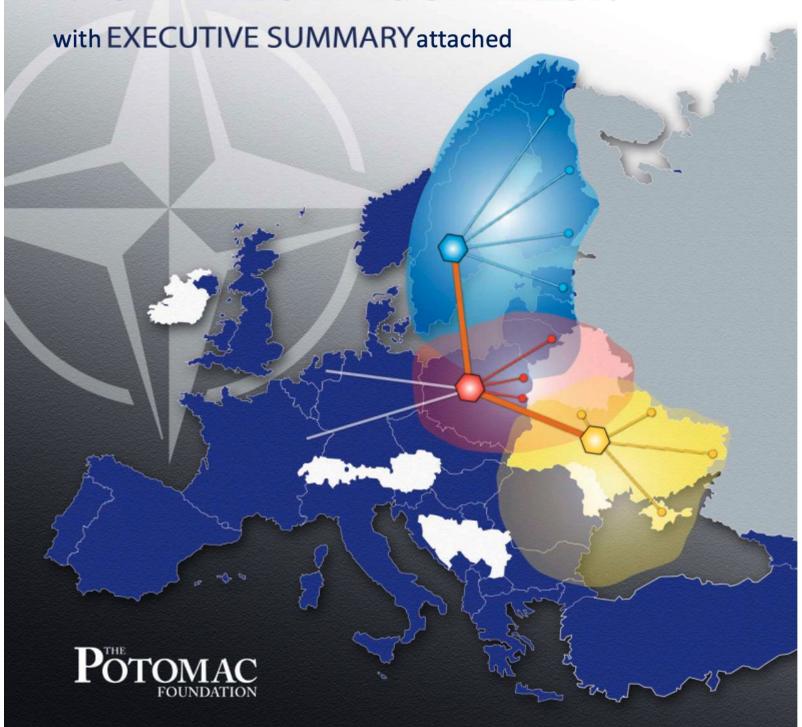
Dr. Phillip A. Karber with support from LGen (Retd) T. Cadieu

WHERE GOEST

UKRAINE & NATO STRATEGY?



Where Goest Ukraine & NATO Strategy?

DEDICATED to the fighters of the Ukrainian Armed Forces. Without their sacrifice, Ukraine would be an occupied colony, hostile armies would be on the Moldovan, Romanian and Polish borders and an arrogant Russian empire would be looking for its next victim.

This report was requested by the Ukrainian Government as a follow-up to the authors' previous 2022 report: "Reconstituting the Armed Forces of Ukraine for Active Defense, Counter-Offensive & Liberation of Invaded Territory," which was based on the authors' direct field observations in the combat areas and presented at NATO HQ on 7 July 2022. The report would not have been possible without the support of The Potomac Foundation.



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WHERE GOEST UKRAINE & NATO STRATEGY?

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EXECUTIVE SUMMARY ATTACHED AT END OF THE REPORT

Quo Vadis [where goest thou] in the time of Nero? ... we are hastening to the precipice, something unknown is coming toward us out of the future, something is breaking beneath us, something is dying around us....¹

In preparation for NATO's 2016 Summit in Warsaw, the following comments were included at the beginning of a chapter in a book titled: "Rethink, Realign, React."

For the third time in a hundred years, storm clouds of war are once again darkening over Eastern Europe. Once again, a major power has invaded and occupied territory of its neighbor.

Once again, a sovereign nation - one identifying with the West and attempting to build its democracy - is under continuous attack, and despite various Western negotiated "ceasefires" the victim of aggression continues to bleed.

Once again, a major power is making threatening statements and military demonstrations against the Western Allies, with provocative maneuvers and dangerous flyovers becoming commonplace.

Nuclear weapons once thought irrelevant and on the path to extinction, are once again being moved forward and targeted on Europe against a background of threats and heavy-handed intimidation against NATO members and neutral countries.²

Clearly, those storm clouds were not sufficiently motivating for NATO to develop a robust strategy to either inhibit Russia's imperial ambition from being implemented or be militarily prepared if deterrence failed. Seven years later, as Europe's skies turn red with the blood of thousands of innocents, those concerns remain a prescient challenge to the West. From the graves of Bucha, Mariupol, and Bakhmut, fading voices cry out asking: "is it now time?" – to produce a serious Alliance military Strategy focused on defending European territory and inhibiting Russian nuclear threats?

Three days after the start of Russia's "Special Military Operation," Germany's new Chancellor, Olaf Scholtz, delivered an impassioned speech to the Bundestag, describing the invasion as producing a "Zeitenwende"³ – which can be translated as "end of an era," "sea change," "epochal tectonic shift," or "historic turning point:"

¹ Henryk Sienkiewicz, QUO VADIS: POWIESC Z. CZASOW NERONA [Quo vadis": a narrative of the time of Nero] (Warsaw, POL: Naklad Gebethnera, 1986), Chpt. XL.

Phillip A. Karber, et al, "The Eastern Front in NATO Strategy – End of the Interregnum," in NATO: RETHINK, REALIGN, REACT; TACKLING SECURITY CHALLENGES TOGETHER, edited by Kinga Redlowska, (Warsaw, POL: Institute for Eastern Studies, 2016): pp. 31-44.

J.A. Bar, "Wort des Jahres 2022: "Zeitenwende," (Wiesbaden, GE: Gesellschaft für deutsche Sprache, 9 DEC 2022), at < https://www-duden-de.translate.goog/sprachwissen/sprachratgeber/Wort-des-Jahres-2022Zeitenwende? >. A jury from the German Language Society (GfdS) chose *Zeitenwende*, which can be translated as "sea change" or "era change," as the German word of 2022.

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The twenty-fourth of February 2022 marks a "Zeitenwende" in the history of our continent. With the attack on Ukraine, the Russian President Putin has started a war of aggression in cold blood.... This is inhumane. It is a violation of international law.

There is nothing and nobody that can justify it....

We are living through a "Zeitenwende" era. And that means that the world afterwards will no longer be the same as the world before.

The issue at the heart of this is whether power is allowed to prevail over the law. Whether we permit Putin to turn back the clock to the nineteenth century and the age of the great powers. Or whether we have it in us to keep warmongers like Putin in check....

In view of the "Zeitenwende" that Putin's aggression entails, our standard is this: what is needed to secure peace in Europe will be done...

This Zeitenwende" does not just affect our country. It affects all of Europe. And this, too, is both a challenge and an opportunity. The challenge consists in strengthening the sovereignty of the European Union sustainably and permanently. The opportunity lies in preserving the united front that we have demonstrated in recent days....

What unites us at this time is that we know the strength of free democracies. We know that when something finds a broad consensus among politicians and the public, it will endure – even in this "Zeitenwende" moment and beyond.⁴

For Germans, the Chancellor's word choice carried double meaning with dual impact. The term had been popular in describing German reunification and end of the Cold War as a very positive turning point in European security – now it was heralding a much darker era and endangered continent. Nevertheless, in 2022 "Zeitenwende" became the "word of the year."

Sounding the alarm that Europe's status quo comfort zone had been undermined by a long-underappreciated danger was both courageous in its stark honesty as well as the mark of statesman in recognizing the various nuanced ramifications of large-scale war on the continent. Scholtz's speech and its corollary defense initiatives were described as a "180-degree course correction" in recognizing that Putin's strategic intent with the implication that "it will not just be Ukraine that is changed forever by this war." ⁵

It is one thing to recognize the on-set of a new era, but something else to develop, articulate and implement a new European Security strategy that pro-actively addresses the multiple challenges that arise with the sudden impact of an epochal *Zeitenwende* threat. In retrospect, neither Ukraine nor NATO were prepared for the multidirectional tsunami that Putin unleashed in February 2022. Not only were they both surprised at the scale, scope, and intensity of the aggression but it is readily apparent that neither the victim nor the Western Alliance had developed strategies that seriously addressed the potential of a "tectonic" challenge to European security and direct threat to Ukrainian survival.

^{4 &}quot;Resolutely Committed to Peace and Security," (Berlin, GE: Policy statement by Olaf Scholz, Chancellor, Federal Republic of Germany, Member of the German Bundestag, 27 FEB 2022), < https://www.bundesregierung .de/breg-en/news/policy-statement-by-olaf-scholz-chancellor-of-the-federal-republic-of-germany-and-member-of-the-german-bundestag-27-february-2022-in-berlin-2008378 >.

⁵ Patrick Wintour, "The Week where Decades Happened: How the West finally Woke Up to Putin," THE GUARDIAN, (4 MAR 2022), < https://www.theguardian.com/world/2022/mar/04/russia-ukraine-how-the-west-woke-up-to-vladimir-putin >.

From 2014 on, Ukraine was under no illusions about Russia's hostile intent and had been very vocal about joining NATO as being critical to its long-term survival strategy. As illustrated in Fig. 1. Ukraine had a lot to offer. It was not only a more militarily powerful force to be added to the Alliance but had the potential of providing a defensive glacis to protect the smaller and newer members of NATO along the Black Sea and the newest and weakest members of the Balkans.

Fig. 1: Ukrainian Contribution to NATO, A Missed Opportunity

		TROOPS			BRIGADES		
	Active	Reserve	TOT	Active	Reserv	e TO	
2004			W 1-1MTM	T. J. J. W. W. H. J. W.	3.5.765653.31		
Bulgaria	31.3	16	47.3	3	4	7	
Estonia	5.7	12	17.7	1	1	2	
Latvia	5.3	7.8	13.1	1	4	5	
Lithuania	6	4.8	10.8	1	2	3	
Romania	73	50	123	6	4	10	
Slovakia	15.8		15.8	2		2	
Slovenia	7.6	5.9	13.5	1	1	2	
2009							
Albania	8	.5	8.5	.3		.3	
Croatia	16.5	3	19.5	2	1	3	
2017							
Montenegro	2	10	12		2	2	
NATO TOT	163.2	104.8	268	17.3	19	37.3	

But NATO membership was elusive – always dangling on the horizon, never arriving. It is NOT because Ukraine didn't qualify:6

- The Ukrainian combat trained Armed Forces would be a major contribution to NATO defense – their manpower and weaponry larger than the previous 10 countries to join the Alliance – COMBINED!
- The Ukrainian military had qualified and adopted more NATO Standards than half the membership that had joined since 1999.
- The disingenuous complaint by some members, particularly German, that "Ukraine is involved in a territorial dispute (over Russian invasion of Crimea and support of proxy war in Donbas) and therefore not eligible" - was the ultimate hypocrisy - what was Germany if not a militarily divided nation when admitted to NATO in 1955?

Phillip A. Karber, "Ukraine & NATO / NATO & Ukraine," Conference on "Why Ukraine Matters," (presentation at Washington, DCL: Center for US-Ukrainian Relations, 14 JUN 2018).

The real reason that Ukraine's survival strategy was put on "infinite hold" is because, in an organization based on the unanimity rule of decisions, there were several members who denied its entry into the club, and who today endanger the Alliance's strategic options with petty side issues or some leaders apparent to play the Kremlin's pawn.

It is not easy for medium size states to develop a realistic strategy when they are neighbors with an overtly hostile opponent five times their size, with offensive forces that dwarf the defenders in both quantity and quality of modern weaponry, who routinely exercises the invasion of their territory, and who possess an arsenal of several thousand tactical/theater nuclear weapons designed for escalation dominance in a regional conflict. This is an asymmetry that only non-NATO members such as Sweden, Moldova and Georgia have experienced but, it is not for nothing that Estonia, Latvia, Lithuania, Finland, and Poland, experiencing the hot breath of Russian coercion have been at the forefront of supporting Ukraine. Given that Kyiv could not match the aggressor's superiority, the Ukrainians focused on fielding a force they could afford while hoping that the deterrent of NATO association would arrive before the apocalypse. It didn't.

The strategy of Flexible Response adopted in 1968 had three key components that were focused on direct defense of the members, countering the threat of tactical and theatre nuclear weapons coercion, and deterring global nuclear war. Compared to the clarity of both the threat and the required response that was evident in the Cold War, over the 1990s successive NATO "Strategic Concepts" devolved into a series of lofty statements instead of specific action plans. In the absence of an existential state-level threat and distracted by "out of area" conflicts in the Balkans, the War on Terror, and invasion of Iraq, NATO broadened its "security" concerns to cover a wide variety of topics – humanitarian aid, refugee flows and the impact of global warming, etc. Albeit important, this disparate list of concerns diluted attention and left the Alliance unprepared for a 'Zeitenwende' scale event.

With the demise of the Soviet Union, NATO was consistent in trying to treat Russia as a "security partner" even after the rise of Vladimir Putin and his increasingly belligerent actions. European energy dependence and American arms control preoccupation created a policy schizophrenia that made it hard to put together a serious security strategy that would prepare the Alliance for a 'worst-case' scenario.

Last summer, four months into the Russian invasion, NATO heads of state met in Madrid and issued a new "2022 Strategic Concept" – only the fourth such document since the end of the Cold War and the first to seriously call-out and condemn Russian aggression:

Our world is contested and unpredictable. The Russian Federation's war of aggression against Ukraine has shattered peace and gravely altered our security environment. Its brutal and unlawful invasion, repeated violations of international humanitarian law and heinous attacks and atrocities have caused unspeakable suffering and destruction. A strong, independent Ukraine is vital for the stability of the Euro-Atlantic area. Moscow's behaviour reflects a pattern of Russian aggressive actions against its neighbours and the wider transatlantic community.⁷

[&]quot;Preface: NATO 2022 Strategic Concept," (Madrid, SP: Adopted by the Heads of State and Government at the NATO Summit, (29 JUN 2022), at < https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/290622-strategic-concept.pdf >

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This stern condemnation was needed and, coming from all the members of the Alliance, it carried symbolic impact. However, what makes the *'Zeitenwende''* a strategic turning point is not just Russia's attack on Ukraine, as bad as that is, but the revelation that Putin's strategic intent is to restore the Russian Empire and his perception that NATO's Collective Defense, being the barrier, is thus the target.

Putin has been starkly clear that the peoples of the former Russian empire have a right to a national language, culture, and customs, but they don't have a right to select their own politics and international associations. Prior to the recent invasion of Ukraine, various histrionic claims could be dismissed as the rantings of hyper-Russian nationalists.

What has changed is that the Russian leadership has now demonstrated a willingness to pursue that revanchist mission with massed forces and inflicting immense suffering and destruction. This is not just the bullying of neutrals but half the countries on that list are NATO members – which simultaneously raises the stakes but also evidences a strategic intent to test the credibility of that commitment.

The current competition for Eastern Europe is not just between the strong and the weak or the revisionist against the status quo. It is also a battle between incompatible philosophies of international relations – the tragedy of a great power's pursuit of condominium versus the right of a people for self-determination and voluntary association in a collective security organization. If the West falters in defense of the latter, it loses more than territory, it imperils its very soul.

NATO's 2022 Strategic Concept clearly identified the challenge:

The Russian Federation is the most significant and direct threat to Allies' security and to peace and stability in the Euro-Atlantic area. It seeks to establish spheres of influence and direct control through coercion, subversion, aggression and annexation. It uses conventional, cyber and hybrid means against us and our partners. Its coercive military posture, rhetoric and proven willingness to use force to pursue its political goals undermine the rules-based international order. The Russian Federation is modernizing its nuclear forces and expanding its novel and disruptive dual-capable delivery systems, while employing coercive nuclear signaling.... Moscow's military build-up, including in the Baltic, Black and Mediterranean Sea regions, along with its military integration with Belarus, challenge our security and interests. ⁸

Thus, as illustrated in the following map, the Ukrainians are currently battling a threat that presumes to ultimately engulf the European countries of Finland, Estonia, Latvia, Lithuania, Poland, Belarus, Moldova, as well as Ukraine.

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⁸ "Strategic Environment: point 8, at NATO 2022 Strategic Concept," op cit.

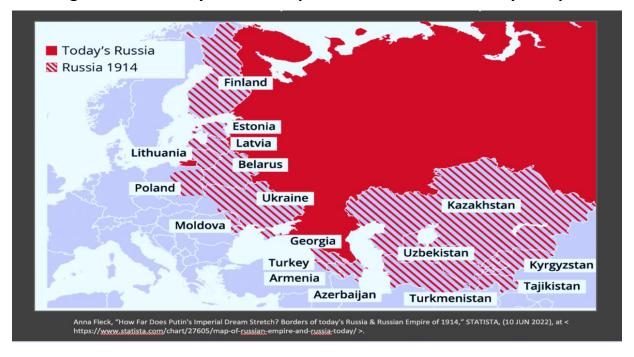


Fig. 2: 19th Century Russian Empire overlaid on 21st Century Europe

This is a situation that demands more than lofty platitudes and inspiring rhetoric – it requires an explicit NATO Strategy focused on HOW to meet the "Zeitenwende" challenge.

Beginning with the 2022 meeting in Madrid, the Alliance coalesced in recognizing the magnitude of the Russian challenge by asking the important strategic questions; for the upcoming July 2023 Summit scheduled for Vilnius will NATO recognize the importance of Ukrainian membership and adopt a realistic Strategic Concept that addresses the position and posture needed to counter the Russian Imperial challenge in the short as well as long term? Thus, QUO VADIS: "Whither goest thou" European Security & Ukraine?

Our purpose here is to emphasize that seismic "Zeitenwende" strategic challenges cannot be addressed, let alone answered, with platitudes or with the publishing of the next "Strategic Concept." These issues took three decades of incubation to reach virulence and they will require NATO to develop a long-term competitive strategy to re-stabilize post-"Zeitenwende" Europe. The intent of this report is therefore to provide a summary of how we got to this point, assess the current crisis points that could make this "Zeitenwende" worse, and provide a framework for evaluating options both for a decisive Ukrainian victory and a new strategy for NATO.

This report is organized around five related themes. Each addresses an issue of importance for the upcoming NATO Summit in Vilnius. In combination, they are both interrelated, and they also have future strategic relevance:

Part I: The Soviet Union's military collapse at the end of the Cold War has led some to claim that there was a military threat posed to Russia by NATO enlargement in Eastern Europe. The rapid withdrawal of Soviet forces from Eastern Europe followed by the disintegration of the Soviet Union and the economic collapse did create insecurity in Russia. Nevertheless, our empirical research shows that expansion of NATO membership drastically reduced military formations and armament stockpiles in Eastern Europe. The current war is not about great power competition but the right of independent states to pursue national self-determination in a collective security association versus imperial intervention to deny that right.

Part II: In retrospect, Vladimir Putin's ascension to power in 1999 was the turning point in Russian-NATO relations. Motivated by a mission to restore the area of control held by the former Russian empire, he drove military restructuring with particular emphasis on redesigning the ground forces for an imperial mission targeted on new NATO members, potential candidates, and neutrals. Under Putin, Russia has pursued a strategy with a range of options -- from hybrid warfare to large scale conventional invasion, with potential for nuclear coercion. But compromises in the new design of Russian ground force proved disastrous in Ukraine.

Part III: Russia's 2021 massive mobilization with ultimatum to the West, and unprovoked 2022 aggression against Ukraine have been costly to the militaries of both combatants but Ukraine's civilians have suffered huge losses, brutal occupation and institutionalized torture. By the end of 2023 Ukraine will have suffered at least \$2 trillion in war costs – equal to 20 years GDP. Russian operational defeats have heavily attritted their best units with manpower replaced by draftees and criminals but uncertain prospects for reconstitution may have a major impact on potential war outcomes, including the current Ukrainian counter-offensive.

Part IV: It is highly probable this conflict will bleed into 2024, raising a serious set of questions about Russia's potential to rebuild its warfighting capability and the additional resources that Ukraine requires to stay in the fight. Genuinely supporting Ukraine's drive to reestablish its sovereign borders will require Western partners to replace a pattern of prevarication and "decide-o-phobia" with decisive action and abandon the current policy of "dawdled incrementalism" a new "get-it-done" focus should be on accelerated delivery of critical combat systems – ATACMs, Fighter Aircraft (F-16/F-18), large number of M-1 Tanks and M-2 IFV from current US stocks, European provided tactical air defense and latest counter drone technology.

Part V: NATO faces a historic turning point and serious threat to European security. The Alliance "Center of Gravity" has moved east. NATO needs a new Strategy. Borrowing the conceptual framework from the previous successful effort that took on and ended the Cold War, a new approach is outlined for a **Strategy of Reciprocal Response** with the following components:

- **Forward Defense** of three Centers of Gravity (each with a core "hub")
- **Escalation Dissuasion** a policy and capability to respond to a wide range of potential opponent escalations, including the use of tactical nuclear weapons;
- Strategic Nuclear Coercion Denial revival and expansion of NATO Nuclear Planning Group addressing Russian nuclear threats and deployments and evaluating military options;
- Long-Range Competitive Strategy "playing smart not rich" in defense cooperation and pursuing "two-track" approach for conflict reduction with a responsible Russian leadership.

Your schemes, your plans effected Ilium's fall, And hurled destruction on Priamus' wall.⁹

I. SOVIET MILITARY MELTDOWN & NATO ENLARGEMENT

For over four decades, NATO pursued a political "containment" policy vis-à-vis the Soviet Union. It was backed up by a competitive strategy based on a defensive military posture deployed in Europe and a robust nuclear deterrent. Despite crises that involved nuclear threats throughout those years, the Western Alliance took no offensive actions toward the Soviet Union, even when they were highly vulnerable during internal revolts in Hungary, Czechoslovakia, and Poland, and undertook numerous initiatives to both normalize interbloc relations and explore options for disarmament agreements that would help stop and then reverse an intense arms race. Finally, the success of the Intermediate Nuclear Forces Treaty in removing a major class of nuclear weaponry that created a growing rapport, coupled with severe economic problems in the Soviet Union that undermined their ability and willingness to continue occupation in Eastern Europe, halted the strategic competition with the United States.

At the end of the Cold War, it was popular to ascribe the demise of that ideologically driven military confrontation as the "end of history." The withdrawal of Soviet forces in Eastern Europe and the demise of communism heralded the prospect of a Europe "whole and free." But international relations are much more than a confrontation of ideologies. They include national aspirations for self-determination as well as the arrogance of some states with imperial ambitions pursuing a sphere of influence, which is intended to interfere or supersede the autonomy of other nations' decision-making.

The Russian invasion of Ukraine launched on 24 February 2022 was the most massive use of force on the European continent and its scope, magnitude and intensity not only shocked Ukraine as the victim but has created a European security crisis for which the members of the NATO Alliance neither anticipated nor were prepared for. This unprovoked aggression meant that the West's optimistic "holiday from history" has come to a dark and brutal end.

It has been said that how the First World War ended presaged the conditions for the successor Second World War. Likewise, it is important to note that the end of the Cold War set the stage for the current crisis. It has become popular in Russia and even among some Western commentators to blame NATO Enlargement for the current conflict. While everyone is entitled to their own opinions, the facts provide a different narrative:

• The cumulative effects of the rapid withdrawal of Soviet forces from Eastern Europe

⁹ Homer, THE ODYSSEY, (translated by R. Shepherd in preface to: Polyaenus, STRATEGEM OF WAR, (London, UK: Ares Publishers, Inc., 1793): chapter 22, line 230.

Francis Fukuyama, "Have we reached the End of History?" (Santa Monica, CA: RAND Corp., 1989); and, Francis Fukuyama, END OF HISTORY & THE LAST MAN, (New York, NY: Free Press, 1992).

George Will, "The End of Our Holiday from History," (editorial) WASHINGTON POST, (12 SEP 2001).

followed by the disintegration of the Soviet Union and the economic collapse of Russia with concomitant inability to support its armed forces, created an intense insecurity that set the stage for a radical pivot.

- In parallel, with the demise of communism coupled with the desire of former members of the Warsaw Pact and Soviet Republics to become integrated with the West, NATO responded to the needs of the newly independent nations to assist with "military reform," help educate a new generation of officers, assist in national efforts to drastically cut defense budgets, and dramatically reduced standing military forces. Moreover, there was no effort to orient them in strategy or exercises against Russia.
- From 1999 onwards, Vladimir Putin first as Prime Minister then as President of Russia was driven to restore the Russian condominium over Eastern Europe. Against that agenda, NATO enlargement was not a military but a political threat in promoting national self-determination and protecting it in a voluntary collective security association. Putin's military reforms were intended to redesign the ground forces for an imperial mission called "New Generation War" targeted on candidate countries desiring NATO membership.

To understand how Russia's military may be reconstituted to continue aggression against Ukraine and/or restructured to be a future threat to NATO, it is insightful to first consider the cumulative effects of the disintegration of the Soviet Union, simultaneous shifts to NATO's composition and posture, and their impacts on Russian strategic thinking. The following will address the points above and PART II will examine Putin's rise to power, his imperial ambition, and the defects and trade-offs of his force design that impact current Russian operations in Ukraine.

I.A. – LEGACY OF THE COLD WAR

Military establishments are not merely collections of troops and weaponry. Overlaying that ensemble is a hierarchical structure of units and up to a dozen levels, which are organized to recruit and train troops, logistically support forces in the field, maintain and exercise modern equipment, plan for operations, and provide command and control not only in peacetime, but also in the fog of war. All armies require these various functions. The Soviet Union just had more of them than anyone else.

When faced with the economic necessity to radically reduce a massive military structure, considerations such as how forces are withdrawn, where they should be sent, how they were decommissioned, and what was left ended up having a critically important impact as the newly democratic Russia attempted to patch together an affordable military capability from the ruins of the Soviet demise. The decline not only set the baseline for the subsequent build-up, but also had a major impact on future operational concepts. Similarly, the experience of demobilizing one's own capability while others seem to be rising likewise impacts on perceptions of security and relations with the West.

At the height of the Cold War, the Soviet Union's military force was organized on the basis of perceived threats deriving from three quadrants of the compass – Western, Southern. and

Far Eastern – each of which were classified as a Theater of War. ¹² These Theaters of War were in turn sub-divided into several Theaters of Military Operations for large-scale regional operations. This organizational concept enabled military planners to tailor the strategy and tactics across the full spectrum of combat for the entire geographic area taking into consideration the capabilities of the missiles, aircraft, ships, and ground forces at their disposal relative to the identified opponent. In peacetime, most of that higher level structure was not activated unless undergoing periodic exercises and the role of administering the forces that would be available to these higher-level commands was fulfilled by Military Districts.

The Soviet Union had 16 Military Districts (MDs) as well as five Groups of Forces (controlling the formations deployed in East Germany, Poland, Czechoslovakia, Hungary, and Mongolia). 13 Upon mobilization, these MDs and the Groups would become "Fronts" which were approximately equivalent to a US/NATO Army Group. Typically, a Front could include three to five "Armies" and was the largest field formation in wartime, but other than planning staffs they were not generally operational in peacetime. 14 The next level down in the command chain was an "Army" - which was the highest combat formation active in peacetime - and organized in two basic types: Combined Arms Army, with balanced allotment of infantry, armor and artillery designed for flexibility in a wide range of missions; and, Tank Army, which, with a large concentration of tanks, mechanized infantry and artillery was designed for high mobility, decisive action and rapid penetration into the depths of an opposing defense. 15 Organizing and maintaining Army level commands in peacetime was driven by the fact that it takes time to develop their capabilities. Unlike manoeuvre or fire units that can be rapidly moved and reassigned to other commands, the communications, logistics, maintenance, intelligence, and planning staffs of an Army require a level of integration, shared experience, and command maturity that cannot be hastily assembled by kluging disparate components during rapid mobilization.

On a global scale, the Soviets had identified 10 continental and four oceanic Theaters of Military Operations. ¹⁶ Those in or directly impacting on Europe, included:

• Western Theater, which included the NATO Central Region, Baltic approaches, East Germany, Poland, Czechoslovakia, and the western USSR – with a potential of 6 Fronts, 6

THE SOVIET ARMY: TROOPS, ORGANIZATION, & EQUIPMENT, (Field Manual FM 100-2-3; Washington, DC: Headquarters, Department of the Army, 6 JUN 1991): pp. I.4-I.5, at < https://irp.fas.org/doddir/army/fm100-2-3.pdf >.

lbid: I.5: "In peacetime, each of these districts and groups of forces is an administrative headquarters directly subordinate to the MOD. In wartime, the ... military districts will continue to function as territorial commands, serving as mobilization and training bases and providing logistical and other support services."

lbid: I.5: "an operational and administrative unit whose size and composition are subject to wide variation depending on its mission and situation.

THE SOVIET ARMY: TROOPS, ORGANIZATION, & EQUIPMENT, (Field Manual FM 100-2-3; Washington, DC: Headquarters, Department of the Army, 6 JUN 1991), at < https://irp.fas.org/doddir/army/fm100-2-3.pdf >.

The other Theaters of Operations included: Southern TVD, with South- west Asia including Afghanistan, Iran, eastern Turkey, the Caucasus, and the Turkestan region of the USSR -- potential of 2 Fronts, and 2 active Combined Arms Armies; Far Eastern TVD, which covered Siberia, the Soviet Far East, Mongolia, China, the Koreas, Japan, and Alaska; potential of 5 Fronts, and 8 active Combined Arms Armies; South American TVD; African TVD; Australian TVD; Antarctic TVD; Indian Ocean TVD; and, Pacific Ocean TVD, which included that ocean as well as the coastal areas of the Soviet Far East.

active Combined Arms Armies, 6 Tank Armies (with Warsaw Pact Allies adding another 7 Combined Arms Armies);

- Northwestern Theater, which included the Scandinavian Peninsula, Iceland, and the northwestern USSR with 2 Fronts and only 1 Combined Arms Army;
- Southwestern Theater, which included the NATO Southern Region, the eastern Mediterranean, Hungary, Romania, Bulgaria, and the southwestern USSR with 3 potential Fronts, a Tank Army and 3 Combined Arms Armies (with Warsaw Pact Allies adding another 7 Combined Arms Armies);
- Arctic Ocean Theater, which covered the Arctic Ocean, the Barents and Norwegian Seas;
- Atlantic Ocean Theater, which covered south of the Greenland-Icelandic-UK gap;
- North American Theater for nuclear operations.

Despite a major build-up of Soviet forces in the Far East focused on China as well as involvement in Afghanistan the priority focus was on Europe with all their Tank Armies, half the Combined Arms Armies, and three of four fleets aimed West.

As evident in FIG. 3, the military assets assigned to a Theater could vary widely depending on the terrain/operating environment, political objectives, and opposing enemy strength.

CONTINENTAL TVD	Northwestern TVD	Western TVD	Southwestern TVD	Western TV TOTAL
OCEANIC TVD	& Artic Ocean TVD	& Atlantic Ocean TVD		
	Northern Fleet	Baltic Fleet	Black Sea Fleet & Med Sqd	
MIL DIST / GROUPS	1	3+3	2 & 1	6+4
POTENTIAL FRONTS	1	6	3	10
TANK ARMIES	0	6	1	
COMBINED-ARMS ARMIES	1	6	3	10
DIVISION	10	63	27	100
TANKS	1400	19460	6850	2771
APC/IFV	3130	20409	5400	2893
ARTILLERY	2000	15000	5900	2290
TACTICAL SSM	100	680	200	98
TACTICAL AIRCRAFT	225	2320	910	345
MAJOR NAVAL COMBATANT		45	120	23
ATTACK SUBMARINES	141	45	44	23
NAVAL AVIATIONDF	426	260	450	113
NAVAL INFANTRY BDE	1	1	1	
St	rategic Reserve	Southern TV	Eastern TV	ALL THEATERS
		Southern TVD	Far East TVD	
		Caspian Flotilla	Pacific Fleet	
MIL DIST / GROUPS of FORC		2	4+1	15 MD, 5 Group
POTENTIAL FRONTS	3	2	5	2
TANK ARMIES	0	0	0	
COMBINED-ARMS ARMIES	1	2	8	2
DIVISIONS	18	30	53	20
TANKS	4590	5400	1490	3919
APC/IFV	3600	9100	17300	5893
ARTILLERY	4170	5600	13400	4607
TACTICAL SSM	120	185	375	166
TACTICAL AIRCRAFT	150	965	1730	630
MAJOR NAVAL COMBATANT	rs	5	85	32
ATTACK SUBMARINES			90	32
NAVAL AVIATIONDF			510	164

Fig. 3: Soviet Force Structure (Mid 1980s)

In the latter part of the Cold War, the Soviet General Staff developed a "Strategy of Deep-

Operations."¹⁷ This was a concept that dramatically expanded the depth and complexity of large offensives conducted simultaneously on several fronts in coordination with air, antiair, assault (airborne, amphibious, or joint), and naval operations.¹⁸ Counter-space and antiair operations would attempt to take communications and launch strikes designed to gain air superiority to disrupt and destroy NATO's command and control and nuclear capability. It was increasingly recognized that offensive campaigns could be conducted under complex conditions: fought with traditional means; or, with nuclear weapons; or, with the sequenced combination of both¹⁹ – with the conflict starting conventional but escalating to the employment of varying quantities and size of nuclear yields, types of targets, and depth of strikes.

Recognizing the growing lethality of the modern battlefield as demonstrated in the 1973 Yom Kippur War, and NATO's proliferation of anti-tank weapons,²⁰ Soviet planners recognized the danger of massing on the nuclear battlefield. Rather than emphasizing traditional concentrated breakthrough operations, a new approach was emphasized with multiple axes of advance penetrating weak points and gaps in the defense going as deep and fast as possible in the initial stage of a conflict.²¹ Driven by the need to reduce their vulnerability to NATO first use of nuclear weapons, the concept of "Deep Operations" stressed fast-moving operations to seize strategic ground objectives located 500 km away.

Moreover, they replaced their traditional emphasis on massed breakthrough with a focus on widely dispersed multiple axes of advance. Recognizing that units operating independently with initiative was not an inherent characteristic of the Soviet Army, they created preselected units at multiple echelons:

• Lowering the level of combined-arms integration in maneuver Regiments to operate with

This on-going Theater War plan versus NATO was produced by an author's collective, directed and collated by GenCol Andrian A. Danilevich, in a Top Secret, three-volume STRATEGY OF DEEP OPERATIONS (GLOBAL & THEATER), composed and refined between 1977-1986.

[&]quot;Interview with Gen.-Lt. Gelii Viktorovich Batenin," (former First Deputy Chief of the Soviet General Staff), interview conducted by John Hines, 6 AUG 1993), in John G. Hines, et al., SOVIET INTENTIONS: 1965-1985, Vol. II, SOVIET POST-COLD WAR TESTIMONIAL EVIDENCE, (CONTRACT #MDA903-92-C-0147 OSD-NET ASSESSMENT; Mclean, VA: BDM Federal, 1995), p. 7.

[&]quot;Interview with Gen.-Col. (Ret.) Andrian A. Danilevich," (assistant for Doctrine and Strategy to Chiefs of the General Staff and Drector of the General Staff "Strategy of Deep Operations"), interview conducted by John Hines, 21 SEP 1992), in John G. Hines, et al., SOVIET INTENTIONS: 1965-1985, Vol. II, SOVIET POST-COLD WAR TESTIMONIAL EVIDENCE, op cit: p. #MDA903-92-C-0147 OSD-NET ASSESSMENT; Mclean, VA: BDM Federal, 1995), p. 28. Thus, "... in the early 1980s, the emphasis shifted to avoidance of a war by finding alternatives to a massive first strike/retaliatory strike and creating options on the ladder of escalation."

Phillip A. Karber, "The Soviet Anti-Tank Debate," SURVIVAL, (1976); and "Soviet Lessons of the 1973 Middle East War: A Tactical Revolution in Ground Warfare," (paper presented at the Fifteenth Annual US Army Operations Research Symposium, Ft. Lee, VA: published in PROCEEDINGS AORS XV, Vol. I, October 1976).

Phillip A. Karber, "The Impact of New Conventional Technologies on Military Doctrine and Organization," published in the book: NEW CONVENTIONAL WEAPONS AND EAST-WEST SECURITY, edited by Christoph Bertram), (London, UK: International Institute of Strategic Studies, 1978).

[&]quot;In the Western Theater, Soviet war aims would be to defeat NATO and occupy Western Europe before it could be reinforced. The Soviets plan for a very rapid, combined arms operation to reach the Atlantic in the shortest time possible. Formations that met stiff resistance would be rapidly reinforced by second echelon forces." SOVIET MILITARY POWER, (Washington, DC: Department of Defense, 1984), Chapter III – Theater Forces.

- high speed and sufficient assets as forward detachments for their parent Division;
- Division sized designated Operational Maneuver Groups (OMG)²³ which would serve as the penetrating force for their parent Army;²⁴
- Specially designed "New Army Corps" equipped as the OMG for a Front or Theater.²⁵

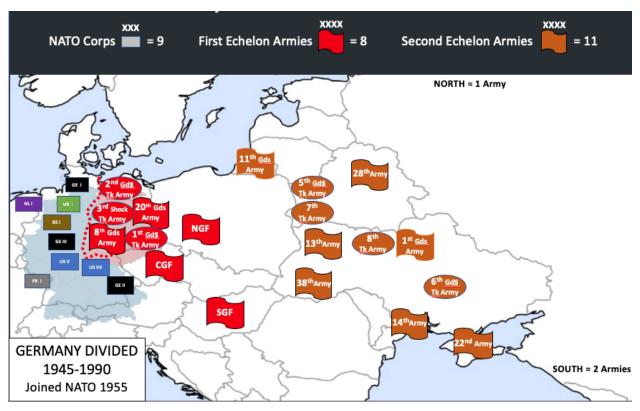


Fig. 4: Soviet Army Deployment During the Cold War (Mid-1980s)

After four years of experimentation and debate, the new "Deep Operations Strategy" was exercised on "ZAPAD" (West) held in 1981 - the largest ever held by the Soviet Union." The emphasis and preparation of ZAPAD 81 was focused on a large-scale invasion of Central Europe. The alternative option of a more limited operation, which included a smaller geographic area and the more limited political objective of restraining the autonomy of

[&]quot;The Soviet Operational Maneuver Group," (Washington, DC: CIA Directorate of Intelligence, 1 FEB 1983) at < https://www.cia.gov/readingroom/docs/DOC_0000498534.pdf >; "1971-1985 – Operational Maneuver Groups," GLOBAL SECURITY, (no date), at < https://www.globalsecurity.org/military/world/russia/army-cccp-omg.htm >.

Drew Middleton, "New Soviet Tactic in a War is Seen," NEW YORK TIMES, (10 OCT 1982), at https://www.nytimes.com/1982/10/10/world/new-soviet-tactic-in-a-war-is-seen.html >.

²⁵ THE SOVIET ARMY: TROOPS, ORGANIZATION, & EQUIPMENT, op cit: p. 1-6.

Kyle Mizokami, "Why Russia's Massive Zapad Military Exercises Scare the World," NATIONAL INTEREST, (16 APR 2017), at < https://nationalinterest.org/blog/the-buzz/why-russias-massive-zapad-military-exercises-scare-the-world-20199 >.

Czechoslovakia in 1968 by 20 divisions²⁷ and the ZAPAD-81 exercise versus Poland,²⁸ were examples of a "Special Military Operation" (or its threat) conducted within a Theater of Operations against perceived internal "rebellion" to the Soviet sphere of influence.

In 1985, the structure of the Soviet military was predicated on having a peacetime manning level of 5.3 million troops, with the ground forces (consisting of army, airborne, and naval infantry branches) representing approximately 40% of the total. Except for forward deployed and several "show" divisions, the majority of "units and formations were not fully manned or ready for immediate deployment." A "bloated and multitiered command structure was perched on top of the actual fighting units, 70 to 80 percent of which were staffed at reduced or skeleton-strength levels." To bring this force up to full manning involved a "complex mobilization system designed for a large-scale war with NATO in Europe or with China in the Far East" 29 and required 5 million reservists to be mobilized.

I.B. – SOVIET MILITARY COLLAPSE

As large and powerful as the Soviet military structure appeared, its very size sowed the seeds of its own dismantlement.³⁰ By the mid-1980s it was becoming apparent to the Kremlin leadership that the Communist economy had stalled, investment in modern technology was falling behind, and the military was consuming a disproportionate share of the country's productivity.³¹ For leaders that was hard to verify, let alone control, because in the Soviet accounting system many of the costs of maintaining that massive force were opaque or even intentionally hidden. Only a few in the State bureaucracy knew the true scope of the Soviet Union's military costs, thus in the words of then President Gorbachev: "many were surprised to learn that: "military expenditure was not 16 per cent of the state budget...but rather 40 percent."³²

President Gorbachev's impressive speech at the United Nations on 7 December 1988 included a surprise announcement pledging to reduce:

Soviet armed forces by 500,000 men and eliminate a total of 10,000 tanks, 8,500 artillery pieces and 800 combat aircraft from forces ... located in Eastern Europe, including European Russia, by 1991. Of the 500,000 men to be reduced 200,000 would come from the Far East,

Phillip A. Karber, "Czechoslovakia: A Scenario of the Future?" MILITARY REVIEW, vol 49, no. 1, (JAN 1969), pp. 11-21.

[&]quot;One similarity appears to be the goal of intimidation. In September 1981 the Kremlin used ZAPAD to press wavering Polish leaders. Three months later, Polish communists imposed martial law." William Courtney, "Moscow Hesitated in Poland—Will It in Belarus?" RAND, (13 SEP 2021), at < https://www.rand.org/blog/2021/09/moscowhesitated-in-poland-will-it-in-belarus.html >. See also: "Warning on Poland," (Memorandum for the National Intelligence Officer for Warning; Washington, DC: Strategic Warning Staff, CIA, 16 OCT 1981).

Mikhail Barabanov, "Hard Lessons Learned: Russian Military Reform up to the Georgian Conflict," BROTHERS ARMED: MILITARY ASPECTS OF THE CRISIS IN UKRAINE, (Minneapolis, MN: East View Press), Kindle Edition.

Henry S. Rowan, Charles Wolf, and Jeanne Tayler, THE SOVIET UNION AS MILITARY GIANT & ECONOMIC WEAKLING, (Stanford, CA: Hoover Institution Press, 1990).

[&]quot;It can be argued that the high cost of military spending was a main cause of the economic crisis, particularly when the disproportionately large share of resources, skilled managerial and shop-floor manpower, and industrial production allocated to the defense sector is taken into account." MILITARY BALANCE: 1988-1989, (London, UK: International Institute for Strategic Studies, 1988): p. 32.

Mikhail Gorbachev, MEMOIRS, (New York, NY: Doubleday, 1995).

including Mongolia, 240,000 men from west of the Urals, and 60,000 from the Southern borders.³³

Given the economic pressures on the Soviet economy, within two years of the end of the Cold War, the total Soviet military strength had been cut by more than 25%.

Between the half dozen remaining army-level commands and the 290,000 professional troops (excluding 210,000 conscripts and 170,000 'contractees'), rather than the Division level organizations picking up the slack, they themselves were in rapid decline and disorganization. Thus, in a 30-year period, the number of fires and manoeuvre divisions had gone from 218 to 81. An attempt to fill the declining divisions with more independent manoeuvre brigades had only produced 16 formations. And the highly trained special brigades had dropped from 35 to 13. By the late 1990s, the Russian ground forces were not only a "hollow army," but the downwards spiral was continuing. In a 15-year period, leading up to 2000, they had gone from 51 tank divisions to 5, from 141 motorized rifle divisions to 21, from 7 airborne divisions to 4, and stayed with one naval infantry division. In addition, they had 17 so-called "reserve" divisions, but these were no more than equipment holding units without a working mobilization system to flesh them out if needed or higher-level army command and support structure.

But this is only part of the story. What is not generally appreciated in the West is that during the early post-Cold War period, the Soviet/Russian armed forces went through a series of shocks. No sooner were they attempting to cope with one, another would hit at essentially two-year intervals.

The first of these shocks came with the Soviet agreement to reduce its forces in Eastern Europe but what had been viewed by them as a phased reduction of forces – with a particular focus on the draw-down of main battle tanks to address NATO's concerns about offensive warfighting potential – selective re-deployment turned into a virtual rout within a year when, with the fall of the Berlin Wall, pro-Soviet governments began collapsing in the face of populist anti-Communist, anti-Soviet, and anti-military presence throughout Eastern Europe. This demand for immediate withdrawal significantly increased the amount of forces and reduced the time available to do that.

Subsequently, the Warsaw Pact, which had served as a collective security regime, ceased to exist and with it a dual set of shocks kicked the Soviet Army:

Of immediate impact was the necessity to withdraw 500,000 troops from Eastern Europe, representing 30 tank and motorized rifle divisions organized into eight forward deployed army formations. It was one thing to move the equipment to bases and storage areas in the Western military districts where there were already existing infrastructure and a cadre of professionals to oversee activities, but there was no place that could absorb 500,000 troops. Even with 80% of them released from service, it meant that 100,000 professional officers and senior non-commissioned officers had no housing and for those who received early release, there was no money for pro-rated retirement benefits nor services available for transition to civilian employment.

A corollary shock was that with the demise of the Warsaw Pact and the antipathy towards

³³ MILITARY BALANCE: 19891990, (London, UK: International Institute for Strategic Studies, 1989): pp. 28-29.

old regimes, the entire first echelon of defense of the Soviet Union deployed in Eastern Europe evaporated. At the height of the Cold War, the Soviet Union had three echelons of forces aimed against NATO in Central Europe.

First, it had eight armies/groups of forces deployed forward in Germany, Poland, Czechoslovakia and Hungary and those allies contributed at least another seven armies equipped with weapons of high commonality, commanders with years of joint training and command integration, as well as a logistics and transportation system, integrated air defense and over 3000 modern combat aircraft.

The second military echelon of the Western Strategic Direction – whose role was to provide both an offensive and defensive capability – included military districts in the Baltics [11th Combined Arms Army (CAA)], Belarus [5th Guards Tank Army (GTA), 7th Tank Army (TA), 28th CAA], and Ukraine (38th CAA, 14th CAA, 13th CAA, 1sth Guards CAA, 8th TA, and 6th GTA). In a NATO War, these forces were intended to exploit to Western Europe following the successes of the combined Soviet Warsaw Pact forces in the first echelon whose job was to make the assault on the Rhine.

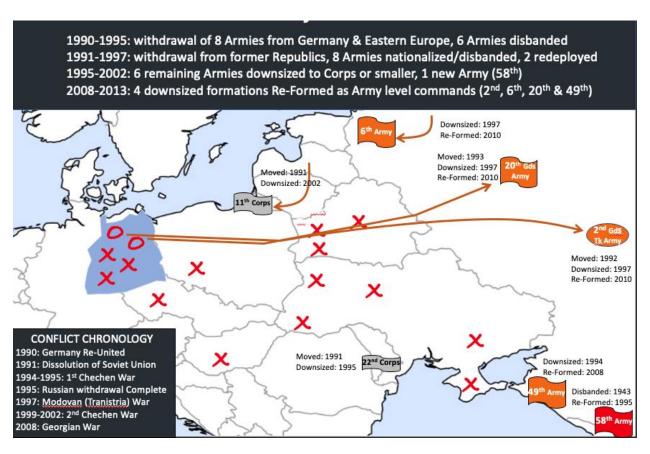


Fig. 5: Post-Cold War Soviet Army Withdrawal & Demobilization

Behind the second strategic echelon was a third, stretching from the Arctic to the Caspian Sea. It consisted of the 6^{th} CAA and the 22^{nd} CAA – both of which were primarily intended to facilitate mobilization. This strategic echelon system was barely weathering the blow from

the double shocks to the first strategic echelon when the Soviet Union disbanded in 1991.

Six months before the break-up, the Baltics were in revolt, demanding independence, and there were intense confrontations with Soviet security and military forces and the heavy weaponry that had just been transferred from East Europe for storage in the Baltics then needed to be transferred further East. Despite repeated Russian attempts to maintain some military presence in the Baltics, particularly air defense sites along the coast, all those positions had succumbed to a combination of local and Western pressure.

With the disbandment of the Soviet Union, Moscow still presumed a close and mutually supportive relationship with the forces in the other former republics. Nevertheless, the newly independent republics were uncomfortable with tens of thousands of Russian troops stationed on their territory and since Russian interior facilities for storing and maintaining excess equipment were overflowing from withdrawals in Eastern Europe, the Russian Army assets in the second strategic echelon – except for those in the Baltics – were turned over to the partners.

Thus, Belarus received the assets of three armies, and Ukraine got the assets of the 6th Guards TA, 8th Tank Army, 1st Guards CAA, the 13th CAA, and the 38th CAA. Azerbaijan received the assets of the 4th CAA. The 7th Guards CAA were transferred to the border troops in Armenia. And the remnants of the 14th CAA were moved from Odessa to Transnistria in support of the separatist forces against Moldova.

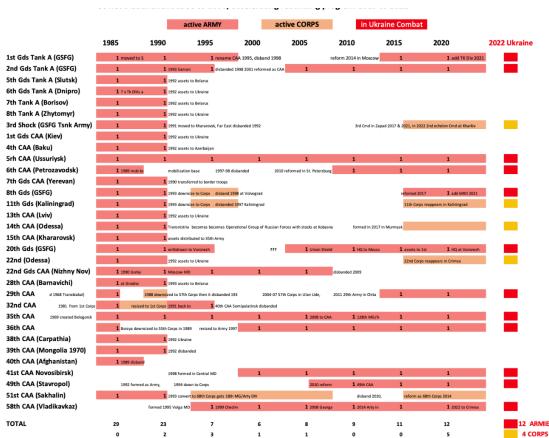


Fig. 6: The Soviet Decline and Russian Return of Army-Level Commands

Contrary to Moscow's expectation, the newly independent former republics neither had the resources nor the inclination to maintain the massive amounts of military equipment that had been transferred to them. For example, in Ukraine alone they reduced their military from 761,000 troops to 140,000, and they could not steward nor operate the 6500 tanks and 350 combat aircraft assigned to them. So, some of this equipment was retained, some was sold off to third world customers, and much of it became obsolete in long-term storage. Under those circumstances, Moscow's dreams of a unified commonwealth force evaporated and relations with the former republics ran the gamut from intimate to estranged.

As if those shocks were not enough, the Russian General Staff also began to realize the complexity of disposing and moving these assets when they had signed the Conventional Forces in Europe (CFE) Treaty with NATO in November 1990. Unlike the 1987 INF Treaty, which had been model of both verification and cooperation, CFE was challenged from the start. First, in trying to control everything, the complexity would have been difficult to manage even had forces and their assets remained stationary, which clearly was not the case.

Second, as shown in FIG. 7, the CFE Treaty had sub-divided the territory of East and West into analytical boxes with strict sub-ceilings on the amount of assets that could be stored there. If Russia pulled back its forward deployed assets to the third echelon, they would be in violation of the Treaty, and thus had to be moved further to the East of the Urals.

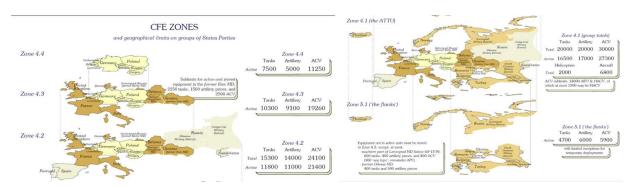


Fig. 7: Complexity of "Conventional Forces Europe" Treaty Deployment Zones

In retrospect, given those sequential extraneous "shocks," it is not unexpected that the once awe-inspiring Soviet conventional force posture was rapidly descending into combat ineffectiveness; the most surprising thing is that it survived at all. Nevertheless, at the end of the Cold War, the dissolution of the Warsaw Pact and the withdrawal of the Soviet Army from Eastern Europe symbolized a new era of "Europe whole and free." The new Russian state, albeit struggling with remnants of the old regime and economic collapse of a centralized collectivist economy, was nonetheless making progress in the development of civil society, creation of democratic institutions, blossoming an independent media with unprecedented freedoms for Russian public.

On the international scene, Russia was viewed as a serious and committed security partner. Having signed the INF Treaty, they dutifully dismantled and destroyed their theatre nuclear forces under a regime of unprecedented and intrusive inspection. A whole new series of strategic arms limitation agreements were not only successfully negotiated but resulted in a significant reduction of offensive forces. Russia joined the U.S. in the mutual, unilateral

reduction of tactical nuclear weapons – resulting in thousands of lower yield nuclear warheads being retired (albeit unspecified in number and with no means of inspection or verification).

Several factors motivated and enabled the Russian leadership to begin rebuilding a force that others in Europe would take seriously rather than treat it as a laughingstock. One of these factors was the high degree of Russian military insecurity in not only dealing with a series of bleeding conflicts on its periphery, but concern that the Western strategic direction was virtually undefended and a tendency to view any NATO activity, no matter how benign, with both resentment and paranoia. A second factor was the stabilization of the Russian economy. After its near fatal collapse and decade of severe austerity, resources were beginning to become available for selective modernization, organizational reform in support, albeit limited, in using limited force where necessary. Resources by themselves would neither provide the direction nor momentum for serious military recovery. That would require a leadership with the ambition and strategic intent to conceive, create and implement a new Russian security architecture in Europe.

I.C. – NATO ENLARGEMENT

Since ascending to power in 1999, Putin and his enabling clique have curated a narrative that the NATO alliance capitalized on the collapse of the Soviet Union as described above to expand its membership and thus threaten Russian strategic interests and national security. This would eventually form the pretext for Russia's full-scale invasion of Ukraine and the slaughter that ensued.

Yet, a review of NATO strategic guidance, enlargement policy, and force posture over the 30-year interregnum between the end of the Cold War and current phase of the Russo-Ukrainian War makes it clear that Putin's rhetoric was deceptive and manipulative. NATO consistently advocated for the self-determination of all nations and likewise attempted to treat Russia as a "security partner," extending opportunities to team up on a range of issues such as arms control, counterterrorism, counter-narcotics, submarine rescue, civil emergency planning, and mitigating the impacts of climate change. Rather than embrace the incredible security and economic potential inherent in a collaborative approach, Putin responded to all NATO overtures with contempt and paranoia.

I.C.1. - Evolution of NATO Strategic Guidance

In terms of organizing their military forces to confront strategic challenges, Western Alliance members take their cue from NATO Strategic Concept papers, which reiterate threats to the Alliance, NATO's enduring purpose, and its key security tasks. In essence, the NATO Strategic Concept sets the unifying strategy and helps to guide long-term decisions on force structure, posture, and development.

NATO strategic guidance issued from 1991 onwards was explicitly non-confrontational towards Russia. The Strategic Concept of 1991, for example – while maintaining the collective security of its members as its fundamental purpose – sought to improve and expand security for Europe through partnership and cooperation with Russia, the Alliance's former adversary.

It also sought to reduce reliance on the use of nuclear forces to a minimum level.³⁴ In 1999, the year of NATO's 50th anniversary, Strategic Concept 1999 committed to developing Relations with Russia based on, "...the basis of common interest, reciprocity and transparency to achieve a lasting and inclusive peace in the Euro-Atlantic area based on the principles of democracy and co-operative security."³⁵ Following the 2001 terrorist attacks against the United States the threat of terrorism and weapons of mass destruction heavily influenced Strategic Concept 2010. Pre-occupied with protecting domestic populations against attacks from non-state actors, this strategic guidance again deliberately pulled the Alliance away from preparing for conventional conflict with Russia. NATO-Russia cooperation was deemed, "...of strategic importance as it contributes to creating a common space of peace, stability and security." It further aspired to achieve a "...true strategic partnership between NATO and Russia...with the expectation of reciprocity from Russia."³⁶

When, in 2014, Russia illegally annexed Crimea and threatened war with Ukraine, practical cooperation between NATO and Russia ended. However, it was not until Russia shocked the world with its full-scale invasion that Allies finally agreed to reset NATO's deterrence and defense guidance. After nearly three decades of attempting to placate Russia, NATO's Strategic Concept 2022 again recognizes that the Russian Federation poses the most significant and direct threat to Allies' security, and it underscores the importance of the Article 5 commitment.³⁷

I.C.2 - Extending NATO Membership

NATO's enduring commitment to treat Russia as a "security partner' applied in equal measure to all former-Soviet states. Recognizing the intense desire of the nations of Eastern Europe to become integrated with the West, the Alliance considered the merits of admitting new members and the best way to do so. It concluded in a 1995 study that the end of the Cold War was a learning moment where broader association with NATO would enhance security in the Euro-Atlantic area and help to encourage and support democratic reforms of new members, including:

- Primacy of political authority over the military and de-politization of military commands;
- Reduction in the costs of bloated Warsaw Pact force structures and massive weapons inventories that were both unnecessary and unsustainable;
- Fostering patterns and habits of cooperation;
- Participation in third world humanitarian challenges and various peace support operations.³⁸

[&]quot;The Alliance's New Strategic Concept (1991)," NATO, (at London, UK: NATO HQ, 7 NOV 1991), at https://www.nato.int/cps/en/natohq/official texts 23847.htm >.

[&]quot;The Alliance's Strategic Concept (1999)," NATO, (at Washington, US: NATO HQ, 24 APR 1999), at https://www.nato.int/cps/en/natohg/official texts 27433.htm >.

[&]quot;Active Engagement, Modern Defence: NATO Strategic Concept (2010)," NATO, (at Lisbon, POR: NATO HQ, 19 NOV 2010), at < https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_publications/20120214_strategic-concept-2010-eng.pdf >, p. 29.

[&]quot;NATO 2022 Strategic Concept," NATO, (at Madrid, SPA: NATO HQ, 29 JUN 2022), at < https://www.nato.int/nato_static_fl2014/ assets/pdf/2022/6/pdf/290622-strategic-concept.pdf >.

[&]quot;Enlargement and Article 10," (12 APR 2023), at < https://www.nato.int/cps/en/natohq/topics_49212.htm >.

If countries seeking NATO membership could demonstrate that they had a functioning democratic political system, a market economy, and a commitment to the peaceful resolution of conflicts, they could apply for accession. Thus, membership in NATO was extended to former Warsaw Pact and Soviet Republics that at once wished to pursue self-determination while leveraging association with the Alliance as a vehicle for "military reform."

Codified in Article 10 of the Washington Treaty, NATO's 'open door policy' has resulted in the growth of the Alliance from the 12 founding members in 1949 to today's 31 members through nine iterations in 1952, 1955, 1982, 1999, 2004, 2009, 2017, 2020 and 2023.³⁹ Significantly, the Alliance invited Czechia, Hungary, and Poland to begin accession talks at the Madrid Summit in 1997. The first former members of the Warsaw Pact to join NATO in 1999, these countries paved the way for Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia to begin accession talks at the Alliance's Prague Summit in 2002 and subsequent accession in 2004.

Following the Bucharest Summit in April 2008, several Western Balkan countries joined the Alliance, including Albania and Croatia in April 2009, Montenegro in June 2017, and the Republic of North Macedonia in March 2020. Subsequently, three partner countries – Bosnia and Herzegovina, Georgia, and Ukraine – declared an intent to seek NATO membership. It is noteworthy that neither Finland – which joined NATO on 4 April 2023 – nor Sweden had embarked upon the accession process before they were incentivized to do so by Russia's illegal invasion of Ukraine in February 2022.

I.C.3 - NATO Member Force Reduction

NATO enlargement did not equate to a greater threat to Russia. The Alliance instead held sacrosanct its commitment to reduce tensions with Russia and to moderate NATO force posture accordingly. After the demise of the Soviet Union, the personnel strength and conventional warfighting capacity of the Alliance plummeted dramatically.

The chart at Fig. 8 demonstrates the abrupt decline in NATO member force strength in the 30 years following the end of the Cold War.⁴⁰ Except for former Warsaw Pact and Soviet Republic members – whose troop strength grew modestly between 1992 and 2022 – all NATO members compressed their force structures, resulting in 35% fewer soldiers in an alliance that had added more than a dozen new members. NATO members also hacked away at their conventional warfighting capabilities – in some cases to shockingly low levels. Germany, France, the UK, and Belgium, for example, almost completely divested themselves of heavy armor, resulting in 65% fewer tanks in the NATO alliance. The reduction of artillery (55%) and combat aircraft (41%) since 1992 has been only slightly less severe.

NATO strategic guidance deliberately treated the Alliance's "eastern flank" as a sideshow throughout the early 2000s. Not only did this mindset result in precipitous force reductions, but NATO activities were also curtailed to limit the possibility of a misunderstanding with Russia.

[&]quot;The North Atlantic Treaty," NATO, (at Washington, US: NATO HQ, 4 APR 1949), at < https://www.nato.int/cps/en/natolive/official_texts_17120.htm >.

⁴⁰ Notwithstanding massive cuts to the conventional warfighting capacity of NATO, defence spending has grown over the same period as a result of inflation, the costs of emerging technologies, and the growth of exquisite niche enabling capabilities such as SOF, intelligence, and cyber forces.

From the end of the Cold War until Russia's unprovoked annexation of Crimea in 2014, the NATO Alliance conducted virtually no high-level joint exercises and certainly none that were Russia-facing. NATO instead focused on lower-level Partnership for Peace initiatives "...to promote closer military cooperation and interoperability between NATO and non-NATO countries in the Euro-Atlantic area." 41

Joint training – when it was conducted – was staged on the periphery of NATO's central front. Exercise COLD RESPONSE, for example, was a Norwegian-hosted event and was predicated on the deployment of NATO partners to re-establish security in the fictional country of "Asando." It was only after Russia's illegal annexation of Crimea that NATO resurrected the use of collective defence scenarios in joint training.

NATO Expansion & Member Force Reduction 1992-2022 TROOPS TANKS ARTILLERY COMBAT AIRCRAFT NATO Mer 25 15 22 100 30 30 48 797 377 27 31 410 114 75 0 31 41 12 70 0 141 33.2 25.6 er SOVIET REPUBLICS 70 34 ESTONIA LATVIA NATO 786 2762 1174 284 1228 183 143 1879 216 161 ITALY 33 25 27 122 0.8 93 32 58 217 590 293 402 148 878 2386 715 211 129 838 3928 1318 172 50 198 485 332 2783.8 1800.9 TOTALS FOR ALL EUROPE 2783.8 2262 2112.8 1814.1 19423 13332 10371

Fig. 8: NATO Expansion and Member Force Reduction (1992-2022)

NATO operations over the same timeframe were also characterized by the Alliance's commitment to defending human rights, preventing genocide, and defeating transnational terrorism. Yet, Putin viewed all NATO interventions with skepticism and as an afront to Russian influence globally. NATO's air campaign and stabilization mission in Kosovo in 1999, for example, threatened to become a Russian-NATO flashpoint and materialized into a long-standing foundational grievance against the Alliance. Angry by Western intrusion on Russia's perceived sphere of influence in Serbia, Putin opposed war crimes tribunals for Serbian leaders and blocked

[&]quot;NATO Exercises," NATO, (at Brussels, BEL: NATO HQ, 4 JUL 2022), at < https://www.nato.int/cps/en/natohq/topics_49285.htm >.

UN recognition of Kosovar independence in 2008.⁴² Nevertheless, with the exception of NATO activities in the Balkans, the Alliance expended most of its energy and resources on counterinsurgency operations in Afghanistan and build partner capacity efforts in Iraq – well outside of any geographic buffer that Putin might deem necessary for the security of the Russian Federation.

Paradoxically then, NATO's commitment to the self-determination of all states, genuine offer to partner with former adversaries – including Russia – and pre-occupation with leveraging NATO enlargement to eliminate Warsaw Pact excess, reform defense establishments, and save money for struggling economies resulted in an Alliance that had more members but became significantly weaker militarily. In that context, it is not clear whether Putin's use of the NATO threat as a pretext to invade Ukraine is propaganda or proof of his delusion, nor is it evident which of the two is more dangerous.

I.D. – MYTH OF NATO THREAT

In Vladimir Putin's public statements rationalizing his unprovoked full-scale invasion of Ukraine, NATO expansion as a military threat to Russia has been repeatedly cited as the cause celebre for Russian aggression. As early as the 2007 Munich Security Conference, for example, the Russian leader fired a shot across the bow of NATO expansion, even though he himself admitted the admission of new members was not of military significance:

I think it is obvious that NATO expansion does not have any relation with the modernization of the Alliance itself or with ensuring security in Europe. On the contrary, it represents a serious provocation that reduces the level of mutual trust. And we have the right to ask: against whom is this expansion intended?⁴³

Putin's real concern was not about military reform and reductions in the forces of NATO or former Warsaw Pact but in preventing the peoples in the areas of the former Russian empire from having a security umbrella inhibiting influence, intimidation and/or intervention by Moscow under the guise of protecting ethnic Russians.

He was even more explicit a year later at the 2008 NATO Summit:

... in Ukraine, one third are ethnic Russians. Out of forty-five million people ... seventeen million are Russians. There are regions, where only the Russian population lives, for instance, in the Crimea, 90% are Russians.... If we introduce it into NATO ... it may put the state on the verge of its existence ... when deciding such issues, realize that we have there our interests as well...Well, seventeen million Russians currently live in Ukraine. Who may state that we do not have any interests there? South of Ukraine, completely, there are only Russians.⁴⁴

This hinted at an ambition to reunify not only the Russians in Crimea but in the south of Ukraine that were prescient and unabashedly threatening the very existence of Ukraine.

⁴² Cameron Abadi, "The Small War That Wasn't. Why the Kosovo Conflict Still Matters Today." FOREIGN POLICY, (2 JAN 2019), at < https://foreignpolicy.com/2019/01/02/the-small-war-that-wasnt/>.

Vladimir Putin, "Speech," at the Munich Conference on Security Policy, OFFICE OF THE PRESIDENT OF RUSSIA: EVENTS, (10 FEB 2007), at < http://en.kremlin.ru/events/president/transcripts/24034 >.

Vladimir Putin, "Speech," at the NATO Summit, Bucharest, UNIAN, (2 APR 2008), at https://www.unian.info/world/111033-text-of-putin-s-speech-at-nato-summit-bucharest-april-2-2008.html.

While mobilizing and deploying the full weight the Russian armed forces to the borders of Ukraine, Putin, made it clear that the threat of direct aggression was a coercive demand:

... we spoke out clearly and directly against any further eastward expansion by NATO. The ball is in their court. They need to respond in one way or another.

In this connection, we have made it clear that any further movement of NATO to the East is unacceptable. Is there anything unclear about this?

It is you who have come to our border, and now you say that Ukraine will become a member of NATO as well. Or, even if it does not join NATO, that military bases and strike systems will be placed on its territory under bilateral agreements. This is the point. And you are demanding guarantees from me. It is you who must give us guarantees, and you must do it immediately, right now....⁴⁵

On the virtual one-year anniversary of his invasion of Ukraine, Russian President Vladimir Putin delivered an address to the Federal Assembly railing against "the expansion of NATO" during which warned the assembled lawmakers of the State Duma, members of the Federation Council, regional governors:

They are not going to stop. The threat continues every day.

The aim is to seize these historically Russian lands from us.

The elite of the West does not conceal their ambitions, which is to strategically defeat Russia.... The United States and NATO quickly deployed their army bases and secret biological laboratories near Russian borders. They mastered the future theatre of war during war games, and they prepared the Kiev regime which they controlled and Ukraine which they had enslaved for a large-scale war.

Let me reiterate that they were the ones who started this war, while we used force and are using it to stop the war.

We are not at war with the people of Ukraine.

Responsibility for inciting and escalating the Ukraine conflict as well as the sheer number of casualties lies entirely with the Western elites....⁴⁶

The evolution of Putin's comments over a fifteen-year period shows a constant complaint about NATO expansion, but it is not directed to a growing miliary challenge, all the statistics show that prior to his arrival on the scene, every category of military capability of both old and new NATO Members with forces in Europe were going through major force reduction.

This clash is not about a military threat to Russia or the "tragedy of great power politics" in an East European vacuum. At its core, NATO enlargement was not a military but political threat to Russia. In promoting national self-determination and offering membership in a voluntary collective security association NATO directly, if unintentionally, threatened any one's dream of re-establishing the Russian Empire. In retrospect, 1999 was the turning point – with the arrival of a new Russian leadership bringing back military planning and preparation for direct conflict as well as a belated response by NATO to increase Member defenses.

Vladimir Putin's annual news conference," PRESIDENTIAL EVENTS, (Moscow, RUS: Office of the President of Russia, 23 DEC 2021), at < http://en.kremlin.ru/events/president/news/67438 >.

[&]quot;Presidential Address to Federal Assembly," PRESIDENTIAL EVENTS, (Moscow, RUS: Office of the President of Russia, 21 FEB 2023), at < http://en.kremlin.ru/events/president/news/70565 >.

Horrible, hairy, human, with paws like hands in prayer, Making his supplications rose Adam-zad the Bear! I looked at the swaying shoulders, at the paunch's swag and swing, And my heart was touched with pity for the monstrous, pleading thing.

Touched with pity and wonder, I did not fire then...
I have looked no more on women -- I have walked no more with men.
Nearer he tottered and nearer, with paws like hands that pray -From brow to jaw that steel-shod paw, it ripped my face away!⁴⁷

II. PUTIN'S IMPERIAL AMBITION AND THE RETURN OF A RUSSIAN "THREAT"

The turning point in Russian-NATO relations was 1999 with the ascension to power of Vladimir Putin. Over the next fifteen years, he drove the restructuring of the Russian Armed Forces with particular emphasis on redesigning the ground forces for an imperial mission – called "New Generation War" – targeted on candidate countries desiring NATO membership.

This section will review Putin's strategy and the force he designed to implement it, which had some success against smaller and unprepared targets, but latent weaknesses and compromises imbedded in Russia's ground force design have proved disastrous during the last 16 months of war in Ukraine.

II.A. - IMPERIAL AMBITION

The rise of Vladimir Putin presaged a stall and retrenchment in Russia's democratic reform, but the actions were incremental, and the negative consequences were often below the radar of Western attention or tolerated because they did not seem to have security implications. Thus, the enrichment of his personal oligarchic kleptocracy,⁴⁸ decline in freedom of the press,⁴⁹ repression of political opposition and assassination of opponents⁵⁰ tended to be overlooked as American diplomatic interests and European business stakes found it

Rudyard Kipling, "The Truce of the Bear," (Mumbai, IND: Poetry collection, 1865), at https://www.poetry.com/poem/33590/the-truce-of-the-bear.

⁴⁸ Karen Dawisha, PUTIN'S KLEPTOCRACY: WHO OWNS RUSSIA? (New York, NY: Simon & Schuster, 2015).

Since Putin's Presidency, dozens of journalists have been killed under highly suspicious circumstances; new laws introduced in 2014 extended the state control over mass media via censorship, denial of entry and deportation of foreign journalists, criminalization of "fake news" and prosecution of publications with "unreliable" information or showing "disrespect for society, government, state symbols, the constitution and government institutions." After Russia took control of Crimea, the Russian parliament passed a law making it a criminal offense to question Russia's territorial integrity within what the government considers its borders. See NEWSWEEK (26 FEB 2022) at < https://www.newsweek.com/russia-tells-media-delete-stories-mentioning-ukraine-invasion-1682973 >.

Catherine Belton, PUTIN'S PEOPLE: HOW THE KGB TOOK BACK RUSSIA AND THEN TOOK ON THE WEST, (New York, NY: Farrar, Straus and Giroux, 2020).

expedient to offset political negatives with arms control negotiations⁵¹ and economic profits. The growing availability of Russian energy resources for Europe as a replacement for unpopular nuclear energy and dependence on volatile Middle Eastern sources compounded this trend.⁵²

Similarly, previous Russian military moves against adjacent areas were often rationalized in the West as merely proactive or prophylactic actions involving local instability whether in the Chechen wars of the 1990s; salami tactics in South Ossetia, or spanking Georgia in 2008.⁵³ Less plausible but nonetheless convincing to many was the occupation of Crimea by "little green men" accompanied by an obviously faked referendum.⁵⁴ Even the orchestration and fueling of the "hybrid war" in Donbas by arming surrogates was excused as merely a reaction to the collapse of the puppet Yanukovych regime. Thus, these military actions either did not seem oriented towards the West (as in Chechnya) or limited (as in Georgia) or historically rationalized (as in Crimea) or sub-rosa (as in Donbas) as if Russia was an honest broker in resolution of ethnic conflict of their own fueling.

In the lead up to the Donbas fighting of 2014, there were occasional hints by Putin himself of a more grandiose ambition than merely helping local Russians. This was his vision of a mythical Novorossiya – the area of southern Ukraine that today includes Crimea and the oblasts of Dnipropetrovsk, Donetsk, Kharkiv, Kherson, Luhansk, Mykolaiv, Zaporizhzhya – extending from the current eastern border with Russia all the way to Transnistria. When Russian forces were stalemated at the bloody battle of Debaltseve in 2015, Putin backed off and focused on protecting the incremental gains with the Minsk II Ceasefire knowing that eventually his broader offensive – whether political, diplomatic or military would eventually resume.

The graphic below illustrates Putin's 'playbook' for the dismemberment of Ukraine to achieve his vision of Novorossiya. Though he consistently cited the protection of Russophiles and the threat of NATO enlargement as the imperatives to expand Russian influence into Ukraine, his true objectives were imperial in nature and included his desire to seize the defense industrial complex, farmlands, minerals, and maritime ports resident in the eight oblasts of southeastern Ukraine. In central Ukraine, Putin sought a neutered and pro-Russian government – dependent economically and militarily on Russia, while simultaneously rejecting NATO and the EU. To placate the anxieties of Ukraine's neighbors in the region, the Russian President was even prepared to offer the remaining spoils as a

[&]quot;Obama tells Russia's Medvedev more flexibility after election," REUTERS, (26 MAR 2012): https://www.reuters.com/article/us-nuclear-summit-obama-medvedev/obama-tells-russias-medvedev-more-flexibility-after-election-idUSBRE82P0JI20120326.

⁵² Stylianos A. Sotiriou, RUSSIAN ENERGY STRATEGY IN THE EUROPEAN UNION, THE FORMER SOVIET UNION REGION, AND CHINA, (Lanham, MD: Lexington Books, 2014).

[&]quot;For our Georgian friends, of course, it [joining NATO] is one means to restore their territorial integrity.... To solve these problems, they need not to enter NATO, they should have patience..." Five months later, Russia attacked Georgia. Vladimir Putin "Text of Speech: NATO Summit," UNIAN, (2 APR 2008) at < https://www.unian.info/world/111033-text-of-putin-s-speech-at-nato-summit-bucharest-april-2-2008.html >.

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⁵⁴ Mark Galeotti, PUTIN'S WARS: FROM CHECHNYA TO UKRAINE, (London, UK: Bloomsbury Publishing, 2022).

Vladimir Putin, "Speech," at the Munich Conference on Security Policy, PRESIDENTIAL EVENTS, (Moscow, RUS: Office of the President, 10 FEB 2007) at < http://en.kremlin.ru/events/president/transcripts/24034 >.

Putin's 2014 "Novorossiya" Gambit to Dismember Ukraine Russian General Staff LIST of Defense Facilities (2014) "Rump "Neutered" Ukraine Ukraine **Pro-Russian Government** Gift to NATO **Economic & Military Ally** or Poland as No NATO, No EU "Compromise" **Small Army Limited Autonomy** Population in 2013 Identifying Themselves as Ethnic Russians "Rump" Ukraine 6 Oblasts (4%) Neutered" Ukraine 8 Oblasts (8%) *orossiyha"* 8 Oblasts (24%) Zakarpattia 1 Oblast (1%)

'gift,' in exchange for tacit acceptance of Russian imperium.

Crimea (65%)

Fig. 9: "Novorossiya" and the Dismemberment of Ukraine

But Putin's strategic ambition has always been much grander. He envisions the restoration of the Russian Empire that includes Finland, Estonia, Latvia, Georgia, Lithuania at least half of Poland, Slovakia, Romania, Belarus, Ukraine, and former Soviet republics to the South and East. The argument being that while these individual social entities – each with their own unique history, culture, and language – have the right to exist as "peoples" but only as subjects in the Russian Empire and not as truly sovereign states. Those who would dare to resist are labeled "Nazis" which has nothing to do with ideology but is merely a synonym for demonized opponents considered beyond the pale of international law, human rights, or even mere existence. Their subjugation can be carried out with all available means including a level of brutal violence and malicious cruelty long banned by civilized nations. This level of barbarity inflicted on a civilian population isn't hidden out of embarrassment but instead flaunted as the "extinction of vermin" necessary for the cleansing of the empire.

It is facile to blame the would-be Czar as just a "crazy guy" with sociopathic megalomania because clearly there are a not insignificant number of Russian political and social nomenklatura who share an imperial ambition and genocidal attitude toward subjects of their imaginary imperial domain who have the temerity to resist their beneficence. The appeal to Russian Xenophobia – a toxic combination of deep seeded insecurity and culture of bullying behavior – may not only allow Putin's regime to be able to weather serious

Ishann Tharoor, "Putin makes his Imperial Pretensions clear," WASHINGTON POST, (13 JUN 2022): < https://www.washingtonpost.com/world/2022/06/13/putin-imperial-russia-empire-ukraine/ >; see also, Amy Cheng & Reis Thebault, "Putin Likens Himself to Peter the Great, links Imperial Expansion to Ukraine War," WASHINTON POST, (10 JUN 2022): < https://www.washingtonpost.com/world/2022/06/10/russia-putin-peter-thegreat-ukraine-war/?itid=lk_inline_manual_9 >.

international approbation and military embarrassment but also transcend his passing as a significant influence on Russian behavior in the future. Whether its Putin's expansionist imperial agenda or less ambitious successors willing to use force to enforce an archaic presumption of divine right to a sphere of influence, the best way to "paper train" the bear for civilized habitation is to ensure that other neighboring countries' sovereign terrain is sacrosanct and Russian use of force to change the status quo produces decisive battlefield defeat.

II.B. - RUSSIAN 'HYBRID WARFARE'

Sensitive to Putin's insecurities, the Western Alliance treaded carefully in the new millennia. Russia for its part could have benefited from the closer collaboration offered by the West, but Russian declaratory policy in the late 1990s and early 2000s – codified in Russia's National Security Concept – steered in the direction opposite of NATO's strategic guidance of the day.

Instead, the National Security Concept articulated fundamental threats to Russia, which included above all, NATO's eastward expansion and the "possible emergence of foreign military bases and major military presences in the immediate proximity of Russian borders." Not only did this national strategy seek to counter NATO Enlargement, but it also set explicit objectives to strengthen Russia's position in Europe, the Middle East, Transcaucasus, Central Asia, and the Asia-Pacific region.

Russian military and diplomatic behavior soon reflected the imperium of its President and, through its actions, Russia subsequently abrogated the commitment it had made in the 1997 NATO-Russia Founding Act, which included a pledge of, "…respect for sovereignty, independence and territorial integrity of all states and their inherent right to choose the means to ensure their own security…"58

As the timeline at Fig. 10 demonstrates, Vladimir Putin employed all instruments of Russian national power to harass, bully, and threaten the NATO allies and partners with a litany of "dirty deeds" conducted just below the threshold of visible conflict – his goal being to manufacture threats for a tale of NATO hostility towards Russia and former Soviet states.

From February 2002 onwards, for example, Russia persistently harassed Estonia, Latvia, and Lithuania as these Baltic Republics sought NATO accession. It presented to Estonia a list of demands to be fulfilled by Estonia in order to "improve" the relations of the two countries, including making Russian an official language in specific regions and officially registering the Russian Orthodox Church. Demonstrating increasingly bellicose behavior, Russia launched in 2007 a debilitating cyber-attack on Estonian organizations, including the Estonian parliament, banks, ministries, newspapers and broadcasters, and sought to foment unrest by disrupting oil and coal exports to Estonian ports.⁵⁹

[&]quot;2000 Russia National Security Concept," ARMS CONTROL, (JAN 2000), at https://www.armscontrol.org/act/2000-01/features/russias-national-security-concept.

[&]quot;NATO-Russia Founding Act," NATO, (at Paris; Brussels, BEL: NATO HQ, 27 May 1997), at https://www.nato.int/cps/su/natohq/ official_texts_25468.htm>.

⁵⁹ Ian Traynor, "Russia Accused of Unleashing Cyberwar to Disable Estonia," THE GUARDIAN, (17 MAY 2007), at https://www.theguardian.com/world/2007/may/17/topstories3.russia.

THE POTOMAC FOUNDATION

Fig. 10: Post-Cold War Military Timeline

Russian Activity		NATO Activity
Nov 90: CFE Treaty Signed by Russia	1990	
Nov 90: Russian support to Moldovan		
secessionists in Transnistrian War		
Feb 91: Demise of Warsaw Pact	1991	Sep 91: US TNW reduction
Sep 91: Russian TNW reduction		Nov 91: NATO Strategic Concept 1991 seeks to
		improve collaboration with Russia
	1992	1992-2004: NATO presence in Balkans
Jul 93: Russia sanctions Estonia for 'violating	1993	
human rights' of Russophobes		
Aug 93: Russia leaves Lithuania		
Aug 94: Russia leaves Latvia and Estonia	1994	Jan 94: NATO establishes Partnership for Peace to enhance practical bilateral cooperation between NATO and partner countries.
Dec 94: First Chechen War		•
	1997	May 97: NATO-Russia Founding Act
		July 1997: NATO extends membership to Czech,
		Hungary, Poland
Jul 98: Putin appointed Director FSB	1998	
Mar 99: Putin appointed Security Council Secretary	1999	Mar 99: NATO airstrikes in Kosovo
Jun 99: Russian troops occupy Pristina Airport. Flashpoint with NATO KFOR		Apr 99: NATO Strategic Concept 1999 committed to developing relations with Russia
Aug 99: Putin appointed Prime Minister. Second Chechen War		Jun 99: NATO KFOR enters Kosovo
Sep 99: Putin establishes ZAPAD-1999 exercise, including Russian invasion of Baltics and use of nuclear weapons on Poland. Russia introduces 'escalate to de-escalate' as a military concept Dec 99: Russia's National Security Concept		
articulated fundamental threats to Russia, which included above all, NATO's eastward expansion and the emergence of foreign military bases in Russia's near-abroad		
Mar 00: Putin elected President.	2000	
Jun 00: Russia-China denounce US missile defense		
	2001	Op EAGLE ASSIST – response to 9/11 attacks on
		the US, the only time NATO has invoked Article V.
	2002	NATO-Russia Council established
		2002-2021: NATO in Afghanistan
	2003	Op DISPLAY DETERRENCE – strengthen Turkish
		defenses from potential Iraqi threat.
Apr 04: Latvia expelled Second Secretary of the	2004	Mar 04: Bulgaria, Estonia, Latvia, Lithuania,
Russian Embassy	_001	Romania, Slovakia, and Slovenia join NATO
2004: Pro-European Ukrainian leader Viktor		2004-current day: NATO build partner capacity
Yushchenko poisoned.		in Iraq
Russia attempts land grab in Kerch Strait and		
agents attempt to provoke Crimean succession		
- O	2005	Apr 05: NATO invited Ukraine to begin an
	2000	'intensified dialogue' on Ukraine's aspirations to membership.
		NATO humanitarian ar archi ara in the HC
		NATO humanitarian operations in the US
	2006	(Hurricane Katrina) and Pakistan (earthquake).
	2006	Ex COLD RESPONSE – exercise NATO response
Ann Mar 07 December and a 11 December 1	2005	and stability operations on northern flank.
Apr-May 07: Russian cyber attack on Estonia and disrupts energy exports	2007	

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Feb 07: Putin Munich Security Conference speech		
denouncing NATO enlargement		
Aug 08: Russia used its armed forces to establish	2008	NATO-Ukraine Commission agrees to assist
the disputed breakaway states South		Ukraine with reforms needed for its aspirations
Ossetia and Abkhazia following the Georgia War.		of joining the Alliance.
Aug 08: After being installed as President by Putin,		
Dmitry Medvedev challenged US unipolarity and		
established a privileged sphere of influence in		
Russia's near abroad		
Sep 09: Russia conducts ZAPAD-2009 exercise of	2009	Apr 09: Albania and Croatia join NATO.
war in central region with NATO and first use of		
tactical nuclear weapons.		Exercises include COLD RESPONSE, LOYAL
1		ARROW (NATO Response Force exercise in
		Sweden), and Cooperative Lancer (PfP exercise
		in Georgia)
2010: Ukrainian/Pro-Russian President	2010	Nov 10: NATO Strategic Concept 2010 focused
Yanukovych terminates process for Ukraine to join	2010	on protecting domestic populations against
NATO		attacks from non-state actors.
INATO		Ex COLD RESPONSE
Any 10. Doliah Dragidant Look Vagnyághi wag billad		EX COLD RESPONSE
Apr 10: Polish President Lech Kaczyński was killed,		
along with 95 others, in a plane crash while moving		
to the 70th anniversary of the Katyn massacre.		
Then Emergency Situations Minister, Sergei Shoigu,		
was dispatched to Smolensk to investigate.		
	2011	Op UNIFIED PROTECTOR – no-fly zone Libya
	2012	Ex COLD RESPONSE
Sep 13: ZAPAD 2013, exercise against NATO in	2013	Feb 13: NATO DEFMINs agree to revitalize NATO
Belarus testing "New Generation Warfare" with		joint exercise programme.
regular and hybrid forces		
Oct 13: Russian bombers detected over the Gulf of		Nov 13: Ex STEADFAST JAZZ - NRF readiness
Finland. They carried out mock attack runs against		exercise in Baltics and Poland
Poland, the Baltic countries and Sweden		
Nov 13: Russia coerces Ukraine to abandon EU		Nov 13: NATO missile defense facility opens in
Free Trade Agreement		Romania
2013: 'New Generation Warfare' and 'Gerasimov		
Doctrine' first enunciated		
2014: Putin launched his concept of the historic	2014	Op RESOLUTE SUPPORT – training advisory
Novorossiya, giving legitimacy to the nascent		Afghanistan
separatist movement when he described the		Tighamstan
Donbas as part of the historic "New Russia"		
Feb-Apr 14: While denying it, Russia annexed		Ann 14, NATO reassurante massuras ta include
		Apr 14: NATO reassurance measures to include
Crimea and sponsored proxy-war in Donbas		enhanced air policing and stronger SNMG.
Jun 14: Russia deployed trained fighters, organized		
into BTGs, into Ukraine		0 44 NATIO 1 1 2 2 2 2
Sep 14: After defeat from Ukrainian counterattack,		Sep 14: NATO declares at Wales Summit,
Russia agrees to Minsk I ceasefire		represent a new challenge to the NATO vision
		of a peaceful, united, and free Europe.
Sep 14: <u>Estonian Internal Security</u>		
Service official Eston Kohver was abducted at		
gunpoint at a border checkpoint by Russian forces		
and taken to Russia		
Oct 14: Russia deploys modern weaponry for 20+		Significant augmentation to Military Training
BTGs in Donbas		and Exercise Programme.
Nov 14: Russia re-established demobilized 1st		NATO released the Readiness Action Plan, which
Guards Tank Army, and deployed elements North		included the stand-up of the Very High
of Ukraine		Readiness Joint Task Force
Dec 14: Russia carried out a military drill in		2014: NATO suspends all cooperation with
nearby <u>Kaliningrad</u> with 55 naval vessels and		Russia given the latter's aggression in Ukraine
9,000 soldiers, causing Lithuania to re-establish		and egregious behavior throughout Europe
military conscription		

In 2008, after then-Russian President Dmitry Medvedev laid out a foreign policy challenging the US-dominated "single-pole" world order and claiming a privileged sphere of influence around the Russian Federation, Russia used its armed forces and material support to help establish the disputed breakaway states South Ossetia and Abkhazia on the heels of the Georgia War.⁶⁰ Generally unchallenged by the international community for this aggressive conduct, it seems that Putin's planning for Ukraine sharpened markedly. Clearly, the pawn that he had in Ukrainian President Yanukovych set the conditions for greater Russian control of Ukraine when the latter terminated the process for Ukraine to join NATO.⁶¹

Whereas NATO troops were exercised on the "northern flank" of the Alliance using fictitious scenarios that could not be perceived as provocative to Russia, Putin had reinvigorated the suite of Russia's joint strategic exercises and was using training events as a form of coercive signaling against neighboring states, to test the readiness of strategic forces to launch nuclear strikes on the West, and to obscure the massing and preparation of troops for offensive operations.⁶²

It was not until 2013-2014 that NATO began to take seriously Russian belligerent actions and finally suspended all practical cooperation that had been mandated by the NATO-Russia Founding Act (later upgraded to NATO-Russia Council). By then, Russia had refused to enter dialogues with NATO on missile defense, the posture of the Russian Federation Army opposite Ukraine started to align to Putin's imperial vision, and Russian bombers were routinely detected carrying out mock attack runs against Poland, the Baltic countries, and Sweden.

II.C. – RECONSTITUTING A THREAT TO EUROPE

Buoyed by a resurgent Russian nationalism, Putin quickly gained military credibility by changing both Russia's politics and tactics in the second Chechen War. He bought off a third of the opposition, prohibited the use of conscripts in front line positions and introduced the Battalion Tactical Groups (BTGs) as an organizational solution to an inherent structural dilemma in the Russian Ground Forces.

Unable to finance a large force structure, the Putin "reforms" of the Russian military were focused on creating the Combined Arms Brigade (CAB) as a basic unit of maneuver and with the firepower and logistic support to be self-contained in low-intensity conflicts. This was generally in line with the approach of many armies including much of NATO and even China – but with one exception, the Russian CABs were heavier in firepower and significantly lighter in infantry. The traditional Soviet and Russian approach of having multiple echelons above the maneuver unit – Divisions, Corps, Armies, Fronts – was viewed as both wasteful in resources and not necessary for the types of security contingences Russia was likely to face.

Bobo Lo, "Medvedev and the New European Security Architecture," (3 AUG 2009), at https://www.opendemocracy.net/en/medvedev-and-the-new-european-security-architecture/.

Steven Pifer, "NATO's Ukraine Challenge: Ukrainians Want Membership but Obstacles Abound," BROOKINGS, (6 JUN 2019), at https://www.brookings.edu/blog/order-from-chaos/2019/06/06/natos-ukraine-challenge/.

[&]quot;Russian Military Exercises," (Washington, DC: Congressional Research Service, 4 OCT 2021), at https://sgp.fas.org/crs/row/IF11938.pdf>.

Putin engineered the first anti-NATO exercise since the end of the Cold War and as part of ZAPAD 1999 deployed several of the new style CAB formations westward into Belarus gaming out an intervention into the Baltic Republics. As part of that scenario, it was presumed that NATO would counter by moving forces eastward. By the end of the exercise the Russians notionally relied on tactical nuclear weapons to offset the limited staying power of their own maneuver forces, targeting the lines of communication crossing the Vistula bridges and striking Polish airfields serving as bed-down for forward deployed reinforcing western aircraft. Russia's conceptual logic was borrowed from NATO's 1950s playbook – that a smaller force equipped with low-yield nuclear weapons could offset a much larger opponent who was not equipped with front-line tactical warheads.

Following the apparent success of Putin's force structure construct in the second Chechen War, the first serious test was the brief Russian intervention against Georgia in 2008 but it was here that problems became evident in the new streamlined system. Conscripts represented 40 percent of the manpower of the maneuver Brigades. If they were not to be sent into combat it meant that at best a Brigade could only field one mechanized Battalion with professional contract enlistees albeit reinforced with a heavier allotment of armor, artillery and air defense sub-units manned by most of the remaining professional troops from the parent Brigade.

While the BTG had the maneuverability of a Battalion and organic firepower of a "mini-Brigade," they were weak in infantry with insufficient troops to man the sparse logistics trains or protect extended lines of communication. The complexity of putting that combination of multiple branch arms in a Battalion, with already small staffs commanded by a lieutenant-colonel of limited experience above battalion, meant that it could not be kludged together at the last minute in the way Western armies would cross-attach assets from one unit to another, but instead required months of training for commanders to make this composite unit operationally effective.

Notwithstanding the obvious challenges of the BTG concept, by 2014, Putin's military structural reforms were matched by doctrinal changes in an approach dubbed "New Generation War." Adopted by Russia's General Staff as a model of warfare that prioritizes the early and persistent use of informational and psychological methods to influence an opponent's behavior and achieve strategic objectives before committing to a costly and attritional campaign, it nonetheless left open the full spectrum of conflict to include major conventional operations and nuclear strikes.⁶³

New Generation Warfare is a combination of both asymmetric and modern forms of warfare, focusing on the weaknesses of an adversary. Since every country has fragilities to be explored, it is possible to employ these tactics in other circumstances.⁶⁴

Russia's Chief of the General Staff, General Valery Gerasimov, concurrently challenged his

⁶³ Col. S.G. Chekinov and Lt.Gen. S.A. Bogdanov, "The Nature and Content of a New Generation War," VOYENNA МЫСЛЬ, [Military Thought], no. 4, (2013): pp. 12-23.

Janis Berzins, "Russian New Generation Warfare: Implications for Europe," EUROPEAN LEADERSHIP NETWORK, (14 OCT 2014), at < http://www.europeanleadershipnetwork.org/russian-new-generation-warfare-implications-for-europe_2006.html >.

senior military leaders and strategists to rethink the Russian "way of war." ⁶⁵ His evolving methods of waging war included the following characteristics: ⁶⁶

- Blurring the lines between states of war and peace;
- Departure from traditional 'rules of war,' including the initiation and declaration of hostilities, thus rendering surprise and deception increasingly important;
- "The role of non-military means of achieving political and strategic goals has grown, and, in many cases, they have exceeded the power of force of weapons in their effectiveness;" 67
- Ubiquitous use of mass media to reduce the enemy's fighting potential and delude the opponent's military and political leaders;⁶⁸
- Significantly enhanced prominence of unmanned vehicles and robotic weaponry, and their use to cue high-precision fires.⁶⁹

"New Generation War" and Gerasimov's personal influence on Russian military doctrine ultimately underpinned the approach adopted by the Russian Armed Forces as they embarked on a mission to restore the Russian condominium over Eastern Europe, first targeting Ukraine and other candidate countries desiring NATO membership.

II.D. – FROM HYBRID CONFLICT TO MAJOR CONVENTIONAL WAR

The Russian direct interventions in Ukraine in 2014 and 2015 involved less than two-dozen BTGs and their lack of infantry was made up by local levees of separatists with logistics supplied by commercial trucking delivering even ammunition and fuel as far forward as the Battalion rear. While that seemed to work initially against the fledgling Ukrainian army, the Russian high command realized that as the intensity of combat increased it also became

V. V. Gerasimov, "Tsennost nauki v predvidenii [The value of science in forecasting], VOENNO-PROMYSHLENNYI KURER, August 2013. See also: Ulrik Franke, "War by Non--Military Means: Understanding Russian Information Warfare," (Stockholm, SWE: Swedish Defense Research Agency, 18 FEB 2015), p. 41.

For a detailed summary of Gerasimov's "forms and methods," see Phillip A. Karber, "Russian New Generation Warfare & Baltic Security," (Research Paper; McLean, VA: The Potomac Foundation, 12 SEP 2015).

[&]quot;The focus of applied methods of conflict has altered in the direction of the broad use of political, economic, informational, humanitarian, and other non-military measures -- applied in coordination with the protest potential of the population;" Gerasimov, op cit. Checkinov and Bogdanov, "New Generation Warfare," op cit: "Months before the start of a new-generation war, large-scale measures in all types of warfare – information, moral, psychological, ideological, diplomatic, economic, and so on – may be designed and followed under a joint plan to create a favorable military, political, and economic setting for the operations of the allies' armed forces."

⁶⁸ Gerasimov, op cit; ""information war is now the main type of war, preparing the way for military action." Dmitry Kieselev, As quoted in Peter Pomerantsev, "Inside Putin's Information War," POLITICO MAGAZINE, (4 JAN 2015).

[&]quot;Another factor influencing the essence of modern means of armed conflict is the use of modern automated complexes of military equipment and research in the area of artificial intelligence. While today we have flying drones, tomorrow's battlefields will be filled with walking, crawling, jumping, and flying robots. In the near future it is possible a fully robotized unit will be created, capable of independently conducting military operations. How shall we fight under such conditions? What forms and means should be used against a robotized enemy? What sort of robots do we need and how can they be developed? Already today our military minds must be thinking about these questions." Gerasimov, op cit.

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apparent and that the BTG had inadequate heavy fire support for major assault operations against a prepared defense and could not sustain the assets they had for more than several days. It was also concluded that given the combined-arms complexity of the BTGs that their training as an integrated unit needed to be extended from two to five months but in the process, the concept of a mission tailored unit became generalized to a broader range of combatant roles albeit without increased organic infantry and logistics.

The need for higher-echelon formations thus generated a series of new initiatives in the Western and Southern Military regions between 2015 and 2021. First, the cadred 20th Gds CAA headquartered in Moscow was assigned additional Brigades and several new Motorized Rifle Divisions (MRD), then redeployed 700 km south to Voronezh opposite eastern Ukraine. The famous 1st Guards Tank Army (GTA) was reconstituted and assigned the 2nd Gds MRD and prestige 4th Gds Tank Division (TD). Fleshed out with a full complement of troops and with newly established organic fire, air defense and logistics support sub-units, the 1st GTA was deployed on the Moscow-Smolensk axis.

The former 2nd Tank Army was reconstituted and brought up to 70% manning as a second echelon CAA. In the Southern Military region, the 8th Gds CAA was reformed at Rostov with several MRD and given command responsibility for the proxy separatist 1st Donetsk Corps (5 CABs) and 2nd Luhansk Corps (4 CABs) in the border areas of Eastern Ukraine. In Crimea the 22nd Corps was established with assigned Marine and Air Assault units and, after the opening of the Kerch Strait bridge, MRDs and CABs from the 49th and 58th CAA in the Caucasus served as a reinforcing reserve.

This massively increased force was first tested in the ZAPAD 2017 exercise covering the area between the Baltic and Black Sea, playing a scenario that included the invasion of all of Ukraine and battles in crossing the Polish, Latvian and Lithuanian borders with all of the above forces participating and also including the 6th Gds CAA at St. Petersburg, 12th Corps in Kaliningrad and Belarussian units joining the fray. This force was backed up with the 2nd Gds CAA taking a second echelon position and another Army level command under the notional title of 3rd Army commanding a composite force of CABs from the Central Military Region.

The southern force and units opposite Ukraine were practiced in the KAVKAS 2018 exercise. The following year the Central Military Region hosted an exercise with the 2nd Gds Army and notional 3rd Army reacting to a hypothetical contingency where a failed hybrid campaign was rescued by a traditional full-scale direct invasion. Russian and Belarussian forces practiced the integration of their forces against NATO and Ukraine in the Brotherhood 2020 joint exercises. ZAPAD was replayed in a series of rolling field exercises starting in early 2021 and running over the next nine months, again covering the area between the Baltic and Black Seas and most of the new higher echelon formations.

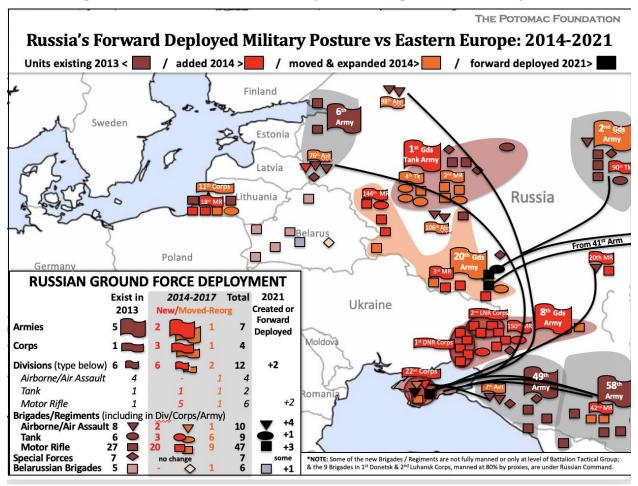


Fig. 11: Russia's Increased Military Posture Against Ukraine by 2021

Interestingly, during the Cold War the Soviet Army deployed five front-line Armies against NATO – the 1st Gds Tank Army, 2nd Gds Tank Army, 3rd Shock Army, 8th Gds CAA and 20th Gds CAA – in East Germany directly opposite NATO's front line. They were withdrawn from Eastern Europe in the early 1990s and demobilized. It does not appear accidental that, out of more than 60 historic Soviet Armies with battle honorifics, those five formations were the ones re-established opposite Ukraine and NATO. However, where those five armies in the Cold War were manned with more than 240,000 troops, their combined strength at the beginning of the current invasion was less than a third that number – the biggest shortages being in infantry and logistics personnel.

A force of eight Armies was within relatively short deployment time/distance to Ukraine by the end of 2021, with several of their sub-units conducting last minute hasty field training. Recognizing that they may not have enough troops for the task, it was decided in late December 2021 or early January 2022 to augment the invasion force but do so without calling up reserves or mobilizing the country. Thus, small numbers of BTGs were cut out from units in the Far East were hastily assembled, loaded on trains, and moved over 8,000 km across Russia.

The phrase '300 Spartans' evokes not only the ancient battle of Thermopylae, but also the large idea of fight for freedom against all odds... In universal terms, a small, free people had willingly outfought huge numbers of imperial subjects who advanced under the lash. More specifically, the Western idea that soldiers themselves decide where, how, and against whom they will fight was contrasted against the Eastern notion of despotism and monarchy.⁷⁰

III. RUSSIA'S WAR AGAINST UKRAINE

The "New Generation War" that started in 2014 with the occupation of Crimea and proxy war in the Donbas that provoked that statement now pales in comparison with the unabashed full-scale Russian 2022 invasion of Ukraine. Yet the inference is still the same – despite overwhelming evidence ranging from statements of intent to the most massive preparation for offensive invasion in Europe since 1945, Vladimir Putin was determined to start a war where the operational battleground was Ukraine, but strategic objective was nothing less than the West.

The Russo-Ukrainian War has been going on with varying levels of intensity for nine years. The direct Russian full scale invasion that started on 24 February 2022 has produced nearly 500 days of the most intense fighting seen globally in the last 80 years. Against all odds and in contradiction to the widespread expectation, Ukraine has not only met the Russian offensive but stopped it and pushed it back in three strategic directions.

Nevertheless, the losses continue to accumulate. While a cornucopia of Western ground force weaponry has been provided to Ukraine, much of which has provided a qualitative edge over the invader, nevertheless the diversity of systems adds complexity as well as training and maintenance challenges, and the quantity delivered has been much slower than needed or anticipated. Without an air force or longer-range strike weapons to offset Russian air superiority and their employment of more than 1000 long range ballistic and cruise missiles makes the conflict even more imbalanced than the existing asymmetry of the 'David vs. Goliath' land battle.

To understand the evolving conflict as well as anticipate and prepare for a future recovery, it is necessary in this section to understand the nature of Russia's operational defeats to date, Ukraine's capacity to mount a resilient defense moving forward, and potential outcomes to the recently launched Ukrainian counter-offensive.

III.A. – RUSSIAN SURPRISE AND OPERATIONAL DEFEATS

The Russian preparation for its invasion of Ukraine was impressive and equaled in its initial execution on 24 February 2022. The sheer scale and audacity were a shock to the West

Victor Davis Hanson, "History & the 300," (11 OCT 2006), at < https://web.archive.org/web/20090319045718/http://www.victorhanson.com/articles/hanson101106.html >.

excelled only by the unexpected failure of Russia's existing force structure to achieve either its initial or subsequent objectives.

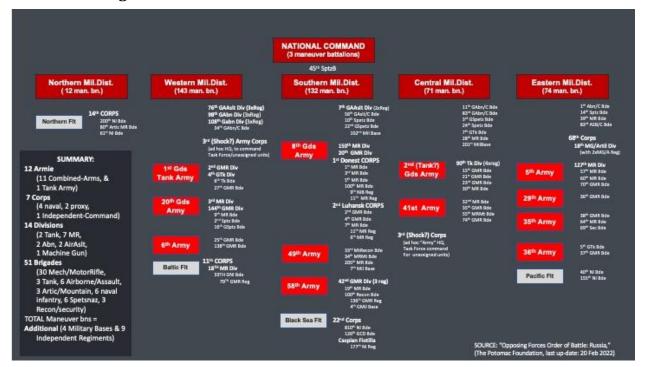


Fig. 12 - Russian Ground Force Pre-Invasion Order of Battle

As Russia was mobilizing and deploying its invasion force, it is natural that the units of the Southern and Western military districts that had armies closest to Ukraine but also intertwined with the conflict in the Donbas would be the first to arrive in offensive assembly points and commit the most BTGs to the fight. In the southern part of the Eastern front, opposite Donbas, was the 8th Guards Army, which had a full strength 150th Division plus an independent brigade and four full strength manoeuvre regiments (two motorized and two tank) for a total of nine BTGs committed in the first wave, the normal complement of fires and logistics support. This Russian army was interestingly responsible for the two subordinate separatist corps – the 1st Donetsk Corps, which had the offensive equivalent of five BTGs and the 2nd Luhansk Corps, which had four BTGs.

Above them in the center of the eastern front was the 20^{th} Guards Army, strung out along the border, with a newly formed 5^{th} Mechanized Division and independent brigade near the border, plus the 144^{th} Mechanized Division with units dispersed along the Ukrainian-Belarussian border – totaling approximately eight BTGs. North of them, but with elements deployed near the border was the 1^{st} Guards Tank Army, equipped with the two high-profile show divisions – the 2^{nd} Guards Motorized Rifle Division with at least four BTGs and the 4^{th} Guards Tank Division again with another four BTGs and an attached mechanized brigade. These forces were basically in an offensive posture by the end of 2021. Also reinforcing were manoeuvre artillery and support units from the Central Military District, which had rehearsed invasion plans for Ukraine in the Spring of 2021 and left much of their heavy equipment near the border when returning the troops back to the formations that were part of the 2^{nd} Guards Combined Arms Army and the 41^{st} Combined Arms Army.

As depicted in FIG. 13, with the forces described above in place between the end of 2021 and D-Day, Russia began deploying many BTGs from throughout the breadth of Russia, however, generally these were three to four BTGs from each army and not as heavily committed as the initial deployment force already along Ukraine's border. In the South, this included the 58th Combined Arms Army as well as naval infantry units from the Caspian Sea, whose assault landing craft had also been deployed and pre-positioned earlier. They were reinforced by additional deployments using Russian strategic airlift.

The 49th Combined Arms Army, which was also deployed in the Caucuses and was much closer to Crimea than the 58th Combined Arms Army, sent only four BTGs via Rostov to the vicinity of Mariupol. In this period, Russia was also reinforcing the combatant elements of Belarus, so several BTGs from the 7th and 103rd Airborne Divisions were deployed near Bryansk, but being West of the marshes, they had an opportunity to threaten the cut-off of access to the Western part of Ukraine. If combined with Belarussian units, this force could serve as an OMG.

Additional assets appeared along the Belarussian border as several BTGs from the $6^{\rm th}$ Combined Arms Army were sent south along with several BTGs from Murmansk and the Northern Military District just a few weeks before the invasion.

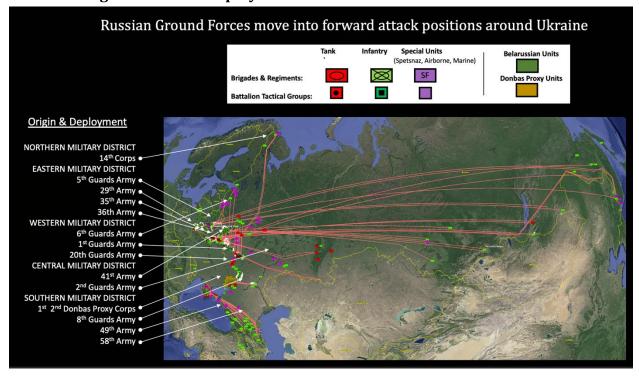


Fig. 13: Russia's Deployment of BTGs for the Invasion of Ukraine

In a surprise move, Russia brought BTGs from its far East Military District, including several from the 5^{th} , 35^{th} and 36^{th} Combined Arms Armies. One of the last forces to appear comprised additional units from the Central Military District, including the 2^{nd} Guards Combined Arms Army and the 41^{st} Combined Arms Army.

In summary, Russia's active force – with some 12 armies, five independent corps, 70+ independent brigades, and four airborne divisions – only produced approximately 150 BTGs. Of these, 120 BTGs were committed to the initial invasion on the morning of 24 February 2022.

It was this force structure that, when combined with hasty and imprudent decisions, produced the most surprising defeat of a major Army in a theatre offensive – comparable to Napoleon's debacle at Moscow or the Barbarossa campaign of 1941. Reminiscent of the latter, the invading force was attacking on three separate fronts simultaneously, but their respective defeats occurred sequentially. Those invading troops and units literally had the 'hell beat out of them.' After 16 months of combat, the existing Russian force structure in Ukraine was bled white and lost much of its offensive potential, as illustrated in the following set of maps.



Fig. 14: 2022 Failure of Russia's Strategic Offensive Against Ukraine

NORTHERN FRONT: The audacious campaign to decapitate the Ukrainian leadership and seize the Capital began to fail within the first three days. When the Government did not fall or flee, every Ukrainian in uniform and much of the population of Kyiv threw themselves into a fanatical urban battle. Russian attempts to take the city by light (albeit professional Special Forces and Airborne/Air Assault) infantry followed-up by armored heavy BTG advanced detachments were initially too light and too late to pull off such an ambitious coup de main.

In terms of the overall Northern Front, attacking across a frontage of more than 700 km and making armored penetrations up to a depth of 200 km, the strung-out formations were neither able to consolidate control of the terrain and population in their area nor linkup with others for decisive encirclements and the entire effort stalled in a strung-out posture unable

to offensively move forward or defensively protect their rear and important lines of communication. Almost as surprising – after a stall for more than a month – was the sudden Russia decision to abandon the entire Northern campaign, withdraw all the invading units under pressure, and redeploy the major elements of five Armies 300-600 km to the east so they could be recommitted to the slow-moving Eastern campaign. It was an action that resembled more a planned retrograde than chaotic retreat, nonetheless, a combination of periodic ambushes and broken down/abandoned weaponry robbed the invading units of up to a quarter of their initial combat capability while sapping troops of morale and officers of their offensive élan.

EASTERN FRONT: Before the Russian forces crossed the Ukrainian eastern border, they already had enormous operational advantage given the occupation of a significant part of the Donetsk and Luhansk oblasts. The forward offensive forces in the Donbas consisted of the 1st Donetsk Corps and the 2nd Luhansk Corps, both of which were under command of the Russian 8th Gds Army headquartered at Rostov, that had several thousand Russian officers in command positions as well as units equipped with reasonably modern Russian weaponry and manned by well trained and combat experience proxies. However, this front did not lend itself to easy or rapid penetration because the Donbas had been contested for the previous eight years and on both sides of the Line of Contact the forces were dug-in with heavily fortified positions in depth, backed up by large concentrations of zeroed-in artillery, mine fields and mobile reserves. North of the Line of Contact in the quadrant between the Siverskyi-Donets River, Kharkiv's eastern suburbs and the Russian border, the unoccupied areas did not have well prepared defensive positions.

Thus, during the first several months of the invasion while both Russian and Ukrainian forces were focused on the campaign in the north, the attacking forces made only modest progress and by late spring were facing significantly stiffened Ukrainian opposition. It is in this context that the redeployment from the north of the entire 1st Gds Tank and 20th Gds CAA along with elements of three other armies to this area tilted the correlation of forces in favor of the attackers and accelerated their capture of the rest of Luhansk and the eastern half of the Kharkiv oblasts. But as they approached Izyum, the offensive slowed to a crawl as it was met by reinforced Ukrainian forces also redeployed from the north as well as augmented by the infantry of Territorial Defense Force Brigades fighting in the urban areas that offset their vulnerability as light forces.

As battles waged week after week, the Russians paid dearly for every meter of ground they gained. So lethal these battles, toward the end of summer Russian forces were so badly depleted they could not hold onto the gains that had been so painfully won, when Ukraine picking up on that launched a counter-offensive with its most elite Air Assault brigades supported by Reserve Tank brigades. Unable to stem the tide and with all of their reserves committed the Russians were forced to fall back to the Oskil River line losing virtually their entire grip on Kharkiv oblast with the front.

SOUTHWESTERN FRONT: In the early days of the campaign the southwestern front was the area where Russian forces were not only able to make deep penetrations but unlike the pattern in the north, they were able to consolidate and keep the territory that they gained. Russian forces were able to immediately breakout across the Crimean causeways and focus their efforts on two major axes of advance. Turning to the east, the 58th Army took Melitopol,

the Zaporizhzhia nuclear power plant and then, driving along the Sea of Azov and reinforced by naval landing, hit Mariupol from the rear encircling the city and linking up with forces from the Central Front. With the Donbas line broken they began rolling up the defense line in the direction of Donetsk, but the heroic last stand of Ukrainian Marines and Azov volunteers at Mariupol took so much time and inflicted such high losses the 58th Army lost its offensive momentum by early summer.

On the other major axis, the 49th Army, reinforced with the 22nd Corps and additional Naval Infantry and Air Assault troops, took the Dnieper River bridge at Kherson on the first day of invasion and pushed forces forward trying to open the way to Odessa via Mykolaiv and toward Zaporizhzhia via Kryvyi Rih. But a combination of blown bridges and tenacious defense stopped both drives.

That was basically where things stood throughout the summer of 2022, but it was here that the Ukrainians launched their third major counter-offensive putting such heavy pressure on the overextended Russian units that they not only failed in breakthrough attempts but lost momentum all across the Southwestern Front, forcing Russia to commit almost all of its dwindling reserves of professional troops to stiffen resistance. With their line of supply across only two bridges and a dam further upriver, Russian forces on the West side of the Dnipro River faced the risk of having their already thin line of supply cut – a danger that became very real when Putin's favorite road/rail bridge over Kerch Strait was damaged. In the face of this Ukrainian counter-offensive, the Russian forces west of the Dnipro River evacuated Kherson in November 2022 and were withdrawn under pressure.

Until very recently, the entire front has remained largely static. Throughout the winter of 2022, Russian efforts to shatter the resolve of Ukrainians by targeting critical energy infrastructure throughout the country failed catastrophically. Rather, the missile attacks only stiffened the resolve of the Ukrainian people, and the humanitarian impacts of the Russia's campaign galvanized the international community in support of the victim. In recent months, both sides largely concentrated their efforts in a highly attritional and indecisive battle for Bakhmut – a Ukrainian city in the Donetsk Oblast that serves as a gateway to the operationally important cities of Slovyansk and Kramatorsk further west. At the time of writing this report, Russia retains tenuous control of Bakhmut but not its flanks, and the gain has come at cost of tens of thousands of soldiers. Currently, the Russian Federation Army seems incapable of breaking out from this wasteland and is instead focused on absorbing Ukraine's long-awaited counter-offensive, which is now underway.

Major factors that produced successive Russian defeats include:

• Delaying the start of the offensive to accommodate China's demand that their support of a Russian invasion must not come during the Beijing Olympics.⁷¹ A delay that combined with a warm winter produced the infamous effects of "General Mud" making off-road maneuver by tracked vehicles problematic and forcing wheeled Armored Personnel Carriers and Logistics trains to be road bound – thus inhibiting their off-road maneuver and increasing their vulnerability to ambush by Ukrainian massed artillery fires and the

The New York TIMES, (2 MAR 2022), at https://www.nytimes.com/2022/03/02/us/politics/russia-ukraine-china.html.

proliferated precision anti-tank weapons hastily supplied to Ukrainian forces by their Western allies.

- The relative lack of infantry in proportion to armor and artillery meant that Russian maneuver units were particularly vulnerable in built-up areas (both urban and suburban) or closed terrain where defenders in prepared positions were protected from being flanked. As the offensive stalled, Russian casualties accumulated and logistics support failed, the already overstretched infantry took disproportionate casualties and fell into a vicious circle of defeat and demoralization.
- The weakness in infantry and support personnel in general meant that there was insufficient protection for the logistic trains, artillery and air defense assets operating in unsecure rear areas. In the absence of sufficient field maintenance units, heavy equipment stuck in the mud, out of fuel or broken down were abandoned to the ignoble fate of being captured by the tractors of Ukrainian farmers.
- The 120 individual BTGs that were assembled for the invasion were cut out from nearly 80 separate Brigades and 40 Divisional Regiments, rapidly moved across Russia, and collated under the headquarters of 12 different Armies and five independent Corps in the middle of winter. This mélange was not coherently integrated above the Battalion level and thus what in normal Army structure would have produced a unified combined-arms assault instead meant multiple units were sent into combat simultaneously without mutual support or dribbled sequentially into uncoordinated battles.
- For widely dispersed forces overly dependent upon top-down communications the inverse of "mission command" turned into "mass confusion," with subordinates waiting for orders that were all too often absent, late, or inconsistent conveyed over secure nets that were crowded or, in desperation, sent via open channels that were frequently jammed or intercepted. This ad hoc structure proved to be tactically and operationally less than the sum of its parts when committed to a strategic offensive on three widely separated fronts.⁷²

III.B. - UKRAINE'S RESILIENT DEFENSE

War is a two-sided equation. No matter how mismanaged the Russian invasion ended up being it would have succeeded if it had not been for the unified heroic resistance of the Ukrainian population and the unexpected superior performance of the Ukrainian Armed forces, whose cumulative improvement over the previous eight years of conflict turned them into not only the largest but the most combat experienced in Europe.

Yet, Ukraine's success in this conflict was far from guaranteed. In the years leading up to the Russian invasion of Crimea in 2014, the Government of Ukraine downsized the Armed Forces and slashed the funding needed to train, equip, and compensate the professional soldiers and officers. Considering the shape Ukrainian forces had deteriorated to by 2014 after two decades of abject neglect, their resurrection as a fighting force since then has been nothing

42

Mykhaylo Zabrodskyi, Dr Jack Watling, Oleksandr V Danylyuk and Nick Reynolds, "Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February – July 2022," ROYAL UNITED SERVICES INSTITUTE, (30 NOV 2022), at https://www.rusi.org/explore-our-research/publications/special-resources/preliminary-lessons-conventional-warfighting-russias-invasion-ukraine-february-july-2022>.

short of miraculous.

2020).

As the Russian sponsored proxy insurgency spread in the Donbas with fifth column agents and Special Forces seizing territory in the undefended Donbas, the "separatist" resistance turned increasingly violent. On paper the Ukrainian ground forces had 14 Brigades with a theoretical strength of 55 maneuver battalions. Only a quarter of the latter were "ready" (defined as having at least two-thirds of required manpower and operable equipment). Moreover, only a handful of those "ready" battalions were deployed on the east side of the Dnieper opposite Russia. Thus, in the Spring of 2014, neither Western officials nor Russian leadership expected the Ukrainians to be able to fight for more than several days. Nevertheless, they mobilized, redeployed their forces to the east, repaired/upgraded old weaponry and simultaneously revised their warfighting doctrine, pivoted away from Russian influence in the Ukrainian defense sector, rebuilt their force and trained their troops in active operations over the next eight years.



Fig. 15 -Build-Up of Ukrainian Ground Forces (Post 2014)⁷³

By the start of the 2022 Russian invasion, the Ukrainian Ground Forces were comprised of approximately 170,000 personnel organized into 15 mechanized brigades and two armored brigades, all of which were dispersed throughout the country. The country's Air Assault and Airborne Forces were able to field an additional parachute brigade and four air assault

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Dr. Phillip Karber, "Reflection on Ukraine's War: Lesson for Building a New Generation Army," lecture: Ukrainian American Congress Committee conference, (New York, NY, 17 JAN 2017); and Dr. Phillip Karber, "Ukraine's Security & Independence," lecture: Ukrainian American Congress Committee, (Chicago, IL, 26 JAN

brigades, and Ukraine's re-generated Soviet style naval infantry brigade lost in the 2014 Crimean occupation replaced with two Marine brigades heavily influenced in design and training by their close ties to the United States Marine Corps. Backstopping these 23 combined arms tactical formations were six Reserve maneuver brigades (three armor and three mechanized), as well as 22 brigades of the nation's fledgling Territorial Defense Forces.

Although not generally recognized, at the beginning of 2022, this Ukrainian force structure was the strongest active ground force in Europe — it was larger, had a higher state of combat readiness with officers and NCOs having far more combat experience than the Armies of the last ten countries to join NATO combined. There are certainly none that better understand the way of war of the Russian Army – its strengths and weaknesses. Why have the Ukrainians done so well?

- Their commanders have eight years of combat experience they have a good appreciation
 of Russian tactics/operations as well as their own limitations. The war has also weeded
 out old style "sit behind the desk" managerial style officers afraid to take initiative and
 waiting for top-down guidance. This new generation of Ukrainian leaders know their
 troops, the terrain, and they lead from the front.
- The Ukrainians have developed their own version of "mission command" with initiative inculcated from the bottom-up that makes their small unit tactics particularly effective. Ukrainian commanders and staffs at all levels continuously plan and anticipate emerging contingencies.
- Though the Ukrainians honor their military traditions, commanders seek to improve the quality of decisions by seeking out fresh perspectives that challenge preconceived notions and thinking that has been stunted by habit. As Ukraine's Commander-in-Chief has stated publicly, Ukraine's professional military force started this war, but it will be ordinary Ukrainians from all walks of life that will finish it. Accordingly, they embrace diverse opinions and fresh approaches to solving military problems.
- Because they have not had an abundance of long-range fire support from missiles, fighters or helicopters, they have not become as dependent on those higher echelon assets as many Western armies employing them for decisive effect rather than distributed as "on-call" support across the front.
- Operating against an opponent using extensive electronic warfare and massive suppressive fires, they have learned the hard way, to disperse, employ camouflage and deception.
- The troops are intensely motivated Russian perfidy and brutality have left an indelible scar and there is no more talk about the Russians being "big brothers." This is particularly evident in the East among the troops with ethnic Russian backgrounds who have witnessed first-hand the barbarity of Russian "liberators," cruelty of Donbas proxies and indiscriminate attacks on civilians.
- Unlike the Donbas conflict that seemed remote to Western and Central Ukrainians, Russian missile attacks across the entire country involving the destruction of much of the Ukraine's electrical grid and generation along with detonating dams with massive civilian damage have plunged everyone into an active war zone and outraged all sectors of the population. Thus, for the first time in 70 years a Western nation is waging a "People's

War" on its own territory where hostility to the aggressor, support for the defenders, and even ordinary citizens arming themselves to help their men in arms, creates a synergy seldom seen in modern societies. The Ukrainian military has experienced consistent and universally high morale. Likewise, for a country with diverse culture and geographic differences, Russian barbarism against the civilian population has created a strong bond of national unity throughout the society.

Perhaps due to the pervasive nature of the Russian threat to Ukraine's existence, members of the Armed Forces of Ukraine promote resilience through shared hardship, and they generally see setbacks as opportunities to grow and improve. Operational commands encourage the conduct of 'after action reviews' following combat actions, which are promulgated laterally to share battlefield experiences more quickly. Ukraine has used these hard-earned lessons to tremendous effect against the Russian Federation Army.

III.C. – COUNTER-OFFENSIVE AND WAR TERMINATION

Over the last 16 months, despite heavy combat, neither side has been able to achieve the tactical success needed to alter the stability of the front. What had started as a blitzkrieg has largely stalled, with neither side able to re-establish battlefield momentum in recent months. Russia, having conducted a limited but quantitatively significant mobilization may feel that they have the strength to conduct an offensive campaign at one or more key points along the Line of Contact and/or attempt to seize the initiative by launching attacks in new areas – such as the Belarus frontier – or along the northeastern perimeter where they had previously been stopped in their attack on Kyiv. Even if they had a humbler appraisal of their own potential, and despite the limited training and tactical performance of mobilized levees -"quantity has a quality of its own" – and use of that substantial manpower in the defensive meatgrinder could wear down Ukraine's reconstituted and Western re-equipped counteroffensive brigades, while retaining sufficient armored reserves to counterattack opposing forces. Nevertheless, both sides are highly motivated to tilt the balance of combat power one way or the other and there is a general expectation that the summer of 2023 will witness a level of conventional battle that in its scope, losses, and strategic implications has not been seen since the 1973 Yom Kippur War.

Thus, in the calm before the storm, it is necessary to momentarily transcend the tactical and operational details and briefly reflect on the strategic implications of the campaigns in terms of political objectives. Until now, Ukraine has been on the defensive, which means it has been responding to Russian initiative with respect to when, how, and the intensity of the attack. So, the retrospective question needs to be asked of the initiator – what were your campaign goals and, despite heavy losses, what is your evaluation of relative gains to losses?

The map below transposes the Russian offensive thrust and retreats overlaid with the goals of controlling a greater Novorossiya.



Fig. 16: Current Russian Position versus the Greater Novorossiya Objective

This depiction illustrates the obvious Russian defeats, and their long-term and as-of-yet unrealized objectives:

- The term "Special Military Operation" is not merely the disguise for blatant aggression but reflects what had been the hope of the Kremlin leadership from the earliest days of the conflict to not only nullify the operational effectiveness of Ukraine's political and military high command but achieve its capture or destruction. Thus, the Russian campaign of no less than 12 armies was not focused on the defeat of opposing forces or control of territory, but the destruction of Kyiv's political and military command center.
- The purpose of this operation was not war in the classical sense of destroying the enemy, but rather surgically removing Western-aligned leaders. Similar efforts had been used by the Soviet Union in Hungary, Czechoslovakia, Afghanistan, and though not directly implemented in Poland forced that country's military to initiate a coup themselves. As devastating as this campaign was in terms of losses, and disappointing in terms of results, it represented only one of two strategic objectives.
- The other strategic objective was to conquer the area identified in the original Novorossiya strategic plan. Just as the stabilization of the front in 2014-2015 and resultant Minsk II ceasefire provided the basis for launching the follow-on attacks in 2022, each successive territorial advance and annexation becomes the launching point of the next aggression, presumably until the Novorossiya line is reached.
- While the image of Novorossiya has achieved general recognition as an objective in Russia, it is not necessarily the end-state of Putin's invasion. As already indicated, Russian military exercises in 2017 portrayed a Russian Combined Arms Army and Tank Army deployed in Western Ukraine for offensive operations against Poland and NATO's Central Europe. In addition to military planning, radical Russian nationalists have also adopted the piecemeal salami tactic of slicing off an area, weathering the reaction from the victim and its supporters, and then – once things have calmed down and offensive

capability has been reconstituted - doing it again.

The bottom line is that the recent stasis is not a harbinger of stalemate or defeatism for either side. Those may come but they are dependent on the outcome of an attending battle for the future of Novorossiya.

For eight months, the peoples of occupied Ukraine have waited for signs of their imminent liberation. The long-awaited and much discussed Ukrainian counter-offensive is now underway. But the outcome is neither clear nor certain.

In preparation for its counteroffensive, Ukraine faced a double challenge. On the one hand, incorporating the cornucopia of Western weaponry in units and, secondly, reconstituting and forming new units that are fully manned with combat veterans and seasoned leaders. This process involved creating a new "9th Corps," which participated in international efforts to equip and train the formation, and a "10th Corps" – assigned 12 manoeuvre brigades, one quarter of which were reconstituted with Ukrainian assets and the balance depended on an extensive amount of NATO supplies – that would serve as the fist of the counteroffensive. While it is not likely that any counter-offensive would have a prospect of succeeding without going through this process, one of the downsides of waiting nine months, particularly for the arrival of Western weaponry and the necessary operational and technical training to accompany it, is that Russian forces have been afforded the time to replace some of their massive manpower losses, and more importantly, conduct extensive defensive preparations.

Given the layered Russian defenses integrated with a string of towns along the Krasna River and proximity to Russia, a counter-offensive in the Luhansk Oblast would involve an intense break-through battle and then attempt to exploit it on a narrow line of communications of several hundred kilometers to the east. Similarly, the years of prepared positions and density of the population along the frontline of the Donetsk Oblast do not auger well for a decisive penetration, and while small units could make forays across the Dnieper River in the Kherson Oblast, it is readily evident that Ukraine does not have sufficient amphibious assets to conduct an initial assault let alone sustain one across that body of water.

Therefore, it comes as no surprise that the most attractive target for a major counter-offensive is on the open Steppe south of Zaporizhzhia. Here, the prospect of a thrust to the Sea of Azov would sever the Russian linkage between their own fronts – effectively holding Russian supply lines at risk – it would bring key positions in Crimea within range of Ukrainian long-range fires, and give the option of either exploiting a breakthrough to the West in the direction of Crimea, or to the East encircling Melitopol, Berdiansk, or Mariupol and pushing into the rear of the Donetsk defenses. All of those are plausible. On the other hand, the massive defensive preparations including trenches, anti-tank ditches, minefields, and other complex obstacles – all covered by Russia's long-range massed fires and integrated air defenses in combination – foreshadow an extended campaign with heavy losses on both sides.

Just as the outcome of the Russian offensive campaigns of 2022 were surprising, no one can predict either the success or consummation of the Ukrainian counter-offensive. Given that unpredictability, three alternatives/potential outcomes are worth pursuing.

III.C.1. - UKRAINIAN MIRACLE VICTORY

The Zelensky government has been very explicit that they will not accept any war termination option that does not include the recovery of all lands occupied by Russia since 2014, including the return of the "separatist" areas of Luhansk and Donetsk as well as occupied Crimea. It is already recognized by the Ukrainian military leadership that to achieve those ambitious objectives will require another full year of counteroffensive operations.⁷⁴

If Western governments provide to Ukraine heretofore unavailable heavy weaponry needed by Ukraine to establish, sustain, and reconstitute its field force, the Ukrainians would be able to open new fronts for the series of counteroffensive actions that will be needed to dislodge Russia. Though Ukraine's highly adept General Staff and operational commands will plan the sequencing of manoeuvre, it is evident that this heavy mechanized force operating on the open Steppes would need to break through the Russian defensive lines, driving to the Sea of Azov and splitting the Russian forces.

Over the last several weeks, it is reported that the counteroffensive has finally started in what appears to be several brigade-sized shaping operations, testing the density and intensity of Russian defensive formations. When these multiple lines are eventually breached, and the Ukrainian offensive arrives at the shores of the Sea of Azov, there is then a set of strategic alternatives to maximize the counteroffensive potential. Thus, as shown in the attached map, they will then face a challenge of whether to continue a liberation campaign to the east, driving to free Mariupol, then enveloping Donetsk, and driving to link-up in Luhansk – another extended campaign with a depth of 700 km – and link-up with a counter-offensive force driving across the Luhansk Oblast. This is a large area with two-thirds of Russia's defensive forces who will have the advantage of proximity to the Russian border and short lines of resupply.

On the other hand, a breakthrough to the Sea of Azov will offer the option of moving to the west to clear out the Kherson peninsula and continue to recapture all of Crimea – a campaign to the depth of 800 km. Both the East or West campaign option are faced with massive logistics challenges and numerous battles – it is thus unlikely that they will be able to be achieved simultaneously.

The retaking of Crimea is more challenging but also lends itself to an unconventional strategy. The two major causeways linking the mainland to Crimea are very narrow and extend for approximately 10 km with water on both sides with little cover and very exposed avenues of approach. In essence, blocking the end of the causeway and using indirect fire on the access route has the potential of being inherently time consuming and lethal for a would-be attacker going either direction. And with no serious navy or amphibious lift, Ukrainians do not have the ability to outflank the causeway defenses and with little of their helicopter fleet left vertical envelopment is not an option.

Siobhan O'Grady, Isabelle Khurshudyan, Laris Karklis, and Samuel Granados, "Senior Ukrainian Officials Fear Counterattack May Not Live Up to Hype," THE WASHINGTON POST, (6 MAY 2023), at https://www.washingtonpost.com/world/2023/05/06/ukraine-counteroffensive-expectations-hype-russia/.



Fig. 17: Ukrainian Counteroffensive Options

Nevertheless, if the tactics of direct assault do not favor Ukraine, Crimea's strategic vulnerability to indirect fire offers an unconventional option. As already illustrated with the sinking of the Moskva cruiser, Ukraine's attack on the Russian fleet headquarters in Sevastopol, and the partial disabling of the Kerch Strait bridge, the very military value which makes Crimea a strategic objective for Russia – the extensive naval infrastructure and support facilities in Sevastopol, the airfields for tactical and strategical aviation and the only land link to Russia – are all highly vulnerable to missile and UAV attack.

The very protected geography that makes Sevastopol an incredible portage also produces an Achille's heel in its narrow passage to blue water and congested docks. The piers and shipping bays as well as the fleet assets birthed alongside them can be targeted with ease. Likewise, the handful of vulnerable Russian airbases can be put out of action with a finite number of runway-busting ammunitions. Not only can the Kerch Strait bridge be effectively attacked (as already demonstrated) but the supplementary ferries and their loading piers also offer an attractive target set. Strikes from a finite number of missiles and UAVs can negate the military value of Crimea basing and isolate the remaining ground forces. In short, if there is no military advantage for Russian continued occupation of Crimea, the strategic rationale for continuing the costly possession of the peninsula fades rapidly.

Thus, a natural option is exploiting the position to deploy longer-range conventional strike missiles to bring down the Kerch Strait bridge turning Crimea into an isolated island, take out the airfields and systematically make the port of Sevastopol untenable as a naval asset.

Nevertheless, there are several factors that could get in the way of that optimistic scenario:

 With Russian forces' extensive entrenchments and other terrain preparation (i.e., complex obstacles, minefields, blown bridges, etc) and redundant prepared defenses in depth, the level of attrition for Ukraine on the offensive is likely to be substantially higher than experienced in the previous exploitation campaigns.

- There are very few armies in the world that could have suffered a fraction of the weapons losses sustained by both Russia and Ukraine. Russia still has considerable military production potential, is engaged in joint projects with partners, they are significantly improving the use of unmanned aerial vehicles and has the potential of receiving vast quantities of consumable ammunition from friends in Asia. Ukraine has been a beneficiary of Western military technology, but donor stocks are already running low and there is no long-term planning or preparation to support a protracted conflict of this intensity.
- Ukraine's strategic reserve and formations in the southern and eastern fronts may need to be diverted to the Belarussian frontier if there is a threat of Russian penetration from the north between Kyiv and the Polish border.

No matter how motivated the army to expel the aggressors, there are physical realities which, if not addressed with Western military aid, may exhaust Ukrainian ability to continue counter-offensive action. After all the brutality of the Russian invasion it is hard to envision their permanently accepting defeat. Nonetheless, the demoralized Russian Federation Army has shown through its several embarrassing reversals that it is primed for failure.

III.C.2. - RUSSIAN "UGLY" WIN

In contrast to Ukraine, whatever Russia's war aims were at the beginning of the invasion, it is likely they have morphed after multiple setbacks. Given Putin's mercurial personality, it is anyone's guess what his future reactions would be to his increasingly obvious debacle. As bad as the Russian situation is, at the time of this writing, nevertheless it's important to recognize several inherent strengths that may affect the outcome of the war. First, Russia's population base is more than three times larger than Ukraine's. It has almost unlimited energy resources that not only fuel its economy but whose denial can cause severe economic dislocation in Western Europe and whose availability ensures the loyalty of the Chinese ally. Despite its current losses, Russia maintains a large military structure with nearly half of its ground forces not committed to combat in Ukraine, which can serve as the structural basis for rebuilding and converting a half million more draftees into soldiers. And, armed with nuclear weapons, Russia's air and missile forces can hold Europe hostage. With time, Russian stocked equipment can be refurbished, upgraded with a combination of Russian and Chinese technology, and used to replace the massive losses sustained in the lasts eight months of high intensity combat.

Hastily throwing raw recruits into the lethal maelstrom of the modern battlefield has already proven to be an unattractive option for replacing Russian losses. Assuming Russia withstands the pain of western sanctions, and the support of China continues, time will work in Russia's favor, and it ought to be capable of rebuilding its field force incrementally over the next 12 to 18 months. Further, if Russia is able to contain the Ukrainian counteroffensives, open a new front such as Belarus that siphons off Ukrainian reserves who do not get the support from their Western "friends" necessary to reconstitute a serious operational level counteroffensive force, Russia may be able to regain most of the already annexed territories.

Frustrated with the high cost and low progress in achieving success on the ground, Moscow

may attempt to achieve its war aims using the indirect approach of strategic bombardment, including the potential use of tactical nuclear weapons. The highly publicized transfer of Russian tactical nuclear weapons to Belarus in mid-June 2023 may be intended primarily to deter greater Western involvement in the Russo-Ukrainian War, but the move places Ukraine's political and military decision-makers resident in the capital at greater risk. And, for the first time since the end of the Cold War, Russia's deployment of nuclear weapons outside of its borders also heightens the threat to neighboring Poland and former Baltic Republics.⁷⁵

Though the Russian campaign to debilitate Ukraine's energy infrastructure in the winter of 2022 not only failed but also galvanized a more coherent Western response, Russia also retains ample precision strike capability. According to Ukrainian officials interviewed for this report, Russia has unleashed more than 3800 cruise, guided air, and ballistic missiles on targets inside of Ukraine, in addition to nearly 2100 strikes by unmanned aerial vehicles. For many countries, this approach would be sufficient to compel surrender – such as the NATO air campaign in Serbia – but given the depth of Russia depredations in Ukraine the minimum that dark age attack can produce is essentially a stalled combat capability.

Even if Russia has the will and commits the resources to continue the war for another two years what they gain is so disproportionately small to the relative costs of continued hostilities. So, the bottom line at best is that they will end up with an "ugly" win controlling war-ravaged territory and a protracted guerilla resistance where common sense would suggest they try to seek a cease fire as quickly as possible.

III.C.3. - CEASEFIRE PAUSE FOR NEXT ROUND

Ukraine has the will, manpower and strategy to regain all its territory. It does not have the quantity and quality of weaponry needed to do that without help. If the West is unwilling to supply what is needed for an operational-level counteroffensive campaign, Ukrainian retackling of lost territory will be slow, costly, and likely to end in a "stall."

Through Moscow's official statements, a host of their parroting trolls along with Western idealists, there is an incipient chorus calling for "an end to the fighting." The longer the fighting goes on, the more brutal the destruction, with growing fears of escalation those calls may turn into a cacophony with even Western supporters pressuring Kyiv for a temporary truce, armistice "in-place," or negotiated formal ceasefire agreement with military, territorial and political "adjustments." ⁷⁶

Russia is increasingly dropping hints that they would like some type of ceasefire. Ukraine's motivation and strength show no signs of being receptive to anything but victory but the longer the war goes on and in the absence of decisive western military support the harder it will be to stand alone. Thus, at some point those two trends may intersect in mutual

Trevor Hunnicutt and Nandita Bose, "Biden Says Threat of Putin Using Tactical Nuclear Weapons is Real," REUTERS, (19 JUN 2023), at https://www.reuters.com/world/biden-says-threat-putin-using-tactical-nuclear-weapons-is-real-2023-06-20/.

David E. Sanger, Steven Erlanger and Eric Schmitt, "How Does it End? Fissures Emerge Over What Constitutes Victory in Ukraine," THE NEW YORK TIMES, (26 MAY 2022), at https://www.nytimes.com/2022/05/26/us/politics/zelensky-ukraine-war.html.

exhaustion or some variant of a ceasefire. While there are obvious advantages to ending the hostilities, reduced bloodshed and halting further civilian destruction, which on the surface can be very appealing, nevertheless, there are also imminent dangers for Ukraine and latent ones for the West are likely to produce even worse consequences than fighting to win.

A ceasefire is only sustainable if the operational conditions facilitate stability rather than incentive for one side or the other to take advantage of its conditions and renew attack in the hope of achieving decisive strategic result. One of these critical conditions is the geography at the line of contact when cessation of direct hostilities occurred. If the length of the front is short enough to provide a high density of defensive units coupled with terrain that does not facilitate high speed movement, this can be reasonably stable. Conversely, a long-extended frontage that only permits thinly defended positions in open terrain gives an incentive for an attacker to use surprise and speed to breakthrough sparse defenses and penetrate deep into the opponent's territory. In 2015, when the Minsk ceasefire was adopted the frontage at the line of contact (LoC) was approximately 600 km in length with about 40 percent of it along the closed terrain of the Seversky-Donetsk River line, and the remaining 60 percent involved prepared defenses in depth on both sides. So strong was that line of contact that when Russia initiated the recent invasion, they specifically attempted to outflank both ends of the line of contact rather than attempt to directly break through it.

The current LoC is now 3,100 km long stretching from the Polish border for over 400 km to Chernobyl – a border region manned by Belarussian troops in prepared positions with Russian reinforcements currently being added. Then the LoC parallels the Russian frontier for another 600 km, running from Chernobyl, north to Chernihiv, around the horn east of Konotop to Sumy and Kharkiv – the scene of major attacks and deep penetrations in the early stages of this attack. The currently active invasion and locus of Ukraine's successful counter-offensive extends south of Kharkiv along the Luhansk border and then cuts through the Donetsk oblast down to Marinka, where the front turns due west in the direction of Zaporizhzhya for a total of another 600 km. The Dnieper River line extends down river with a 450-km LoC encircling Kherson. From Mykolaiv to Odessa to the Romanian frontier, the 350-km Black Sea coastline must be defended against the danger of amphibious invasion, as well as the 600-km Moldovan border where hostile Russian armed Transnistrian militia pose an infiltration threat.

As Russia has retained troops in Belarus and Lukashenko moves his forces to the border, Ukraine cannot leave it undefended. Similarly, the frontier running from Chernobyl, Chernihiv, east of Konotop, Sumy to Kharkov that is currently only defended by understrength Territorial Defense Force units is vulnerable if Russia again masses offensive forces across the frontier. The critical center between Zaporizhzhya-Marinka is in the open country of the Steppe, which is optimal country for offensive armored warfare. Although the threat of a major amphibious landing from the Black Sea is reduced, the existence of Russian fleet and aircraft operating out of Crimea, the potential of Russian special operations being conducted there as well as unconventional threats from Transnistria – thus, that frontage cannot be ignored.

A ceasefire is only as good as the party's intention to honor it. Russia's Military Invasion is the first State territorial aggression in Europe since the end of World War II and they have blatantly violated virtually every security agreement they have signed:

- The aggression violates the UN Charter (1945);⁷⁷
- The aggression violates the Helsinki Act (1975);⁷⁸
- Russian aggression and implied Nuclear Threats violate the Nuclear Non-Proliferation Treaty (NPT, 1968);⁷⁹
- Russia violated the Intermediate Nuclear Forces (INF) Treaty (1987) and currently employing those missiles in strategic bombardment against Ukraine;⁸⁰
- Unilaterally withdrew from the Treaty on Conventional-armed Forces in Europe (CFE, 1990);⁸¹
- Open Skies Treaty (1992) but withdrawn by the US in 2020 due to repeated Russian violation⁸²
- It is an egregious betrayal of the Budapest Memorandum on Security Assurances (1994) to Ukraine for their giving up control of Soviet era nuclear weapons on their territory;⁸³
- Russia violated the Chemical Weapons Convention (CWC, 1997);84
- Russia ended the September 2014 Minsk I Ceasefire agreement by launching a series of attacks on Ukraine in 2015;85

United Nations Charter, Article 2 (4), signed by the Soviet Union, 24 OCT 1945, and following the dissolution of the Soviet Union in 1991, its UN seat was transferred to the Russian Federation.

⁷⁸ Signed on 1 AUG 1975, 35 nations signed the Helsinki Final Act establishing the CSCE as an ongoing consultative organization with signatories "Refraining from the threat or use of force" and committing to the "Inviolability of frontiers, Territorial Integrity of states, Peaceful settlement of disputes, Non-intervention in internal affairs."

[&]quot;Nuclear NPT" Signed: 1 JUL 1968, requires that: "States must refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State."

⁸⁰ INF Treaty prohibits the US and Russia from possessing ground-launched ballistic and cruise missiles with ranges between 500 and 5,500 km. Starting in mid-2000s Russia began testing, resulting in termination of US support.

Signed 19 NOV 1990 in Paris by 22 countries; amended in 1996 which relaxed the restrictions for Russia and Ukraine in the flank region defined in Article V; and having just launched the Donbas proxy war in MAR 2015, Russia formally withdrew from the Treaty.

The Open Skies Agreement signed in Helsinki, Finland in 1992 established a program of unarmed aerial surveillance flights over the entire territory of its participants intended to enhance mutual understanding and confidence by giving them a direct role in gathering information about military forces and activities of concern to them. In response to repeated Russian manipulation of notifications, denial of access and overflights associated with military action, the US withdrew from the Treaty in NOV 2020 and Russia withdrew in JUN 2021.

Signed 5 DEC 1994 in Budapest Hungary to provide security assurances to Belarus, Kazakhstan, and Ukraine in exchange for their signing the NPT and giving up control of former Soviet Union nuclear weapons on their territory. In exchange Russia, US and UK agreed to "respect the signatory's independence and sovereignty in their existing borders and refrain from the threat or the use of force against the signatory."

Russian responsibility for the 2020 poisoning of Alexey Navalny with a Novichok agent (which their officials claim has been made a case under the CWC – which was intended as a treaty on disarmament and the non-use of a certain class of weapons in armed conflict); and Russian dissembling related to their Syrian ally's accountability for continued CW use, including abject denial of three Air Force CW attacks in 2017.

After five months of escalating violence between Ukraine and the Russian proxies of Donetsk and Luhansk oblasts, the original Minsk agreement mediated by the leaders of France and Germany under the Normandy Format at Minsk, Belarus between the representatives of the Russian proxy leadership of Donetsk and Luhansk "Peoples Republics," and signed on 5 SEP 2014; blessed and repeatedly promoted by Russia, then overtly violated in JAN 2015 by a winter offensive organized and led by Russian command.

• Russia unilaterally abrogated the Minsk II agreement of March 2015.86

With that track record only, a fool would presume Russian good faith in keeping any future agreement. In the absence of an honorable signatory, a successful armistice or ceasefire is then dependent on the strength of those willing to enforce it.

But particular attention needs to focus on the nuclear agreements Russia committed itself to. For example, the 1994 Budapest Memorandum – all too conveniently forgotten – is worth remembering because it carries onerous implications for the international system in the future. It was specifically crafted to provide security guarantees to the three former Republics of the Soviet Union who agreed to sign the NPT. With the collapse of the Soviet Union, Ukraine became an independent state with 1,272 strategic warheads and 2,500 theater/tactical nuclear weapons. The new Ukrainian Government did not want to be a nuclear power but was concerned that if they gave up all their nuclear weapons they could be bullied by their nuclear neighbor. As a result, Russia, the UK, and the US all declared that in exchange for Ukraine surrendering those nuclear weapons they would neither threaten their use nor impinge on Ukrainian territory or sovereignty. When confronted with blatant Russian violations, Ukraine asked the US and Britain for help to enforce it – but their response was tepid.

Third, given that Russia cannot realistically be trusted to keep any security agreement, and, after repeated violations, particularly any ceasefire with Ukraine, what incentive would they have to follow it even when they do not want to? If Ukraine, suffering exhaustion and insufficient support from the West, is forced to cease active military operations accompanied by some part of negotiated regime which depends on Russian observance – what keeps Russia from exploiting the terrain and Ukrainian military weakness? In these hypothetical circumstances obviously, Ukraine does not have sufficient strength to resist a position they detest.

Among well intended Western politicians and arms control advocates there is an argument that the West can and should step in to enforce the agreement if Ukraine cannot.

As the risk of nuclear war increases, fighting in Ukraine escalates, and global economic insecurity deepens, 30 members of Congress urged President Biden to pursue direct diplomacy for a negotiated settlement to end Russia's war in Ukraine.... The lawmakers propose an approach that could include "incentives to end hostilities, including some form of sanctions relief," and an international arrangement to "establish security guarantees...87

This naive idealism is fundamentally flawed. First, there is no evidence the threat of Western sanctions has had success in inhibiting Russian bullying let alone forcing them to desist when they have initiated aggression. This is not to say that the sanctions don't hurt – only that, by

Minsk II was signed on 12 FEB 2015 after three weeks of intense combat with high losses on both sides; the agreement was achieved with the mediation of the leaders of France and Germany under the Normandy Format at Minsk, Belarus. On 22 FEB 2022, two days before launching the direct Russian invasion, Putin unilaterally declared that the Minsk agreements "no longer existed."

Andrew Desiderio & Nancy Vu, "A big contingent of House progressives is pushing for a shift on Ukraine strategy — and aligning with Donald Trump in the process: Some Congressional Progressive Caucus members want Biden to pursue Direct Negotiations with Russia to end the War," POLITICO, (24 OCT 2022), at https://www.politico.com/minutes/congress/10-24-2022/shaheens-debt-limit-push/>.

themselves, they have seldom proven effective in inhibiting an actor committed to an irredentist agenda.

Second, there is no real option of a Western military intervention without committing troops on the ground – an action that they have repeatedly demonstrated they are loathe to do. If in fact NATO decided to intervene to defend the agreement, by the time their forces were mobilized and deployed, the aggressor's gains are likely to have been already achieved. The U.S. might attempt an aerial campaign, but the extended distances from NATO bases drastically reduces the sortie rate for ground attack and the loiter time for aerial interception. Even with an attempted air campaign using American long-range global strike systems, the defensive impact against maneuver forces on the ground would only come weeks after an intense air defense suppression and counter-air campaign all the while raising the specter of the much feared "escalation."

In summary, there is no advantage to Ukraine in a ceasefire with Russia occupying 20% of Ukrainian sovereign territory. At best, it might give them a short respite, but it is Russia that will benefit far more by being able to reconstitute, reinforce and reassemble another massive invasion force. The one advantage Ukraine currently has is operational initiative and strategic momentum. Given the one-sided massive infrastructure damage already suffered by the victim, with irreplaceable losses in trained manpower and a depleted arsenal – it is highly probable that the outcome of forcing Ukraine to stop their counter-offensive in exchange for a ceasefire would be a setup for a subsequent decisive defeat and national destruction irrespective of Western verbal "guarantees."

III.D. – WAR TERMINATION

Every war must end. They always do, if not with a bang, then a whimper. As illustrated in the previous section, how combat between Russia and Ukraine ends is still an open question. And while everyone may be more optimistic now than a year ago in terms of a positive result for Ukraine, neither how that is going to be achieved nor when is readily apparent and in the fog of war, there is always the possibility of battle outcomes that radically shift the endgame. Thus, an ugly Russian win – while unlikely to emanate from the current contested fronts – could come from Russia opening a new front from Belarus.

Russian missile strikes may eventually destroy Ukraine's power electrical generation capacity and threaten its rail logistics system to the extent that the country cannot continue. A conflict which drags on into a third of fourth year with continuing levels of heavy Ukrainian losses may eventually sap not only the morale of the forces engaged, but the willingness of the public to support a continuation of combat, thus producing internal political instability, which while currently seems highly unlikely, nevertheless is not without numerous historical precedents. Lastly, selective Russian use of nuclear weapons on a critical Ukrainian position or industry – if not responded to by a Western nuclear power – could in theory force Kyiv to accept war termination on Russian terms. However it hypothetically might happen, a Ukrainian defeat is likely to result not only in Russian internal influence, but also – along with the disarming of much of Ukraine's military and the likely positioning of Russian forces strengthening their position in Transnistria, the use of Ukrainian airbases for Russia airframes (AWACS, fighters and strike assets), culminating in the deployment of at least two armies along on the Polish border, including the reconstituted 1st Gds Tank Army,

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backed up with the forward deployment of land-based, dual-capable Iskander missiles and dense layered air defense systems.

Lest this prospect seem remote, it is worth noting that currently Russia has re-deployed the headquarters of the 1st Gds Tank Army and 20th CAA to Belarus and is using that location to re-establish the offensive potential of these formations. It should also be noted that Russia has announced that it has deployed nuclear weapons to Belarus, which accordingly provides to Belarus air assets, tactical warheads, as well as basing for long-range Russian aircraft with "strategic warheads." Since Putin returned the ZAPAD series of exercises against NATO in 1999, Russian military planning has repeatedly demonstrated an intent to overrun Latvia and Lithuania to establish a land bridge to Kaliningrad and if resisted, use Belarus as a conventional and nuclear dagger aimed at Warsaw.

If by the end of 2023 Ukraine is unable to successfully conduct a series of counter-offensives to recover all its territory that has been occupied by Russia, it will invoke the perception of a stalemate, where neither side can make decisive gains, and the implications of that are dire. It implies an environment in which, by shear losses alone, Ukraine may face the steep internal pressures discussed above and empower the Russian leadership to go for an "ugly win."

While some may intend to let Ukraine carry the burden of holding a revanchist Russian empire at bay, given that positive outcome is not axiomatic, it not only directly threatens NATO members on the Black Sea and those on the Baltic, but its core center of gravity in Poland. In short, for Ukraine and ultimately NATO, there is "no substitute for victory."

It is incredible courage, what they are showing. It really deserves our deepest respect as the whole world, this heroism that we are witnessing every day, how Ukrainians are defending themselves against the Russian aggression. It is not enough, however, to defend themselves. What they need is to have modern and efficient equipment. Armaments that will help the Ukrainians to repel their aggressor. This weaponry has to be delivered to Ukraine all the time. Ukraine has to repel the Russian aggression, has to win, but for it to be able to do so it needs armaments.⁸⁸

IV - ARMING UKRAINE

Force structure – the organization and hierarchy of various units – is the skeletal sine qua non for creating a modern combined arms ground force. Its units vary in size and scope that ranges from a platoon to combined arms army with companies, battalions, regiments, brigades, and divisions serving as a hierarchy of command combined arms and support. The force structure not only creates an order of battle for commitment to combat, but also incorporates the prequel and indispensable necessities of training, leadership development, operational planning, maintenance, logistics support, and means of onward movement and deployment from peacetime garrison to a front. To achieve its mission, a force structure requires established facilities, troop housing and barracks, manoeuvre training areas, sustainment nodes, effective lines of communication, and adequate equipment stocks, but this edifice is hollow without a means of recruiting the troops to go in it, the industrial base to both arm and supply it, and the national infrastructure for its deployment.

No matter what tactical scenario is postulated, both Ukraine and Russia are going to face an urgent imperative to reconstitute their military force structures, to include re-armament with competitive weaponry, trying to establish technological advantage, and replenishing equipment fleets and combat supplies with a robust and redundant long-range sustainment architecture. For Ukraine, the issue of self-sufficiency is off the table and no matter what scenario plays out, they are going to need extensive external support to survive. On the other hand, Russia's ability to replace personnel losses, to rearm and reconstitute the existing forces in the field can have a decisive impact on Ukrainian prospects.

With neither the Russians able to achieve their minimalist goals and Ukraine still far from recovering its lost territory and territorial integrity, the prospect of the conflict extending through much of 2023 or even bleeding into 2024 raises a serious set of questions for Ukraine and its Western supporters that will be considered in this section. First, having sustained debilitating losses in Ukraine, to what extent does Russia intend to rebuild its offensive capability – via mobilization of more cadres, rehabilitation of older stored equipment, and incorporation of assets from their allies – and to what levels over throughout the balance of 2023 and into 2024? Second, what additional resources does

Polish President, Andrzej Duda, "Interview with BBC," (Warsaw, POL: Presidential Office, 12 FEB 2023), p. 1, at https://www.president.pl/news/andrzej-duda-interview-with-bbc,64519.

Ukraine require to restore its territorial integrity?

Barring a change in how Ukraine is supported by the international community or the revitalization of its defense industrial base (which is not possible without adequate layered air defenses), the contest will effectively remain rigged in Russia's favor – whereby the aggressor finds sanctuary inside its own borders to reconstitute losses and generate new combat-capable teams and is able to use any weapon in its arsenal against Ukrainian military targets and civilian populations alike. With one arm tied behind its back, Ukraine is unlikely to be decisive at the theatre-level, the conflict could grind down to stalemate and freeze as Western resolve weakens – leaving NATO to address the very problem it has tried so hard to avoid.

IV.A. - REBUILDING RUSSIAN OFFENSIVE WARFIGHTING CAPABILITY

Putin and his Generals clearly wanted a rapid and decisive victory by shocking Ukrainian political and military leadership through 'blitzkrieg' strikes early in the conflict. They were met instead with the now legendary resilience and resolve of the Ukrainian people, and a highly motivated and tactical superior enemy that made the Russian Federation Army pay for every step that it took on Ukrainian soil.

The costs of Russia's surprising and humiliating reversals during the first year of the Russo-Ukrainian war are virtually incalculable. Notwithstanding variances in the intelligence assessments of the Ukrainian Ministry of Defense, Ukraine's international supporters and open sources of information such as Oryx,⁸⁹ it is evident that this conflict has resulted in the death or serious injury of at least 100,000 Russians, as well as the destruction of between two and four thousand main battle tanks, twice as many armored and infantry fighting vehicles, and hundreds of artillery systems that have been the mainstay of the Russian Federation Army. Moreover, the Russian economy has been damaged through sanctions and the prohibitive costs of this illegal invasion. Diplomatically, Russia's influence globally continues to wane, and its actions have resulted in a stronger and more powerful NATO Alliance.

Figure 18: Assessment of Russian Battlefield Losses ()	Februar	y 2022 - May	72023)	
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Destroyed or Damaged Russian Systems	Ukraine MoD Figures ⁹⁰	Oryx Figures ⁹¹	
Tanks	3745	1965	
Armoured and Infantry Fighting Vehicles, Armoured Personnel	7295	3494	

Enemy battle loss tracking, and the establishment and maintenance of a common operating picture is an extremely complex undertaking for any military force. Ukrainian MoD figures are likely inflated because of the 'fog of war' and redundant reporting from deployed force elements. Meanwhile, Oryx data only includes Russian equipment and vehicles for which photographic or video evidence is available. Thus, real losses are likely fall somewhere between the figures provided by the Ukrainian MoD and Oryx.

⁹⁰ Information provided by Ukrainian Ministry of Defense, dated 12 MAY 2023

See "Attack on Europe: Documenting Russian Equipment Losses During the 2022 Invasion of Ukraine," ORYX, at https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-equipment.html.

Carriers		
Artillery (tubed/rocket)	3672	729
Aircraft	308	82
Missile systems	970	140

Time and again, Western media has optimistically reported that Russia has already depleted its stockpiles of conventional munitions, missiles, and that its Soviet-era storage facilities have been emptied of legacy tank fleets, infantry fighting vehicles, and guns. Yet, every day Ukrainian cities throughout the country continue to be subjected to massive artillery and missile attacks, and though Russian force elements have proven unable to decisively manoeuvre for several months, their layered defenses in the temporarily occupied territories suggest that they have retained critical warfighting capacity. Noting Putin's determination to mobilize all instruments of Russian national power to achieve his imperialist objectives – at virtually any cost – this section assesses Moscow's capacity to rebuild its forces and sustain theatre-level operations in Ukraine over the next 12-24 months.

Starting in late September 2022, the Russian Federation started to set the conditions for a long-term war of attrition with Ukraine through a partial mobilization of at least 300,000 Russian conscripts – a figure that Russian authorities have obfuscated given domestic sensitivities, and could be as high as 500,000 recruits, many of whom have been drawn from regions far from the capital and large cities, in order to avoid publicity and reduce the risks of a social explosion.⁹²

In December 2022 and January 2023, the Russian President and Minister of Defense Sergei Shoigu announced additional massive investments in the Armed Forces of the Russian Federation with three stated objectives. Specifically, Putin intends as a priority to reconstitute losses that have been sustained in what he dubs as an American and NATO proxy war being fought against Russia in Ukraine, and to protect 'new regions of the Russian Federation,' referring to the four Ukrainian oblasts of Donetsk, Kherson, Luhansk, and Zaporizhzhya. Russian political leaders have also justified military expansion plans as a retaliatory measure for Finland and Sweden moving closer to the NATO Alliance – a problem of Russia's own making that materialized only because of the illegal invasion of Ukraine. Sergei Shoigu announced additional massive investments in the Armed Forces of the Russian Federation with three stated objectives.

Central to Russian military growth that is intended to occur between 2023 and 2026 is the increase of personnel strength from 1.15 million to 1.5 million professional 'contracted' troops, which is 'above and beyond' the mobilization of conscripts last year. To attract motivated Russians to join the fight in Ukraine, state media has initiated a concerted recruitment and marketing campaign that appeals to Russian patriotism, the warrior spirit

⁹² "Putin Announced Partial Mobilization in Russia," BBC NEWS, (22 SEP 2022), at https://www.bbc.com/russian/news-62977634.

⁹³Inder Singh Bisht, "Russia Announces Military Expansion to 1.5 Million Troops, THE DEFENCE POST, (18 JAN 2023), at https://www.thedefensepost.com/2023/01/18/russia-military-expansion/>.

Thomas Nilsen, "Russia Vows to Place More Troops Near Nordic Countries," THE INDEPENDENT BARENTS OBSERVER, (23 DEC 2022).

of Russian fighting-aged males, and promises lucrative compensation.⁹⁵ Targeting of volunteers is almost certain to attract men from poverty-stricken regions, and thus mute the disproportionate influence and criticism of family members that are connected to conscripts that have been pressed into service.

Concurrently, although more difficult to control and despite the intuitive challenges with integrating them, irregular formations and mercenaries will continue to feature prominently in the Russian aggression against Ukraine. Mercenary organizations, such as the now infamous 'Wagner Group,' which is comprised of up to 50,000 members drawn primarily from the Russian penitentiary system and veterans' community, have been and will continue to be engaged in active combat alongside Russian Federation Army units and formations. 96 The Russian government will also resource other groups that are not included in recent legislation enacted for the expansion of the active-duty military. For example, the thousands of so-called "Kadyrovtsy" (Chechen units) have integrated several formed battalions into the Russian Guard.⁹⁷ These tactical teams possess suites of personal assault and crew weapons, and they are equipped with armored vehicles, artillery and a modicum of organic lift and combat aviation. The Armed Forces of the Russian Federation and the Roshvardiya are also actively creating their own 'volunteer units,' such as BARS (supplemental army reserve) and 'Cossack' battalions, whose fighters are not formally military personnel, and therefore do not fall within the maximum number determined by Russian legislation. According to Ukrainian officials, these organizations have generated nearly 100-battalion sized elements, for a total of up to 25,000 to 50,000 additional fighters.

In all, between the recruitment of professional contracted soldiers and the continued use of mercenary organizations, Russia is organizing to train and put more than 500,000 additional troops in the field over the next three years. In addition to leveraging new recruits to reconstitute mauled units, Russia intends to re-organize and enhance seven motorized rifle brigades into division-level formations and establish two airborne assault divisions. According to Defense Minister Shoigu, these divisions will be garrisoned in the Western, Central and Eastern military districts, and it is from these regions that 'self-contained' forces will be deployed to secure the four temporarily Russian occupied oblasts of Ukraine. Further, already established marine corps brigades will form the nucleus of five marine-corps divisions.

It is Putin's intent to create an army corps in Kareilia in Russia's Northern military district through the deployment of additional troops and by beefing-up in-place forces that have already bled-away combat power for the invasion in Ukraine. For the foreseeable future, this will likely be a secondary effort for Russia, as will any initiative that does not directly contribute to operations in Ukraine, such as the creation of two strategic territorial formations in Moscow and Leningrad and the reinforcement of navy, aerospace, and

⁹⁵ Vitaly Shevchenko, "Russian Army Launches Campaign Encouraging Men to Join," (BBC NEWS, (21 APR 2023), at https://www.bbc.com/news/world-europe-65351271.

⁹⁶ Erin Banco, Sarah Anne Aarup, and Anastasiia Carrier, "Inside the Stunning Growth of Russia's Wagner Group," POLITICO, (18 FEB 2023), at https://www.politico.com/news/2023/02/18/russia-wagner-group-ukraine-paramilitary-00083553>.

⁹⁷ Mansur Mirovalev, "The Real Role of Pro-Russian Chechens in Ukraine," ALJAZEERA, (18 AUG 2022), at https://www.aljazeera.com/news/2022/8/18/the-real-role-of-pro-russian-chechens-in-ukraine.

strategic missile forces.

Force growth on the scale announced by Russian military leadership would be a complex, costly, and time-consuming endeavor for any military force, especially one that has been as heavily depleted and demoralized as the Russian Federation Army. To achieve these objectives, Russia is unlikely to design and build new combat formations unless they can 'freeze' the conflict in stalemate. Clearly, most Russian command and staff capacity at the operational and strategic levels of war is currently committed to responding to developments in Ukraine and are thus reticent to apportion the intellectual capacity and resources that would be needed to create functional combined arms teams from scratch. Thus, Russia will probably leverage existing units in the short term, which – though badly damaged – will have retained a modicum of leadership with some combat experience, a fleet of vehicles and armaments, integral sustainment, and already-established garrisons.

With a population base of 140 million people, the Russian Federation has the capacity to replenish battlefield losses over the long-term. To date, the staggering number of killed and wounded Russian soldiers has not palpably tempered Putin's ambitions and are unlikely to change barring the operational defeat of the Russian Federation Army in Ukraine. Russia has retained the ability to train military personnel at scale across all occupations through an extensive network of training centers and ranges that are capable of drilling combined arms manoeuvre. Unlike Ukraine, these training areas are not subjected to enemy targeting and bombardment. In addition, assistance in the training of Russian personnel is provided by Belarus, whose military infrastructure and territory have also been provided for military operations against Ukraine since the first days of full-scale aggression.⁹⁸

Even though the Russian Federation Army can reconstitute its forces in these sanctuaries that are relatively immune to foreign attack, operational requirements in Ukraine will significantly impair the amount of time available to prepare assault formations for medium to high intensity combat. Western armies in peacetime commit up to a year to force generate manoeuvre brigades and divisions for operations, with roughly a quarter of the time allocated each to individual primary combat qualifications, leader/staff development and battle task standards, combined arms manoeuvre training from the platoon to brigade/division-level, and equipment readiness and pre-deployment preparations.

Lacking time, funding, serviceable equipment, ammunition, and combat supplies, the Russian Federation Army will – for the foreseeable future – be forced to adopt a constrained force generation cycle, which is unlikely to extend beyond five to six months and could consist of the following essential elements:

- Basic training/leader development: 30 days.
- Combat function and specialty trades qualification training: 30-45 days.
- Squad to company-level dry/live fire manoeuvre training: 30 days.
- Battalion and brigade-level combined arms manoeuvre training: 30 days.
- Equipment readiness, staging and onward movement: 30-45 days.

Notwithstanding these training deficiencies and the obvious downstream impacts of the

Artyom Shraibman, "What's Behind Russia's New Deployment of Troops to Belarus," CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE, (25 OCT 2022), at https://carnegieendowment.org/politika/88249.

effectiveness of Russian combined arms teams in combat against superior Ukrainian forces, human resources will not the limiting factor for the invading force. Russia is capable of growing its professional military force to 1.5 million members and maintaining that force strength – albeit at degraded readiness and effectiveness levels – regardless of losses in Ukraine. On the other hand, Russia's ability to mobilize its defense industrial base and economy to supply its troops with weapons, military equipment, munitions, and combat supplies is another much more complex matter.

In the year following the invasion of Ukraine, Russia spent approximately \$114.4 billion to sustain this conflict, which was a third of all revenues of the Russian budget for 2021. 99 About half of this amount was fenced for the salaries and compensation of military personnel and members of their families, and the balance was needed to replenish equipment stocks. Though Russian military spending has increased precipitously in 2023, the Armed Forces of Ukraine continue to exact a heavy toll on Russian land forces and the monetary costs of funding this effort far outpaces the resources that Putin has made available.

Compounding financial problems that Russia is attempting to mitigate through the export of oil and natural gas to strategic partners are the significant impacts of a robust international sanctions regime that hamper Russia's ability to acquire technologies at scale that are needed for the military's modern fleets. Clearly, these measures – when combined with workforce pressures in Russia's defense industrial sector – have impaired Russia's ability to source low-density and high-tech components, resulting in the production of armaments that are both inferior and at insufficient scales needed to replace battlefield losses. Nevertheless, there are ample indicators to suggest that Russia has adapted to Western sanctions by prioritizing support to national R&D and its defense industry, while relying increasingly on strategic partners such as Iran and North Korea to supply military armaments and drawing more heavily on vast prewar equipment stockpiles. 100

This approach is most obvious in Russia's approach to replacing destroyed main battle tanks. Throughout the 1980s, the Soviet Union had the defense industrial capacity to churn out more than 2000 modern tanks annually. In the current conflict – especially given the reliance on Western fire control systems and optics, specialty tooling and major assemblies essential for the mechanical operation of tanks and other armored vehicles – Russia's ability to sustain tank assembly lines at needed levels has degraded significantly. As a result, it seems most likely that Russia will continue to produce small numbers of modern T-90 and T-80 tank fleets, while privileging scarce resources on the readiness of legacy systems currently held in long-term preservation, such as the T-72, T-64, and T-54/55 fleets. Assuming that the rates of attrition that characterized the first year of this conflict will remain comparable for the foreseeable future, Russia is likely to be able to satisfy the demands of Russian commanders for heavy armor by drawing down its estimated stockpile of nearly 7000 tanks, which will be adequate to reconstitute Russian force elements for up to two additional years

⁹⁹ Volodymyr Datsenko, "Russia Has Spent Almost \$115 billion on the War with Ukraine," FORBES UKRAINE MAGAZINE, (24 FEB 2023), at https://forbes.ua/ru/war-in-ukraine/rosiya-vitratila-na-viynu-z-ukrainoyu-mayzhe-115-mlrd-i-vsi-tanki-yaki-mala-pered-vtorgnennya-rozrakhunki-forbes-24022023-11970>.

Max Bergmann, Tina Dolbaia, Nick Fention, and Maria Snegovaya, "Out of Stock? Assessing the Impact of Sanctions on Russia's Defense Industry," CENTER FOR STRATEGIC INTERNATIONAL STUDIES, APR 2023, p. 3.
 Ibid, p. 7.

of conventional warfighting.

Russia's artillery stocks are in far better shape. At the start of 2022, the Russian Federation Army had more than 6000 artillery systems in service (including MLRS) and about 20,000 more guns in reserve. Though – according to the Ukrainian Ministry of Defense – up to half of the in-service fleet has already been destroyed, Russia retains in storage more than 800 2S19 "MSTA" self-propelled artillery systems, 950 2S5 "Hyacinth" guns, 320 2S7 "Pion" self-propelled guns, 230 2S4 "Tyulpan" self-propelled guns, 1800 2S3 "Acacia" self-propelled guns, 1100 2A36 "Hyacinth-B" towed guns, 600 2A65 "MSTA-B" towed guns, 2000 2S1 "Carnation" self-propelled guns, 2500 D-3 howitzers, and numerous other 152 mm and 122 mm caliber systems. Russian factories are capable of producing new replacement systems, but are again most likely to focus as a priority on pulling the aforementioned stocks from preservation and readying them for combat in Ukraine.

In terms of rocket artillery, Russia's Ministry of Defense purchased from Rostech in 2022 a batch of new 300-mm Tornado-S MLRS capable of hitting targets at a distance of up to 120 km, and 122-mm Tornado-G with a firing range of up to 40 km. Russia has the necessary technology and production capacity to produce dozens of such systems every year, however, these outputs will fall short of battlefield requirements. As a result, Ukraine's General Staff have assumed that Russia is most likely to privilege the restoration of 700 220-mm 9P140 "Uragan" MLRS and 2000 122-mm BM-21 "Grad" MLRS.

The Russian Federation Army might be capable of fielding the tanks and artillery it will need over the coming two to three years, but ammunition production in the volumes needed will remain problematic. According to the observations of Ukrainian Armed Forces commanders, Russian troops continue to employ "valley of fire" tactics, which necessitate the expenditure of between 20-60,000 shells per day. To maintain this tactic – which seems likely for a force that struggles to manoeuvre – Russia will need millions of projectiles annually. The most optimistic assessments indicate that Russia's vast stockpiles available at the start of 2022 are likely to be exhausted by the end of 2023. Moving forward, less than two-thirds of Russia's needs can be filled by domestic ammunition manufacturers and through the supports of its international partners, such as North Korea. Left unchanged, Russia will at once be forced to rely less on indirect fires in support of ground manoeuvre (when it is attempted) and Ukrainian artillery parity is likely in 2024 given the supports to the latter by Western partners.

Aside from the land systems that are essential to Russian combined arms manoeuvre, Russia has relied heavily on its missile forces to deliver long-range precision fires throughout the depth of Ukraine. Ukraine's successful integration of the Western-provided Patriot missile defense system and the SAMP/T-MAMBA air defense system have meanwhile provided the country with greater resilience and confidence, but the defender still lacks a layered and redundant air defense system and is running dangerously low on stocks of air defense munitions. Again, while Russia closely guards information related to its ability to produce

Oleksandr V. Danylyuk, "Russia's Ability to Wage a War of Attrition in Ukraine," CENTER FOR DEFENCE REFORMS, (17 APR 2023).

¹⁰³ Ibid.

¹⁰⁴ Ibid.

ammunition and military equipment, Ukraine's MoD reports that Russian military forces continue to maintain sufficient stocks of long-range precision munitions, and factories are able to produce dozens of projectiles and delivery systems – such as the Kh-101 and Kalibr – on a monthly basis.

In summary, it should be assumed that Russia will be able to procure, produce, and integrate the equipment and munitions needed by the Russian Federation Army for at least the next two years, and possibly longer. In fact, the longer this conflict persists, Russia is almost certain to find additional workarounds to Western-imposed sanctions, it will enhance collaboration with existing strategic partners, and its defense industrial base – though currently under strain – will strengthen over time. When efficiencies are required, it would be reckless to conclude that – despite its many battlefield reversals – the Russian Federation Army is incapable of modifying its force employment concepts based on hard lessons learned. In fact, the opposite appears to be true in terms of how combined arms teams are being employed. 105

IV.B. - SECURITY ASSISTANCE TO UKRAINE

As the previous section demonstrates, notwithstanding Ukraine's inspirational successes, the country is at war with an invading force several times its size and one that can marshal the resources needed for a long-term attritional contest.

In the early days following Russia's full-scale invasion of Ukraine, the co-authors of this report met with senior Ukrainian officials and tactical commanders to better understand Ukrainian force structure, campaign design, and the most existential needs of the Armed Forces of Ukraine. It was recognized then, as it is now, that the supports mobilized by the international community in the Winter of 2022 – although necessary to prevent the fall of Kyiv – still left Ukrainian commanders without the joint enabling capabilities needed to strike high value targets, create needed stand-off, and support conventional manoeuvre. This, in turn, required Ukraine to initially forward-deploy nearly all its combined arms brigades in a conventional and highly attritional slugfest with the invading force.

Unable to maintain a robust and mobile strategic-level reserve in the depth of the country, Ukraine was highly susceptible should the Russian Federation Army break-through or encircle Ukrainian defensive positions, or attack once again from Belarus. Meanwhile, in both 2014/15 as well as early 2022, the Ukrainian General Staff recognized the importance of counterattacks in not only bolstering an active defense but breaking the opponent's pattern of initiative, exploiting vulnerabilities in their positions, and forcing them into a reactive cycle at the tactical level. Yet, given the vast combat power deployed by the invading force to seize Ukrainian oblasts in the eastern and southern parts of the country, Ukraine could scarcely afford to retain ready forces in the depth of the country, less those essential

¹⁰⁵ In recent months, Russian tank-infantry tactics have evolved to counter Ukrainian force employment concepts and enhance combined arms manoeuvre. Russian infantry tactics, for example, have shifted from trying to deploy uniform BTGs as combined arms units of action to a stratified division by function into line, assault, specialized and disposable troops. Meanwhile, Russian tanks are increasingly used in depth in a fire support function, which has enhanced the survivability of heavy armor, and Russian artillery forces have improved the integration of sensor-shooter systems to economize the expenditure of munitions. See Jack Watling and Nick Reynolds, "Meatgrinder: Russian Tactics in the Second Year of its Invasion of Ukraine," Royal United Services Institute, (19 MAY 2023).

to protecting Kyiv.

Thus, it was determined that – to win this war – Ukraine required a strategy that transcended the existing force structure and means of the AFU. As articulated in *Reconstituting the Armed Forces of Ukraine*, strategic transformation involved three critical tasks, each one daunting in and of itself and – in combination – would be a challenge to any country in peacetime, let alone assuming them simultaneously amid foreign invasion:

- Reconstituting and reinforcing the combat capability of the existing force of 29 assault brigades and 22 Territorial Defense Force brigades to offset battle losses and augment their capabilities.
- Reception, integration, and sustainment of a variety and diverse amount of Western assets coming into Ukraine, which encompasses everything from individual soldier systems to complex strategic weapons, each of which has unique training, maintenance, and logistical requirements.
- With virtually the entire active force fully committed in close combat, the need to establish corps-sized strategic reserves, which have three challenging missions to include integrating Western technology into combatant units, providing a rapid reaction capability to respond to the threat of enemy breakthroughs at the operational level, and not least creating a coherent combined arms counter-offensive force that can be employed at the operational level to decisively defeat Russian combat formations and recapture all Ukrainian territory.¹⁰⁶

Recognizing that these tasks would require high command commitment and discipline – Ukrainian Commander-in-Chief Valerii Zaluzhnyi organized his staff to confront these Herculean time-based force development tasks without being interrupted by the exigencies of current battlefield demands.

IV.B.1 - WESTERN CONTRIBUTIONS

Fortunately, the international community – primarily under the leadership of the US, UK, and Poland – dynamically established the structures and processes needed to better synchronize the provision of security assistance to Ukraine. This was an essential first step in mounting a credible response to Russia's murderous invasion. Prior to the 24th of February 2022, NATO members and their partners dealt with Ukraine on a bi-lateral basis to support combined arms training and provide a modicum of non-lethal support. These initiatives were important, but they hung together loosely and were not as effective nor impactful as they could have been.

The International Donor Coordination Centre (IDCC), for example – established by the UK, US and partner nations in Stuttgart, Germany in April 2022 – has been instrumental to harmonizing security assistance to Ukraine. Staffed by highly committed leaders from over 30 different partner nations and a robust team of Ukrainian officials that are empowered by Ukraine's Commander-in-Chief to make decisions, the IDCC maintains a common operating picture of Ukraine's battlefield needs, it ensures international partner contributions are fit-for-purpose and aligned to Ukrainian requirements and ensures the onward movement of

Philip A. Karber and Lieutenant-General (Retired) Trevor Cadieu, "Reconstituting the Armed Forces of Ukraine for Active Defense, Counter-Offensive & Liberation of Invaded Territory," (7 JUL 2022).

equipment to the theatre of war. 107 In short, the IDCC helps Ukrainian interlocutors to design and assemble the critical capabilities that their troops require in combat.

First convened by the United States Secretary of Defense in Germany on the 26th of April 2022, the Ukraine Defense Contact Group (UDCG) has also been a critical enabler. The Group, which meets almost monthly, considers the evolving operating environment and Ukraine's commensurate needs. Comprised of the senior defense and security officials of nearly 50 nations, this table – under United States leadership – facilitates a shared understanding of Ukraine's challenges and sets strategic priorities for the provision of security assistance.

The results of this collaboration have been impressive and important. Since Putin ordered the Russian military to attack Ukraine in February 2022, the UDCG has mobilized over \$60B USD in security assistance, much of which is lethal in nature. The United States has provided \$30B USD, making it the largest contributor, and the UK, Germany and Poland together have generated over \$10B USD. 109 Even historically neutral countries have provided a vast array of offensive weapons to Ukraine's fight for its existence. The feat is even more remarkable when one considers the logistical challenge of moving large quantities of weapons, equipment, spare parts, specialty tooling, ammunition, and other combat supplies to Poland, where it is received, staged, and integrated for onward movement to Ukraine.

A crowning achievement of Ukraine's supporters thus far has been the creation of two corpssized combined arms formations that are currently conducting counter-offensive operations and elements of which are poised to provide a reliable strategic-level reserve that is certain to give Russia pause before attempting to manoeuvre on to Kyiv once again. The Security Assistance Group – Ukraine (SAG-U), a U.S. three-star headquarters based out of Germany that implements direction issued by the UDCG, has delivered this effect by integrating the equipment and training providing by the international community for nine combat-capable mechanized brigades, each comprised of three infantry battalions, one tank battalion, one artillery battalion, and integral logistics support. To satisfy this massive remit, friends of Ukraine have provided over 250 tanks, 380 infantry fighting vehicles, 480 armored personnel carriers, and nearly 150 tubes of artillery.

Throughout the months of January to April 2023, SAG-U harmonized a global effort to train tens of thousands of Ukrainian soldiers destined for these brigades in four key areas: first, abbreviated Basic Training courses have integrated Ukrainian recruits and introduced them to the use of personal weapons, basic fieldcraft, the Law of Armed Conflict, tactical combat casualty care and operating as members of an infantry squad; second, platform-specific and specialty training has included artillery observer and combat engineer courses, and

Vivienne Machi, "Inside the Multinational Logistics Cell Coordinating Military Aid for Ukraine," DEFENSE NEWS, (21 JUL 2022), at https://www.defensenews.com/global/europe/2022/07/21/inside-the-multinational-logistics-cell-coordinating-military-aid-for-ukraine/.

¹⁰⁸ Claire Mills, "Military Assistance to Ukraine Since the Russian Invasion," HOUSE OF COMMONS LIBRARY, (23 MAY 2023), at https://researchbriefings.files.parliament.uk/documents/CBP-9477/CBP-9477.pdf.

¹⁰⁹ Ibid. See also "Russian War in Ukraine: Timeline," US DEPARTMENT OF DEFENSE, (2 JUN 2023), at https://www.defense.gov/Spotlights/Support-for-Ukraine/Timeline/.

Julia Monn, Andreas Rüesch, "How do Western Weapons Reach Ukraine?" NEUE ZÜRCHER ZEITUNG, (2 JAN 2023), at https://www.nzz.ch/english/how-western-weapons-reach-ukraine-ld.1719248.

familiarization with countless Western platforms such as tanks, infantry fighting vehicles, and artillery systems; third, SAG-U has facilitated company and battalion-level combined arms manoeuvre training to foster proficiency in offensive, defensive and sustainment operations; and, finally, recognizing the disproportionate losses suffered by Ukraine's junior leadership cohort, leader professional development has been tuned to generate professional squad and platoon leaders that will eventually have the skill sets needed to command battalions and combat formations.

Concurrently, Ukraine's General Staff and various operational commands have 'coiled the spring' by assembling these nine brigades (and three more of Ukraine's creation) in various oblasts in Western Ukraine, where Ukrainian soldiers are afforded a rare opportunity to decompress, ready their weapons and equipment, and marry-up with other elements of their respective combined arms teams before forward-deploying for combat.

IV.B.2 - PREVARICATION

Notwithstanding the colossal efforts undertaken to provide Ukraine with conventional warfighting equipment in the current phase of the conflict, both American and European leaders have reluctantly responded, in part – they have justified – out of concern of escalation, not wanting to overload the recipient, the need to bring allies along, and not wanting to interrupt other agendas related to economic prosperity and arms control. Instead of providing Ukraine with the supports it needed to decisively re-establish its sovereign borders and protect the Ukrainian people, the West deliberately regulated the flow of supports to Russia's victim.

This 'strategy' is notable in how economic sanctions were applied, the constrained Western military assistance to Ukraine, and the unending debate and delay regarding Ukrainian membership in NATO. Western responses have been introduced incrementally, inconsistently applied to targets and thus at times not fit-for-purpose, and incoherently applied by the members of the Alliance. Undoubtably, economic sanctions have had an impact on some individuals, some Russian access to technology, and finally their integration with the global financial system. But at each step, while painful, they were not decisive, and it gained time for Russia to both adjust to their impact as well as afford them an opportunity to seek alternative pathways with other states. Over and over, and example after example, the West has responded to a military need, but with a consistent pattern of too little, too late.

Within days of Russia's invasion, the Ukrainian General Staff and Ministry of Defense officials had already determined the suite of conventional warfighting supports needed to defeat Russia and restore Ukrainian sovereign borders. This information was presented to all international interlocutors and formed the basis of a coherent and consistent Ukrainian narrative with the IDCC, UDCG, and eventually SAG-U. As Fig. 19 depicts, rather than releasing to Ukraine early in the conflict all of the urgent operational capabilities that they had requested, equipment bundles were organized by virtue of their lethality and range –

Phillips Payson O'Brien, "The West Given Ukraine the Weapons it Needs to Win," THE ATLANTIC, (25 MAR 2023), at https://www.theatlantic.com/ideas/archive/2023/03/ukraine-western-allies-support-supplies/673520/. See also Alexander Ward and Paul McLeary, "F-16s, Longer-range Missiles Could Help Ukraine Beat Russia," POLITICO, (18 FEB 2023), at https://www.politico.com/news/2023/02/18/f-16s-and-long-range-missiles-ukraine-russia-00083572.

the implication being that less capable systems, such as personal protective equipment, small arms, portable anti-tank and air defense systems, drones, and towed howitzers, were less likely to provoke a nuclear response by Russia and could therefore move to Ukraine more quickly. Delays to the delivery of more sophisticated weaponry were justified by the high costs of these capabilities, as well as their complexity and sustainment demands.

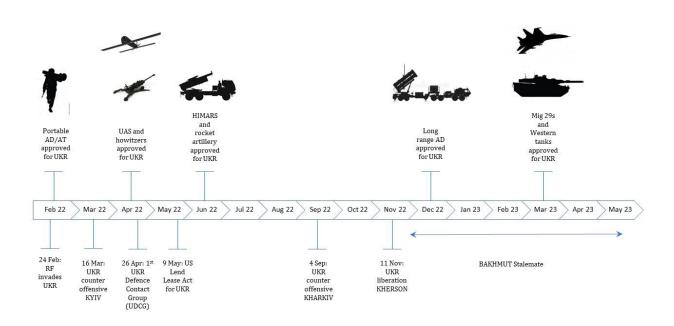


Fig. 19: Regulating the Flow of Military Capabilities to Ukraine

This incremental and indecisive approach undermines the West's commitment to Ukraine in two important ways. First, needed support has been deliberately withheld and is often late-to-need. Lethal joint strike capabilities – deemed essential for the success of any serious Western military force – were only approved for initial delivery to Ukraine nearly a year after Russia's invasion had started. Many other 'war-winning' capabilities are still being negotiated. Highly sophisticated and maintenance intensive, these systems require operators to undergo extensive training before they can be integrated into battle. Decisions to delay their integration have left Ukraine in the difficult position of having to initiate a counter-offensive campaign without all the tools it needs to first shape the enemy and subsequently protect the manoeuvre of combined arms teams.

Second, as Fig. 20 illustrates, even though the international community has started to release some of its sophisticated armaments to Ukraine, the quantity of joint strike assets and mechanized assets delivered falls far short of the stock-levels needed for combat and to replenish losses.

As of the writing of this report – 16 months after the start of the invasion – Western allies are only now talking about the viability of delivering a fourth-generation combat aircraft to Ukraine and – not trusting Ukraine's pledges not to use these systems to attack into Russia –

they have yet to approve long-range, ground-launched munitions. The mechanized assets required to equip a Ukrainian corps-level counter-offensive force are mostly in place, but the operational stocks needed to reconstitute Ukraine's losses are insufficient. Of the 2160 main battle tanks needed to equip the Armed Forces of Ukraine and ensure replacements throughout 2023, less than half of the requirement has been fulfilled. Similarly, only 896 of the 4100 infantry fighting vehicles (i.e., US M2A2 Bradleys, German Marder 1A3, Swedish CV90, BMP 1A, etc) needed by Ukrainian combined arms teams have been integrated into Ukraine's field force. To offset this gap, Ukraine's friends have provided nearly 1400 armored personnel carriers (i.e., US M113, Canadian ACSV, Finland Sisu XA-185, etc) and over 3000 light mobility vehicles (i.e., US HMMWVs, Belgium Iveco LMV, Canadian Roshel Senators, etc) but these systems lack the battlefield firepower, protection and mobility needed to break into and fight through Russian layered defenses.

Figure 20: Status of International Military Assistance to Ukraine¹¹³

Capability Requirement	Corps Requirement	UAF Op Stock Requirement 2023-2024	Total Requirement 2023-2024	Quantity Delivered	Quantity Committed Yet TBD	Total Delivered and Committed	Residual Requirement
Main Battle Tanks	360	1800	2160	697	141	838	1322
Infantry Fighting Vehicles	600	3500	4100	896	N/A	896	3204
Long range air defense systems	48	24	72	43	4	47	25
M270 MLRS	72	36	108	77	N/A	77	31
HIMARS	36	18	54	18	20	38	16
Self-propelled artillery	72	36	108	445	34	479	N/A
Towed artillery	54	540	594	379	16	395	199
Fighter aircraft	96	N/A	96	27	N/A	27	69
Attack aircraft	48	N/A	48	4	N/A	4	44
Attack helicopters	68	N/A	68	4	12	16	52
Air assault and general support helicopters	76	N/A	76	48	5	53	22

With a Ukrainian counter-offensive now underway, the 12 Ukrainian brigades that have just been established, equipped, and trained by the international community are particularly vulnerable. Customarily, two or more brigades are aggregated to form division and/or corps-level tactical formations. Key is that each echelon of command has a different function in the battlespace. Brigades, for instance, are generally only capable of concurrently planning a tactical action whilst executing another within compressed decision-action cycles.

The UK again stands out as a notable exception, having recently provided to Ukraine the Storm Shadow missile, which has a range greater than 250 km. See Timothy Wright, "UK to Provide Storm Shadow Missile to Ukraine," INTERNATIONAL INSTITUTE FOR STRATEGIC STUDIES, (16 MAY 2023), at https://www.iiss.org/online-analysis/2023/05/uk-to-supply-storm-shadow-missile-to-ukraine/.

¹¹³ Karber and Cadieu, "Reconstituting the Armed Forces of Ukraine," (7 JUL 2022). The co-authors argued that Ukraine's ability to defeat Russia within Ukraine's sovereign borders would require international allies and partners to deliver enough equipment to generate corps-level counter-offensive forces and simultaneously reconstitute Ukraine's manoeuvre formations. Together, these two lines of effort comprise the 'total requirement' articulated in this chart. 'Quantity delivered' has been tabulated from an amalgam of sources to include open-source reporting, national reporting, and publicly released intelligence assessments.

They also generally manoeuvre in space that is determined by the range of their organic weapons, and so they are most decisive in the 'close' fight. Division and corps headquarters, on the other hand, integrate and command scarce joint fires and enabling capabilities – such as long-range artillery, combat aircraft, attack aviation, and special operations forces – to locate and destroy high-value enemy targets. These 'deep' operations overwhelm enemy decision-making, induce shock, and eliminate enemy strengths, thus making the 'knife fight' easier for brigades and battalions. Ukrainian division and corps-level headquarters have access to massed artillery fires, but ammunition is in short supply, and they have been denied long-range munitions and combat air assets out of fear that they could strike targets inside of Russia (though no such restriction is placed on the invading force).

Further, defending forces generally have a tactical advantage over their opponents. They know the ground they are fighting on, and they tirelessly prepare concealed and protected positions. As Ukraine's assault brigades transition from defensive to offensive operations and clash with Russian layered defenses in the temporarily occupied oblasts of Ukraine, their casualty rates are almost certain to spike. Ukrainian soldiers will again acquit themselves with valor and rare professionalism, but their tactical manoeuvre will not be optimally supported by joint enabling capabilities.

IV.B.3 - WESTERN ECONOMIC SANCTIONS ON RUSSIA

Following the Russian success in annexing Crimea in March 2014, the West equivocated. According to then-US President Barrack Obama, for example, "Now is not the time for bluster. The situation in Ukraine, like crises in many parts of the World, does not have easy answers, nor a military solution." Convinced that there was no viable military response option for Western intervention in Ukraine, the leaders of the West focused instead on leveraging political dialogue and economic sanctions to persuade Russia – a country that itself had already elected to use multiple coercive instruments such as subversion, invasion, and aggressive military posturing. 115

Assuming that Putin could be compelled to reverse his course through pacific measures, the US and its allies sanctioned individuals that were "...responsible or complicit in undermining peace, security, integrity, or democratic institutions and processes in Ukraine." The means to implement these sanctions included a ban on individuals from financing Russian banks and energy firms, denying VISAs to implicated individuals, and restricting the sale of equipment that could have dual military and civilian applications. Ultimately, this effort – undertaken by over 30 countries – was neither sufficiently cohesive, coherent, nor coordinated to achieve optimal effect. Specifically, no single individual or entity that had committed offenses had been sanctioned by the entirety of the international community, international partners targeted different Russian and Ukrainian focal points – diluting their impact, and sanction coordination seemed

President Barrack Obama, Speech, Addressing Europe and Russia, (26 MAR 2014), at https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-on-march-26/2014/03/26/07ae80ae-b503-11e3-b899-20667de76985">https://www.washingtonpost.com/world/transcript-president-obama-gives-speech-addressing-europe-russia-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-president-obama-gives-p

General (Retired) Wesley Clark and Dr. Phillip Karber, "Ukraine vs. Russian State Sponsored Terrorism," Report to US House Armed Services Committee, (23 JUL 2014).

Ibid.

negligible. Without robust military and diplomatic efforts undertaken in tandem, this first effort at sanctions failed to deter Putin, nor did it seriously blunt the effectiveness of the Russian Federation Army as they readied for offensive operations in Luhansk and Donetsk. 117

Since Russia's full-scale invasion of Ukraine in February 2022, the international community has again implemented robust economic sanctions with a view to "...isolating Russia from the global financial system, reducing the profitability of its energy sector, and blunting its military edge." These measures – now much better cohered internationally – have specifically targeted Russia's financial sector (to freeze its assets abroad and prevent it from using its foreign reserves), energy sector (capping oil prices and banning their imports), and military technology (restricting Russian access to military use technologies and major equipment assemblies).

Again, sanctions have not delivered the "silver bullet" to alter Putin's intended course. Still able to get vast commodities of oil, gas, wheat, fertilizers, and precious metals to market, Russia has not been easy to target, and the country has adapted over time by enhancing strategic cooperation with China and India, and revitalizing its organic defense industrial base.

That said, a convergence of factors has made international economic sanctions against Russia much more effective this time around, and there are indicators that the effectiveness of these penalties will compound over time. First, whereas the response of the international community in 2014 was tepid at best, the US and its friends have galvanized and imposed much more comprehensive measures against Russia. Although all countries decide unilaterally which sanctions to impose, European countries have weaned themselves off Russian energy products, greater coherence has been achieved through the G7's Russian Elites, Proxies, and Oligarchs (REPO) Task Force, and nations have harmonized their approaches with the World Bank Group and Organization for Economic Cooperation and Development. In turn, as Western countries decouple from Russia's energy sector, for example, new trade opportunities amongst countries participating in the sanctions regime have been unlocked and the global coalition is dynamically 'counter-adjusting' its approach to countries evading sanctions.

According to the Center for Strategic and International Studies, these efforts have been particularly damaging to Russia's defense industrial complex. Moscow has found it more difficult to manufacture, sustain, and deliver advanced weapons to the fight in Ukraine, and there are acute shortages in specific components such as optical and fire control systems, bearings, specialty tooling, microchips, and engines. ¹¹⁹ Further, while countries like China and India are readily scooping up Russian oil and gas at discounted rates, up

¹¹⁷ Ibid.

Noah Berman and Anshu Siripurapu, "One Year of War in Ukraine: Are Sanctions Against Russia Making a Difference?" COUNCIL ON FOREIGN RELATIONS, (23 FEB 2023).

¹¹⁹ Max Bergmann, Tina Dolbaia, Nick Fention, and Maria Snegovaya, "Out of Stock? Assessing the Impact of Sanctions on Russia's Defense Industry," CENTER FOR STRATEGIC INTERNATIONAL STUDIES, (APR 2023), at https://csis-website-prod.s3.amazonaws.com/s3fs-public/2023-04/230414_Bergmann_Out_Stock.pdf?VersionId=6jfHCP0c13bbmh9bw4Yy2wbpjNnfeJi8 >.

to \$1 billion each month in rupee assets remains stranded at banks outside the country, depriving Moscow of the hard currency it needs to fund its war effort in Ukraine. 120 Combined, as Russia's economic growth is choked off and deficits skyrocket, these efforts are generating tensions between civilian and military priorities internal to Russia. Such is the case with Russia's highly popular social welfare initiatives, which are currently under intense pressure.

Russia's few remaining allies have felt the impacts of Western sanctions as well. Although China has enjoyed a staggering 34% increase in trade since 2022 and Chinese brands are thriving in some unsanctioned sectors of the Russian market (i.e., tech, automobile, household appliances, etc), novel enforcement strategies are making it increasingly difficult for Chinese companies to hide from international scrutiny. As reported by the Carnegie Endowment for International Peace, China's Sinopec froze negotiations on a planned \$500 million investment in Russia's energy sector in the spring of 2022 at the direction of China's government. Similar fears of exposure have discouraged Chinese companies from trying to duck sanctions on dual-use and military technologies. Unity amongst Western nations is likely to compel Beijing to settle on an approach that allows China to capitalize on Russia's weakened position, while avoiding glaring sanctions violations.

Once seen as a foil to the Western-dominated G7, the potential of the BRICS (Brazil, Russia, India, China, South Africa) alliance is also now less certain given the evolving geopolitical environment. Though none of the BRICS nations directly advocate for sanctions on Russia, they all risk international scrutiny and commensurate impacts for failing to comply with these restrictions. Moreover, global tensions over the Russo-Ukraine war are hampering unrelated diplomatic initiatives. As the major BRICS powers look to expand BRICS membership, for example, they are likely to find differing and conflicting interests amongst potential members that are almost certain to preclude a homogenous approach to Russian sanctions. Meanwhile, simmering border tensions between China and India block a unified BRICS coalition.

It is likely that Russia will continue to increase domestic arms production, moderate its trade practices, and exercise some battlefield restraint to adapt to Western sanctions in the long-term. And, while there can be no illusion that economic tools will be decisive in and of themselves, Western economic sanctions against Russia must continue – along with the application of other instruments of national power – until Putin either voluntarily withdraws his forces from Ukraine or his military is defeated. These measures will require Western nations to make sacrifices in terms of heightened inflation and energy shortages, however, these pressures can be mitigated through a strengthening of the international coalition, establishing mechanisms to deal with nations that abstain from holding Russia to account

[&]quot;Russia's Rupee Trap is Adding to \$147 Billion Hoard Stuck Abroad, BNN BLOOMBERG, (1 JUN 2023), at < https://www.bnnbloomberg.ca/russia-s-rupee-trap-is-adding-to-147-billion-hoard-stuck-abroad-1.1927379 >.

¹²¹ Vita Spivak, "How Sanctions Have Changed the Face of Chinese Companies in Russia," CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE, (18 MAY 2023).

Evan A. Feigenbaum and Adam Szubin, "What China Has Learned from the Ukraine War," FOREIGN AFFAIRS, (14 FEB 2023).

for its murderous behavior, and continuous adjustments to counter sanctions evasion.

IV.C. – REQUIREMENTS FOR DECISIVELY RESTORING UKRAINIAN SOVEREIGNTY

While the Western approach of regulating the flow of armaments to Ukraine is intended to deter Russia from using nuclear weapons, an argument can be made that Russia's threats of escalation had a paralytic effect on Alliance decision-making. This incremental approach has at once hobbled Ukraine's brave defenders, while buying Russia the time it needed to adapt to Western sanctions, kick-start its defense industrial and mobilization base, and strengthen other strategic partnerships.

The current trajectory of the conflict does not bode well for Ukraine and its Western partners. Absent a truly decisive and enduring commitment to Ukraine, Russia will become increasingly capable of etching out an 'ugly win' or, more likely, freezing this conflict once the global community becomes wary over time. Either way, a decision to deliberately protract this conflict for fear of an escalation will inevitably lead to more Ukrainian deaths and could result in a stalemate that might at best offer temporary reprieve, but it will almost certainly portend a bloodier and more costly show-down in the years to come.

Genuinely supporting Ukraine's stated desire to protect its citizens and re-establish its sovereign borders will require Ukraine's western partners to abandon the policy of incrementalism and immediately deliver all needed combat systems, sustainment, and training support so that Ukraine doesn't face exhaustion, take unnecessary losses, and forfeit the opportunity to re-establish its national integrity and territorial sovereignty before Russia replaces its losses and reconstitutes its offensive capability.

Putin – desperate and unpredictable – could evoke a contrived threat to Russian sovereignty as justification to employ tactical nuclear weapons if the Russian Federation Army is on the brink of an embarrassing rout in Ukraine. If Western nations truly support a free Ukraine, this is a risk that will linger for as long as Russia has the military capacity and wherewithal to inflict damage on Ukraine or other countries in the region.

Thus, leveraging existing structures and processes that are already in place to cohere military assistance to Ukraine, Western partners must reinforce their commitment to Ukraine's sovereignty and back those words with the immediate commitment to fulfil the following key lines of effort at once and simultaneously:

IV.C.1. - JOINT STRIKE CAPABILITIES

No issue is of deeper current concern than securing for Ukraine the joint enabling capabilities that it requires to defend against air threats, mass fires, and strike Russian high value targets before Ukrainian ground troops engage in the close fight. The delivery and sustainment of this package – which includes the combination of technology, force structure, and logistics at the joint level – is inarguably a pre-condition for a decisive counter-offensive campaign:

• **LONG-RANGE FIRES**. Ukraine's Western supporters have offered a wide range of artillery systems, including heavy mortars, towed and self-propelled howitzers, and rocket artillery. The Armed Forces of Ukraine have employed these systems to great effect, but they are plagued by munition shortages that must be stabilized. Moreover,

while the UK has recently delivered to Ukraine stocks of its long-range Storm Shadow cruise missile, the munition is launched from combat air platforms that Ukraine has also been denied. Inexplicably, allies have yet to approve the delivery of the Army Tactical Missile System (ATACMS) – a surface-to-surface GPS-guided missile with a range of 300 km that can be fired from the HIMARS systems already in Ukraine's inventory. Although US officials have cited low productive rates of the ATACMS missile to justify their indecision, the primary concern is the potential risk of escalation if Russia is targeted by this system. While the authors of this report advocate that legitimate military targets inside of Russia should be 'fair game,' if Ukraine agrees to keep ATACMS deployment west of the Dnieper River and south of 20th parallel, the Ukrainian military could strike all military targets in Crimea (including Kerch Strait bridge), 90% of the temporarily occupied territories, the invasion corridors threatening northeast Ukraine and Kyiv as well as Russian build-up in airfields, assembly areas and access to northwest Ukraine – but still remain out of range of Russian territory.



Fig: 21 - ATACMS Control Measures

• **COMBAT AIR**. Again, no modern army would attempt to conduct a major counter-offensive without supplementing ground-based air defenses with combat air patrols (CAP), suppression of enemy air defenses (SEAD), and close air support (CAS). Thus, the much-debated issue of replacement combat air for Ukraine remains critically important – not only for a layered air defense capability, but providing CAP, longer-range strike, and CAS. Every effort by Ukraine's allies needs to be focused on addressing the issue of

Daniel Block, "The Russian Red Line Washington Won't Cross – Yet," THE ATLANTIC, (26 MAY 2023), at https://www.theatlantic.com/international/archive/2023/05/ukraine-us-long-range-missiles-crimea-warend/674199/>.

getting for Ukraine Western multi-role fighters, the most attractive of which being earlier model F-16. They need to be acquired with full sets of both air-to-air missiles as well as precision ground attack munitions (including the Mk 84 2000-lb hard target penetrator bomb), spare parts, tooling, and substantial maintenance back-up. The 'F-16 coalition' recently announced on the fringes of the May 2022 G7 Summit is promising, but it should be recognized that the process to fully integrate this capability could be up to 18 months. Planning for this initiative must start immediately. A successful F-16 program could eventually lead to the introduction of other used and competitive aircraft with substantial flying hours such as the F-18 Hornet with Harpoon for maritime strike and the F-15E Strike Eagle for air superiority and long-range interdiction. Airborne Early Warning aircraft (E-2C or Hawkeye-2000) should also be delivered to Ukraine to help with the detection of threats at long-range and facilitate command and control of the battlespace.

- ATTACK AIR AND AVIATION. Similarly, if properly synchronized with other joint strike assets, attack aviation will play a key role not only in supporting the close fight of the counter-offensive force, but also in shaping tactical and operational deep areas. The delivery to Ukraine of platforms such as the venerable A-10 Warthog and AAH-64C Apache would enable manoeuvre throughput the battlespace and the ability to interdict enemy capabilities and vulnerabilities, such as rear areas and sustainment nodes, which in turn can debilitate Russian combat units.
- **LAYERED AIR DEFENSE**. It would be a mistake to believe that highly publicized shootdowns of Russian drones and missiles over the skies of Kyiv are indicative of a robust and redundant layered air defense capability in the country. Western deliveries of the National Surface-to-Air Missile System (NASAMS), US Patriot, French Crotale, and German IRIS-T have been helpful, but there remain massive gaps in Ukrainian air defense coverage, made worse by a near-debilitating shortage of munitions for these platforms. 125 Ukrainian critical infrastructure, civilian populations, and tactical ground forces remain highly exposed and vulnerable to the Russian air threat. 126 This challenge is made more severe by the clear superiority of assets available to the Russians. specifically their large number of surface-to-surface missiles, loitering munitions, and both tactical and strategic air and aviation. Thus, a concerted effort must continue to be made to assist Ukraine with the design and build of a high-quality layered ground-based air defense system. This will require additional investment in a suite of passive surveillance systems (such as Czech's Vera-NG) and multi-functional radars that can detect, classify, track and guide munitions to intercept aerial threats (such as the US AN/TPY-2 and TPS-77 multi-role radar, Sweden's Giraffe 4a, and/or France's Ground Master 200). Critically, Ukraine's air defense artillery forces must be augmented with additional systems to intercept incoming threats at close-range (i.e., US AN/TWQ

Lili Bayer, Cristina Gallardo and Lara Sligman, "The F-16 Takeoff to Ukraine Will Take Time," POLITICO, (22 May 2023), at https://www.politico.eu/article/f-16-jet-to-ukraine-will-take-time-pilot-training/.

¹²⁵ Karen DeYoung, Alex Horton and Serhiy Morgunov, "Leaked Documents Warn of Weaknesses in Ukraine's Defenses," THE WASHINGTON POST, (8 April 2023), < https://www.washingtonpost.com/national-security/2023/04/08/leak-documents-ukraine-air-defense/>.

Adam Robinson and Kayleen Devlin, "Kyiv Missile Strikes: Tracking the Rise of Russian Attacks," BBC, (3 JUN 2023), at < https://www.bbc.com/news/world-europe-65682618 >.

Avenger), short-range (i.e., German IRIS-T and Norwegian/US NASAMS), medium-range (i.e., US Patriot and/or Italy/France SAMP-T), and long-range (i.e., US THAAD and/or Israel David's Sling).

- **COUNTER-DRONE**. Since the end of 2022, Russia has increasingly used drones and loitering munitions such as the Zala/Kalashnikov Lancet-3 and the Iranian Shahed-136 to devastating effect against exposed Ukrainian troops and critical infrastructure. Designed to deliver explosive payloads, conduct kamikaze attacks, surveil targets, and/or disrupt Ukrainian networks, these drones are both difficult to track and jam when guided by inertial systems. 127 Even Ukrainian kill rates of 70-80% are insufficient to completely mitigate the threat of Russian swarm attacks, which seek to overwhelm and penetrate air defenses. Ukraine's friends have provided radars, portable and mobile air defense systems, and counter-drone systems (i.e., Edgesource's Windtalker, Fortem Technology's DroneHunter, DroneShield C-UAS, L3Harris' Vampire, etc) to counter the threat, but the problem is intensifying and stressing an already patchy air defense posture, as indicated above. In addition to dispatching proven kinetic solutions such as the SAIC counter-UAS laser-guided rocket systems and Northrop-Grumman Agnostic Gun Trucks, an expedited and concerted effort by Western partners to deploy experimental directed energy weapons such as Eprius' High-Power Microwave Leonidas and other laser energy solutions could at once help Ukraine to solve an intractable military challenge, while reducing the need for more expensive air defense munitions and concurrently facilitate for Western militaries an opportunity to hone emerging technologies.
- **ELECTRONIC WARFARE (EW)**. Just as Ukraine requires enhanced capabilities to detect, classify, track and intercept Russian aerial threats as part of a layered air defense posture, it also urgently needs the ability to counter the enemy's radar and radio emission capabilities. EW systems such as the Turkish Koral could assist Ukraine with detecting, jamming, and deceiving Russian radars that cue air attack. Similarly, tactical portable direction funding systems, such as the TCI-903-II-40, would allow for Ukrainian ground troops to more effectively geolocate and intercept radio emissions.

Unless the international community urgently delivers to Ukraine the joint enabling capabilities that it requires to shape the enemy, Ukraine will continue to be forced to pit its manoeuvre forces against the strength of Russian defenses – a losing proposition.

IV.C.2. - PROVISION OF OPERATIONAL STOCKS FOR MECHANIZED GROUND FORCES

After nearly 10 years of being forged in the unforgiving crucible of combat operations with Russia, the Armed Forces of Ukraine is one of the best and most experienced military forces in the World, and there are certainly none that better comprehend the Russian way of war. Their spirited defense, however, has come at tremendous cost. According to Oryx, over 3000 pieces of military equipment – verified through photograph or video – have been destroyed in just over a year of the current phase of the conflict.

Though this data likely represents only a small fraction of Ukraine's real losses, it

Philip Butterworth-Hayes, "Russia and Ukraine Rapidly Accelerate C-UAS Capabilities," UNMANNED AIRSPACE, (5 MAR 2023), at < https://www.unmannedairspace.info/counter-uas-systems-and-policies/russia-and-ukraine-rapidly-accelerate-c-uas-capabilities-in-face-of-new-drone-threats/>.

nonetheless signals the destruction of nearly 10 mechanized brigades worth of armaments. When factoring in the severe logistical challenges of fielding and sustaining dozens of assault brigades, it is not inconceivable that nearly 50% of Ukraine's tank and armored fighting vehicle holdings have been lost either due to serviceability challenges or combat action.

Fig. 22: Estimated Ukrainian Equipment Losses

Destroyed or Damaged Ukrainian Systems	Oryx Figures ¹²⁸
Tanks	504
Armoured and Infantry Fighting Vehicles, Armoured Personnel Carriers	1083
Artillery (tubed/rocket)	325
Aircraft	66
Missile systems	112

While continuing to maintain their current defenses, Ukrainian combined arms teams have embarked on a theatre-level counter-offensive operation. The force, as reported above, is comprised of nearly a dozen mechanized brigades, each comprised of main battle tanks, infantry fighting vehicles, and direct support indirect fires, backed-up by a dedicated and committed logistics supply chain. Unlike Ukraine's previous focus on defensive operations – less various localized counterattacks at the tactical level – the ongoing phase of operations will require the Ukrainians to manoeuvre over an immense area, break-in and fight through well-prepared Russian defensive positions that are certain to be ringed with complex obstacles, all capable of hanging up Ukrainian combat fleets as Russian formations concurrently bring joint strike and combined arms assets to bear.

Anticipating that Ukraine is likely to suffer higher personnel and equipment casualty rates in the coming months, maintaining the viability of this force will require Ukraine's friends to invest in the equipment suites needed to reconstitute all of Ukraine's 30+ existing manoeuvre formations, to include proper scaling of ammunition, spare parts, specialty tooling, and other combat supplies.

At a minimum – as depicted in the chart that follows – Ukraine will require the equipment identified last year in "Reconstituting the Armed Forces of Ukraine for Active Defense, Counter-Offensive & Liberation of Invaded Territory."

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See "Attack on Europe: Documenting Ukrainian Equipment Losses During the 2022 Invasion of Ukraine," ORYX, at < https://www.oryxspioenkop.com/2022/02/attack-on-europe-documenting-ukrainian.html >.

Corps Requirement UAF Op Stock Total Requirement Total Delivered and Requirement 2023-2024 Committed 2023-2024 2160 1800 838 1322 360 600 3500 4100 896 3204

Fig. 23: Residual Military Assistance Requirements¹²⁹

Capability Requirement Residual Requirement Main Battle Tanks Infantry Fighting Vehicles 72 25 Long range air defense 48 24 47 systems M270 MLRS 77 31 72 108 36 HIMARS 36 18 54 38 16 Self-propelled artillery 72 108 479 N/A Towed artillery 594 395 199 54 540 Fighter aircraft 96 N/A 96 27 69 Attack aircraft 48 N/A 48 4 44 68 52 Attack helicopters 68 N/A 16 76 76 22 53 Air assault and general N/A

Once these urgent operational requirements are finally satisfied, partners should assume moving forward a requirement to replace at least 25% of Ukraine's mechanized fleets annually. This is an expensive proposition, but failure will be more costly, and should thus incentivize the international community to support Ukraine more assertively in the near term.

IV.C.3. - ENHANCING RESILIENCE - UKRAINE'S TERRITORIAL DEFENSE FORCE

support helicopters

In addition to the supports required by Ukraine's mechanized assault brigades, the Territorial Defense Force is increasingly essential to the defense of Ukraine - and it will continue to be in the years to come – yet it is severely ill-equipped to fulfill its assigned tasks.

As Russia's conventional army rumbled in a murderous campaign towards Kyiv in late February 2022, the international community was inspired by and ultimately galvanized to support the courage of ordinary Ukrainians preparing to defend their families, communities, and country with anything they could muster. The tools of the Ukrainian resistance in those early days were rudimentary at best. Ukrainians from all walks of life prepared 'Molotov' cocktails, they brandished personal weapons, and improvised barricades were constructed to disrupt Russian tanks and fighting vehicles.

On the order of President Volodymyr Zelensky, these people were organized into Ukraine's Territorial Defense Force – a national-level command separate from the Ukraine's Ground Forces that now maintains a footprint in every major Ukrainian community. The President's call was met with an overwhelming response. Hundreds of thousands of Ukrainians clamored towards recruitment centers and they are now organized into 31 brigades

¹²⁹ Note that reference to 'Infantry Fighting Vehicles/Armored Personnel Carriers does not include light wheeled mobility vehicles – many of which have been produced for either law enforcement or general utility applications, and lack the firepower, mobility, and protection to operate as part of a combined arms team.

comprised of approximately 200 battalion-sized fighting units.

Before the current phase of Ukraine's war, the Territorial Defense Force consisted of a small number of professional soldiers. Their ranks have thus been filled by mobilized Ukrainian civilians and retired military personnel. They were initially intended to live and work in the districts that they serve and where they know the threat. Once brigades are mobilized to defend against Russian attack, members were supposed to be recalled by their battalions, they would be issued their weapons and would then be tactically employed as directed.

As conventional warfighting has traditionally been the purview of Ukraine's professional combat formations, Territorial Defense Forces were intended originally to supplement the Ground Forces by attacking vulnerable targets such as sustainment convoys, command and control nodes, and lightly equipped enemy units. Depending on the nature of the threat, Territorial Defense Force teams were intended to conduct hit-and-run attacks at the squad and platoon levels but could also be aggregated and fight as part of a larger tactical team. With much of Ukraine's professional military cohort now decimated, the Territorial Defense Force is no longer Ukraine's force of last resort. Rather, the command has been and will continue to be on active-duty status. Tens of thousands of territorials have left civilian jobs to fight for Ukraine.

Once formations are trained and activated, the Commander of the Territorial Defense Force detaches them for employment by one of the nation's regional joint operations commands. Out of necessity for the continued existence of a free and independent Ukraine, the Territorial Defense Force now conducts the following operational tasks, which are a far reach from what was initially envisioned for this team:

- Regional Defense. All Ukrainian communities are at risk of Russian missile attack. Further, the presence of Russian Federation Army force elements in Belarus reminds us that Russia has already attempted to attack the nation in depth, and communities must therefore remain prepared for that troubling possibility. Accordingly, Territorial Defense Force brigades continue to work closely with local officials and emergency services to plan for the defense of their communities. In this capacity, the Territorial Defense Force is intended to build resilience and deter Russia from contemplating ground attack on defended urban centers.
- Combat Operations. Territorial Defense Force companies and battalions are routinely assigned to Ukraine's other combat formations for close combat against the Russian Federation Army in the Eastern and Southern fronts. In this context, Territorial Defense Force soldiers are expected to conduct all tactical tasks in the full spectrum of conflict.
- Defense of International Borders. Ukraine's Territorial Defense Force now provides the frontline of defense on Ukraine's borders with Belarus, Transnistria, and parts of Russia, as well as Ukraine's southern maritime approaches. Without exception, these Territorial Defense Force brigades are assigned large areas of operation that span hundreds of kilometers. They work continuously to improve defenses often while being monitored and attacked by Russia's military and they thus free-up regular combat formations for close combat.

The success of this strategy of using Territorial Defense Force troops to guard Ukraine's borders will hinge on the ability of these troops to hold their ground with integral resources.

Otherwise, under pressure from Russian cross-border attacks, Territorials will not be able to hold the line and other combat brigades will be bled away from other fronts to reinforce border defenses.

Therein the problem lies. Having been established only on the dawn of Russia's full-scale invasion, the Territorial Defense Force has very little organic equipment. Territorial Defense Force battalions have been able to equip soldiers with assault rifles and personal protective equipment, but they have very few combat support weapons. Most of their troops move about the battlefield in personal vehicles, and – almost without exception – Territorial Defense Force battalions are unable to mount a mobile reserve and they have no night fighting capability. To date, international supports have understandably focused on securing the heavy armor, artillery, and joint strike assets needed by Ukraine's mechanized forces.

The Territorial Defense Force urgently requires from the international community a modest investment of light and highly mobile wheeled vehicles, crew weapons (including light/heavy machine guns, TOW, portable air defense, and loitering munitions), communications equipment and night fighting systems to ensure this force can either credibly deter Russian attack or defend against it when the time comes. Until the Territorial Defense Force can move its troops on the battlefield, penetrate Russian armor, counter enemy UAVs and aircraft, and strike with indirect fires, most defensive positions will continue to lack depth and mutual support, and they will have few opportunities to incorporate offensive action into their plans and seize on opportunities. More troublingly, Territorial Defense Force units risk being smashed by enemy fires and then quickly overrun.

The chart that follows provides an indicative assessment of the supports that the Territorial Defense Force requires to establish in each battalion a platoon-sized quick reaction force and combat support weapons detachment that can move quickly, communicate securely, and deliver lethal fires to where they are needed most. Intended to be centralized at the battalion-level, this force element could be tasked by the unit commander to assume the following duties: covering force capable of finding, disrupting and canalizing the enemy; counter-moves forces assigned to block, reinforce and counterattack; and escort for combat replenishment and casualty evacuation.

Recognizing that Western support has its limits, this assessment deliberately does not advocate for the protected mobility and combat support weapons that infantry companies would normally have for medium-high intensity conflict. A mobile sustainment echelon capable of transporting troops, rapidly evacuating casualties and delivering combat supplies is also essential and is included in this requirement.

Moreover, it should be noted that Ukraine's National Guard and State Border Guard Service are also integral to the defense of Ukraine's frontiers, however, in regions where the Territorial Defense Force provides the first echelon of defense, these entities fall under the operational command of the in-place force. Notably smaller in size than the Territorial Defense Force, the National Guard and State Border Guard Service have also benefitted from the bi-lateral support of international donors. This is not to say that they do not require ongoing assistance, but the needs of the Territorial Defense Force are expansive and vital to Ukraine's defensive scheme of manoeuvre.

Fig. 24: Priority Territorial Defense Force Vehicle and Weapons Requirements

Capability Requirement	Vehicles per TDF battalion	Priority TDF Requirement	Comment
Battalion <i>command tactical group</i> , to include command vehicle, reconnaissance vehicles, and command post.	4	400	Optimal vehicle is military pattern, light, highly mobile, wheeled (i.e., Infantry Squad Vehicle GM Defense, Humvee AM General, Eagle General Dynamics European Land Systems, Joint Light Tactical Vehicle Oshkosh Defense, etc). Or civilian pattern 4x4 truck with open flatbed.
Battalion <i>quick reaction force platoon:</i> command vehicle, heavy machine gun carrier (x2), TOW (x2), and UAV carrier/launch.	6	600	Optimal vehicle is military pattern (as per above), equipped with designated crew weapons.
Battalion <i>support weapons detachment:</i> 82 mm mortar (x4) and Stinger AD (x2).	6	600	Optimal vehicle is military pattern (as per above), equipped with designated crew weapons.
Battalion sustainment echelon: escort vehicles (x2), ambulance (x2), maintenance (x1), fuel (x2), supply (x2), and ammunition (x1).	10	1000	Civilian pattern vehicles configured for these support functions – although not optimal – would suffice. Light machine guns should be mounted in the convoy escort vehicles.
Total vehicles	26	2600	

As this conflict persists, not all of Ukraine's international partners will retain the capacity to produce or supply Ukraine with the heavy armaments that it requires. That said, virtually all partners do have the capacity to procure the light vehicles, weapons, communications, and night fighting equipment needed by the Territorial Defense Force. To reduce the financial burden on contributors, like-minded partners could collaborate, and battalion mobility packages can be delivered in tranches to ensure those units in combat operations are first to receive equipment.

Without possessing the equipment needed to shoot, move, communicate, and extract casualties from the battlefield, the effectiveness and potential of the Territorial Defense Force will remain limited. Should Russia again mass its forces along northern and northeastern approaches, Territorial Defense Forces risk being overrun, lest other combat formations from other fronts reinforce them.

IV.C.4. - ORGANIZING THE UKRAINIAN RESISTANCE

To date, the international community has naturally privileged the apportionment of security assistance to Ukraine's ground forces. Yet, Ukraine's Defense Intelligence has provided an unrecognized service to the West that has required Ukraine to at once protect its operational

security, while also maintaining honesty and vulnerability with Western partners, whose support is at times predicated on understanding Ukrainian needs and the exchange of information that facilitates it.

Ukraine's Defense Intelligence requires Western support for two essential tasks, the first of which is in support of its mandate to collect, process and disseminate intelligence on the enemy. Unlike many Western partners who are net consumers of the intelligence provided by specific allies, Ukraine views intelligence as an active and intimate engagement with the opponent across all domains. Accordingly, one of the things that sets Ukrainian intelligence apart is its persistent frontline engagement to conduct independent and sensitive strategic operations such as long-range reconnaissance and intelligence gathering, as well as direct actions against targets of strategic importance. These essential operational tasks are dangerous, complex, and resource intensive. Ukraine would thus benefit from foreign support with specific issues for which the security of sources and means would normally inhibit sharing but is crucial in enhancing the survivability of Ukrainian troops. This includes the provision of access to include electromagnetic, cyber, and space resources fenced to the needs of Ukraine's defense.

Ukraine's Defense Intelligence also requires extensive tactical and logistical support to organize the nation's resistance, and thus enhance Ukrainian resilience against long-term Russian aggression. Assuming that the defeat of the Russian Federation Army in Ukraine will require a series of counter-offensive actions on the part of the defending nation, Ukraine will continue to temporarily cede terrain to preserve the combat power needed to protect strategic vital ground, which includes the nation's capital, crossing sites along the Dnieper River and major approaches into them.

This does not mean that Ukraine will capitulate in temporarily occupied territories. Rather, as conventional forces defend and counterattack in specific areas, Ukraine's resistance movement – led by the nation's Defense Intelligence – will feature more prominently to tie down and push Russian forces towards battlefield culmination. As part of this 'shaping' effort, the Ukrainian resistance will attempt to induce shock and overwhelm Russian decision-making in all temporarily occupied territories until the Armed Forces of Ukraine have been able to establish joint enabling capabilities and the armored-heavy counter-offensive force needed to reclaim Ukraine's sovereign territory.

While mechanized units will continue to damage and impose delay on RFA elements through conventional manoeuvre, Defense Intelligence teams will band together with surviving Territorial Defense Forces and Special Operations Forces in temporarily occupied territories to complete the following essential tasks:

- Organization of the 'Underground.' This component at once leads the resistance and establishes a rear-link to Ukraine's national government. Defense Intelligence will play a key role in identifying Russian collaborators and threats to resistance cohesion, while recruiting, training, and protecting the right leaders to orchestrate resistance activities.
- Opposition to Russian Occupation. This includes tasks such as resisting deportation and military service, refusing to fulfill work expectations, and disrupting food delivery quotas in the temporarily occupied areas.
- Nonviolent resistance such as the provision of food and shelter to resistance forces,

- assisting with psychological and information operations, running media networks, and assisting with the construction of bunkers and other defensive positions.
- Violent resistance to include sabotaging materiel and supply nodes, plundering lines of communication and government property, targeting enemy leaders and Russian supporters, and attacking Russian military forces.

For Ukraine's Defense Intelligence and Special Operations Forces to buy time for the counter-offensive actions needed to eject Russia, these organizations urgently require reconnaissance drones and loitering munitions, protected mobility vehicles (for reconnaissance and liaison tasks), armored fighting vehicles (to facilitate link-up with conventional forces), heavy mortars, portable air defense and anti-tank systems, night fighting equipment/optics, and a range of logistical support vehicles.

IV.C.5. - ONGOING SUPPORT TO TRAINING AND PROFESSIONAL DEVELOPMENT

Ukraine's critical force generation tasks of recruiting, training, and equipping individual soldiers and integrating them into combined arms teams are significant. They are even more daunting when one considers that Ukraine's military must also fight and tend to casualties, while concurrently fostering a warfighting ethos and establishing training and reconstitution systems that did not previously exist in some of the commands. As the Ukrainian military integrates additional fleets of Western equipment and continues to sustain heavy battlefield casualties, the training support coordinated by SAG-U and the EU in third locations will become increasingly important.

Specifically, the following key challenges confront Ukrainian force generating commands and the General Staff:

- In the first year of this phase of the Russo-Ukrainian War, Ukraine lost tens of thousands
 of troops, either killed or injured. Thus, even to sustain Ukraine's current force structure
 will require the recruitment and training of a steady stream of ordinary Ukrainians for
 the foreseeable future.
- Though training gaps exist at all echelons, there is an acute shortage of trained and experienced combat leaders at the *squad* and *platoon*-levels. Ukrainian commanders have reported to the authors that leaders at these levels, which are often required to inspire and lead combined arms teams from the front, have taken disproportionate casualties. Compounding the problem is that leaders cannot be created overnight, and Ukraine has only recently sought to optimize the role of senior non-commissioned officers on tactical teams. Leader selection is critically important, and inculcating battlefield commanders with requisite experience and the right mindset takes time.
- Time is a critical vulnerability for Ukraine's armed forces. There will be an ongoing requirement to align ambitious training objectives with the operational mandate of the force, necessitating abbreviated and modular training cycles.
- Russia has actively targeted Ukrainian garrisons, headquarters, and training centers, thus denying training academies the luxury of centralized training models. Decentralized and exported training models will need to be explored as a result.
- Generally, as fit and deployable soldiers and leaders are with frontline troops, Ukrainian training institutions are critically understaffed.

- While exposure to Soviet models of training and warfighting have given the Ukrainians insight into the Russian way of war, Soviet planning models reinforce the centralization of authority and decision-making at the expense of individual initiative that is essential to the concept of mission command. Introducing battalion and brigade headquarters to Western planning concepts and tools is important.
- SAG-U training support to Ukraine especially leader development has given Ukraine
 a critical advantage over its enemy. Despite best intentions, the training delivered by
 some countries is not always fit-for-purpose nor aligned to the priorities established by
 Ukraine with the SAG-U. As a result, some training initiatives have surplus instructional
 capacity, while others have yet to be optimized. Further, the standardization of training
 that is being delivered by dozens of countries remains problematic and so experiences
 vary for Ukrainian soldiers.
- In the early chaotic days following Russia's full-scale invasion of Ukraine, military and paramilitary commands in Ukraine's Ministry of Defence and Ministry of Interior were forced to source equipment and training from international partners and private entities. At times, the result has been an incoherent demand signal from Ukraine and again redundant effort on the part of supporting agencies. Despite efforts to consolidate demands and the delivery of training, some commands continue to operate bi-laterally with foreign partners.

Clearly, it will remain essential for SAG-U to harmonize the delivery of training, with leader development as an enduring priority. International partners should be encouraged to facilitate training aligned to the strengths of their respective militaries, but centralized planning and coordination by SAG-U is almost certain to result in greater efficiencies and ensure the priorities of the Armed Forces of Ukraine are satisfied. Moreover, additional efforts to standardize training courses will result in more effective and interoperable forces when they return to combat operations.

Moving forward, as Ukraine adapts to its long-term force generation challenges and contemplates the re-opening of training academies across the country, Western support with courseware development, advice on the conduct of collective manoeuvre training and the integration of joint enabling capabilities, the institutionalization of a lessons-learned concept, and inputs on the organization of combat arms battle schools will also be helpful to specific commands.

IV.D. – STRATEGIC IMPORTANCE OF A UKRAINIAN VICTORY TO NATO

In summary, the West's incremental approach has precluded Ukraine from being more decisive on the battlefield. While Ukraine's partners have gradually introduced armaments with enhanced sophistication and lethality, they have been late-to-need and nowhere near the quantities required by Ukraine to re-establish its internationally-recognized borders.

Unless the international community can immediately organize to deliver all joint enabling capabilities and operational stocks specified in this report – at the scales needed – battlefield stalemate will endure, and a Russian win will become more viable at a risk to Ukraine's European neighbors.

Strategy is the great work of the organization, it is the way of survival or extinction, its study cannot be neglected. What is of supreme importance in war, is to attack the Enemy's Strategy.¹³⁰

V – UKRAINE AND A NEW STRATEGY FOR NATO

In 2022, after 14 years of prevarication in the face of ever-increasing Russian bellicose behavior, the collective members of NATO recognized:

The Euro-Atlantic area is not at peace. The Russian Federation has violated the norms and principles that contributed to a stable and predictable European security order. We cannot discount the possibility of an attack against Allies' sovereignty and territorial integrity. Strategic competition, pervasive instability and recurrent shocks define our broader security environment. The threats we face are global and interconnected.¹³¹

The good news is that the publication of the 2022 Strategic Concept provides a clear and concise articulation of the threat posed to European security that serves as a wake-up call to action. On the other hand, it did not publicly articulate, even in general terms, how that challenge could, should or would be addressed.

While it is normal that specific military contingency planning is and should be conducted with the highest levels of security, nonetheless for an Alliance wide commitment to engage in serious and sustained confrontation and be supported over the long-term, there is a need to explain to the collective citizenry of the Members not only why helping Ukraine in its time of peril is important. But equally significant, aggression threatens the sovereignty of several front-line Members and Russian threats of escalation endanger the survival of all – and they need to know how this menace can be addressed by a strategy of collective action.

It is not the role of external commentators to define what NATO's strategy should be. That is the responsibility of the Members and Alliance leadership. Our purpose here is to articulate in outline form a strategic checklist of issues which need to be addressed. In addressing a strategy vacuum, this is neither the time for generalized sentiments nor a laundry list of specific needs. Rather, the real challenge and the difficult one, is in providing a coherent, compelling, and competitive strategic architecture that not only provides operational guidance to NATO commands and offers a roadmap for unified action among Alliance militaries, but also can be articulated to the publics and political leadership of the European and North American partners.

As noted in the introduction to this report, the last time the NATO Alliance had an approach that specifically addressed large-scale conventional threats of invasion and/or nuclear attack on the Members was the strategy of Flexible Response. This approach was the driving guidance for the second half of the Cold War to its successful end. The situation today is not isomorphic to that of the 1980s, but there are compelling similarities, and the success of Flexible Response then provides an insightful frame of reference for the current challenge.

Sun Tzu, THE ART OF STRATEGY, A New translation of Sun Szu's Classic "the Art of War" by R.L Wing, editor, (New York, NY: Doubleday, 1988), Chpts: I. p. 1; III. p. 9; IV. p.13.

[&]quot;Strategic Environment: point 6, at "NATO 2022 Strategic Concept," op cit.

The peace of Europe is again threatened by an aggressive and revanchist adversary, one that is intent on dominating a sphere of influence that includes European neutrals that have the right to self-determination and accepted members of the Alliance – who other members are committed to defend.

V.A. – FLEXIBLE RESPONSE AS A FRAMEWORK FOR A NEW NATO STRATEGY

If a new era requires a new strategy, then the leadership and members of NATO need to recognize that a radical shift in the security environment cannot be successfully addressed by repeating the old homilies, making textual changes on the margin, and letting the lowest common denominator water down a serious "call to action." The term strategy is widely overused, but seldom defined. When it is correctly applied, it involves five key components:

- First, a Perception of the Threat which includes the anticipation of future contingencies.
- Second, a clear statement of Strategic Intent representing the collective interests of the Alliance with commitment to an "Agreed Action Plan."
- Third, a Strategic Framework for managing the "Agreed Action Plan" that:
 - 1. Identifies response options for various levels of threat;
 - 2. Tracks their continued relevance and viability over time as threats develop or morph;
 - 3. Prioritizes areas of effort that maximizes the contributions of all Members;
 - 4. Continually and critically evaluates the collective performance of the Allied force relative to the threat; and,
 - 5. Is flexible if responsible leaders emerge on the opposing side and are willing to behave under international law and withdraw threats to peace to constructively engage them with an agreed Allied approach to diplomacy and negotiation;
- Fourth, implementation by NATO Military Headquarters (and cooperating Allied Commands) of the "Agreed Action Plan" involving simultaneous and sequential military preparations in the design, organizational, national preparation, active readiness, peacetime deployment, along with specific national force commitments (not promissory notes or budgetary accounting), and development of a strategic reserve for employment in unexpected contingencies that is competitive to the threat; and,
- Fifth, Resource Allocation, which is focused on supporting the organization and fielding of an Alliance force, ensuring those assets are employed judiciously, and, that frontline needs are shared as an alliance-wide responsibility.

During the Cold War, NATO had a strategy development process that essentially worked. 132 With the members periodically adopting generalized Strategic Concepts that would then be converted into Military Committee guidance that would serve as both the overall Alliance strategy but also as the basis for serious war-planning by SHAPE, subordinate Commands and national forces committed to the collective defense.

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Diego A. Ruiz Palmer, "The NATO-Warsaw Pact Competition in the 1970s and 1980s: A Revolution in Military Affairs in the Making or the End of a Strategic Age?," COLD WAR HISTORY, (2014), 14:4, pp. 533-573.

NATO's strategy of "*Flexible Response*," adopted in 1968¹³³ as MC-14/3¹³⁴ initially identified three strategic concepts, designed to be implemented in sequence:

- Direct Defense as far forward as possible; 135
- Deliberate Escalation as a means for the defender to seize the initiative for recovery of lost territory and early war termination; 136
- General Nuclear Response in the event the opponent conducted a large-scale nuclear attack on NATO – with this linkage and uncertainty over the outcome hopefully deterring invasion in the first place.¹³⁷

The Soviet Union was identified as the immediate and long-term strategic challenger, NATO had a clear and closely monitored perception of threat, a majority of forces were maintained at full manning and heightened states of readiness, major units at the Division and Corps level conducted extensive joint multinational training, several thousand nuclear weapons were deployed in Europe and available for use by the armed forces of eight member countries, and the Alliance fielded long-range nuclear delivery systems (strike aircraft, surface-to-surface ballistic and cruise missiles). Organizing, synchronizing, and modernizing this force was a collective security strategy prepared for a wide-range of contingencies – from limited probes to full-scale continent-wide conflict with potential escalation up to global nuclear war – the ultimate "Zeitenwende" event.¹³⁸

As the Flexible Response strategy evolved into the 1980s, the adoption of supplemental long-term planning considerations became an important contribution:

• First, NATO planning groups highlighted Alliance conventional and theater nuclear weaknesses, especially including fallibilities in anti-armor, integrated air defense, and

J.E. Stromseth, THE ORIGINS FLEXIBLE RESPONSE: NATO'S DEBATE OVER STRATEGY IN THE 1960s, (New York, NY: 1988); and, J.S. Duffield, "The Evolution of NATO's Strategy of Flexible Response: A Reinterpretation," STRATEGIC STUDIES, (1991), pp. 132-156.

North Atlantic Military Committee. *Overall Strategic Concept for the Defense of the NATO Area,* MC 14/3 January 1968. http://www.nato.int/docu/stratdoc/eng/a680116a.pdf>.

Phillip A. Karber, PLAYDOYER FUR DIE VORNERVERTEIDIGUNG, (Pro Pace: Beitrage und Analysen Zue Sicherheitspolitik, Bonn, GER: Vertog Mittler and Sohn for Deutsches Strategy-Forum, 1984).

¹³⁶ Ivo Daalder, THE NATURE & PRACTICE OF FLEXIBLE RESPONSE: NATO STRATEGY AND THEATER NUCLEAR FORCES SINCE 1967, (New York, NY: Columbia University Press, 1991); and Phillip A. Karber, "Tactical Nuclear Weapons and Conventional Warfare," (paper presented at tactical nuclear symposium, April 1977, published in the volume: TACTICAL NUCLEAR WARFARE, edited B. A. Wellnitz, (Los Alamos, NM: Los Alamos Scientific Laboratory, August 1977).

¹³⁷ Phillip A. Karber, "Nuclear Weapons & Flexible Response," ORBIS, (Summer 1970).

[&]quot;Proud Prophet," was the U.S. test of the Flexible Response war plan in early 1983, the only military simulation directly participated in by the Secretary of Defense and Chairman of the Joint Chiefs, which walked up each of the escalatory steps from Conventional, to Tactical Nuclear, to full scale Inter-Continental Strategic Exchange. For a description see: Paul Bracken, THE SECOND NUCLEAR AGE: STRATEGY, DANGER AND THE NEW POWER POLITICS, (New York, NY: Henry Holt & Company, 2012); LtGEN, Richard Lawrence, "Proud Prophet-83 After Action Report," (Washington, DC: Joint Exercise Division, J-3 Directorate, Joint Chief of Staff, 28 DEC 1983); Phillip A. Karber, "Proud Prophet ... in Retrospect," (Washington, DC: Report for the Defense Science Board Study on National Leadership Command Capability, 27 FEB 2018). Phillip A. Karber interviewed by Albert Swidinski, "Proud Prophet Wargame," STRATEGY & FUTURE FORUM, YOUTUBE, 27 JUL 2022), at https://www.youtube.com/watch?v=pVBf2iidDOk.

the organization of reserve or territorial defense units. They recommended a "fast track" to provide needed forward defense capabilities to all front-line countries large and small;

- Second, the need to integrate the disparate forces of the Alliance in terms of standardization and interoperability – playing "smart, not rich" – in maximizing collective armament cooperation, with acute focus on command and control systems, ammunition production, and interoperability and standardization of components and spare parts in all programs; and,
- Third, articulating to the opponent an off-ramp vis-à-vis negotiated constraints that would reduce the costs and consequences of continued rivalry.

These disparate elements were linked and addressed through a series strategic initiatives adopted by NATO a decade after the Strategy of Flexible Response was launched. In May 1978, for example, NATO heads of government, at the ministerial meeting held in Washington, adopted a new "Long-Term Defense Plan" (LTDP). It committed its signatories to a fifteen-year program to improve NATO defenses and provided a long-range strategic architecture for doing so.¹³⁹

Reacting to the Warsaw Pact military buildup opposite Central Europe, the ZAPAD exercise emphasis on offensive deep operations, and the Soviet development of new theater nuclear delivery systems (particularly the SS-20 theater strike missile system), the new LTDP included 10 priority categories: Enhanced readiness; Rapid reinforcement; Stronger European reserve forces; Improvements in maritime capabilities; Integrated air defenses; Effective command, control, and communications; Electronic warfare; Rationalized procedures for armaments collaboration; Logistics co-ordination and increased war reserves; and, Theater nuclear modernization – including the creation of the Long-Range Theater Nuclear Force (LRTNF) modernization program.

The LTDP proved to be very effective in both giving Alliance members a joint-road map for force development and maximizing the introduction of new weapons technology to the forces deployed on the Central Front. It was also this willingness to compete that would, over the next decade, force the Soviet Union to realize it had started an arms race it could not afford. The LRTNF program, which would lead to the deployment of the Pershing II

[&]quot;NATO's New Defense Program: Issues for Consideration," (Washington, DC: Comptroller General Report to the Congress, 9 JUL 1979), at < https://www.gao.gov/assets/id-79-4a.pdf >. The report noted that "Similar past improvement efforts have been impaired by NATO's inability to overcome the national concerns of its members. For example, a 1970 study generated by NATO's own Defense Planning Committee identified critical deficiencies which would face the alliance during the 1970s such as deficient anti-armor capabilities, reinforcement deficiencies, maldeployment, crisis management capabilities, air defense problems, and communications shortfalls." But "nearly a decade later" these problems had not been solved because "Limitations of NATO's planning system are partly to blame. The system is a complicated, elaborate process, which takes 2 years to complete." NATO set up Task Forces based on the LTDP framework that corrected many of these problems by offering the senior leadership and member governments a framework that not only set priorities but provided the means of systematically assessing progress. ¹⁴⁰ Michael Kofman, "The Orgarkov Reforms: The Soviet Inheritance Behind Russia's Military Transformation," RUSSIAN MILITARY ANALYSIS, (11 JUL 2019), at < https://russianmilitaryanalysis.wordpress.com /2019/07/11/theogarkov-reforms-the-soviet-inheritance-behind-russias-military-transformation/ >. See also, Rachel Douglas, "Soviet Economy Restructured for Marsahl Ogarkov's war Build-up." EIR, vol. 14, no. 31, (7 AUG 1987), at < https://larouchepub.com/eiw/public/1987/eirv14n31-19870807/eirv14n31-19870807 032soviet_economy_restructured_for.pdf >.

and GLCM missiles in response to the Soviet SS-20, was also coupled with an expressed willingness to negotiate joint restraint and reduction in a plan called the "Dual Track Decision."

Ministers note that these recent developments require concrete actions on the part of the Alliance if NATO's strategy of flexible response is to remain credible. After intensive consideration, including the merits of alternative approaches, and after taking note of the positions of certain members, Ministers concluded that the overall interest of the Alliance would best be served by pursuing two parallel and complementary approaches of TNF modernization and arms control.¹⁴¹

After eight years of tough negotiation, the "Arms Control" track succeeded with the signing of the Intermediate-Range Nuclear Forces Treaty in December 1987 and the elimination of intermediate-range and shorter-range missiles on both sides. It is not an exaggeration to say that the" Dual Track" competitive strategy produced a radical change in Soviet security policy the following year and willingness to end the Cold War. 142

V.B. - NATO's NEW CENTERS OF GRAVITY

Any strategy for a defensive alliance threatened by external aggression, the natural starting point and the 'sine qua non' of the effort begins with member territory – assessing potential vulnerabilities, evaluating national needs for protection, and looking to alliances with friendly states to help address gaps and supplementary measures.

Recently, NATO's Supreme Allied Commander, told the US Congress that:

As NATO has re-postured...forces over the past couple of months...clearly what has been happening is that the center of gravity of the NATO forces has been shifting eastwards... 143

"Center of Gravity" was not a conceptual element of NATO's original Flexible Response strategy. That 19th Century icon of 20th Century strategic theory, Carl von Clausewitz introduced the concept of "Center of Gravity" (CoG) to military affairs. But in the first three decades of Cold War confrontation, it did not seem to readily apply to issues of deterrence and the role of nuclear weapons in theater conflict. However, with a growing recognition that there was a realistic possibility of a major Central European conventional war in the 1980s, it was popular among American and NATO military circles to describe the confrontation with the Soviet Union and its Warsaw Pact in Clausewitzian terms. Over the years, its influence and insight stimulated numerous commentaries and various

(Washington, DC: Brookings Institution, 1994), p. 326.

[&]quot;NATO Press Communique on the 'Double-Track' Decision on Theatre Nuclear Forces," (Brussels, BEL: NATO, 12 DEC 1979), at < https://www.cvce.eu/en/obj/nato_press_communique_on_the_double_track_decision_on_theatre_nuclear_forces_brussels_12_december_1979-en-7d068b4c-63b6-4248-9167-fe9085a0032b.html >.

Raymond Garhoff, THE GREAT TRANSITION: AMERICAN-SOVIET RELATIONS AND THE END OF THE COLD WAR.

When asked by US Senator Mark Kelly what U.S. and NATO force posture changes are required to deter future Russian aggression, General Cavoli – then NATO Supreme Allied Commander (Designate) responded that the U.S. and allies needed to consider the shift of the Alliance's center of gravity eastwards towards Poland. See General Christopher Cavoli, Commander US European Command and NATO Supreme Allied Commander, US Senate NATO Commander Confirmation Hearing, (26 MAY 2022), at https://www.c-span.org/video/?520453-1/nato-commander-confirmation-hearing.

interpretations (some of which would be unrecognizable by the original author). Nevertheless, his original concept of "center of gravity" provides a useful perspective in thinking about large-scale theatre war, something that has not been lost on other emerging powers.

Clausewitz borrows the metaphor from physics and gives it major emphasis, employing it more than fifty times.¹⁴⁵ Using what he calls an example from "mechanics," the Prussian strategist argues that:

Just as the center of gravity is always found where the mass is most concentrated, and just as every blow given to the center of gravity of a body is the most effective; and as the strongest blow is that struck with the center of gravity of the power used, then so it is also in war. 146

This is an oft cited quote from Clausewitz, but, in careful translation, it is followed by several explanatory paragraphs that give it much deeper meaning. First, he is not talking about mass *per se*, but the interconnected and relational "unity" of the force. 147 Second, there are natural and social boundaries that both impede unity and limit the expansion of its application. 148 Third, taking the "unity" and "limits" of a force into account allows the military planner to "discern their spheres of action." 149

In a conflict there are typically two opposing sides, each with forces at some level of concentration and dispersion in geographic space that, depending on time, terrain, and opposition, have a range of potential applications. It is this stored, latent, or inherent capacity for action that Clausewitz calls "centra gravitas," and the ability to recognize it that he calls "one of the principal functions of strategic judgment."

In this examination we have seen the general conditions that determine a distribution of forces. They consist fundamentally of two interests, which are in opposition to each other; the one, the possession of territory, strives to divide the forces; and the other, the blow against the center of gravity of the enemy's military power, up to a point once more unites them.

Thus, it is that theaters of war or separate army regions originate. They are in fact such boundaries of the tract of country of the forces distributed on it that every decision given by

See: "COG in On War," (no date), at < http://www.clausewitz.com/opencourseware/Clausewitz-COGexcerpts.htm >; and Antulio J. Echevarria II, "Clausewitz's Center of Gravity: Changing Our Warfighting Doctrine—Again!" (Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, SEP 2002).

Antulio Echevarria, "Clausewitz's Center of Gravity: It's Not What we Thought," NAVAL WAR COLLEGE REVIEW, vol. LVI, no. 1, (Winter 2003), at < http://www.au.af.mil/au/awc/awcgate/navy/art4-w03.htm >.

¹⁴⁶ Carl von Clausewitz, ON WAR, (translated by O.J. Matthijs Jolles; Washington, DC: Combat Forces Press, 1943): p 465.

[&]quot;The armed forces of every combatant, whether an individual state or an alliance of states, have a certain unity and thus a certain interdependence or connectivity; and just where such interdependence exists, one can apply the center of gravity concept. Accordingly, there exist within these armed forces certain centers of gravity that, by their movement and direction, exert a decisive influence over all other points; and these centers of gravity exist where the forces are most concentrated," Ibid: p 465.

[&]quot;However, just as in the world of inanimate bodies where the effect on a center of gravity has its proportions and limits determined by the interdependence of the parts, the same is true in war." Ibid.Ibid.

the main force of such a region affects the whole directly, and carries it along in its own direction....

We think, therefore, a theater of war, whether large or small, with its military force, of whatever size this may be, represents a unity, which may be reduced to one center of gravity. At this center of gravity, the decision must be made, and to be victor here means to defend the theater of war in the widest sense. 150

The power of military force is its potential in time and space. Within a Theater, ¹⁵¹ there are nodes of interconnected military units that, under certain circumstances can be unified into higher formations with the capacity for resistance to attack as well as the potential to move on certain vectors to attack others – representing a degree of "unity" called "center of gravity." The organization of these formations for decisive action within the Theater, whether on offense or defense, are called Campaigns. ¹⁵² A Theater can command multiple Campaigns simultaneously or sequentially. Over the course of any given Campaign, a force can be concentrated or dispersed, depleted or reinforced, experience success or failure in battle – and therefore its "center of gravity" changes over the course of events. But at any specific moment in time, each side's respective Campaigns have one and only one "center of gravity" that is in juxtaposition to the other.

Clausewitz thought the "centra gravitas" metaphor so useful that he employed it in a variety of different contexts. This has left a variety of commentators and critics confused, 153 but it makes more sense if viewed from the perspective of hierarchical levels of conflict:

- Political/Strategic level "center of gravity" a nation or alliance nucleus of identity and commitment without which it cannot function to protect sovereignty or interests which those externalities worth going to war;¹⁵⁴
- Theater/Front "center of gravity" the relationship between the center of unity and its constituent subordinate fronts within the limits of the geography provides the strategic

¹⁵⁰ Ibid., p. 466.

[&]quot;Theater" is defined at Clausewitz, On War, Ibid, p 232, but expanded on later: "It is only in small, well-developed states that it is possible and probable to have such a unity of military force, that all depends upon a victory over that force. In the case of larger tracts of territory which border on our own for a great distance, or in the case of an alliance of such states as surround us on several sides, such a unity is practically impossible. Here, therefore, division of force must necessarily take place, giving occasion to different theaters of war.

[&]quot;Campaign" defined at Clausewitz, Ibid, p 233, where he differs with the traditional concept that a Campaign represented all military events in a theater for a single year.

¹⁵³ Thomas Waldman, "War, Clausewitz and the Trinity," (PhD dissertation; University of Warwick, 2009): p 79: notes that "in almost all cases where Clausewitz expresses some principle or another, and no matter how forcibly stated, they are accompanied by qualifying remarks."

Thomas Waldman, op cit: p 336, states that Clausewitz "noted how the centre of gravity – 'the hub of all power and movement on which everything depends' – might in some cases equate to 'the personalities of the leaders and public opinion." Thus, political, economic and even "moral" factors can contribute to the national level "center of gravity" and that while, for most conflicts, strategically, the "the center of gravity is the Army," nevertheless "in countries subject to domestic strife, the center of gravity is generally the capital. In small countries that rely on large ones, it is usually the army of their protector. Among alliances, it lies in the community of interest, and in popular uprisings it is the personalities of the leaders and public opinion. It is against these that our energies should be directed." Clausewitz, On War, op cit: pp 495-497.

line of communication, is the source of force generation in the region and means of distributing the assets and support; 155

• Operational/Campaign "center of gravity" – the loci of relative strength versus weakness between opposing forces in battle. 156

Although autonomous in terms of importance and impact at a given level, each "center of gravity" is, in theory, interconnected with the one at a level above or below. Battle, the contest of wills, is at the center, but the gravitational pull ascends in influence and importance at each level.

Clausewitz's notion of three unique but interrelated and overlapping levels of domain – strategic cohesion, force generation, and operational campaigns – is not only relevant to the modern era but can provide a specific and constructive approach to thinking about how to organize a relevant NATO strategy and optimize its impact in the 21st Century.

V.B.1 – STRATEGIC "CENTER OF GRAVITY" & COHESION:

Given that war is an extension of politics, the highest level of connotation is the aspiration, allegiance, and avidity of the collective body of people, single states and alliance of states as implemented through their leaders in confronting an opposing polity.¹⁵⁷ The CoG for strategic cohesion in a multi-national alliance is represented by the combination of those members who are committed to a joint strategy and willing to act decisively in implementing it. What made NATO unique at the time of its founding and remains special today, is that it is a peacetime alliance that is trans-continental linking North American and European Centers of Gravity in a unified mission, organizational structure, and integrated military command.

During the Cold War, the NATO Alliance had 16 members. Strategic cohesion was achieved by several factors: a shared perception of threat; prioritization of main effort, and division of labor focused primarily on one Front – the forward presence in central Europe with the echeloned reinforcing potential of the massive Soviet Army which was quantitatively unmatched by NATO's original conventional capability. The flanks, in the North and the Mediterranean, were viewed as separate force generation and operational campaign areas and were thus treated as generally independent of "the" Central Front.

Today, NATO has been expanded to 31 states, with the potential of adding two additional applicants. It is an incredible compliment to the Alliance that millions of more Europeans,

For example: John F. Kalb, "A Foundation for Operational Planning: The Concepts of Center of Gravity, Decisive Point, and the Culminating Point." (Fort Leavenworth, KS: US Army School of Advanced Military Studies, 1987); James M. Dubik, "A Guide to the Study of Operational Art and Campaign Design," (Draft Paper, US Army School of Advanced Military Studies, 1991); and "Operations," (FM] 100-5; Washington, DC: U.S. Department of the Army, 1993): pp 6–13.

Clausewitz, ON WAR, p 456: "... since the essence of war is fighting, and since the battle is the fight of the main force, the battle must always be considered as the true center of gravity of the war." See: Michael T. Inman, "The Tactical Center of Gravity: How Useful is the Concept?" (Fort Leavenworth, KS: US Army School of Advanced Military Studies, 1990).

¹⁵⁷ Clausewitz defines warfare as "...an act of force to compel our enemy to do our will...[in a] collision of two living forces." Carl von Clausewitz, ON WAR, edited and translated by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), pp. 75, 77.

living in democratic societies want to continue to pursue their independence and self-determination in the face of a revival of a Russian imperial attempt to impose a sphere of influence on their lives, and they see the value in joining a collective security group of likeminded states.

Until the 2022 Russian invasion of Ukraine, there was not a shared perception of threat and, as a consequence, there was neither an agreed prioritization of danger, nor a united commitment in addressing it. Although strategic cohesion can be defined in many ways, one current example is with respect to Ukraine and the support that various Alliance Members have given. As would be expected, some of the larger ones have in fact given by far the greatest amount of support. But one way of looking at Alliance cohesion in this case is to not only ask 'how much' has a member given but at what cost?

As illustrated in the data below, ¹⁵⁸ at the heart of strategic cohesion is the issue of shared sacrifice. It is an issue that since the founding of NATO has cut to the core of the Alliance at every level. It is not only about what countries are willing to spend in terms of financial capital, but who is willing to have foreign troops on their territory and what countries are willing to host nuclear weapons knowing that they will rank high on the opponent's target list. Is the US willing to risk its cities by committing strategic deterrent forces to the Alliance? In any organization that has lasted for more than 70 years, it is natural for the 'old-timers' to become pre-occupied by day-to-day petty squabbles. It is therefore refreshing when other countries in Europe, feeling the heat of Russian imperial ambition still see in the Western Alliance a combination of values and willingness to defend them that inspires these new applicants to join.

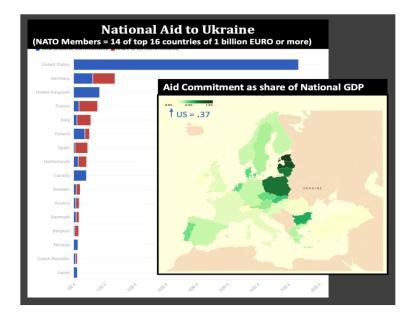


Fig. 25 - Comparison of Total Versus Relative Aid to Ukraine

Government-to-Government Transfers from 24 JAN 2022 to 15 JAN 2023. EU commitments include MFA, EPF, and EIB. Christopher Wolf, "Ukraine Support Tracker," US NEWS & WORLD REPORT, (24 FEB 2023), at https://www.usnews.com/news/best-countries/articles/2023-02-24/these-countries-have-sent-the-most-aid-to-ukraine.

Although the United States has made by far the largest financial contribution, in terms what has been given relative to affordability of Ukraine's strategic importance to NATO, it is interesting that those who are also on the front line of Putin's Imperial expansion – Estonia, Latvia, Lithuania, Poland and Bulgaria – are the one's contributing to the Ukrainian defense all out of proportion to their available means (measured as a percent of their GDP).

It is a great advantage to have an international alliance with 31 members participating in a collective security association based on their free will and taking a unanimous stand on strategic issues. At Brussel's headquarters, it is common to hear that "consensus and consultation are part of NATO's DNA" where decisions are taken by the Atlantic Council (with all member countries participating) and done by consensus" – meaning unanimously. While this is generally laudatory, there is a real danger when a set of critical decisions impacting the fundamental security of the majority of members need to be made, that one or two states can delay or effectively defeat strategic action on the basis of internal issues or leadership petulance. NATO faces this problem at the upcoming Summit with respect to Sweden and Ukraine with Hungary and Turkey blocking their admission.

Under the 1949 North Atlantic Treaty, "...any other European State in a position to further the principles of this Treaty and to contribute to the security of the North Atlantic area to accede" is welcome but that requires "unanimous agreement." When the Treaty was originally signed, no provision was included for removing a member state, so it is not possible to remove recalcitrant Members endangering everyone else. The "Vienna Convention on the Law of Treaties" covers the termination or suspension of a treaty, but it is not retroactive and therefore does not apply. However, in extremis, any member country has the right to withdraw from NATO at any time. Therefore, if all but the problematic subversive had a common understanding, they could theoretically all withdraw at the same time and recreate a very similar treaty, effectively being equivalent to removing a member.

V.B.2 - THEATER/FRONT "CENTER OF GRAVITY" & FORCE GENERATION:

Within the Strategic Center of Gravity, there are areas of direct challenge, often called a "Front" or a "Theater" (if involving multiple Fronts Theater). As the next level down in the structure of engagement, there is a critical requirement to link the source of support from the rear to the forward forces conducting Campaigns – a process called "Force Generation," which encompasses the readiness of existing formations, as well as

[&]quot;How are Decisions taken at NATO?" NATO, (Brussels, BEL: NATO Headquarters, no date), at https://www.nato.int/wearenato/how-are-decisions-taken-nato.html.

[&]quot;Article 10, North Atlantic Treaty," NATO, (Washington, DC: NATO, 4 APR 1949), at < https://www.nato.int/cps/en/natolive/official texts 17120.htm>.

¹⁶¹ Article 60, Vienna Convention on the Law of Treaties, (Vienna, United Nations, 23 MAY 1969), at < https://legal.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf >.

Phillip.A. Karber, "Battlefield Leverage: Hierarchy and Transition in 'Central Battle' and 'Force Generation'," (report for "Battlefield Development Plan" with comments by Gen. Don Starry; Ft. Monroe, VA: TRADOC, Spring 1979): p 371.

reinforcement and replacement of assets.¹⁶³ Within or added to this Center of Gravity are the full gamut of sources producing military capability such as manpower, mobility, stocks, mobilization systems, training, sustainment, and other elements that are combined in a military structure focused on a strategic mission in a given space and time. This multidomain ellipsoid has a center of mass¹⁶⁴ – a military structure that serves as a "hub" for maximizing the combatant potential of this Front relative to the overlapping Front(s) of the opposing system.¹⁶⁵

In modern terminology, this hub is the basis of force generation linking the supporting Rear with the Front's engaged Operational Campaigns. The area that includes the transportation system, including from trans-Atlantic reception ports and moving across Europe's transportation net, is designated the "Communication Zone (Com-Z)." Usually the "hub" and the combatant Front(s) are in separate locations reflecting the depth of the theater – however, sometimes they become co-mingled which greatly adds to the vulnerability of both.

Following the French withdrawal from the Alliance in 1967, NATO lost the extensive Com-Z that it had built in France. With the line of communication rerouted via the Channel ports to the Central Region, to the direct engagement battle-space where multiple Corps would be conducting simultaneous defensive campaigns, Germany was forced to take on the dual role of the Front "Hub" and host of a number of combatant operational CoG. ¹⁶⁷ During the Cold War, forty successive years defending the Central Front made Germany a very "mature" supporting "hub" with cumulative decades of infrastructure investment and refinement of the forward flow to the Front in a Theater with narrow depth.

[&]quot;Force generation encompasses actions taken to supply the human resources curing planning, preparation, and execution of a military operation and has two components: reinforcement and replacement...Planning for adequate force generation is an integral part of any plan for a campaign or major operation." MAJ. Quentin Schillare, "Force Generation in an Immature Contingency Theater," (Fort Leavenworth, KAN: School of Advanced Military Studies United States Army Command and General Staff College, 14 MAY 1990), at, https://apps.dtic.mil/sti/pdfs/ADA233997.pdf>.

[&]quot;A centre of gravity is always found where the mass is concentrated most densely. It presents the most effective target for a blow; furthermore, the heaviest blow is that struck by the centre of gravity." Ibid: pp. 485-486.

[&]quot;... one must keep the dominant characteristics of both belligerents in mind. Out of these characteristics a certain centre of gravity develops, the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed." Ibid: pp. 595-596.

Phillip A. Karber, et al, "Trends in Relative NATO/Warsaw Pact Force-Generation Capabilities," pp. 1-122, Vol. I, "The Correlates of Confrontation," in WAR IN EUROPE: A Campaign Analysis of the Changing Military Balance in Central Europe, 5 Vols, (Washington, DC: Office of Net Assessment, Pentagon, 7 AUG 1987), [formerly Top Secret, redacted and declassified For Official Use Only on 8 AUG 2012).

Multiple operational level campaigns between one or more NATO Corps conducting an "active defense" against one or more Warsaw Pact Armies launching concentrated breakthrough attempts across the breadth of the Front. See: Phillip A. Karber with A. Grant Whitley, "The Operational Realm," in NATO AT FORTY: CHANGE, CONTINUITY AND PROSPECTS, edited by James K. Golden, Daniel J. Kaufman, Asa A. Clark, and David H. Petraeus, (Boulder, CO: Westview Press, 1989); and Phillip A. Karber and Diego Ruiz Palmer, "Coalition Strategy and the Operational Level of Warfare," in US DEFENSE POLICY: IN AN ERA OF CONSTRAINED RESOURCES, edited by Robert L. Pfaltzgraff, Jr., and Richard H. Shultz, Jr., Lexington, MA: Lexington Books, 1990).

But, since the end of the Cold War, little was done to invest in and build upon NATO's Force Generation capacity, as the "hub" of the Central Front moved 800 km to the East. Progress has been made since Russia's initial assault on Ukraine in 2014, with Poland serving as the new combination "Hub"/Front, and Germany struggling with the important role of Com-Z. These useful but small and partially implemented Force Generation steps of the last seven years are inadequate for the new challenge. Upscaling NATO's multinational commitment to Poland and the Baltic Republics from Battalion to Brigade is long-overdue, but that Front of 1100 km is only a fraction (1/6th) of the Frontage threatening the Western Alliance.

Although it has not received much consideration, NATO expansion not only greatly increased the total area of the Alliance, but dramatically changed the geometry of its defensibility:

- It doubled the horizontal depth of NATO's Theater way beyond the ability of its Cold War hub to support force generation to the most exposed Eastern front-line members, a role that has now shifted east to Poland, who, like West Germany before, is now both a force generation "hub" and a frontline defender;
- The expansion of members along the Baltic, throughout the Balkans and along the Black Sea has geographically and operationally united Northern, Central and Southern Europe

 the Flanks are no longer isolated but integrated with the Center as adjacent Fronts;
- The line of direct continuous engagement has expanded from the Cold War's Central Region of 820 km to over five times that length = 4,200 km.

Thus, today the Alliance is faced with three contested and overlapping centers of strategic importance. NATO has suddenly and surprisingly coalesced in terms of the perception of the threat and as illustrated in its support of Ukraine has demonstrated a cohesive unity in different levels of effort. But a challenge remains and that is in identifying and responding to these future areas of instability, intimidation and/or invasion. Each of these three levels were major factors in the Cold War confrontation, but it is important to recognize how they have changed over the last three decades and assess the difference that each makes in the current Alliance context.

For NATO in the Cold War, the focus was primarily on the Central Front in defending divided Germany and the forces of eight NATO countries, organized into two army groups, with nine Corps covering an 860 km-frontline, with the equivalent of 48 high readiness Brigades immediately available and – with 10 days mobilization – the total reached 60. This formidable ground force was backed up with 2000 aircraft (and another 1000 rapid reaction aircraft being available within 10 days), either deployed in the central region or within strike range from England, and – from the Baltics to the Bavarian Alps – NATO deployed two integrated air defense belts (with continuous coverage). This force was held at high readiness, and it also involved repeated cross-national air/ground joint exercises.

The flank area, involving Norway and Iceland, was called the "Northern Region" ¹⁶⁸ and was seen as critical both in terms of protecting transatlantic reinforcement to the center and Soviet submarine targeting of the US. Likewise, south of the Alps, there was a perceived Mediterranean flank, even more disconnected from the center and amorphous in terms of

[&]quot;Military Decision on MC 48/3: A Report by the Military Committee to the Defense Planning Committee on "Measures to Implement the Strategic Concept for the NATO Area," NATO, (Brussels, BE: North Atlantic Military Committee, 8 DEC 1969), at < https://www.nato.int/docu/stratdoc/eng/a691208a.pdf >.

threat, but nevertheless the connecting lifeline of four NATO members (Spain, Italy, Greece, and Turkey) and a strategic position with respect to the volatile Mid-East that received increased attention after the 9/11 attacks on the US.

Expansion of NATO Territory and Forward Defense Challenge EUROPEAN COUNTRIES TOTAL CURRENT + 2020 Members 13 28 28+3 **Population** 449000000 561000000 617000000 5878000 3489000 4490000 Area (km2) FORWARD DEFENSE EXPANDING MEMBERS 1990 CURRENT + 4** 2*** 1* Countries **Population** 620000000 430000000 460000000 Area (km2) 250000 486000 941000 FORWARD DEFENSE AREA BY THEATER 1990 Area (km2) 2020 CURRENT + 785000 NORTHERN 250000 486000 486000 CENTRAL SOUTHREN 603000 West Germany Estonia, Lativia, Finland & Sweden Lithuania, Poland Ukraine

Fig. 26: A Growing NATO Forward Defense Challenge

As in the Cold War, NATO's Central Front remains the critical core of Alliance security. Previously, the dual role which gave West Germany strategic importance was in combining both the function of a "force generation hub" as well as being the contested territory in a series of "operational campaigns." While Germany is still a critical line of communication, their strategic CoG role has now been moved East.

What is different from the Cold War is that this core "force generation" CoG in Poland now supports not only the defense of NATO's Central Region but is also the indispensable link to the new Northern and Southern Fronts.

These fronts overlap and produce a powerful and symbiotic set of CoGs. Anchored on Poland, a Northern Front encompassing the Baltic Sea, Lithuania, Latvia, Estonia, Finland (and hopefully Sweden) has the potential to become a strong and sustainable Front with their own center of gravity. It is the land link critical to the survival of the Baltic Republics.

Likewise, the security of the Black Sea region also has the potential of a Front if anchored on liberated and potential Alliance member Ukraine. In this case Poland is not only the indispensable line of communication keeping Ukraine alive with Western supplies, but the irreplaceable cork in the bottle stopping further Russian aggression in Central-Southeastern Europe if Ukraine falls. But, as with Germany in the Cold War, Poland is also a front-line state facing a potential threat from three Russian "schwerpunkts" – from Kaliningrad, Belarus, and through Western Ukraine (if the current conflict ends unfavorably).



Fig. 27: NATO's New Strategic Centers of Gravity

Thus, in a Clausewitzian sense, Poland is the new strategic CoG for Central Europe – a status that is both a blessing and a curse. On the positive side, Poland's leadership understands the security needs of NATO's East European members, it represents collective interests fairly and appreciates the strategic importance of Ukraine's survival in not only words of support but in action. Conversely, as the CoG for NATO's center, it is a natural Russian pressure point – more likely to become the target of Russian nuclear coercion in a crisis and nuclear strikes in a conflict.

As shown in Fig. 27 above, three countries have the size, depth and military potential to serve as the basis for NATO's defense of the Northern and Southern Fronts. This offers NATO the potential of two strong Centers of Gravity adjacent to the Center, not as isolated "flanks" but integrated wings.

V.B.3. OPERATIONAL & CAMPAIGN CENTERS OF GRAVITY

Operational campaigns are the third level for which centers of gravity can be designated. Specific forces are deployed, concentrated, and committed to offensive and defensive combat. These are best used as a series of campaigns, which can be conducted sequentially or simultaneously. Opposing forces in the field each have a "schwerpunkt" or locust of main effort, and it is that confrontation that defines the CoG of operations and campaigns.

In military art and science, the "operational level" is viewed as an intermediary level between the strategic and tactical echelons and involves the planning and execution of campaigns and major operations.¹⁶⁹ Traditionally, operational-level manoeuvre was viewed as the combined arms integration of forces at the level of a modern Corps or Army Group in NATO, or an Army or Front in traditional Soviet military thought. This perspective dominated the Cold War period but in the modern era, smaller formations have been given equivalent missions to what would have traditionally been a Corps or operation, particularly on a dispersed battlefield where the opposing forces are not linearly juxtaposed and there is a low force-to-force ratio. Contrary to much popular opinion, large-scale combined arms warfare did not go away with the dawn of 'hybrid warfare' theory or the counterinsurgency campaigns of the early 2000s. And, as demonstrated over the last 16 months of Russia's invasion of Ukraine, conventional warfare on a scale of World War II but with vastly increased lethality is a reality that cannot be ignored in contemplating future NATO-Russian confrontation.

Traditionally, campaigns described a series of operations that occurred in the calendar year during seasons that were amenable to the movement and fielding of troops exposed to the elements. More recently, campaigns have taken on the character of combining multiple operations focused not only on a larger military objective but operating in greater depth and over extended time relative to a typical operation.¹⁷⁰

Clausewitz described these as having a 'schwerpunkt' – a point of main effort, the nucleus of which is the operational/campaign center of gravity.¹⁷¹ When the term "schwerpunkt" is used, it is natural to view it as a reference to an offensive action. But both in Clausewitzian theory and modern military thought, a point of main effort is as important to the defense as it is to the attacker. Generally, the difference being the offense has the initiative and therefore the defense is forced into a reactive mode. In the beginning of an operation or campaign, the attacker has the advantage of having carefully thought through the most critical issues and put together a plan orchestrating the use of his available resources. But many a strategist have noted that the best laid plans "do not survive contact with the enemy," which Clausewitz famously described as "friction." It is this state that offers the defender an opportunity to not only use traditional advantages of defensive preparation versus offensive exposure, but at the moment when friction becomes dominant, the defender can attempt to seize the initiative. Thus, the center of gravity in modern combined arms battle is the point of decisive confrontation between the opposing forces.

If one compares the Russian invasion of Ukraine to the Soviet/Warsaw Pact offensive planning of the Cold War on the central front, both the magnitude and density of forces have

Andrew S. Harvey, "The Levels of War as Levels of Analysis," MILITARY REVIEW, (NOV-DEC 2021), at .

¹⁷⁰ See Trevor Nevitt Dupuy, UNDERSTANDING WAR: HISTORY AND THEORY OF COMBAT (London: Leo Cooper, 1992).

Milan Vego, "Clausewitz's Schwerpunkt: Mistranslated from German – Misunderstood in English," MILITARY REVIEW, (JAN-FEB 2007), at https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/MilitaryReview_20070228_art014.pdf.

¹⁷² Barry D. Watts, "Clausewitzian Friction and Future War," McNAIR PAPER 68, (2004), at https://www.clausewitzstudies.org/readings/Watts-Friction3.pdf. See also Carl von Clausewitz, ON WAR, Michael Howard and Peter Paret, eds. and trans. (Princeton: Princeton Univ. Press, 1976)>.

some similarity, however, Russia's "Special Military Operation" was obviously not planned to be a static and attritional bloodbath, but rather a quick coup-de-main to replace the Ukrainian government. Thus, it is worth noting that when Russia was previously planning a war with NATO that included Ukraine, the disposition of forces was not concentrated, but widely dispersed – across three major fronts: Northern, Central, and Southern.

As illustrated in the accompanying maps at Fig. 28, in the Cold War period, the initial engagement of multi-Army first echelon forces against NATO corps was concentrated in the central region. There were other areas where combat could take place immediately with adjacent forces, but these were either limited naval amphibious operations or conducted in extremely challenging terrain that inherently limited any significant initial advance. The famous Russian ZAPAD exercise of 1981, as previously discussed, emphasized this heavy concentration in the center, and very light offensive potential on the flanks.¹⁷³ What is not shown in the graphics is that with mobilization and re-deployment, the seven armies in the center could be augmented by a second echelon of equal size and capability, as well as the preparation for eventual army-level operations on the flanks.

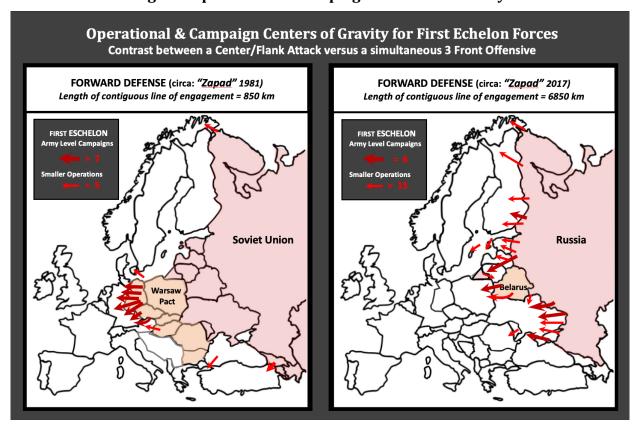


Fig. 28: Operational & Campaign Centers of Gravity

Conversely, the 2017 iteration of ZAPAD was an exercise that effectively involved three major fronts: a Northern front against Norway, but with Finland taking the heaviest hit; in

¹⁷³ Kyle Mizokami, "Why Russia's Massive Zapad Exercises Scare the World," THE NATIONAL INTEREST, (16 APR 2017), at https://nationalinterest.org/blog/the-buzz/why-russias-massive-zapad-military-exercises-scare-the-world-20199.

the Center against the Baltic Republics an attempt to close the Suwalki Gap between Kaliningrad and Belarus, as well as a double Army assault of Warsaw; and in the South, initially Ukraine would be neutralized by the control of Kyiv and the eventual occupation of the country in following the defeat of Ukrainian forces in the field with one or more armies subsequently stationed on the Ukrainian-Polish border. ZAPAD 2017 sent a strategic message to NATO that unfortunately was not understood by the Alliance. The confrontation between Russia's imperial ambition and Western attempt to defend democracies exercising self-determination would not be limited to one local area but potentially involve combat over a front of nearly 7000 km.

In addition to the sheer magnitude of ZAPAD 2017 and its various campaigns, several other observations are worth noting. First, while it involved a tank army and five combined arms armies, in contrast to 1981, they did not presume a reinforcing second echelon – the remaining six armies deployed to the south remained in the far east. Second, ZAPAD 2017 presumed it was going against opponents that: 1) were either inherently weak (i.e., Estonia, Latvia, Lithuania); 2) whose defenses depended on mobilization (i.e., Finland); or 3) whose forces were tied down in a proxy war (i.e., Ukraine). Ever since Putin's ascent to power, Poland has represented a special case ("thorn") in Russia's imperial ambition.

Fortunately, the countries involved in the North and in the South that are targets of Russian imperial ambition are neither weak, nor unmotivated. For 40 years of the Cold War, Finland and Sweden remained neutral (with a cant to the West). And now they perceive a threat in Northern Europe that is greater and more dangerous than anything during the Cold War. Likewise, Ukraine having been ambivalent in the comings and goings of various political administrations has now realized that for survival, its fate is tied to NATO.

Sweden has maintained an impressive military and R&D capability, and although it has drastically downsized its active forces since the end of the Cold War nonetheless has much to offer NATO – not the least of which is a large number of airfields for the bed down of Western fighters and their recovery; and a naval force which in coordination with Poland has the potential of dominating the Baltic Sea. Finland, although it has a small population and a capital within easy strike range of Russian forces, nevertheless has the largest Army in Europe (relative to available manpower) and given their history of performance, few doubt that they will inflict massive and disproportionate losses on any aggressor.

Finland has been accepted to NATO. Unfortunately, Sweden's membership has been held up and the strategic significance of this cannot be overstated. Without bringing Sweden into the Alliance to backstop Finland, just as in 1940, they will be left to fight and to die without the help that they need from the West.

On the Southern front, any hesitation among the Ukrainian population to join NATO has been swamped by the barbarity of Russia's invasion including the targeting of civilian infrastructure, the disregard of civilians in combatant areas, the kidnapping of Ukrainian children and their movement to Russia, and the numerous incidents of methodical torture by Russian forces across the breadth of the front. Ukraine has taken on a Russian offensive

Giangiuseppe Pili and Fabrizio Minniti, "Understanding Russia's Great Games: ZAPAD 2013 to ZAPAD 2021," RUSI, (7 JUN 2022), at https://rusi.org/explore-our-research/publications/commentary/understanding-russias-great-games-zapad-2013-zapad-2021.

involving all 12 of their armies. It has beat them back in the battles of Kyiv, Kharkiv, and Kherson and yet the Russian "meatgrinder" goes on, and on.

NATO is lucky, as the forces of the new applicant Members on the new Fronts are not weak. But in terms of bringing to bear Alliance military and supporting assets to Theaters they are "immature" in development and will take a not only a concerted effort to fulfill their potential but a serious strategy that both addresses the unique threats and responds in helping meet requirements.

V.C. – DESIGNING A 'RECIPROCAL RESPONSE' STRATEGY

NATO is a defensive Alliance. Its expansion in Membership and geographic area shows no intent or effort to seize territory from others or coerce states into submission. Its history and mission reflect a very cautious and judicious use of force focused primarily on deterring attack on the democratic Members exercising their self-determination within their own sovereign territory by providing a collective security organization. Because it is defensive, it also means that it is inherently reactive.

As a "defensive reactor," NATO's constitutive nature and the cautious outlook of any organization requiring unanimity to act makes developing a comprehensive and coherent strategy very challenging:

- First, as a "defensive reactor" NATO cedes to a potential aggressor "the initiative" in picking the time, place, mode, and intensity of aggression.
- Second, the nature of any organization requiring 31 members to agree unanimously in order for the group to act, means that creating a new strategy and/or inviting new members tends to depend on the "lowest common denominator" that compromise can produce.
- Third, in a trans-Atlantic alliance and in an area the size of Europe, some states who are on the frontline view threats as existential to their survival, while those in the "rear" may not only be less motivated but to a certain extent "free-load."
- Fourth, while a "defensive reactor" has the option in peacetime to organize its defensive posture, structure of forces, and procure weaponry responsive to the threat, it is all too easy to become complacent and presume that this peacetime posture is a deterrent in and of itself when in fact the inhibition to attack is in the mind of the aggressor.
- Fifth, having ceded the initiative to the aggressor if deterrence fails, attempts to regain the initiative can be inhibitive in both fear of escalation and/or self-deterrence.

As frustrating as these challenges are, they are not going away so a new strategy for NATO must accommodate them as "givens."

Developing a new strategy in the context of these limitations can seem daunting. But it is important to remember that not only did NATO's strategy of Flexible Response have to deal with those same issues, but it also faced a massive opponent and a far greater military challenge. The Soviet Union had a force structure five times larger than Russia's current conventional capability and – with its Warsaw Pact alliance – dominated virtually all of Eastern Europe with a heavy forward deployed force posture that raised the specter of surprise attack, as well as a robust second echelon of equal strength that could be mobilized and rapidly deployed forward. Moreover, because of NATO's conventional inferiority, it felt

compelled to depend on the first use of nuclear weapons as a means of seizing the initiative to create the conditions for war termination.

Despite these challenges of a defensive alliance, Flexible Response was a successful strategy that was internally consistent, flexible enough to be sustainable over the long-term, and that was both comprehensive and convincing to Western publics and politicians.

If Flexible Response was intended to implement a mandate to use nuclear weapons "if necessary," today NATO needs a strategy of "Reciprocal Response" where the focus, both in peacetime messaging and in fighting aggression, is having a perceptible capability and committed policy of reciprocity. Specifically, attacks launched from Russian territory involving conventional missile strikes against rear area targets or initiating the use of nuclear weapons must be met in kind. Russian territory cannot be a sanctuary from which it can attack NATO with impunity and then hide behind the skirt of superpower inviolability.

Obviously, there are significant elements of the current environment, in particular Russia's willingness to wage war on a European state, that are different from the situation with the Soviet Union four decades ago. Nevertheless, the three strategic concepts of the Flexible Response strategy are not without relevance to Europe's current 'Zeitenwende' angst.

Fig. 29: Modern Application of Successful Alliance Strategic Framework

FLEXIBLE RESPONSE (1968-1991)

- Direct Defense (DD) of Central Front & Flanks
 -- as Far Forward as prudent
- Deliberate Escalation (DE) if necessary, initiate seize the initiative at place and time of choice for "first use" of nuclear weapons to stop offensive
- Deterrence General Nuclear Response (GNR) if Deliberate Escalation fails but pre-conflict emphasis on uncertainty as inhibiting factor
- Long-Term Defense Plan (LTDP)
 - -- Development of Competitive Strategy
 - -- Rationalization, Standardization & Interoperability
 - -- Dual-Track: LRTNF deployment & arms control negotiation

RECIPROCAL RESPONSE (2023-????)

- Forward Defense of "Centers of Gravity" (CoGs) --North/Baltic Sea, Central Front, South/Black Sea
- Escalation Dissuasion develop proportionate response options to inhibit expansion of the conflict in scope or intensity
- Deny (with active defense & means of retaliation) opponent belief in threat/use of weapons of mass destruction usable to coerce or strike Alliance
- Long-Range Competitive Strategy
 - -- Create collective approach for CoG Forward Defense
 - $\hbox{\it -- Rationalization, Standardization \& Interoperability}\\$
 - -- Dual-Track "War Termination:" Support Ukraine to defeat the aggressor & recover sovereign territory while diplomatically convincing the invader to leave

The terms are different and some of the meanings have changed, but using Flexible Response as a starting point serves as a useful Strategic Framework to compare "then & now" – think through current challenges and explore future options.

The following discussion is organized around the three key concepts, briefly describing the original Flexible Response construct, identifying what remains relevant, and providing some examples as to how each component could be implemented.

V.C.1. - FORWARD DEFENSE OF NATO'S NEW EUROPEAN SHIELD

The declared objective of NATO's Strategy of Flexible Response was, "...to provide for the security of the North Atlantic Treaty area primarily by a credible deterrence," but:

Should aggression occur, the military objective is to preserve or restore the integrity and security of the North Atlantic Treaty area by employing such forces as may be necessary within the concept of forward defence. 175

Numerous times in history, the defenders have not had sufficient initial strength to defend their territory at the frontier and find it necessary to husband their forces and fall back to stronger positions and gain time for reinforcements. There are notable examples where that has worked and in others the sheer momentum in the offensive advance produces political capitulation and/or national occupation. Even when it is ultimately successful, the costs in civilian lives and destruction can be catastrophic. This was the dilemma that NATO faced in the first 20 years of its existence and forced it to try to offset that weakness by relying on the first use of nuclear weapons on the battlefield and against the opponent's rear area. However, by the mid-1960s, the size and quality of NATO conventional forces had more than doubled and thus offered the possibility of a successful conventional forward defense.

Since the founding of the Alliance, there was recognition that for a strategy to have credibility meant there could be no confusion over the trigger for its "invocation" of the Alliance's direct intervention as represented in Article V of NATO's founding treaty. The concept of 'Direct Defense' not only calls for an immediate engagement and recognition that an attack on one member's sovereignty is an attack on the Alliance, but that the defense should be conducted as far forward as operationally tenable to minimize lost territory. In the inevitable consequences of a major attack, it was recognized that the initial defenses would be penetrated and that to repulse them might not only depend on local forces, but rapid response units from the Alliance.

NATO defined Direct Defense with the following statement:

Direct defence seeks to defeat the aggression on the level at which the enemy chooses to fight. It rests upon physically preventing the enemy from taking what he wants. A capability for direct defence in any contingency is a deterrent to that contingency; successful direct defence either defeats the aggression or places upon the aggressor the burden of escalation. Full options for direct defence exist when NATO can successfully counter any aggression, at whatever place, time, level and duration it occurs. ... The requirement for direct defence is effective forces-in-being which, on land, must have a capability to defend forward and, at sea, must have a capability to defend wherever aggression occurs. ¹⁷⁶

Direct Defense also recognized the contingency where an opponent with the attitude of "what is mine is mine, what is yours is negotiable," might, after seizing significant gains in the initial assault, intend to quickly achieve termination with either de facto acceptance of occupied territory or a "cease fire" that produces a "frozen conflict." Thus, it was the

[&]quot;Final Decision on MC 14/3: A Report by the Military Committee to the Defense Planning Committee on 'Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area," NATO, (Brussels, BE: North Atlantic Military Committee, 16 JAN 1968), p.3, at https://www.nato.int/docu/stratdoc/eng/a680116a.pdf

[&]quot;Final Decision on MC 14/3," op cit: p. 10. The document, in a section on "Strategy Considerations," recognized that Direct Defense could include: "the use of such available nuclear weapons as may be authorized, either on a pre-planned or case-by-case basis." Nevertheless, as Flexible Response evolved between 1968-1988, NATO's use of nuclear weapons in the Direct Defense role decline in proportion to the improvement in Alliance conventional forces. There was however concern that the Soviet Union might be the side initiating battlefield tactical nuclear fires to support its Direct Offense advance.

accepted responsibility of the alliance to conduct counter-offensive operations to restore the "status quo ante."

As discussed earlier, one of the key differences between NATO's challenges of the last half of the Cold War versus today is that the Central center of gravity has moved eastward, and what were disconnected flanks are now adjacent fronts on the North and the South. Neither of the keystone states needed for a Northern and Southern center of gravity are currently Alliance members but are indispensable in providing a core 'hub' as the center of gravity for their respective fronts. With a new center of gravity anchored in Poland, the central region also provides the indispensable link to the new Northern and Southern fronts.

Today the Alliance is faced with three contested Fronts of strategic importance. These fronts overlap and provide the possibility of mutual support. In combination, they produce the potential of a unified Theatre center of gravity. As shown below, the net effect of this integrated combination of Fronts offers the potential of a NATO based "European Security Shield."

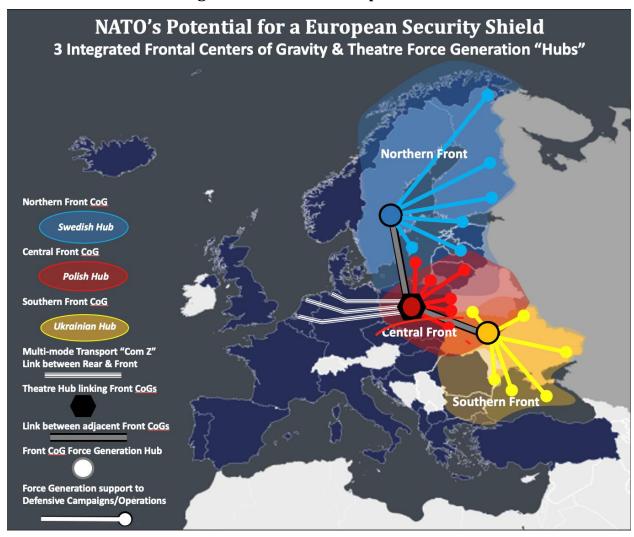


Fig. 30: NATO's New European Shield

Each of NATO's three fronts faces a serious Direct Defense challenge and it will require NATO to not only recognize that and assess what is needed for an effective forward defense, but also prioritize the allocation of scarce resources. Thus, "European Security Shield" is neither a given nor self-implementing. It requires a NATO strategy that is committed to building a forward defense of the Theatre's strategic center of gravity.

NORTHERN FRONT: Russia has drawn an imperial domain that covers Finland, the Baltic Republics and Poland east of the Vistula. Russia's ambitions in the north form a reverse 'L' of 1800 km – running south from the strategic ballistic missile bases on the Kola Peninsula to the large naval facilities and headquarters of the Baltic Fleet at St Petersburg, and then west to the enclave of Kaliningrad – an outpost armed with heavy mechanized forces, Iskander missiles and strike aircraft. Since the Baltic Republics became independent, Russia has repeatedly attempted intimidation, military coercion, and used its forces in both the Baltic as well as from Belarus, with Belarussian troops, exercising a direct invasion against Estonia, Latvia, and Lithuania. Often, these exercises anticipate NATO reinforcements moving from Poland through the Suwalki Gap with Russian counterattacks that have included the play of low-yield tactical warheads targeted on the Vistula bridges and Polish airbases, as well as high-yield city-busters exploded over Warsaw.

Finland, whose memory of Soviet invasion remains burned into the national consciousness, has repeatedly been the focus of political subversion and direct intimidation. Although Finland – with a small population of 5.5 million – can neither man nor afford a large active defense with its 1300 km border with Russia, it has maintained, trained, and modernized one of the strongest reserve forces in Europe. Its membership in NATO provides three key contributions: first, it helps to secure Norway against a Russian ground offensive, which would out of necessity transit Finnish territory; second, along the Gulf of Finland for 70 km, Finnish territory parallels the Estonian littoral and opens up the possibility of mutual support, as well as joint action to either interdict the waterway and/or maintain lines of communication; and lastly, with Finland as a member of NATO, Russia cannot be confident that the long border with Finland will not be used either offensively or even as a benign tiedown of Russian forces.¹⁷⁷

In reaction to Russia's invasion of Ukraine in February 2022, NATO announced that the existing enhanced Forward Presence combined arms battalions with components from NATO members that are serving in each of the Baltic Republics as well as Poland will soon be in the process of upgrading them to brigades. Nevertheless, the small size of the host nation armed forces and their lack of combat air capabilities, especially in the context of having a shared border of nearly 900 kms with Russia and Belarus, all combine to make the Baltic Republics feel vulnerable. This is not an imaginary concern. In virtually every ZAPAD exercise that the Russians have conducted since Putin ascended to power, all had as a major component the invasion of the Baltic area.

Andrew Dorman, "Finland Brings Great Value to NATO's Future Deterrence," CHATHAM HOUSE, (20 APR 2023), at https://www.chathamhouse.org/2023/04/finland-brings-great-value-natos-future-deterrence.

Allies also agreed to establish four new enhanced Forward Presence battle groups in Bulgaria, Romania, Hungary, and Slovakia. See "NATO's Military Presence in the East of the Alliance," NATO, (16 JUN 2023), at https://www.nato.int/cps/en/natohq/topics_136388.htm.

In addition to the local ground forces and soon-to-arrive NATO enhanced Forward Presence brigades, in terms of the ratios of adversarial combat forces in the region, it means that to defend forward it will require at least another half dozen mechanized or heavily supported infantry brigades, some of which could come from local rapid response forces and other vacancies in the line could be covered by NATO rapid reinforcements. If it is the former, they will need much heavier weapons than normally allocated to territorial defense forces and more intense combined arms field training than typically afforded to reserve forces.

Alternatively, if there is an expectation that NATO could use the Very High Readiness Joint Task Force and/or broader NATO Response Force to defend forward in the Baltics, force elements should be pre-assigned, have trained in their respective deployment areas previously, and units should be generated and deployed from an homogenous national army (not a mix-match of multi-national units), with a commitment from the provider that on the indications of imminent attack, the units are sent proactively rather than waiting for the outbreak of hostilities. There is a role for multi-national participation in NATO's enhanced Forward Presence concept. It broadens the demonstration of Alliance resolve and gives smaller Alliance nations a role that they can contribute to. However, when considering follow-on reinforcements, having more than one such mixed unit per host nation becomes counter-productive and excessively complex.

Following the ascension of Estonia, Latvia and Lithuania to the NATO Alliance in 2004, NATO fighter aircraft were deployed to the Šiauliai Air Base in Lithuania to help protect the skies of these nations. Since 2014, NATO has also been using Ämari Air Base in Estonia for the deployment of additional air policing assets. While the air policing mission shows symbolic commitment, it does not – with only limited resources available for the task – deter attack nor demonstrate unity of effort.

But, with the prospect of Sweden joining NATO, the Baltic north is no longer a flank but a major front. Although Sweden's defenses have been drastically reduced in recent years, nonetheless its air force and navy in combination with Poland has the power to enforce a serious blockade of Russia's Baltic Fleet. Moreover, with its airfields, it can provide operational depth with air defense, early warning, ground attack and strike assets flying in support of the three Baltic republics, as well as potentially hosting a significant number of naval rapid response squadrons – all serving as a more credible deterrent and defense against Russian forces in the region.¹⁷⁹

It should be an embarrassment to the Alliance that a time when Europe is going through the anxiety of a Russian produced "Zeitenwende" that a neutral country with strategic position, strong military, and long commitment to Western values requests to be admitted to NATO - is left dangling in the wind.

SOUTHERN FRONT: NATO's southern flank centered on the Mediterranean during the Cold War has in the last three decades moved east to the Black Sea. The reason for this is not only Turkey's presence, but the addition of Bulgaria and Romania as members of the Alliance, and Russian malevolent behavior vis-à-vis Transnistria, Georgia, and Ukraine. Russia's large fleet

Bradley Bowman, Ryan Brobst, Jack Sullivan, and John Hardie, "Finland and Sweden in NATO are Strategic Assets, not Liabilities," DEFENSE NEWS, (20 JUL 2022), at https://www.defensenews.com/opinion/commentary/2022/07/20/finland-and-sweden-in-nato-are-strategic-assets-not-liabilities/.

and aerial presence in the Black Sea have repeatedly been employed to impress or intimidate friends and opponents. This has included Russia's violent attacks on Ukraine emanating from the Black Sea, the seizure of coastal areas by land attack, the launching of hundreds of long-range missiles from the Black Sea, the carpet bombing by ground attack and strategic bombers of Mariupol, and the harassing flights of Russian naval aviation bombers around the region.

Looking to the future when Ukraine has been liberated and admitted to NATO, clearly securing Sevastopol, and converting it to a NATO base is a priority, which will ensure NATO air and maritime security over the northern half of the Black Sea. Moreover, areas of southeastern Ukraine, including Donetsk and Luhansk, will end up becoming a reconstruction zone and are likely to remain a priority target on Russia's imperial revanchist agenda, thus necessitating not only a strong security element in the previously occupied area to re-integrate it and safeguard the rebuilding, but also a combined frontier and mobile reserve to dissuade a repeat of last year's illegal invasion.

If the frustrated leadership in the Kremlin who ordered the invasion remains in power, it is not improbable that – humiliated in defeat and critiqued for the massive amounts of troops and equipment, which will be lost for nothing – they will want to "...keep on coming on" in pursuit of all their original objectives. This will necessitate Ukraine maintaining a large military establishment with enough active units to cover all the important access routes across the border from Poland in the west, all the way to the Azov Sea in the east. Behind this force, which must consist of modernized air and maritime components, it will be necessary to have a strong, mobile and mechanized reserve, capable of both active defense in high intensity combat, as well as deep penetrations in the opponent's vulnerable rear area.

Ukraine, whose refusal to capitulate against overwhelming odds, its immense sacrifice – in terms of civilian casualties, rape and torture, urban destruction, and economic industrial devastation – popular resistance, and successful counterattacks has offered its candidacy to the NATO alliance written in blood. Their expanded military capability, mobilization, battlefield experience, and exposure to virtually every weapon system in NATO is historic. This interoperability with Alliance forces combined with NATO training and combat leaders that have demonstrated their battlefield acumen puts Ukraine on a par with the best of the best in NATO. The question is whether the obvious advantages of having that Army on NATO's side and integrating it into a coherent Western defense strategy are appreciated. If so, like the Northern front – with Ukraine as a NATO member anchoring its Southern front – the center of gravity in the Black Sea dramatically shifts in the favor of the alliance.

Given the massive costs of Ukraine building its destroyed country, it is unlikely on the basis of their own resources that they will be able to sustain a large standing force kept at a high state of readiness and preparedness against a renewed Russian invasion. In addition to making up for two years of lost GDP and massive other costs, Ukraine is going to need to establish a large enough army to secure its 2000 km perimeter. Likewise, the country will need to re-establish its air force and coastal navy. In terms of air capabilities, it will require a form of AWACS and an aircraft capable of receiving and acting on the information that platform provides. It will also require combat aircraft (i.e., F-16 and F-18) that can hold at risk extended range targets, including major surface capital ships (Python, anti-surface ship missile).

Troublingly, Turkey's future path in the Southern Front remains uncertain. On the one hand, it has demonstrated strong regional leadership, especially vis-à-vis the Russo-Ukraine War. Turkey has expressed major concern for the fate of the Tartar population following Russia's brutal invasion and occupation of Crimea, and Turkish-provided TB2 Bayraktar drones were essential to Ukraine's early defense. Further, through the Istanbul-based Joint Coordination Centre, Turkey has forcefully advocated for the application of international and maritime law and has thus been instrumental to the implementation of the Black Sea Grain Initiative to establish a humanitarian corridor to allow ships to export grain, foodstuffs, and fertilizer from Ukraine. Yet, it is an open question whether Turkey – having pursued Russian S-400 air defense systems, maintained good relations with Russia in Syria, despite several untoward incidents, and having used a domestic political issue as the rationale and acting in Russia's interests, by blocking Sweden's entry into NATO – will rejoin the Western alliance, side with Russia, or continue to vacillate. 180

CENTRAL FRONT: As referenced earlier, NATO's central front, which during the Cold War consisted of the territory of West Germany, has now moved eastward with Poland taking on that role. With this shift, Poland has now taken on the dual role of a frontline state facing multiple potential points of attack and as the force generation 'hub' that not only brings resupply and reinforcement from Poland but provides a critical lifeline to the defense forces of the Baltics Republics. And in the current situation, Poland is also the integrating hub for the Western support and rearmament of Ukraine. In that sense, it takes on a triple role in serving as the physical geographic connector between what are now adjacent fronts.

Unlike the situation during the Cold War, in which 900,000 troops were deployed to defend West Germany, 45% of which were from Allied countries, the defense of Poland today depends on 200,000 troops, only 5% of which are from Allied forces. To some extent, the pressure on Poland will be addressed with NATO's decision to augment 'enhanced Forward Presence' battle groups to brigade-sized formations. This helps Poland both in terms of additional combat assets on its territory and ensuring more defensibility along the flanks, which increases the prospect of their defending longer so that resupply and reinforcement from Poland can make a difference elsewhere.

More than any other country, Poland was the first to appreciate the military threat to NATO posed by the Russian invasion of Ukraine and as a result its military assistance has been at the forefront of Alliance efforts and has been unique in several ways: first, Poland and the Alliance are supplying Ukraine with critical assistance such as main battle tanks and fighter aircraft; second, Poland acted decisively and provided those assets six months before other Alliance members followed; and third, Poland provided these fleets of armaments in significant numbers. Simultaneously, recognizing the criticality of NATO's Direct Defense in deterring and defending against Russian aggression, Poland contributes combat-ready force elements to the multi-national forces that are forward-staged in Latvia and Romania, it is the host nation for an American-led enhanced forward presence formation, and it provides the terrain, infrastructure and robust staff supports to NATO's Multinational Corps Northeast Headquarters (Szczecin, Poland) and Multinational Division Northeast Headquarters

Gabriel Gavin, "Erdogan: I Have a Special Relationship with Putin – And it is Only Growing," POLITICO, (19 MAY 2023), at https://www.politico.eu/article/turkey-special-relationship-russia-grow-recep-tayyip-erdogan-valdimir-putin/.

(Elblag, Poland) – all while synchronizing the activities of the international hub that has been established to support Ukraine.

Poland has also been the leader in the Alliance in terms of modernizing its forces, ordering hundreds of main battle tanks of multiple variants, creating their own infantry fighting vehicle, purchasing Patriot air defense missile systems, as well as F-16 fighters and AH-64 attack helicopters. Similarly, they are taking a lead-role in the alliance by developing a territorial defense force, equipping it with modern weaponry, and designing it to be interoperable with its active combat formations.

Poland has demonstrated strong leadership in the Alliance, modernized its force, and provided air and ground facilities for both NATO enhanced forward presence and periodic rapid reaction force training. Combined with its costs is the impact of hosting more than six million Ukrainian refugees.

If Ukraine survives the current war and is a member of NATO, it creates a powerful synergy with Poland in linking the Center to the Southern front. Moreover, that would reduce at least a third of the threat frontier that Poland would need to defend and provides important geographic access along the perimeter of Belarus in terms of both intelligence collection and advanced warning. If Ukraine falls or is a severely weakened state, Poland must face the prospect of a potential contingency of a Russian Army on its border with Ukraine. That threat takes on special significance if the 1st GTA and 20th Gds CAA, elements of which are being reconstituted in Belarus, are rehabilitated, and aimed at Warsaw. North of them is the Kaliningrad enclave, with the combined arms corps and second echelon from several brigades from the 6th CAA, an airborne division, and special assault brigade. Another feature of the Kaliningrad threat is that it is the forward stationing base for the Russian Baltic Fleet, and it also has strike aviation, modernized and dense air defense, and has exercised with the SS-26 Iskander surface-to-surface missile being deployed in the enclave and it appears that tactical/theatre nuclear warheads have been forward deployed there.

In previous exercises, it appears that Russia's intent with respect to the Baltic was to use the fleet in Kaliningrad and assets in St Petersburg to envelop the Baltic Republics on their seaward side in support of a ground invasion. However, with NATO having the potential to deploy a northern front center of gravity, those positions can radically change Russia's options and NATO's prospects. For example, Finland and Estonia will have the option of closing the estuary for Russian naval vessels trying to break out of St Petersburg. Likewise, Swedish ground and naval assets, combined with Polish assets, have the substantial possibility of containing any potential threats inside of Kaliningrad, and thus preventing their offensive operations in the Baltic.

To maintain its critical link with the northern flank, Poland must fight forward of the Vistula to ensure access to the Baltic Republics is not closed off and likewise in the south vis-à-vis access to Ukraine. The current conflict has decimated most of the units Russia needed and would have committed to an attack on Poland. Nevertheless, over time, the existing army structures with all their supporting elements can be rearmed and re-manned to a level of threat that Poland will have to take seriously. The most significant contribution to Polish security and facilitator of its role as a critical NATO asset is not arms, financing, or words of praise – but having a strong Ukraine as a member of NATO adjacent on its frontier.

Separately, but importantly, Belarus is also becoming an increasing danger not only for Ukraine, but for NATO as well. First, under Russian pressure, Belarussian forces are increasingly integrated with their Russian counterparts. Second, they are preparing both local defenses on the major axis routes on the Ukrainian-Belarussian border, but also improving the size and sustainability through the Pripyat marshes. The fact that the Russian Federation Army has placed elements of the 1st GTA and 20th CAA in Belarus does not bode well. Assuming these armies will remain in Belarus, if, and when, they are re-armed and brought back to full strength with proper troop training, they will provide a serious threat to NATO's strategic central front.

Several lessons can be distilled from the Russo-Ukrainian War that are germane to all three of NATO's strategic fronts and should be considered when operationalizing the concept of Forward Defense of NATO's new European Shield:

- Foremost is the need for NATO to acknowledge and demarcate its evolving area of operations, which is now comprised of three interlocking European theatres, each with its own center of gravity.
- Importantly, NATO's Concept for Deterrence and Defence of the Euro-Atlantic Area must prioritize the existential threat posed by Russia and the reality of NATO's expanding membership and evolving boundaries. NATO military preparations should include the design, organization, national preparation, active readiness, peacetime deployment, specific national force commitments, and development of a strategic reserve for employment in unexpected contingencies that is competitive to the threat.
- Establish Warsaw as the Alliance's European center of gravity to ensure the nation is capable of fulfilling with simultaneity -- its critical multiple and overlapping roles of forward defense, integrating and synchronizing operations with the Northern and Southern theatres, and force generation 'hub' commitments.
- Recognizing the unfavorable force ratios in the defensive schemes of the former Baltic Republics, NATO should mission-task specific high-readiness response forces to reinforce Theatres, and whose operational plans are strengthened through liaison and reconnaissance with in-place forces, rehearsals, and joint combined arms exercises.
- Given the reticence of specific members of the Alliance to condemn Russian aggression, NATO should wargame the invocation of Article V and military response options against the possible future Russian imperium and establish a mechanism to deal with Alliance members that do not fulfil their Treaty commitments or, even worse, actively obstruct NATO collective action.
- Immediately endorse the accession of Sweden and Ukraine to the NATO Alliance, and plan for the forward defense of both countries. This should include plans for NATO-basing, capability development, and in the case of Ukraine providing security for the reconstruction of critical infrastructure following the end of hostilities.

Russian hostility in Ukraine – as barbaric as it is – has paradoxically created for NATO an opportunity to strengthen the mutual support, depth, and offensive potential of its European defenses. But this will not happen on its own, nor will high-level diplomatic statements of intent prepare the Alliance to confront evolving strategic challenges. Rather, the current situation demands a new strategy and the commensurate investment in force structures and necessary adjustments to posture.

V.C.2. - DISSUADING ESCALATION

In the Flexible Response strategy of 1968, NATO placed a heavy emphasis on the "first use" of nuclear weapons as an offset to fears of conventional inferiority. For the last two decades of the Cold War, NATO had an explicit and coherent nuclear strategy in its MC-14/3 "Flexible Response" doctrine which laid out the conditions under which a sequential release of nuclear fire would graduate from battlefield "Direct Defense," to theatre strike "Deliberate Escalation" and ultimately linked to strategic "General Nuclear Response." ¹⁸¹

Thus, while the concept of "Deliberate Escalation" recognized that there are a number of ways to counter conventional aggression, the Alliance had an asymmetrical advantage in battlefield tactical nuclear weapons, particularly artillery (155mm and 203mm) warheads, which had multiple advantages: they were accurate; they were low yield and minimized collateral damage or residual radiation; they would be used on Alliance territory; and, most significantly, NATO had them and neither the Soviets nor Warsaw Pact members possessed a similar capability.

Under the Strategy of Flexible Response, NATO defined the step above Direct Defense as Deliberate Escalation:

Deliberate escalation seeks to defend aggression by deliberately raising but where possible controlling, the scope and intensity of combat, making the cost and the risk disproportionate to the aggressor's objectives and the threat of nuclear response progressively more imminent. It does not solely depend on the ability to defeat the enemy's aggression as such; rather, it weakens his will to continue the conflict. Depending on the level at which the aggression starts, the time needed for each escalatory action and reaction and the rate of success, escalatory steps might be selected from among the following examples provided they have not previously been used as part of a direct defensive system:

- (1) broadening or intensifying a non-nuclear engagement, possibly by opening another front or initiating action at sea in response to low intensity aggression;
- (2) use of nuclear defence and denial weapons;
- (3) demonstrative use of nuclear weapons;
- (4) selective nuclear strikes on interdiction targets:
- (5) selective nuclear strikes against other suitable military targets. 182

The Soviet Union had been several decades behind the US in the miniaturization of nuclear warheads but, by the late 1970s, they began fielding equivalent systems and within a decade they had not only established a significant stockpile but had tactical nuclear warheads for their 152 mm howitzers, 152 mm guns, 203 mm long-range guns, and 240 mm heavy mortars (short range, but with an enhanced radiation warhead). In addition, they replaced the unguided Free Rocket Over Ground (FROG) and early generation SCUD guided missiles with a new generation of systems that included the SS-21 "Toschka" (120 km range) and SS-23 "Oka" (500 km range) systems.

In operational planning – the Soviets constructed targeting packages designed to aid not only a breakthrough of a conventional defense, but in theory accelerate the rate of advance of subsequent deep penetrations with selective low-yield nuclear strikes on the battlefield. Two other factors also played an important role. First, in numerous exercises and

¹⁸¹ P.A. Karber, "Nuclear Weapons and Flexible Response," ORBIS, XXX.

¹⁸² "Final Decision on MC 14/3," op cit: pp. 10-11.

simulations, it became apparent that – with each side having similar battlefield nuclear capabilities – there was a natural incentive for one or both to gain the upper hand by increasing the depths of the strikes. As a result, escalation targeting longer-range missile systems and air bases rapidly accelerated with no clear fire break between tactical and theatre nuclear exchanges. Second, with the build-up of NATO conventional forces, led by American modernization of the 7th Army in central Europe during the 1980s, there was a growing prospect that a conventional forward defense might not only hold, but even defeat Soviet-style conventional breakthroughs.

Thus, by the end of the Cold War, there was increasing recognition that the "first use" of nuclear weapons was unlikely to be of advantage for NATO's Direct Defense and thus the key to a successful outcome was ending the conflict without the use of nuclear weapons. Western leaders and American presidents have since downplayed the role of nuclear weapons for tactical use on the battlefield or for theater deterrence. The core of their argument being that nuclear weapons have limited military utility relative to their disadvantages and can also invite retaliation in kind that ends in massive and unacceptable destruction of modern societies. Any utility in striking theatre military targets was offset by the prospect of rapid escalation to strategic war. While US Army Commanders believed that Tactical Nuclear Weapons (TNW) could play an important role, American civilian theorists and arms control advocates argued that they added nothing but chaos on the battlefield and at best were political devices symbolizing the slippery slope between "first use" and Armageddon.

The success of the INF Treaty, which abolished an entire class of Theatre Nuclear delivery systems, created a gulf between battlefield nuclear weapons and their linkage to a strategic deterrent. With the various Strategic Arms Limitation Agreements that reduced concerns about a preemptive intercontinental first strike, it was thus natural to turn attention to the tactical and medium-range nuclear delivery systems and warheads that were not included in the INF Treaty. Although there was a large number of sub-kiloton and lower kiloton yield warheads on both sides, it was felt that 95 percent of the US stocks (and those systems available to a select number of NATO allies) could be abolished – leaving only a handful. Because they were "irrelevant" to theater campaigns, the traditional requirements of explicit arms control constraints and verifiable implementation were waived.

Thus in 1991, the US and Soviet Union agreed to the mutual unilateral reduction in TNW. America cut its stock of some 5,000 TNW warheads down to a single class of weapons – several hundred B-61 air-delivered gravity bombs – and Russia also significantly reduced its arsenal from approximately 20,000 warheads to 3,000.

During the 1990s, Russia did not have the opportunity to modernize its nuclear weapons, but this changed after the millennium. Over the next three decades, Russia designed,

[&]quot;Russia is a major nuclear power and we bear responsibility under the main conventions, including those in the field of strategic nuclear arms limitations. We should have an efficient defense system. But it cannot be on the level of the 1970s or the 1980s. We should have a defense system of the 21st century. And this is my main duty as the Commander-in-Chief. But certainly it shouldn't be regarded as a step against someone. This is our task—to maintain the needed level of defense capacities of our country. The fact that we didn't do that in the 1990s doesn't mean that we didn't want to modernize our defense system. As a matter of fact, we have had no possibilities to do that. Now the situation is different." President Dmitry Medvedev, "Interview with BBC," (Moscow: Office of the President, 29 MAR 2009), at < http://en.kremlin.ru/events/president/transcripts/3578 >.

developed and deployed a new-generation of tactical nuclear munitions for a wide range of discrete, low yield, tactical applications, including: nuclear artillery, medium range ballistic and cruise missiles, naval anti-submarine warfare systems, air-to-ground cruise missiles, and warheads for long-range air defense systems. Russia's current TNW inventory consists of 3,000 legacy warheads in long-term secure "deep storage" and an "active" posture of 2,050 modern warheads.

In his 2009 speech in Prague, President Obama declared America's commitment to a world without nuclear weapons¹⁸⁴ with many assuming it was moving towards fruition. NATO's nuclear doctrine had concurrently become far less explicit and thereby the conditions of a nuclear response were more ambiguous. Although Russia politically mimicked western arms control rhetoric, it took the opposite attitude towards the utility of TNW. Given the massive reduction in their conventional forces and the equally large territory they were assigned to defend, they concluded that they had to depend on TNW to offset numerical inferiority on the battlefield. And taking a page from NATO's nuclear concepts during the Cold War, they argued that using battlefield nuclear weapons on their own territory to offset a conventionally superior invader was not inherently escalatory.

Starting in 1990, Russia was explicitly attempting to mirror NATO's strategy of Flexible Response. This made inherent sense in terms of the withdrawal of the Red Army from Eastern Europe. Russia's direct defense would start at their border and if insufficient with conventional assets could be backed up using nuclear weapons on Soviet territory. However, with the break-up of the Soviet Union and the loss of the defensive glacis provided by the Baltic, Belarussian, and Ukrainian republics, the defense of forward positions as in Kaliningrad no longer fit a borrowed "Direct Defense" model. The use of nuclear weapons for their defense had to be projected west, offensively, against Polish territory, interdicting the Vistula bridges and preventing NATO use of Polish airbase infrastructure.

This expanded, offensive, TNW targeting rationale was incorporated into Russia's first major post-Cold War military exercise against NATO, ZAPAD 1999, involving a Russian occupation of the Baltic Republics and the simulated use of selective low yield warheads on the Vistula River bridges to delay NATO eastern deployment of forces along with a one megaton hit on Warsaw. It is also in this period that they developed the antithesis of a graduated response doctrine. Having recognized its passivity, Russian military theorists emphasized the importance of seizing the initiative with a nuclear strike designed to either achieve a military impact or terrify the opponent from continuing to escalate the conflict; or both.

Thus, the concept of "escalate to deescalate" was a major shift in Russian strategic thinking and can be attributed directly to the arrival of Vladimir Putin in the critical role as Secretary of Russia's Security Council:

Fulfilling the de-escalation function is understood to mean actually using nuclear weapons both for showing resolve as well as for the immediate delivery of nuclear strikes against the enemy. It is advisable to execute this mission using non-strategic (above all operational-tactical) nuclear weapons, which can preclude an "avalanching" escalation of the use of nuclear weapons right up to an exchange of

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President Barrack Obama, "World without Nuclear Weapons," (Speech; Prague: CZH: 5 APR 2009), at https://obamawhitehouse.archives.gov/the-press-office/remarks-president-barack-obama-prague-delivered.

massed nuclear strikes delivered by strategic assets. It seems that the cessation of military operations will be the most acceptable thing for the enemy in this case.

The condition for using non-strategic nuclear weapons can be as follows: enemy use of mass destruction weapons or reliable discovery of his preparation for their use; destruction of our strategic weapons, above all nuclear weapons, and also important economic installations (atomic electric power stations, hydroelectric stations, major enterprises of the chemical and military industry, the most important transportation hubs) by enemy conventional weapons; appearance of a threat of disturbance of stability of a strategic defense in the presence of a large-scale enemy invasion.¹⁸⁵

Russian military theorists took an innovative approach, which – as illustrated in Fig. 31 – contrasted to NATO's concept, which viewed the escalation to the first use of nuclear weapons as entering an extended plateau where nuclear weapons were deployed throughout the theatre over an extended period. Instead, the Russian concept involved a selective strike, which could include multiple targets and multiple warheads, but limited in duration – creating a significant military effect and a salient political message but one which conveyed to the recipient that, while that set of attacks was limited, it could be repeated.

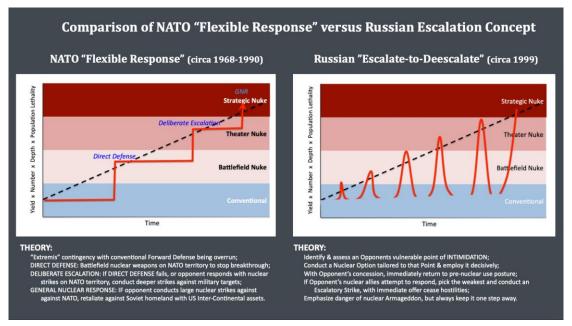


Fig. 31: Russia's "Escalate to De-escalate"

The original Russian formulation of "escalate to deescalate" introduced in the General Staff Journal in May 1999 was an attempt to create a Russian strength out of what would have generally been viewed as a weakness. In reality, there were an infinite number of escalatory levels, but the article selected a range to illustrate the applicability of the concept across a wide spectrum of conflict, to include:

• Stage 1: Demonstration (unpopulated targets);

¹⁸⁵ V.I Levshin, A.V. Nedelin and M.E. Sosnovsky, "O Primeenenii Yadernogo Oruzhiya Dlya Deeskalatsii Voyennyskh Deistviy [On Use of Nuclear Weapons for De-escalation of Military Operations]," VOYENNAYA MYSL, (MAY 1999).

- Stage 2: Intimidation-Demonstration (single strikes);
- Stage 3: Intimidation (group strikes to change balance on operational direction);
- Stage 4: Intimidation-Retaliation (theater strikes to "eliminate threat of defeat");
- Stage 5: Retaliation-Intimidation (massive strikes to annihilate the enemy in the theater & convince opponent that alliance commitments are not worth suicide); and,
- Stage 6: Retaliation (massive theater & strategic strikes).

These stages reflect an effort by Russian planners to find a "key" that unravels Western commitment to its objectives and have been a continuing topic of Russian interest.

Three specific factors were particularly important to the development of the concept: first, understanding the target and designing a strike message that at once ensured that it would get through, while not being overshadowed by the damage done; second, in the process achieve serious military effect so that it was not purely symbolic; and, third, a demonstrated willingness to immediately cease and desist with the concomitant understanding that the strike could result in negotiations. Although not addressed in the Russian military literature, in retrospect the construct of "escalate to deescalate" was specifically tailored for those opponents who could not respond in kind.

Russian exercises where nuclear weapons were notionally employed, including some where Putin himself enjoyed being televised pushing "the button," showed a wider range of variants in target selection, quantity of strikes and geographic scope. Apart from a small number of specialists, few people in the West seriously considered the prospect of TNW being threatened, let alone used, by one of the founding members of the Nuclear Non-Proliferation Treaty.

More recently, a group of Russian military theorists have raised the construct of "escalate to deescalate" in a much broader context. In their ladder of escalation, there are 17 rungs (though they would be the first to acknowledge that these scenarios are notional). This work was presented by a former Deputy of Minister of Defense and noted reformer Andrei Kokoshin, co-authored with serious professionals including Colonel-General Viktor Esin (former Chief of Operations for Strategic Rocket Forces). What is interesting about their list is that they identified a much wider selection of potential actions that might fit in the coercive "escalate to deescalate" construct. They identified several opportunities where "escalate to deescalate" could be used short of the deployment of nuclear weapons and, on the other hand, listed fewer options for nuclear strike. ¹⁸⁶

See Andrei Kokoshin, Iurii Baluevskii, Viktor Esin, Aleksandr Shliakhturov, ESCALATION AND DEESCALATION OF CRISES, ARMED CONFLICTS, AND WARS (Lenand: 2021). Although the authors argue that "escalate to de-escalate" is not formal Russian policy, they nonetheless agree that nuclear first use is a component of Russian doctrine. They further offer an "escalatory ladder" of 17 steps that culminates in the massive use of nuclear weapons:

^{1.} Aggravation of the situation, including the intensification of information confrontation, information operations to destabilize the internal political situation of the opposite side, economic sanctions, etc.

^{2.} Exchange of threatening statements about the possible use of military force, including to protect allies.

^{3.} An escalating political crisis with an increased intensity of information confrontation, demonstrations of military force in the gray zone (including the intensification of the behavior of military exercises, flights along the borders of strike aircraft, etc.), but still without combat use.

It is in this context of "escalate to deescalate" that Putin and his clique have made repeated nuclear threats over the last 16 months. On the heels of Russia's first embarrassing reversal in Ukraine when his forces failed to capture Kyiv and were forced into a self-imposed withdrawal, Putin explicitly raised the specter of a nuclear conflict, approved a plan to annex four Ukrainian oblasts, and called up 300,000 reservists. "If the territorial integrity of our country is threatened, we will without doubt use all available means to protect Russia and our people - this is not a bluff," Putin declared in an address to Russians. Most recently, when asked if the threat of nuclear conflict has eased, Dmitry Medvedev, currently the Deputy of Russia's Security Council, declared, "No, it hasn't decreased, it has grown. Every day when they provide Ukraine with foreign weapons brings the nuclear apocalypse closer." 188

Not only have these provocative statements sent a shockwave to global publics, whose imagination can conjure up a world-ending apocalypse, but political and military leaders who have now awoken from a 30-year blissful slumber to the realization that there is a serious asymmetry between Russia and NATO in the quantity, modernization, and range of

^{4.} Hybrid war, an integral part of which is the limited combat use of military force (especially special operations forces, as well as mercenaries, private military companies, etc.) along with the large-scale use of political, information-psychological, economic, and other means characteristic of hybrid warfare.

^{5.} Intentional or unintentional provocation (incident) in the interaction of great powers, which causes deaths and serious damage to military equipment.

^{6.} Local conventional warfare with limited political goals of the opposing sides and limited use of military force in time and place, without the use of weapons of mass destruction and without the large-scale use of combat cyber operations in relation to civilian targets.

^{7.} Regional war with combat operations on land, in the air, at sea without destroying spacecraft, with combat cyber operations on a larger scale than in the case of a local war.

^{8.} Limited conventional warfare with defeat (physical destruction or functional defeat) on one scale or another of spacecraft without destroying satellites of the missile attack warning system.

^{9.} Large-scale conventional war without destroying large urban centers, chemical industries, nuclear power plants, etc., with the use of cyber weapons only against military targets both in the theater and beyond.

^{10.} Large-scale conventional war with combat cyber operations aimed at disrupting the state administration system and destroying important civilian infrastructure of the other side.

^{11.} Conventional war disrupting urban centers, with destruction of chemical industries and nuclear power.

^{12.} Nuclear conflict – a crisis in which one or more nuclear weapons states are involved, and the confrontation reaches the level when one or more sides begin to use nuclear weapons. A nuclear conflict can arise abruptly, without going through the stages of local and regional war, etc., noted above.

^{13.} Intentional or unintentional destruction by conventional means of SSBNs of one of the great powers.

^{14.} Demonstration use of nuclear weapons in a deserted area without hitting people and key infrastructure.

^{15.} War with the limited use of nuclear weapons against military facilities, the armed forces of the other side.

^{16.} War with the use of strategic nuclear forces in a counterforce operation with an attempt to avoid the destruction of the civilian population and important infrastructure of the enemy's economy.

^{17.} War with the massive use of nuclear weapons and other types of weapons of mass destruction, including against large urban centers.

Guy Faulconbridge, "Putin Escalates Ukraine War, Issues Nuclear Threat to the West," REUTERS, (21 SEP 2022), at < https://www.reuters.com/world/europe/putin-signs-decree-mobilisation-says-west-wants-destroy-russia-2022-09-21/>.

¹⁸⁸ Vladamir Isachenkov, "Russia's Security Chief Blasts West, Dangles Nuclear Threats," AP NEWS (23 MAR 2023), at < https://apnews.com/article/medvedev-nuclear-putin-arrest-warrant-germany-ukraine-6dcde92e06f41a7c5cb7386f7939df33 >.

applications in respect to the relative nuclear arsenals. Thus, the Western Alliance faces a lacuna in terms of how and with what to respond to Russian TNW use.

Russia's threatening remarks and tactical/theatre nuclear asymmetry become even more prevalent and poignant in the current war against Ukraine because the victim complied under international agreement to get rid of all nuclear weapons on its territory but not being a member of NATO, it is a vulnerable target of nuclear intimidation or strikes and left facing the threat of annihilation alone.

Russia has a wide range of nuclear options against a victim that cannot strike back:

SYMBOLIC OPTION: Some have speculated that a symbolic detonation perhaps over the Black Sea would underscore the danger and get the leadership in Kyiv to capitulate or western governments to rethink their support of Ukraine but once having detonated, as the world-wide shock dissipates, the next logical question is "so what?" Admittedly, a dramatic message would be sent but conversely – by not striking a meaningful target – it implies the sender was himself inhibited and potentially fearful of unknown consequences.

BATTLEFIELD OPTION: The Russians have three artillery systems capable of firing a range of warheads from very low yield 20 tons of explosive power to detonations 1000 times larger but still generally viewed as tactical, as well as enhanced radiation warheads which are particularly effective against infantry. Usually, most tacticians would apply these in limited complimentary groupings of shots known as "a package," designed to either create a gap in a prepared defense or disrupt a concentrated offensive breakthrough.

INTERDICTION OPTION: Behind the battlefield there is a range of potentially lucrative targets that could seriously hurt a defender. For example, major highway bridges and electric generation stations which power rail lines critical to moving supplies from Eastern Poland to Ukraine's western front can be efficiently struck and create major disruption in the defender's resupply and forward movement of reinforcements. Russian conventional attacks on both electrical stations and bridges over the course of the 2022 campaign suggests that these could be high priority targets for them. In the beginning of a campaign, airfields are an attractive class of targets to preempt the defender's planes on the ground but given the few planes that Ukraine has left and their wide dispersal this does currently a high pay off target.

DECAPITATION OPTION: Modern command, control and communication facilities both for regional headquarters and national decision-making authority are typically buried and/or hardened against conventional attack but a small number of nuclear weapons at the larger end of the tactical yield spectrum could have a powerful degradation effect and potentially remove the Commander in Chief. However, the most important command sites are often in major urban areas including the capital, Kyiv, and while a 15 to 20 kiloton warhead may be classified as "tactical" when compared to megatons, the damage they can inflict on urban populations is illustrated in the results of Hiroshima and Nagasaki.

COUNTER VALUE OPTION: This class of targets is not necessarily intended to inflict mass civilian casualties they just incidentally include massive collateral damage. Typically, these would include military related armament and manufacturing facilities, communication hubs with several types of interdiction targets within the radius of effect but no matter how benign the intention, the shear nature of urban areas involved in these types of strikes will inevitably

involve massive civilian casualties. They are nothing short of a "terror weapon." Lest this be thought beyond the pale for even Russian targeting, it is noteworthy that Russia's concentrated large-scale missile/UAV strikes focused on Ukrainian electrical power generation in the winter of 2022 already has characteristics of a methodical coercive campaign.

This raises the theoretical scenario of a "hybrid nuclear" option that combines both ends of the spectrum – a symbolic explosion that causes no prompt nuclear casualties or direct physical destruction but nonetheless has a disproportionate mass impact by employing the detonation of a high-yield warhead above the atmosphere to achieve an Electro-Magnetic Pulse (EMP) that takes out a wide swath of civilian electrical generation and transmission and also disrupting the defender's command and communication system. The EMP option certainly captures the initiative – but the effects are unpredictable for both sides. Over the battlefield it may blackout the aggressor's own forces; a large weapon detonated to cover a large area may propagate the pulse across borders without distinguishing between friend or foe.

From the beginning of the 2022 invasion, Western governments – specifically the US – have been hyper-sensitive over concerns of starting an escalatory cycle in their own behavioral responses to various Russian escalation. No NATO country, again including the US, has even hinted that responding to Russian use of nuclear weapons against Ukraine would trigger a response in kind. While US and allied countries are considering a "range of options," these appear to be asymmetric – that is responding with either conventional action, even heavier economic sanctions or other non-military moves. Whether a Russian employment of some nuclear option is motivated out of fear of conventional defeat or expectation of coercive surrender in Kyiv, Western timidity neither offers Ukraine solace nor enhances Russian inhibition.

The massive 2022 Russian invasion of Ukraine no one expected six months before it was initiated underscored the pitfalls of prognostic hubris but also illustrates the dangers in ignoring our own entropy – that we do not know what we do not know. We cannot with any confidence predict the implications of some unanticipated "future shock." Nevertheless, there are several potential game changers on the horizon. Regarding whether these developments arrive or how serious their consequences are, they are ignored at our peril.

Contrary to the expectations of many Western disarmament proponents, nuclear weapons have not been un-invented. If Tactical / Theatre Nuclear Warfare had a premature burial, Russia has brought them back to life as a serious strategic challenge to stability and security in Europe. As mentioned earlier, there is a gross asymmetry between the thousands of warheads available on hundreds of delivery systems in the Russian inventory compared to the few hundred bombs available to the Western Alliance. Clearly, Russia believes that NATO members can be coerced by nuclear threats. And, if that fails to persuade NATO from having a robust range of nuclear delivery capability that exceeds what is currently available to defend Eastern Europe in terms of yield, quantity and depth of target coverage, Russia will maintain access to military options that place NATO at an asymmetrical disadvantage.

As important as TNW are, long-range theatre strike missiles targeted against fixed rear-area installations (such as airfields, bridges, railyards, ports, command/control, etc) do not have

the ability to engage armoured forces manoeuvring across the battlefield. Thus, tactical delivery systems such as artillery and short-range ballistic missiles (SRBM) armed with low-yield warheads previously filled a critical role in defending a wide front. Unfortunately, in the early 1990s, the US and NATO withdrew and disposed of all the American nuclear artillery and SRBM that had been allocated to the Alliance since the late 1950s, while Russia not only retained that capability but has modernized it with more mobile, reliable, and accurate delivery systems combined with a new generation of low yield nuclear warheads. More than several hundred of these systems have either been deployed on Ukrainian territory in the current invasion or threaten it from adjacent regions.

If Russia wins in Ukraine and ends up deploying Armies along the NATO central region between Transnistria and Kaliningrad, the West should expect that those forces will not only be equipped with nuclear capable tactical delivery systems but have the nuclear warheads for their use deployed nearby.

If Russia is to be disabused of that notion it will require action not rhetoric. There is a clear need for a coherent NATO strategy, which in unambiguous terms focusses on enforcing a mutual "no first-use" approach. Prior to Russia's re-invention of its imperial mission, it would have been prudent and maybe possible to have achieved a negotiated and mutual agreement between NATO and Russia on limiting the number of TNW warheads and systems in and aimed at Europe, supported by verifiable observations of training, exercises, and deployments. But, until Russia decides to return as a European security partner, it is important that a modern NATO Reciprocal Response strategy have as a key component an emphasis on dissuading nuclear-delivered escalation or threats of "escalate to de-escalate" and to ensure that inhibition is recognized and respected. It would also be prudent for the Alliance to hold a NATO nuclear weapons review, which not only addresses what is needed but how the burden and risk would be shared.

The dilemma of Extended Deterrence is not a new and was a major challenge to the Western Alliance in the latter half of the Cold War. Thus, NATO found it expedient to deploy Theatre Nuclear Systems – such as the Pershing II ballistic and GLCM cruise missiles – on European territory that provided a visible manifestation of the Alliance's willingness to defend itself against nuclear coercion and/or attack. Their prescience also provided a linkage between the theatre and the homeland of the Alliance's deterrent guarantor. In 2020, NATO briefly debated the option of bringing back land-based theatre systems to minimally offset Russia's expanding capability and apparent violation of the Intermediate-Range Nuclear Forces (INF) Treaty they had signed in 1987. This option was dismissed because none of the European members wanted to host the nuclear systems on their home territory. However, in 2021 NATO explicitly rejected the option of fielding their own land-based nuclear missile 189 and a US plan to fill the gap with off-shore capabilities. 190 Given recent Russian threats, their targeting of Ukrainian cities and the addition of new members into the Alliance suggests that this issue can no longer be ignored. Either the Alliance will address Russian TNW, or their

Joe Gould, "NATO Members set to say they Won't Deploy Land-based Nukes in Europe," DEEFENSE NEWS, (12 JUN 2021), at < https://www.defensenews.com/global/europe/2021/06/12/nato-is-preparing-to-ban-land-based-nukes-in-europe/>.

¹⁹⁰ Rebeccah Henrichs, "Congress Rejects Bidens Nuclear Rollback," NATIONAL REVIEW, (22 JUL 2022), at < https://www.nationalreview.com/2022/07/congress-rejects-bidens-nuclear-rollback/>.

unmatched capability will undermine the credibility of NATOs extended deterrent.

V.C.3. - DETERRING NUCLEAR WAR

Under the 1968 Strategy, NATO defined its highest level of military response option as General Nuclear Response:

General nuclear response contemplates massive nuclear strikes against the total nuclear threat, other military targets, and urban-industrial targets as required. It can be forced upon NATO by a major Soviet nuclear attack. It is both the ultimate deterrent and, if used, the ultimate military response. 191

NATO recognized that the initiation of nuclear use – whether on the battlefield or against the opponent's homeland strategic targets – carried risk of escalating out of control:

- a. The first objective would be to counter the aggression without escalation and preserve or restore the integrity and security of the North Atlantic area.
- b. In peace and war nuclear power in being will weigh heavily in the scales of negotiation and the keystone of NATO security and integrity must continue to be based on an adequate overall nuclear posture. The effects of nuclear war would be so grave that the Alliance should engage in such action only after the possibilities of preserving or restoring the integrity of the NATO area through political, economic and conventional military actions had been tried and found insufficient.
- c. NATO should retain the initiative to use nuclear weapons under conditions where it is militarily or politically required. The use of nuclear weapons to oppose an aggression, limited in scope and area, though it should not be excluded, might involve an increased risk of escalation.¹⁹²

NATO's parsed language reflected the challenge of its general nuclear response concept. In order to make the component of deliberate escalation credible, it needed to invoke the possibility of strategic nuclear conflict between the 'superpowers,' but in so doing it was glossing over the fact that neither the leadership of the U.S. nor the Soviet Union wanted to commit national suicide. That dilemma is best described as the conundrum of extended deterrence. Over time Western thinking has evolved to replace "first-use" with "no-use."

NATO's endorsement of the concept of General Nuclear Response as the capstone of the Flexible Response strategy were made in the late 1960s when the strategic nuclear balance between the U.S. and Soviet Union involved a large number of intercontinental delivery systems that could be targeted on the homelands of both sides. Although the U.S. had a quantitative advantage, its strategic impact was perceived as marginal and no knowledgeable decision-maker on either side viewed a war with those weapons as winnable. Over the next two decades, a number of important strategic arms limitations agreements were made between the two "superpowers." Nonetheless, by the late 1980s, the assets of both sides had not only expanded, but no longer represented the significant quantitative disparity. A test of U.S. war plans in support of NATO's strategy of Flexible Response that realistically addressed the escalation from Direct Defense to Dissuading Escalation to General Nuclear Response concluded that the cost of going to the latter level was a billion deaths when the impact was assessed on a global scale. Neither side had an appetite for

¹⁹¹ "Final Decision on MC 14/3," op cit: p.11.

¹⁹² "Final Decision on MC 14/3," op cit: pp. 14-15.

going there and by the end of the Cold War, General Nuclear Response was viewed as a "no-go zone," it's value in Alliance strategy being to underscore to the opponent the dangers of escalation beyond the level of Deliberate Escalation.

After the Cold War ended, a further set of agreements dramatically reduced force levels and. until recently, there was a general agreement that the current posture of strategic deterrence was stable and that neither side had sufficient assets to disarm the other sufficiently while escaping a strategic exchange with acceptable losses. Considering current events, it is interesting to note the change to official Russian commentaries related to strategic forces. Not only was there an unusual amount of public bravado related to the testing of new strategic systems, but then a bizarre series of discussions emerged about radically new weapons designs, such as a submarine-firing 1000 km torpedo carrying a massive nuclear warhead designed to produce a tsunami in coastal areas. This could be dismissed as the rantings of "mad scientists" or engineers looking for funding of their exotic projects if it were not for the fact that not only was the Russian President there when these projects were revealed, but he has since been a strong proponent of them. It is reminiscent of President Nikita Khrushchev's detonation of the "Czar Bombe," the largest nuclear weapon ever. Such systems may result in civilian mega-deaths, but they have minimal military utility, and their prime purpose is psychological in intimidating the populations if not the leadership of opposing countries. Thus, the real danger of the "tsunami torpedo" is not what it adds to the Russian strategic arsenal, but what it implies about the course of logic operating in the Kremlin.

With respect to European security and NATO strategy, the issues related to the topic of General Nuclear Response are not limited to the US and Russia. Russia's ally and silent partner, China, needs to be a part of the discussion. While Beijing's true strategic motives are unknown and probably unknowable, three things are clear: first, they knew of Russia's plan to conduct a full-scale attack on Ukraine and obviously approved it; second, the similarity between Russia trying to regain control of its former imperial province is not dissimilar to China's intent to also bring Taiwan back into the fold; and third, despite China being embarrassed at their allies poor performance and disingenuous efforts to serve as an intermediary for a cease-fire, they are a critical financial and material supporter of Russia, without which it is unlikely the Kremlin could continue the aggression in Ukraine. Why raise the issue of China here? They are in the process of building up their own strategic intercontinental nuclear weapons delivery capability with 180 ICBM silos reportedly under construction, each with a potential of holding an ICBM capable of carrying between three and 10 multiple independently targetable reentry vehicle (MIRV) warheads targeted on North America. There are also recent reports that Russia is providing assistance to China in providing the advanced modern nuclear warhead designs applicable to China's large inventory of deployed tactical, intermediate and theatre ballistic missiles.

Perhaps America's current strategic posture is sufficiently robust – with modest modernization efforts – to meet the strategic requirements of Russia and China individually. But if and when they not only combine assets but integrate them into a joint offensive plan, that produces a much more serious contingency. During the Cold War, one of the attributes that contributed to its stability was the fact was that the conflict was essentially bi-polar in nature. Introducing tri-polarity, particularly where there is the prospect of two joining

against one, does not bode well for stable strategic relationships, particularly in the absence of any mutually agreed constraints or negotiated "rules of engagement" with the newest joining the trio.

There is also the question with the respect of the role of British and French nuclear forces. In this new 'Zeitenwende' world, does their role remain as latent and passive national deterrence? Should there contribution to an Alliance posture be more robust and evident? It is interesting that when Russia has made recent threats to use nuclear weapons against Ukraine and NATO, all attention is turned to Washington, and no one asks Paris how will the 'Force de Frappe' respond? British and French national nuclear postures provide a reasonable deterrent to attacks on their respective homelands, but they do not offer a viable TNW option for the defence of other alliance members. Only the US has the quantity and the variety of nuclear weaponry that can respond to Russian TNW targeting of Eastern Europe. But as nuclear weapons are employed at longer-range and in the depth of the theatre (including Russian territory from where their systems were launched) this raises the danger of rapidly escalating strategic exchange between Russia and America. The US leadership may be willing to risk the destruction of American cities as the cost of defending Eastern Europe, but it is naïve to consider it as axiomatic.

In the current strategic environment, a credible strategy for NATO must – like its predecessor Flexible Response – include the linkage to General Nuclear War. In that context, with the forward deployment and intensified Russian nuclear threats directed to NATO, can and should the UK and France play a more significant role in Europe's security? Questions like that and the issue of nuclear burden sharing need to be addressed within the Alliance, and the best way to do that is in a Reciprocal Response framework that includes General Nuclear War as a "no-go" objective.

A hallmark of American and European arms control since the 1960s has been the attempt to limit the spread of nuclear weapons beyond the original five nuclear powers – US, Russia, UK, France and China. The 1969 Nuclear Non-Proliferation Treaty (NPT) which has been signed and observed by 185 countries that have remained non-nuclear, the exceptions being India, Israel, Pakistan and North Korea. A critical component of the NPT is Article 6 in which the five nuclear signatories agree not to threaten to use nuclear weapons against any of the other non-nuclear signatories. Russia's occupation of Crimea in 2014 and current full-scale invasion against Ukraine is the most egregious examples of a violation of Article 6. This is all the more grievous given that Ukraine is one of four countries (others being Belarus, Kazakhstan and South Africa) that actually possessed nuclear weapons and voluntarily gave them up. When it gained independence at the dissolution of the Soviet Union, Ukraine suddenly became the largest proliferee in history inheriting an inventory of 1,272 strategic nuclear warheads and 2,500 Theatre/Tactical nuclear weapons. These were given to Russia when Ukraine signed the Budapest Agreement in 1994 with the US, UK and Russia promising to honour Ukrainian territorial integrity and sovereignty.

If Ukraine defeats the invading forces and regains its lost territory, they will still face a long border with one of the two largest nuclear powers in the world. After suffering Russian perfidy and the bloodbath of the current invasion, it is very natural that Ukraine will search for nuclear protection. Countries such as Sweden and Ukraine, if threatened by a nuclear power and left exposed outside of an alliance nuclear umbrella, cannot be faulted for

following the example of Israel.

If Ukraine loses or is forced to accept a ceasefire, and NATO does not address both its Extended Deterrent credibility challenge and TNW imbalance, it will not be surprising that other front-line members of the Alliance who have the technical capability – such as Sweden, Poland, and Turkey – may reconsider their vulnerability and need for a self-sufficient deterrent.

V.D. – LONG-TERM DEFENSE PLANNING CONSIDERATIONS

A key element of any serious strategy is the differentiation between the essential and the non-essential. Given the prospect of the Alliance facing a reconstituted Russian military threat, there is no shortage of needed responses for NATO forces. But, to put it bluntly, those needs relative to stopping a Russian win in Ukraine are of secondary importance. And the primary focal point must be in countering Russia's military threat to Europe.

As indicated earlier in part V, NATO sought in the 1980s to challenge perceived Soviet conventional and theatre nuclear advantages through various initiatives that complemented the strategy of Flexible Response, including emergency improvements to NATO's forward defense forces, playing "smart, not rich" through enhanced standardization and interoperability, and articulating to the Soviet Union an off-ramp vis-à-vis negotiated constraints that would reduce the costs and consequences of continued rivalry.

Given the breadth of Putin's reforms to Russian force structure, capabilities, and doctrine that have been assembled to facilitate Russia's imperial objectives, a refresh of this package of NATO's long-term defense planning considerations that guided Alliance capability development, standardization, and interoperability during the Cold War is warranted. The current conflict in Ukraine needs to take priority, but there are issues that transcend that conflict, and which are also important to NATO members.

LONG-TERM DEFENSE PLAN (LTDP). One of the major successes of the original LTDP is that it differentiated the essential from the "nice to have" and established emergency priorities, which took precedence over "business as usual." It is ironic that the first priorities in the contemporary operating environment involve not NATO members, but Ukraine. However, that also recognizes the volatility of the current situation and the realization that "as Ukraine goes" so will several NATO countries.

The 1978 LTDP – which committed its signatories to a fifteen-year program to modernize NATO defenses – provided a long-range strategic architecture that was intended to increase cooperation among alliance members. The proposals that emanated from this approach called for "…quantitative increases in forces, weapons, and equipment; qualitative boosts through modernization of weapons and equipment inventories; and improved procedures…to effect…coordination and mutual support." ¹⁹³

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The 10 priority areas of the 1978 LTDP included Enhanced readiness; Rapid reinforcement; Stronger European reserve forces; Improvements in maritime capabilities; Integrated air defenses; Effective command, control, and communications; Electronic warfare; Rationalized procedures for armaments collaboration; Logistics co-ordination and increased war reserves; and, Theater nuclear modernization. See Comptroller General of the United States,

Since the LTDP was conceived 45 years ago, NATO member defense planning and capability development activities are now harmonized by the NATO Defence Planning Process (NDPP). It is through this process that NATO collectively identifies, develops, and delivers future capability requirements to address the strategic threats and collective security tasks identified in NATO's strategic concept papers. Even though capability development remains a sovereign responsibility, the NDPP is thus intended to help influence national decisions regarding the procurement of military equipment and armaments, encourage multinational burden-sharing, stimulate collaboration within Europe's defense industrial complex, and ultimately strengthen Alliance security.¹⁹⁴

NATO's High Visibility Project (HVP) list serves as a vehicle for multinational capability cooperation, fleet commonality, and reducing acquisition costs through economies of scale. Importantly, these projects include capabilities – such as ground based air defense, gap crossing and counter-mobility, ammunition procurement and warehousing, maritime multi mission aircraft – that are often too complex and/or expensive for countries to source on their own. HVP therefore seeks to accelerate the delivery of critical capabilities to the Alliance's forward defense forces by creating political commitments amongst multinational partners.

While NATO's capability development process has helpfully encouraged greater cooperation amongst Alliance members, Russia's full-scale invasion of Ukraine proves beyond doubt that NATO needs more heavy conventional and high-tech capabilities postured at higher levels of readiness. The importance, for example, of Patriot air defense has been demonstrated beyond debate in Ukraine. With Sweden planning to purchase the system, Poland currently deploying it, and a limited number of Patriot batteries already in Ukraine, the potential to establish a NATO air defense belt from the North Cape to the Bosporus is obvious. The fact that Turkey prefers a Russian system is interesting but irrelevant to a coherent NATO air defense zone backed up by AWACS surveillance and an integrated set of fourth generation fighters.

The current conflict has also demonstrated the impact of anti-tank guided weapons – particularly British NLAWS and American Javelin. These systems are not cheap and for small NATO members with limited defense budgets on the frontline against potential Russian attack, it is in the Alliance's interest to develop a mechanism by which a common set of anti-tank munitions can be available to members at the most efficient price possible.

Similarly, this war validates that the modern main battle tank (such as the Leopard 2 and M1 Abrams) and mechanized infantry fighting vehicle (such as the M3 Bradley) contribute a critical role in the defense potential of the Alliance. Because initial penetrations of NATO territory are inevitable, given the attackers ability to choose the time, place, and concentrate the assets, having an affordable mechanized ability to counter-attack and even conduct a counter-offensive, restoring state sovereignty, has a critical role in securing NATO forward

[&]quot;NATO's New Defense Program: Issues for Consideration," REPORT TO THE CONGRESS OF THE UNITED STATES, (Washington, DC: 9 JUL 1979), at < https://www.gao.gov/assets/id-79-4a.pdf >.

[&]quot;NATO's Capabilities," NATO, (21 FEB 2022), at https://www.nato.int/cps/en/natohg/topics 49137.htm >.

[&]quot;Multinational Capability Cooperation," NATO, (15 JUN 2023), at https://www.nato.int/cps/en/natohq/topics_163289.htm.

defense and reinforcing member confidence. The key is to recognize that it is in the interest of the entire Alliance that those systems should be more readily accessible to all members, especially those on the frontline that can least afford them.

RATIONALIZATION, STANDARDIZATION, AND INTEROPERABILITY. A related aspect of a NATO long-term competitive approach is the importance of "playing smart, not rich." It is heartening to witness the flood of various Western weaponry in support of Ukraine. But it should also be recognized that limited numbers of a wide variety of systems that are not interoperable in their firing systems, munitions, or maintenance, is unsustainable for smaller members of the Alliance, who do not have their own defense industries.

The NATO Alliance has recognized since its creation in 1949 that the promotion of commonality in military doctrine, force structure, administrative processes, and equipment would be essential to achieving military and economic advantage over the adversary. Thus, concurrent to the creation of the LTDP and its associated processes in the late 1970s, the Alliance became increasingly interested in optimizing member cooperation in the face of Soviet military modernization. Reflecting this imperative to enhance the military effectiveness of the Western Alliance, NATO undertook improvements in three key areas:

- RATIONALIZATION. Applicable to both military material resources and non-military matters, Rationalization sought to enhance "...consolidation, reassignment of national priorities to higher alliance needs, standardization, specialization, mutual support improved interoperability, or greater cooperation." 196
- STANDARDIZATION. Standardization initiatives aspired to strengthen Alliance cooperation and achieve the efficient use of resources by adopting common tactical doctrine; operational, administrative, and logistical processes; technical procedures; and interchangeable supplies, components, weapons, or equipment.
- INTEROPERABILITY. Meanwhile, efforts to enhance Interoperability were aimed at improving the ability of "...NATO members to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together." Interoperability implied commonality of ammunition, fuel, commodities, and major equipment assemblies, as well as the processes needed to plan, conduct operations, and effect command and control.

Despite more recent efforts such as NATO's Partnership Interoperability Initiative, NATO continues to struggle in its, "...ability to act together coherently, effectively and efficiently to achieve Allied tactical, operational and strategic objectives." Not only does the current support provided by NATO members to Ukraine reveal a dizzying lack of uniformity in equipment fleets, virtually every NATO intervention in recent years – including NATO's bombing campaigns in Kosovo and Libya, the counterinsurgency campaign in Afghanistan, and the current deployment of enhanced Forward Presence combined arms teams throughout Eastern Europe – has shown NATO's lack of preparedness to defend against emerging air threats, an inability to establish joint and multi-domain command and control,

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American Defense Preparedness Association, NATO RATIONALIZATION, STANDARDIZATION, AND INTEROPERABILITY HANDBOOK, (Arlington, VA: 1 NOV 1979), at < https://apps.dtic.mil/sti/pdfs/ADA151461.pdf>.
 "NATO Standardization," NATO, (Brussels, BEL: 14 OCT 2022), at < https://www.nato.int/cps/en/natohq/topics 69269.htm>.

inconsistencies in operating procedures, doctrine and language, and debilitating sustainment challenges. Moving forward, NATO should seek to enhance interoperability by distilling key lessons learned from the Russo-Ukrainian war and current NATO deployments, and prioritizing investment in the initiatives that will be essential to fighting and winning a medium-high intensity conventional war.

DUAL-TRACK NEGOTIATION. Finally, as part of NATO's package of long-term defense planning initiatives of the 1970s and 1980s, the Alliance adopted a "Dual Track" policy of modernizing its theatre nuclear weapons while concurrently seeking to negotiate an arms control agreement with the Soviet Union. As previously indicated, after eight years of tough negotiation, this approach succeeded with the signing of the Intermediate-Range Nuclear Forces Treaty in December 1987 and the elimination of intermediate-range and shorterrange missiles on both sides.

It is difficult to imagine in the current environment – characterized by the growing lethality of modern weaponry, the evident delusion and imperial ambition of Russian decision-makers, the demise of long-standing arms control agreements, and the horrific trauma being inflicted upon Ukraine – that Russia can be encouraged to contribute to international security more productively, especially when one considers the comments of former-President Dimitry Medvedev's to the Russian Security Council literally on the eve of the full-scale invasion of Ukraine:

I remember 2008 quite well...Ossetia and Abkhazia...it was a lesson for NATO and a number of European countries, a lesson that no one can do this to the Russian Federation. Today, the situation is much more complicated, but in some ways, maybe even simpler. I will explain. It is more complicated, because the scale of the potential conflict is incomparable to what we dealt with in 2008.... We understand that the pressure will be overwhelming, but we understand how to resist this pressure. In this sense, I think the bitter experience of the past 14 years was beneficial for us.

This experience showed that it will be difficult for us ... but after a while, with skillful management of the situation...the tension that is now vibrating around our country will subside one way or another. Not quickly, not all at once, but this is how human history works: sooner or later, they will get tired of this situation and will themselves ask us to resume discussions and talks on all issues of ensuring strategic security.

Here, you know, it is like that line from the famous book by Bulgakov: never ask for anything, they will come to you themselves and offer everything. This is about how developments unfolded in 2008–2009. They came to us and suggested resuming relations across the board. Let us face it, Russia means a lot more than Ukraine for the international community and our friends in the United States and the European Union, and everyone understands this, including the Ukrainians, and, to a certain extent, it was

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a lesson for NATO and a number of European countries, a lesson that no one can do this to the Russian Federation. 198

Medvedev's arrogance and brazen Machiavellianism – which reflects the mindset of other senior officials, including Putin and his enabling clique – are both disturbing and make it clear that Russia will continue to be unfazed by appeals for national self-determination and international stability. In that context, it is evident that NATO will need to impress upon Russian leadership the costs of not being receptive to genuine diplomatic efforts.

A new "Dual Track" approach for the US and NATO could seek to compel dialogue around arms control by increasing levels of investment in Alliance air and sea-based missiles, while concurrently bolstering NATO's investment in emerging technologies such as hypersonic, directed energy, cyber weapons. In theory, these new capabilities could incentivize Russia to start negotiating limits on other NATO systems and the posture of its force.¹⁹⁹

Concurrently, skittish Western leaders should be discouraged from cutting unilateral backroom deals with the Russian President. A more productive approach is for the Alliance to collectively inspire Russia to move towards a collective security context, which could eventually result in: normalized relations; calibrated, mutually agreed and verifiable restraint on military deployments; and, the moderation of economic sanctions in recognition of the requirements for mutual security.

Dimitry Medvedev, "Report to the Security Council Meeting," OFFICE OF THE PRESIDENT OF RUSSIA: EVENTS, (Moscow, RUS: Office of the President, 21 FEB 2022), at < http://en.kremlin.ru/events/president/news/67825 >.

¹⁹⁹ John D. Maurer, "The Dual Track Approach: A Long-Term Strategy for a Post-INF Treaty World," WAR ON THE ROCKS, (10 APR 2019), at < https://warontherocks.com/2019/04/the-dual-track-approach-a-long-term-strategy-for-a-post-inf-treaty-world/>.

CONCLUSION

At the upcoming NATO Summit in Vilnius, it is likely that the discussions will start about Ukraine and, at the end of the second day, the concluding comments will also involve Ukraine. Undoubtedly, the opening sessions will have many Alliance leaders recognizing the valiant defense of Ukraine's armed forces and their ability to prevail for 16 months when few thought that they would survive 16 days against a massive attack by a much larger force. Likewise, at the close of the Summit, many leaders speaking with heartfelt outrage will criticize the duplicity and depravations inflicted by Russia and express their solidarity with the Ukrainian people. All of this is laudatory, but in facing a 'Zeitenwende' challenge, what matters is not the words spoken at the start nor at the end of the Summit, but what is achieved in between.

Despite being more united than ever before, the NATO Alliance faces five strategic challenges that cannot be ignored, postponed, or covered with diplomatic rhetoric:

FIRST: NATO does not have a strategy to secure Eastern Europe from Putin's imperial ambition, and more than a dozen members states are threatened by the implications of what comes in the wake of the Russo-Ukrainian War. They know that Putin's Russia after licking its wounds and reconstituting its military will be back to complete its imperial project against not just Ukraine but any other frontline state it has in its sights. In the face of disunity and insecurity various states will act differently – some with their Democracy undermined by Russian interference and sub-rosa influence operations may attempt accommodation with the bully; others may try self-sufficiency in constructing their own deterrent. Thus, this historic 'Zeitenwende' moment requires the NATO Alliance to develop and implement a strategy that, on the one hand, inhibits Russia. But on the other hand, encourages them to see that pursuing their imperial objectives is a loser, and that they can gain by abandoning that and becoming part of a collective security environment.

SECOND: there are three critical centers of gravity that determine the stability and security of Eastern Europe. NATO's next challenge at this Summit is to recognize not only the potential of these centers of gravity, but also the inherent danger in not taking advantage of them. With Ukraine's success in the South and the accession of Finland and Sweden in the North, these areas are no longer disconnected flanks, but potentially integrated fronts in and of themselves, and vet there is a unique opportunity to create an integrated and synergistic defense whereby each contributes to the stability and effectiveness of the other. potential has been alluded to, but how that is going to be realized has neither been explained nor committed as an action plan. Every center of gravity requires a defensible 'Hub,' which provides integrated command, unity of effort, a strategic reserve, and source of extended sustainment. In the Baltic region, Finland provides that function and while not land-linked to the Baltic Republics on the littoral, its naval and air potential nonetheless provides the strategic overwatch critical to successful NATO defense of the area. Likewise in the South, a Ukraine that has re-established its territorial sovereignty can provide with its bases and the prospect of Western combat aircraft a counter to Russian hegemony in the Black Sea, it provides a glacis protecting the weaker and newer members of NATO in the southern region and is critical in offsetting Russian forward deployments through Belarus aimed at Warsaw.

THIRD: NATO's challenge at the Summit is to recognize the strategic importance of Sweden

and Ukraine being members. NATO needs them as much as they need NATO. And an Alliance with 31 countries that allows one or two rogue members to pre-emptively deny strategic opportunities that are critical to European security must either find an alternative to the unanimity or recognize that NATO is not a debating society. If it was, the contradictory behavior of Turkey would not be allowed and would need to be modified for continuation in the Alliance. Nor is there any room for active obstructionism. The same goes for Hungary, a former leader in the West that had the courage to revolt in 1956 against Soviet communism and one that led the effort to bring former Warsaw Pact states into NATO – but not petuantely . NATO's rules of association do not have a mechanism for removing members who would sacrifice collective security in pursuit of idiosyncratic games. But that does not mean that states that sabatoge Alliance collective defense should be allowed to participate in military commands, joint exercises, or shared intelligence.

The current conflict is about NATO Enlargement threatening Russia, not in the militaristic way that it is portrayed, but because endorsing national self-determination in a collective security context is a direct block to Russian imperial expansion. Russia's more limited efforts earlier could be ignored or rationalized away but the 2022 invasion of Ukraine made it evident to all that Russia's Putin was willing to use massive military force to overcome barriers to Russia's imperial expansion. Few countries would have had the courage to stand up to the existential threat posed by Russia. In recent history, no country in Europe has experienced let alone persevered the pain inflicted on Ukraine. All NATO members owe Ukraine a debt of gratitude for their perseverance through hybrid warfare, occupation, and full-scale invasion since 2014. Now no one can dismiss the threat posed to any target of Russia's expansion. In retrospect, a lesson worth considering is NOT whether NATO expansion went TOO FAR but didn't GO FAR ENOUGH and should have more quickly covered Ukraine.

FOURTH: virtually every NATO communique since the end of the Cold War has reaffirmed and lauded the Alliance "deterrence" component of the collective security strategy. But there appears to be no recognition that the tactical/theater nuclear balance has been shifting significantly with Russia possessing several thousand modernized warheads for a wide range of ground, air and sea-based delivery vehicles compared to NATO's small stockpile of gravity bombs, delivered by only several dozen nuclear-certified aircraft operating from a handful of bases.

FIFTH: The failure of the Russian invasion to achieve its minimal objectives combined with the enormous costs of men and material, cannot help but produce severe strains in the Russian politique and exacerbate internal contradictions. Whether Putin remains "czar," is seceded by others committed to a Russian imperial expansion or is replaced by those focused on stabilizing domestic relations, the potential of instability that could impact NATO frontline members is likely to remain for years. The agenda for implementing strong centers of gravity for the Northern, Central, and Southern fronts, and developing a new NATO strategy designed to provide a Shield for Western values, the right of self-determination, and the rule of international law will be essential no matter what scenario plays out. While it is untoward and counter-productive to have individual Western leaders running to Moscow to "make a deal," at some point it is important to bring Russia back into a collective security context, which could: open a pathway to discussions with a future leadership in Russia

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focused on normalizing relations; introduce calibrated, mutually agreed and verifiable restraint on military deployments in order to increase opponent confidence; and, selectively withdraw economic sanctions in recognition of the requirements for mutual security. BOTTOM LINE: NATO should consider offering Russia, not "an off ramp" to the current conflict, but a vision of an optimistic future as a reintegrated member of Western civilization. The first step being to end the invasion of Ukraine and complete withdrawal of Russian forces.

EXECUTIVE SUMMARY





Where Goest Ukraine & NATO Strategy

Dr. Phillip A. Karber

with the support of

LGen (Retd) T. Cadieu

24 June 2023

Where Goest Ukraine & NATO Strategy? Executive Summary

Dr. Phillip A. Karber with support from LGen (Retd) T. Cadieu 24 June 2023

Three days after the start of Russia's "Special Military Operation," Germany's new Chancellor, Olaf Scholtz, delivered an impassioned speech to the Bundestag, describing the invasion as producing a "Zeitenwende" – which can be translated as a "historic turning point." Sounding the alarm that a long-underappreciated danger had undermined Europe's comfort zone was courageous in its honesty and recognizing the nuanced ramifications of large-scale war on the continent. It is one thing to recognize the onset of a new era, but something else to develop, articulate and implement a new European Security strategy that proactively addresses the multiple challenges that arise with the sudden impact of an epochal *Zeitenwende* threat.

From 2014 on, Ukraine was under no illusions about Russia's hostile intent and had been very vocal about joining NATO as being critical to its long-term survival strategy. But NATO membership was elusive. It is not because Ukraine didn't qualify. In fact, the Armed Forces of Ukraine would be a major contribution to NATO defense – their battel tested forces are larger than the previous 10 countries to join the Alliance combined. The real reason that Ukraine's survival strategy was put on "infinite hold" is because, in an organization based on the unanimity rule of decisions, there were several members who denied its entry into the club, and whom today endangers the Alliance's strategic options with petty side issues.

The strategy of Flexible Response adopted in 1968 had three key components focused on direct defense of the members, countering the threat of nuclear weapons coercion, and deterring global nuclear war. Compared to the clarity of both the threat and the required response that was evident in the Cold War, over the 1990s successive NATO "Strategic Concepts" devolved into a series of lofty statements instead of specific action plans. NATO consistently tried to treat Russia as a "security partner" even after Vladimir Putin's increasingly belligerent actions.

Last summer, NATO heads of state met in Madrid and issued a new "2022 Strategic Concept" – the first to seriously call out Russian aggression. However, what makes the 'Zeitenwende" a strategic turning point is not just Russia's attack on Ukraine, but the revelation that Putin's strategic intent is to restore the Russian Empire and his perception that NATO's Collective Defense, being the barrier, is thus the target. The current competition for Eastern Europe is a battle between incompatible philosophies of international relations – the tragedy of a great power's pursuit of condominium versus the right of a people for self-determination.

Our purpose here is to emphasize that seismic "Zeitenwende" strategic challenges cannot be addressed, let alone answered, with platitudes or with the publishing of the next "Strategic Concept." The intent of this report is therefore to provide a summary of how we got to this point, assess the current crisis points that could make this "Zeitenwende" worse, and provide a framework for a decisive Ukrainian victory and a new strategy for NATO.

This report is organized around five related themes. Each addresses an issue of importance for the upcoming NATO Summit in Vilnius. In combination, they are both interrelated, and they also have future strategic relevance:

Part I: The Soviet Union's military collapse at the end of the Cold War has led some to claim that there was a military threat posed to Russia by NATO enlargement in Eastern Europe. The rapid withdrawal of Soviet forces from Eastern Europe followed by the disintegration of the Soviet Union and the economic collapse did create insecurity in Russia. Nevertheless, our empirical research shows that expansion of NATO membership drastically reduced military formations and armament stockpiles in Eastern Europe. The current war is not about great power competition but the right of independent states to pursue national self-determination in a collective security association versus imperial intervention to deny that right.

Part II: In retrospect, Vladimir Putin's ascension to power in 1999 was the turning point in Russian-NATO relations. Motivated by a mission to restore the area of control held by the former Russian empire, he drove military restructuring with particular emphasis on redesigning the ground forces for an imperial mission targeted on new NATO members, potential candidates, and neutrals. Under Putin, Russia has pursued a strategy with a range of options -- from hybrid warfare to large-scale conventional invasion, with potential for nuclear coercion. But compromises in the new design of Russian ground force proved disastrous in Ukraine.

Part III: Russia's 2021 massive mobilization with an ultimatum to the West, and unprovoked 2022 aggression against Ukraine have been costly to the militaries of both combatants but Ukraine's civilians have suffered huge losses, brutal occupation, and institutionalized torture. By the end of 2023, Ukraine will have suffered at least \$2 trillion in war costs – equal to 20 years GDP. Russian operational defeats have heavily attritted their best units with manpower replaced by draftees and criminals but uncertain prospects for reconstitution may have a major impact on potential war outcomes, including the current Ukrainian counter-offensive.

Part IV: This conflict will probably bleed into 2024, raising a serious set of questions about Russia's potential to rebuild its warfighting capability and the additional resources that Ukraine requires to stay in the fight. Genuinely supporting Ukraine's drive to re-establish its sovereign borders will require Western partners to replace a pattern of prevarication with decisive action and abandon the current policy of "dawdled incrementalism." A focus should be on accelerated delivery of critical combat systems, replenishment of Ukraine's operational stocks, reinforcement to specific under-resourced commands, and investment in priority training efforts.

Part V: NATO faces a historic turning point and serious threat to European security. The Alliance "Center of Gravity" has moved east. NATO needs a new Strategy. Borrowing the conceptual framework from the previous successful effort that took on and ended the Cold War, a new approach is outlined for a **Strategy of Reciprocal Response** with the following components:

- **Forward Defense** of three Centers of Gravity (each with a core "hub");
- **Escalation Dissuasion** a policy and capability to respond to a wide range of potential opponent escalations, including the use of tactical nuclear weapons;
- **Strategic Nuclear Coercion Denial** revival and expansion of NATO Nuclear Planning Group addressing Russian nuclear threats and deployments and evaluating military options;
- **Long-Term Planning Considerations** "playing smart, not rich" in defense cooperation and pursuing a "two-track" approach for conflict reduction with responsible Russian leadership.

I. SOVIET MILITARY MELTDOWN & NATO ENLARGEMENT

For over four decades, NATO pursued a political "containment" policy vis-à-vis the Soviet Union. It was backed up by a competitive strategy based on a defensive military posture deployed in Europe and a robust nuclear deterrent. Despite crises that involved nuclear threats throughout those years, the Western Alliance took no offensive actions toward the Soviet Union, even when they were highly vulnerable during internal revolts in Hungary, Czechoslovakia, and Poland, and undertook numerous initiatives to both normalize relations and explore options for disarmament agreements that would

help stop an intense arms race.

The withdrawal of Soviet forces from Eastern Europe and the demise of communism heralded the prospect of a Europe "whole and free." But international relations are much more than a confrontation of ideologies. They include national aspirations for self-determination as well as the arrogance of some states with imperial ambitions pursuing a sphere of influence, which is intended to interfere with or supersede the autonomy of other nations' decision-making.

The Russian invasion of Ukraine launched on 24 February 2022 was the most massive use of force on the European continent and its scope, magnitude, and intensity not only shocked Ukraine as the victim but has created a European security crisis for which the members of the NATO Alliance neither anticipated nor were prepared for. This unprovoked aggression meant that the West's optimistic "holiday from history" has come to a dark and brutal end.

It has been said that how the First World War ended presaged the conditions for the successor Second World War. Likewise, it is essential to note that the end of the Cold War set the stage for the current crisis. It has become popular in Russia and even among some Western commentators to blame NATO Enlargement for the current conflict. While everyone is entitled to their own opinions, the facts provide a different narrative:

- The cumulative effects of the rapid withdrawal of Soviet forces from Eastern Europe followed by the disintegration of the Soviet Union and the economic collapse of Russia with concomitant inability to support its armed forces, created an insecurity that set the stage for a radical pivot.
- In parallel, with the demise of communism coupled with the desire of former members of the Warsaw Pact and Soviet Republics to become integrated with the West, NATO responded to the needs of the newly independent nations to assist with "military reform," help educate a new generation of officers, assist in national efforts to drastically cut defense budgets, and dramatically reduced standing military forces. Moreover, there was no effort to orient them in strategy or exercises against Russia.
- From 1999 onwards, Vladimir Putin first as Prime Minister then as President of Russia was driven to restore the Russian condominium over Eastern Europe. Against that agenda, NATO enlargement was not a military but a political threat in promoting national self-determination and protecting it in a voluntary collective security association. Putin's military reforms were intended to redesign the ground forces for an imperial mission called "New Generation War" targeted on candidate countries desiring NATO membership.

The evolution of Putin's comments over a fifteen-year period shows a constant complaint about NATO expansion, but it is not directed to a growing military challenge. All the statistics show that before his arrival on the scene, every category of military capability of both old and new NATO Members with forces in Europe was going through major force reduction.

This clash is not about a military threat to Russia or the "tragedy of great power politics" in an East European vacuum. At its core, NATO enlargement was not a military but a political threat to Russia. In promoting national self-determination and offering membership in a voluntary collective security association NATO directly, if unintentionally, threatened Putin's dream of re-establishing the Russian Empire.

II. PUTIN'S IMPERIAL AMBITION & THE RUSSIAN "THREAT"

The turning point in Russian-NATO relations was in 1999 with the ascension to power of Vladimir Putin. Over the next fifteen years, he drove the restructuring of the Russian Armed Forces with particular emphasis on redesigning the ground forces for an imperial mission – called "New Generation War" – targeted on candidate countries desiring NATO membership.

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The rise of Vladimir Putin presaged a stall and retrenchment in Russia's democratic reform, but the actions were incremental, and the negative consequences were often below the radar of Western attention or tolerated because they did not seem to have security implications. Thus, the enrichment of his personal oligarchic kleptocracy, the decline in freedom of the press, repression of political opposition, and assassination of opponents tended to be overlooked as Western capitals found it expedient to offset political negatives with arms control negotiations and economic profits.

Similarly, previous Russian military moves against adjacent areas were often rationalized in the West as merely proactive or prophylactic actions involving local instability whether in the Chechen wars of the 1990s; salami tactics in South Ossetia, or spanking Georgia in 2008. Even the orchestration and fueling of the "hybrid war" in Donbas by arming surrogates was excused as merely a reaction to the collapse of the puppet Yanukovych regime. Thus, these military actions either did not seem oriented towards the West (as in Chechnya) or limited (as in Georgia) or historically rationalized (as in Crimea) or sub-rosa (as in Donbas) as if Russia was an honest broker in the resolution of an ethnic conflict of their own fueling.

In the lead-up to the Donbas fight of 2014, there were occasional hints by Putin himself of a more grandiose ambition than merely helping local Russians. This was his vision of a mythical Novorossiya – the area of southern Ukraine that today includes Crimea and the oblasts of Dnipropetrovsk, Donetsk, Kharkiv, Kherson, Luhansk, Mykolaiv, Zaporizhzhya – extending from the current eastern border with Russia all the way to Transnistria.



"Novorossiya" and the Dismemberment of Ukraine

But Putin's strategic ambition has always been much grander. He envisions the restoration of the Russian Empire which includes Finland, Estonia, Latvia, Georgia, Lithuania at least half of Poland, Slovakia, Romania, Belarus, Ukraine, and former Soviet republics to the South and East. The argument is that these individual social entities – each with their own unique history, culture, and language – have the right to exist as "peoples" but only as subjects in the Russian Empire and not as truly sovereign states.

Sensitive to Putin's insecurities, the Western Alliance trod carefully in the new millennia. Russia for its part could have benefited from the closer collaboration offered by the West, but Russian

declaratory policy in the late 1990s and early 2000s – codified in Russia's National Security Concept – steered in the direction opposite of NATO's strategic guidance of the day.

Russian military and diplomatic behavior soon reflected the imperium of its President and, through its actions, Russia subsequently abrogated the commitment it had made in the 1997 NATO-Russia Founding Act to respect the sovereignty, independence, and territorial integrity of all states. Vladimir Putin subsequently employed all instruments of Russian national power to harass, bully, and threaten NATO members and partners that aspired to join the Alliance with a litany of actions conducted just below the threshold of visible conflict – his goal being to manufacture threats for a tale of NATO hostility towards Russia and former Soviet states.

Buoyed by a resurgent Russian nationalism, Putin quickly gained military credibility by changing both Russia's politics and tactics in the Second Chechen War. He bought off a third of the opposition, prohibited the use of conscripts in front-line positions, and introduced the Battalion Tactical Groups (BTGs) as an organizational solution to an inherent structural dilemma in the Russian Ground Forces.

By 2014, Putin's military structural reforms were matched by doctrinal changes in an approach dubbed "New Generation War." Adopted by Russia's General Staff as a model of warfare that prioritizes the early and persistent use of informational and psychological methods to influence an opponent's behavior and achieve strategic objectives before committing to a costly and attritional campaign, it nonetheless left open the full spectrum of conflict to include major conventional operations and nuclear strikes. "New Generation War" and Gerasimov's personal influence on Russian military doctrine ultimately underpinned the approach adopted by the Russian Armed Forces as they embarked on a mission to restore the Russian condominium over Eastern Europe, first targeting Ukraine and other candidate countries desiring NATO membership.

III. RUSSIA'S WAR AGAINST UKRAINE

The "New Generation War" that started in 2014 with the occupation of Crimea and the proxy war in the Donbas that provoked that statement now pales in comparison with the unabashed full-scale Russian 2022 invasion of Ukraine. Yet the inference is still the same – despite overwhelming evidence ranging from statements of intent to the most massive preparation for offensive invasion in Europe since 1945, Vladimir Putin was determined to start a war where the operational battleground was Ukraine, but the strategic objective was nothing less than the West.

Russia's active force – with some 12 armies, five independent corps, 70+ independent brigades, and four airborne divisions – only produced approximately 150 BTGs. Of these, 120 BTGs were committed to the initial invasion on the morning of 24 February 2022. It was this force structure that, when combined with hasty and imprudent decisions, resulted in the defeat of the invading force on three separate fronts.

Over the last 16 months, despite heavy combat, neither side has been able to achieve the tactical success needed to alter the stability of the front. Nevertheless, both sides are highly motivated to tilt the balance of combat power one way or the other.

While the Russian defeats are apparent, so too are their long-term and as-of-yet unrealized objectives:

- The term "Special Military Operation" is not merely the disguise for blatant aggression but reflects what had been the hope of the Kremlin leadership from the earliest days of the conflict to both nullify the operational effectiveness of Ukraine's political and military high command and achieve its capture or destruction.
- The other strategic objective was to conquer the area identified in the original Novorossiya strategic plan. Just as the stabilization of the front in 2014-2015 and the resultant Minsk II

- ceasefire provided the basis for launching the follow-on attacks in 2022, each successive territorial advance and annexation becomes the launching point of the next aggression.
- While the image of Novorossiya has achieved recognition as an objective in Russia, it is not necessarily Putin's end-state. Russian military exercises in 2017 portrayed Russian forces deployed in Western Ukraine for operations against Poland and NATO's Central Europe.



Current Russian Position versus the Greater Novorossiya Objective

Just as the outcome of the Russian offensive campaigns of 2022 was surprising, no one can predict either the success or consummation of the Ukrainian counter-offensive. Given that unpredictability, three potential outcomes are worth pursuing.

UKRAINIAN VICTORY. The Zelensky government has been very explicit that they will not accept any war termination option that does not include the recovery of all lands occupied by Russia since 2014, including the return of the "separatist" areas of Luhansk and Donetsk as well as occupied Crimea. The Ukrainian military leadership already recognizes that achieving those ambitious objectives will require another full year of counteroffensive operations. If Western governments provide to Ukraine heretofore unavailable heavy weaponry needed by Ukraine to establish, sustain, and reconstitute its field force, the Ukrainians would be able to open new fronts for the series of counteroffensive actions that will be needed to dislodge Russia. Though Ukraine's highly adept General Staff and operational commands will plan the sequencing of maneuver, it is evident that this heavy mechanized force operating on the open Steppes would need to break through the Russian defensive lines, driving to the Sea of Azov and splitting the Russian forces.

RUSSIAN "UGLY" WIN. Given Putin's mercurial personality, it is anyone's guess what his future reactions would be to his increasingly evident debacle. As bad as the Russian situation is, at the time of this writing, nevertheless it's important to recognize several inherent strengths that may affect the outcome of the war. First, Russia's population base is more than three times larger than Ukraine's. It has almost unlimited energy resources that not only fuel its economy but whose denial can cause severe economic dislocation in Western Europe and whose availability ensures the loyalty of the Chinese ally. Despite its current losses, Russia maintains a large military structure with nearly half of its ground forces not committed to combat in Ukraine, which can serve as the structural basis for rebuilding and converting a half million more draftees into soldiers. And, armed with nuclear weapons, Russia's air and missile forces can hold Europe hostage. With time, Russian-stocked equipment can be refurbished, upgraded, and used to replace the massive losses sustained in the last

eight months of high-intensity combat. Frustrated with the high cost and low progress in achieving success on the ground, Russia may attempt to achieve its war aims using the indirect approach of strategic bombardment, including the potential use of tactical nuclear weapons.

CEASEFIRE PAUSE FOR NEXT ROUND. A ceasefire is only sustainable if the operational conditions facilitate stability rather than an incentive for one side or the other to take advantage of its conditions and renew the attack in the hope of achieving decisive strategic results. One of these critical conditions is the geography at the line of contact when cessation of direct hostilities occurred. A long-extended frontage that only permits thinly defended positions in open terrain gives an incentive for an attacker to break through sparse defenses and penetrate deep into the opponent's territory. Further, a ceasefire is only as good as the party's intention to honor it. Russia's invasion is the first State territorial aggression in Europe since the end of World War II and they have violated virtually every security agreement they have signed. With that track record, a fool would presume Russian good faith in keeping any future agreement.

Every war must end. They always do, if not with a bang, then a whimper. If by the end of 2023, Ukraine is unable to successfully conduct a series of counter-offensives to recover all its territory that Russia has occupied, it will invoke the perception of a stalemate, where neither side can make decisive gains, and the implications of that are dire. It implies an environment in which, by sheer losses alone, Ukraine may face the steep internal pressures discussed above and empower the Russian leadership to go for an "ugly win."

While some may intend to let Ukraine carry the burden of holding a revanchist Russian empire at bay, given that a positive outcome is not axiomatic, it not only directly threatens NATO members on the Black Sea and those on the Baltic, but its core center of gravity in Poland. In short, for Ukraine and ultimately NATO, there is "no substitute for victory."

IV - ARMING UKRAINE

With neither the Russians able to achieve their minimalist goals and Ukraine still far from recovering its lost territory and territorial integrity, the prospect of the conflict extending into 2024 raises a serious set of questions related to Russia's ability to rebuild its offensive capability and the additional resources that Ukraine requires to restore its territorial integrity.

SECURITY ASSISTANCE TO UKRAINE. Notwithstanding Ukraine's inspirational successes, the country is at war with an invading force several times its size and one that can marshal the resources needed for a long-term attritional contest.

Fortunately, the international community dynamically established the structures and processes needed to better cohere the provision of security assistance to Ukraine including the International Donor Coordination Centre (IDCC) and Ukraine Defense Contact Group (UDCG). The results of this collaboration have been impressive and important. Since Putin ordered the Russian military to attack Ukraine in February 2022, the UDCG has mobilized over \$60B USD in security assistance, much of which is lethal in nature. The United States has provided \$30B USD, making it the largest contributor, and the UK, Germany, and Poland together have generated over \$10B USD. A crowning achievement of Ukraine's supporters thus far has been the creation of two corps-sized combined arms formations that are currently conducting counter-offensive operations and elements of which are poised to provide a reliable strategic-level reserve that is certain to give Russia pause before attempting to maneuver on to Kyiv once again.

WESTERN PREVARICATION. Notwithstanding the colossal efforts undertaken to provide Ukraine with conventional warfighting equipment in the current phase of the conflict, both American and European leaders have reluctantly responded, in part – they have justified – out of concern of

escalation, not wanting to overload the recipient, the need to bring allies along, and not wanting to interrupt other agendas related to economic prosperity and arms control. Instead of providing Ukraine with the support it needed to decisively re-establish its sovereign borders and protect the Ukrainian people, the West has deliberately regulated the flow of equipment to Russia's victim.

This 'strategy' is notable in how economic sanctions were applied, the constrained Western military assistance to Ukraine, and the unending debate and delay regarding Ukrainian membership in NATO. Western responses have been introduced incrementally, inconsistently applied to targets, and thus at times not fit-for-purpose, and incoherently applied by the members of the Alliance. Undoubtedly, economic sanctions have had an impact on some individuals, some Russian access to technology, and finally their integration with the global financial system. But at each step, while painful, they were not decisive, and it gained time for Russia to both adjust to their impact as well as afford them an opportunity to seek alternative pathways with other states. Over and over, the West has responded to a military need, but with a consistent pattern of too little, too late.

UAS and AD/AT for UKR for UKR Feb 22 Apr 22 Jun 22 Sep 22 Dec 22 24 Feb: 4 Sep: UKR 11 Nov **BAKHMUT Stalemate** RF UKR UKR Defence offensive Contact for UKR KHERSON KHARKIV

Regulating the Flow of Military Capabilities to Ukraine

REQUIREMENTS FOR DECISIVELY RESTORING UKRAINIAN SOVEREIGNTY. This report argues that Western partners must abandon the current tepid approach and immediately deliver all needed combat systems, build the capacity of specific commands that have thus far been under-supported, and marshal vital sustainment and training supports so that Ukraine doesn't face exhaustion, take unnecessary losses, and forfeit the opportunity to re-establish its national integrity:

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JOINT STRIKE CAPABILITIES. No issue is of deeper current concern than securing for Ukraine the joint enabling capabilities that it requires to defend against air threats, mass fires, and strike Russian high-value targets:

- **Fires**. Inexplicably, allies have yet to approve the delivery of the Army Tactical Missile System (ATACMS) a surface-to-surface GPS-guided missile with a range of 300 km that can be fired from the HIMARS systems already in Ukraine's inventory.
- **Combat Air.** No modern army would attempt to conduct a major counter-offensive without supplementing ground-based air defenses with combat air patrols, suppression of enemy air defenses, and close air support. Every effort by Ukraine's allies needs to be focused on addressing the issue of getting Ukraine Western multi-role fighters. A successful F-16 program could

eventually lead to the introduction of other competitive aircraft such as the F-18 Hornet with Harpoon for maritime strike and the F-15E Strike Eagle for air superiority and long-range interdiction. Airborne Early Warning aircraft (E-2C or Hawkeye-2000) should also be delivered to Ukraine to help with the detection of threats at long range and facilitate command and control.

- Attack Air and Aviation. Similarly, attack aviation could play a key role not only in supporting the close fight of the counter-offensive force and also in shaping tactical and operational deep areas. The delivery to Ukraine of platforms such as the venerable A-10 Warthog and AAH-64C Apache would enable maneuver throughout the battlespace.
- Layered Air Defense. Ukrainian critical infrastructure, civilian populations, and ground forces remain highly exposed and vulnerable to the Russian air threat. Thus, a concerted effort must continue to be made to assist Ukraine with the design and building of a high-quality layered ground-based air defense system. This will require additional investment in a suite of passive surveillance systems (such as Czech's Vera-NG) and multi-functional radars that can detect, classify, track, and guide munitions to intercept aerial threats (such as the US AN/TPY-2 and TPS-77 multi-role radar, Sweden's Giraffe 4a, and/or France's Ground Master 200). Critically, Ukraine's air defense artillery forces must be augmented with additional systems to intercept incoming threats at close-range (i.e., US AN/TWQ Avenger), short-range (i.e., German IRIS-T and Norwegian/US NASAMS), medium-range (i.e., US Patriot and/or Italy/France SAMP-T), and long-range (i.e., US THAAD and/or Israel David's Sling).
- **Counter-Drone**. The challenge posed by drones is intensifying and stressing an already patchy air defense posture. In addition to dispatching proven kinetic solutions such as the SAIC counter-UAS laser-guided rocket systems and Northrop-Grumman Agnostic Gun Trucks, an expedited and concerted effort by Western partners to deploy experimental directed energy weapons such as Eprius' High-Power Microwave Leonidas and other laser energy solutions could help Ukraine to solve an intractable military challenge.
- **Electronic Warfare (EW)**. Ukraine also urgently needs the ability to counter the enemy's radar and radio emission capabilities. EW systems such as the Turkish Koral could assist Ukraine with detecting, jamming, and deceiving Russian radars that cue air attacks. Similarly, tactical portable direction funding systems, such as the TCI-903-II-40, would allow Ukrainian ground troops to geolocate and intercept radio emissions.

PROVISION OF OPERATIONAL STOCKS FOR MECHANIZED GROUND FORCES. Anticipating that Ukraine is likely to suffer higher personnel and equipment casualty rates in the coming months, maintaining the viability of this force will require Ukraine's friends to invest in the equipment suites needed to reconstitute all of Ukraine's 30+ existing maneuver formations, including proper scaling of ammunition, spare parts, specialty tooling, and other combat supplies. Once these urgent operational requirements are finally satisfied, partners should assume moving forward a requirement to replace at least 25% of Ukraine's mechanized fleets annually. This is an expensive proposition, but failure will be more costly, and should thus incentivize the international community to support Ukraine more assertively in the near term.

ENHANCING RESILIENCE – UKRAINE'S TERRITORIAL DEFENSE FORCE (TDF). The TDF is increasingly essential to the defense of Ukraine – and it will continue to be in the years to come – yet it is severely ill-equipped to fulfill its assigned tasks.

With much of Ukraine's professional military cohort now decimated, the TDF is no longer Ukraine's force of last resort. Rather, this command now conducts the following operational tasks, which are a far reach from what was initially envisioned for this team:

• Regional Defense. TDF brigades continue to work closely with local officials and emergency services to plan for the defense of their communities. In this capacity, this force is intended to

build resilience and deter Russia from ground attacks on defended urban centers.

- Combat Operations. TDF companies and battalions are routinely assigned to Ukraine's other combat formations for close combat in the Eastern and Southern fronts.
- Defense of International Borders. Ukraine's TDF now provides the *frontline* of defense on Ukraine's borders with Belarus, Transnistria, and parts of Russia, as well as Ukraine's southern maritime approaches. Without exception, these brigades are assigned large areas of operation that span hundreds of kilometers.

The success of this strategy of using TDF troops to guard Ukraine's borders will hinge on the ability of these troops to hold their ground with integral resources. Otherwise, under pressure from Russian cross-border attacks, Territorials will not be able to hold the line and other combat brigades will be bled away from other fronts to reinforce border defenses.

The TDF urgently requires from the international community a modest investment of light and highly mobile wheeled vehicles, crew weapons (including light/heavy machine guns, TOW, portable air defense, and loitering munitions), communications equipment, and night fighting systems to ensure this force can either credibly deter Russian attack or defend against it when the time comes.

ORGANIZING THE UKRAINIAN RESISTANCE. Ukraine's Defense Intelligence has provided an unrecognized service to the West that has required Ukraine to at once protect its operational security, while also maintaining honesty and vulnerability with Western partners.

Ukraine's Defense Intelligence requires Western support for two essential tasks, the first of which is in support of its mandate to collect, process and disseminate intelligence on the enemy. Unlike many Western partners who are net consumers of the intelligence provided by specific allies, Ukraine views intelligence as an active and intimate engagement with the opponent across all domains. Accordingly, one of the things that sets Ukrainian intelligence apart is its persistent frontline engagement to conduct independent and sensitive strategic operations such as long-range reconnaissance and intelligence gathering, as well as direct actions against targets of strategic importance. Ukraine would thus benefit from foreign support with specific issues for which the security of sources and means would normally inhibit sharing but is crucial in enhancing the survivability of Ukrainian troops, including access to electromagnetic, cyber, and space resources.

Ukraine's Defense Intelligence also requires extensive tactical and logistical support to organize the nation's resistance, and thus enhance Ukrainian resilience against long-term Russian aggression. For Ukraine's Defense Intelligence and Special Operations Forces to buy time for the counter-offensive actions needed to eject Russia, these organizations urgently require reconnaissance drones and loitering munitions, protected mobility vehicles, armored fighting vehicles, heavy mortars, portable air defense and anti-tank systems, night fighting equipment/optics, and a range of logistical vehicles.

ONGOING SUPPORT TO TRAINING AND PROFESSIONAL DEVELOPMENT. Ukraine's critical force generation tasks of recruiting, training, and equipping individual soldiers and integrating them into combined arms teams are significant. They are even more daunting when one considers that Ukraine's military must also fight and tend to casualties, while concurrently fostering a warfighting ethos and establishing training and reconstitution systems that did not previously exist in some of the commands. Clearly, it will remain essential for SAG-U to harmonize the delivery of training, with leadership development as an enduring priority. International partners should be encouraged to facilitate training aligned to the strengths of their respective militaries, but centralized planning and coordination by SAG-U is almost certain to result in greater efficiencies and ensure the priorities of the Armed Forces of Ukraine are satisfied. Moreover, additional efforts to standardize training courses will result in more effective and interoperable forces when they return to combat operations.

V – UKRAINE AND A NEW STRATEGY FOR NATO

In addressing a strategy vacuum, this is neither the time for generalized sentiments nor a laundry list of specific needs. Rather, the real challenge is in providing a coherent, compelling, and competitive strategic architecture that not only provides operational guidance to NATO commands and offers a roadmap for unified action among Alliance militaries, but also can be articulated to the public and political leadership of the European and North American partners.

The last time the NATO Alliance had an approach that specifically addressed large-scale conventional threats of invasion and/or nuclear attack on the Members was the strategy of Flexible Response. This approach was the driving guidance for the second half of the Cold War to its successful end. The situation today is not isomorphic to that of the 1980s, but there are compelling similarities, and the success of Flexible Response then provides an insightful frame of reference for the current challenge.

FLEXIBLE RESPONSE AS FRAMEWORK FOR A NEW NATO STRATEGY. NATO's strategy of "*Flexible Response*," adopted in 1968 as MC-14/3 initially identified three strategic concepts, designed to be implemented in sequence:

- Direct Defense as far forward as possible;
- Deliberate Escalation as a means for the defender to seize the initiative for recovery of lost territory and early war termination;
- General Nuclear Response in the event the opponent conducted a large-scale nuclear attack on NATO with this linkage and uncertainty over the outcome deterring invasion in the first place.

The Soviet Union was identified as the immediate and long-term strategic challenger, NATO had a clear and closely monitored perception of threat, a majority of forces were maintained at full manning and heightened states of readiness, major units at the Division and Corps level conducted extensive joint multinational training, several thousand nuclear weapons were deployed in Europe and available for use by the armed forces of eight member countries, and the Alliance fielded long-range nuclear delivery systems. Organizing, synchronizing, and modernizing this force was a collective security strategy prepared for a wide range of contingencies – from limited probes to full-scale continent-wide conflict.

NATO'S NEW CENTERS OF GRAVITY. Any strategy for a defensive alliance threatened by external aggression, the natural starting point, and the 'sine qua non' of the effort begin with member territory – assessing potential vulnerabilities, evaluating national needs for protection, and looking to alliances with friendly states to help address gaps.

Recently, NATO's Supreme Allied Commander told the US Congress that the center of gravity of NATO forces has shifted eastwards. "Center of Gravity" was not a conceptual element of NATO's original Flexible Response strategy. That 19th Century icon of 20th Century strategic theory, Carl von Clausewitz introduced the concept of "Center of Gravity" (CoG) to military affairs. But in the first three decades of Cold War confrontation, it did not seem to readily apply to issues of deterrence and the role of nuclear weapons in theater conflict. However, with a growing recognition that there was a realistic possibility of a major Central European conventional war in the 1980s, it was popular among American and NATO military circles to describe the confrontation with the Soviet Union and its Warsaw Pact in Clausewitzian terms.

Clausewitz's notion of three unique but interrelated and overlapping levels of domain – political/strategic, theater/front, and operational/campaign – is not only relevant to the modern era but can provide a specific and constructive approach to thinking about how to organize a relevant NATO strategy and optimize its impact in the 21st Century.

STRATEGIC "CENTER OF GRAVITY" & COHESION. The CoG for strategic cohesion in a multinational alliance is represented by the combination of those members who are committed to a joint strategy and willing to act decisively in implementing it. What made NATO unique at the time of its founding and remains special today, is that it is a peacetime alliance that is trans-continental linking North American and European Centers of Gravity in a unified mission, organizational structure, and integrated military command.

Although strategic cohesion can be defined in many ways, one current example is with respect to Ukraine and the support that various Alliance Members have given. As would be expected, some of the larger ones have in fact given by far the greatest amount of support. But one way of looking at Alliance cohesion, in this case, is to not only ask 'how much' a member has given but at what cost.

It is a great advantage to have an international alliance with 31 members participating in a collective security association based on their free will and taking a unanimous stand on strategic issues. While this is generally laudatory, there is a real danger when a set of critical decisions impacting the fundamental security of the majority of members need to be made, that one or two states can delay or effectively defeat strategic action on the basis of internal issues or leadership petulance. NATO faces this problem at the upcoming Summit with respect to Sweden and Ukraine with Hungary and Turkey blocking their admission.

THEATER/FRONT "CENTER OF GRAVITY" & FORCE GENERATION. As the next level down in the structure of engagement, there is a critical requirement to link the source of support from the rear to the forward forces conducting Campaigns – a process called "Force Generation," which encompasses the readiness of existing formations, as well as reinforcement and replacement of assets. Within or added to this Center of Gravity are the full gamut of resources producing military capabilities. This multi-domain ellipsoid has a center of mass – a military structure that serves as a "hub" for maximizing the combatant potential of overlapping Fronts.

Although it has not received much consideration, NATO expansion not only greatly increased the total area of the Alliance, but dramatically changed the geometry of its defensibility. It has doubled the horizontal depth of NATO's Theater and the expansion of members along the Baltic, throughout the Balkans, and along the Black Sea has geographically and operationally united Northern, Central, and Southern Europe. The flanks are no longer isolated but integrated with the Center as adjacent Fronts

Thus, today the Alliance is faced with three contested and overlapping centers of strategic importance. NATO has suddenly and surprisingly coalesced in terms of the perception of the threat and as illustrated in its support of Ukraine has demonstrated a cohesive unity in different levels of effort. But a challenge remains and that is in identifying and responding to these future areas of instability, intimidation, and/or invasion.

As in the Cold War, NATO's Central Front remains the critical core of Alliance security. Previously, the dual role which gave West Germany strategic importance was in combining both the function of a "force generation hub" as well as being the contested territory in a series of "operational campaigns." While Germany is still a critical line of communication, their strategic CoG role has now been moved East. What is different from the Cold War is that this core "force generation" CoG in Poland now supports not only the defense of NATO's Central Region but is also the indispensable link to the new Northern and Southern Fronts.

These fronts overlap and produce a powerful and symbiotic set of CoGs. Anchored on Poland, a Northern Front encompassing the Baltic Sea, Lithuania, Latvia, Estonia, Finland (and hopefully Sweden) has the potential to become a strong and sustainable Front with its own center of gravity. It is the land link critical to the survival of the Baltic Republics. Likewise, the security of the Black Sea region also has the potential of a Front if anchored on liberated and potential Alliance member

Ukraine. In this case, Poland is not only the indispensable line of communication keeping Ukraine alive with Western supplies, but the irreplaceable cork in the bottle stopping further Russian aggression in Central-Southeastern Europe if Ukraine falls. But, as with Germany in the Cold War, Poland is also a front-line state facing a potential threat from three Russian "Schwerpunkts" – from Kaliningrad, Belarus, and through Western Ukraine (if the current conflict ends unfavorably).

OPERATIONAL & CAMPAIGN CENTERS OF GRAVITY. Operational campaigns are the third level for which centers of gravity can be designated. Specific forces are deployed, concentrated, and committed to offensive and defensive combat. These are best used as a series of campaigns, which can be conducted sequentially or simultaneously. Opposing forces in the field each have a "schwerpunkt" or locust of main effort, and it is that confrontation that defines the CoG of operations and campaigns.

Fortunately, the countries involved in the North and the South that are targets of Russian imperial ambition are neither weak nor unmotivated. For 40 years of the Cold War, Finland and Sweden remained neutral (with a cant to the West). And now they perceive a threat in Northern Europe that is greater and more dangerous than anything during the Cold War. Likewise, Ukraine having been ambivalent in the comings and goings of various political administrations has now realized that for survival, its fate is tied to NATO.



NATO's New Strategic Centers of Gravity

DESIGNING A 'RECIPROCAL RESPONSE' STRATEGY. If Flexible Response was intended to implement a mandate to use nuclear weapons "if necessary," today NATO needs a strategy of "Reciprocal Response" where the focus, both in peacetime messaging and in fighting aggression, is having a perceptible capability and committed policy of reciprocity. Specifically, attacks launched from Russian territory involving conventional missile strikes against rear area targets or initiating the use of nuclear weapons must be met in kind. Russian territory cannot be a sanctuary from which it can attack NATO with impunity and then hide behind the skirt of superpower inviolability.

Obviously, there are significant elements of the current environment, in particular Russia's willingness to wage war on a European state, that is different from the situation with the Soviet Union four decades ago. Nevertheless, the three strategic concepts of the Flexible Response strategy are not without relevance to Europe's current 'Zeitenwende' angst.

FORWARD DEFENSE OF NATO'S NEW EUROPEAN SHIELD. Since the founding of the Alliance, there was recognition that for a strategy to have credibility meant there could be no confusion over the trigger for its "invocation" of the Alliance's direct intervention as represented in Article V of NATO's founding treaty. The concept of 'Direct Defense' not only calls for an immediate engagement and recognition that an attack on one member's sovereignty is an attack on the Alliance, but that the defense should be conducted as far forward as operationally tenable to minimize lost territory. In the inevitable consequences of a major attack, it was recognized that the initial defenses would be penetrated and that to repulse them might not only depend on local forces, but rapid response units from the Alliance.

Direct Defense also recognized the contingency where an opponent with the attitude of "what is mine is mine, what is yours is negotiable," might, after seizing significant gains in the initial assault, intend to quickly achieve termination with either de facto acceptance of occupied territory or a "cease fire" that produces a "frozen conflict." Thus, it was the accepted responsibility of the alliance to conduct counter-offensive operations to restore the "status quo ante."

One of the key differences between NATO's challenges of the last half of the Cold War versus today is that the Central center of gravity has moved eastward, and what were disconnected flanks are now adjacent fronts on the North and the South. Neither of the keystone states needed for a Northern and Southern center of gravity is currently an Alliance member but is indispensable in providing a core 'hub' as the center of gravity for their respective fronts. With a new center of gravity anchored in Poland, the central region also provides the indispensable link to the new Northern and Southern fronts.

Today the Alliance is faced with three contested Fronts of strategic importance. These fronts overlap and provide the possibility of mutual support. In combination, they produce the potential of a unified Theatre center of gravity. As shown below, the net effect of this integrated combination of Fronts offers the potential of a NATO-based "European Security Shield."

Each of NATO's three fronts faces a serious Direct Defense challenge and it will require NATO to not only recognize that and assess what is needed for an effective forward defense, but also prioritize the allocation of scarce resources. Thus, the "European Security Shield" is neither a given nor self-implementing. It requires a NATO strategy that is committed to building a forward defense of the Theatre's strategic center of gravity.

Several lessons can be distilled from the Russo-Ukrainian War that are germane to all three of NATO's strategic fronts and should be considered when operationalizing the concept of Forward Defense of NATO's new European Shield:

- Foremost is the need for NATO to acknowledge and demarcate its evolving area of operations, which is now comprised of three interlocking European theatres, each with its own center of gravity.
- NATO's Concept for Deterrence and Defence of the Euro-Atlantic Area must prioritize the existential threat posed by Russia and the reality of NATO's expanding membership and evolving boundaries. NATO military preparations should include the design, organization, national preparation, active readiness, peacetime deployment, specific national force commitments, and development of a strategic reserve for employment in unexpected contingencies that is competitive to the threat.

- Establish Warsaw as the Alliance's European center of gravity to ensure the nation is capable
 of fulfilling with simultaneity -- its critical multiple and overlapping roles of forward defense,
 integrating and synchronizing operations with the Northern and Southern theatres, and force
 generation 'hub' commitments.
- Recognizing the unfavorable force ratios in the defensive schemes of the former Baltic Republics, NATO should mission-task specific high-readiness response forces to reinforce Theatres, and whose operational plans are strengthened through liaison and reconnaissance with in-place forces, rehearsals, and joint combined arms exercises.
- Given the reticence of specific members of the Alliance to condemn Russian aggression, NATO should wargame the invocation of Article V and military response options against the possible future Russian imperium and establish a mechanism to deal with Alliance members that do not fulfil their Treaty commitments or, even worse, actively obstruct NATO collective action.
- Immediately endorse the accession of Sweden and Ukraine to the NATO Alliance, and plan for the forward defense of both countries. This should include plans for NATO-basing, capability development, and in the case of Ukraine providing security for the reconstruction of critical infrastructure following the end of hostilities.



NATO's New European Shield

DISSUADING ESCALATION. In the Flexible Response strategy of 1968, NATO placed a heavy emphasis on the "first use" of nuclear weapons as an offset to fears of conventional inferiority. For the last two decades of the Cold War, NATO had an explicit and coherent nuclear strategy in its MC-14/3 "Flexible Response" doctrine which laid out the conditions under which a sequential release of nuclear fire would graduate from the battlefield "Direct Defense," to theatre strike "Deliberate Escalation" and ultimately linked to strategic "General Nuclear Response." By the end of the Cold War, there was increasing recognition that the "first use" of nuclear weapons was unlikely to be of

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advantage for NATO's Direct Defense and thus the key to a successful outcome was ending the conflict without the use of nuclear weapons. Western leaders and American presidents have since downplayed the role of nuclear weapons for tactical use on the battlefield or for theater deterrence.

During the 1990s, Russia did not have the opportunity to modernize its nuclear weapons, but this changed after the millennium. Although Russia politically mimicked Western arms control rhetoric, it took the opposite attitude toward the utility of tactical nuclear weapons (TNW). Given the massive reduction in their conventional forces and the equally large territory they were assigned to defend, they concluded that they had to depend on TNW to offset numerical inferiority on the battlefield. And taking a page from NATO's nuclear concepts during the Cold War, they argued that using battlefield nuclear weapons on their own territory to offset a conventionally superior invader was not inherently escalatory.

Thus, the concept of "escalate to de-escalate" was a major shift in Russian strategic thinking and can be attributed directly to the arrival of Vladimir Putin in the critical role of Secretary of Russia's Security Council. Russian military theorists took an innovative approach, which contrasted with NATO's concept, which viewed the escalation to the first use of nuclear weapons as entering an extended plateau where nuclear weapons were deployed throughout the theatre over an extended period. Instead, the Russian concept involved a selective strike, which could include multiple targets and multiple warheads, but limited in duration – creating a significant military effect and a salient political message but one which conveyed to the recipient that, while that set of attacks was limited, it could be repeated.

It is in this context of "escalate to deescalate" that Putin and his clique have made repeated nuclear threats over the last 16 months. Not only have these provocative statements sent a shockwave to the global public, whose imagination can conjure up a world-ending apocalypse, but political and military leaders who have now awoken from a 30-year blissful slumber to the realization that there is a serious asymmetry between Russia and NATO in the quantity, modernization, and range of applications in respect to the relative nuclear arsenals. Thus, the Western Alliance faces a lacuna in terms of how and with what to respond to Russian TNW use.

From the beginning of the 2022 invasion, Western governments – specifically the US – have been hyper-sensitive over concerns of starting an escalatory cycle in their own behavioral responses to various Russian escalations. No NATO country, again including the US, has even hinted that responding to Russian use of nuclear weapons against Ukraine would trigger a response in kind. While US and allied countries are considering a "range of options," these appear to be asymmetric – that is responding with either conventional action, even heavier economic sanctions, or other non-military moves. Whether Russian employment of some nuclear option is motivated out of fear of conventional defeat or expectation of coercive surrender in Kyiv, Western timidity neither offers Ukraine solace nor enhances Russian inhibition.

Contrary to the expectations of many Western disarmament proponents, nuclear weapons have not been un-invented. If Tactical / Theatre Nuclear Warfare had a premature burial, Russia has brought them back to life as a serious strategic challenge to stability and security in Europe. There is a gross asymmetry between the thousands of warheads available on hundreds of delivery systems in the Russian inventory compared to the few hundred bombs available to the Western Alliance. Clearly, Russia believes that NATO members can be coerced by nuclear threats. And, if that fails to persuade NATO from having a robust range of nuclear delivery capability that exceeds what is currently available to defend Eastern Europe in terms of yield, quantity, and depth of target coverage, Russia will maintain access to military options that place NATO at an asymmetrical disadvantage.

If Russia is to be disabused of that notion it will require action, not rhetoric. There is a clear need for a coherent NATO strategy, which in unambiguous terms focuses on enforcing a mutual "no-first-use"

approach. Prior to Russia's re-invention of its imperial mission, it would have been prudent and possible to have achieved a negotiated and mutual agreement between NATO and Russia on limiting the number of TNW warheads and systems in and aimed at Europe, supported by verifiable observations of training, exercises, and deployments. But, until Russia decides to return as a European security partner, it is important that a modern NATO Reciprocal Response strategy have as a key component an emphasis on dissuading nuclear-delivered escalation or threats of "escalate to de-escalate" and to ensure that inhibition is recognized and respected. It would also be prudent for the Alliance to hold a NATO nuclear weapons review, which not only addresses what is needed but how the burden and risk would be shared.

The dilemma of Extended Deterrence is not new and was a major challenge to the Western Alliance in the latter half of the Cold War. Thus, NATO found it expedient to deploy Theatre Nuclear Systems – such as the Pershing II ballistic and GLCM cruise missiles – on European territory that provided a visible manifestation of the Alliance's willingness to defend itself against nuclear coercion and/or attack. In 2020, NATO briefly debated the option of bringing back land-based theatre systems to minimally offset Russia's expanding capability and apparent violation of the Intermediate-Range Nuclear Forces (INF) Treaty they had signed in 1987. This option was dismissed because none of the European members wanted to host the nuclear systems on their home territory. However, in 2021 NATO explicitly rejected the option of fielding their own land-based nuclear missile and a US plan to fill the gap with off-shore capabilities. Given recent Russian threats, their targeting of Ukrainian cities and the addition of new members to the Alliance suggests that this issue can no longer be ignored. Either the Alliance will address Russian TNW, or their unmatched capability will undermine the credibility of NATO's extended deterrent.

DETERRING NUCLEAR WAR. NATO's endorsement of the concept of General Nuclear Response as the capstone of the Flexible Response strategy was made in the late 1960s when the strategic nuclear balance between the U.S. and Soviet Union involved a large number of intercontinental delivery systems that could be targeted on the homelands of both sides. Although the U.S. had a quantitative advantage, its strategic impact was perceived as marginal and no knowledgeable decision-maker on either side viewed a war with those weapons as winnable. Thus, after the Cold War ended, a set of agreements dramatically reduced force levels and, until recently, there was a general agreement that the current posture of strategic deterrence was stable and that neither side had sufficient assets to disarm the other sufficiently while escaping a strategic exchange with acceptable losses.

With respect to European security and NATO strategy today, the issues related to the topic of General Nuclear Response are not limited to the US and Russia. Russia's ally and silent partner, China, needs to be a part of the discussion. While Beijing's true strategic motives are unknown and probably unknowable, they are in the process of building up their own strategic intercontinental nuclear weapons delivery capability with 180 ICBM silos reportedly under construction, each with the potential of holding an ICBM capable of carrying between three and 10 multiple independently targetable reentry vehicle warheads targeted on North America. There are also recent reports that Russia is providing assistance to China in providing the advanced modern nuclear warhead designs applicable to China's large inventory of deployed tactical, intermediate, and theatre ballistic missiles.

Perhaps America's current strategic posture is sufficiently robust – with modest modernization efforts – to meet the strategic requirements of Russia and China individually. But if and when they not only combine assets but integrate them into a joint offensive plan, that produces a much more serious contingency. During the Cold War, one of the attributes that contributed to its stability was the fact that the conflict was essentially bipolar in nature. Introducing tri-polarity, particularly where there is the prospect of two joining against one, does not bode well for stable strategic relationships, particularly in the absence of any mutually agreed constraints or negotiated "rules of engagement"

with the newest joining the trio.

There is also the question with respect to the role of British and French nuclear forces. It is interesting that when Russia has made recent threats to use nuclear weapons against Ukraine and NATO, all attention is turned to Washington, and no one asks Paris how will the 'Force de Frappe' respond. British and French national nuclear postures provide a reasonable deterrent to attacks on their respective homelands, but they do not offer a viable TNW option for the defense of other alliance members. In the current strategic environment, a credible strategy for NATO must – like its predecessor Flexible Response – include the linkage to General Nuclear War. In that context, with the forward deployment and intensified Russian nuclear threats directed at NATO, can and should the UK and France play a more significant role in Europe's security? Questions like that and the issue of nuclear burden-sharing need to be addressed within the Alliance, and the best way to do that is in a Reciprocal Response framework that includes General Nuclear War as a "no-go" objective.

A hallmark of American and European arms control since the 1960s has been the attempt to limit the spread of nuclear weapons beyond the original five nuclear powers – the US, Russia, the UK, France, and China. The 1969 Nuclear Non-Proliferation Treaty (NPT) has been signed and observed by 185 countries that have remained non-nuclear, the exceptions being India, Israel, Pakistan, and North Korea. A critical component of the NPT is Article 6 in which the five nuclear signatories agree not to threaten to use nuclear weapons against any of the other non-nuclear signatories. Russia's occupation of Crimea and the current full-scale invasion of Ukraine are the most egregious examples of a violation of Article 6. This is all the more grievous given that Ukraine is one of four countries that possessed nuclear weapons and voluntarily gave them up.

If Ukraine defeats the invading forces and regains its lost territory, it will still face a long border with one of the two largest nuclear powers in the world. After suffering Russian perfidy and the bloodbath of the current invasion, it is very natural that Ukraine will search for nuclear protection. Countries such as Sweden and Ukraine, if threatened by nuclear power and left exposed outside of an alliance nuclear umbrella, cannot be faulted for following the example of Israel. If Ukraine loses or is forced to accept a ceasefire, and NATO does not address both its Extended Deterrent credibility challenge and TNW imbalance, it will not be surprising that other front-line members of the Alliance who have the technical capability – such as Sweden, Poland, and Turkey – may reconsider their vulnerability and need for a self-sufficient deterrent.

CONCLUSION

At the upcoming NATO Summit in Vilnius, the discussions will likely start about Ukraine and, at the end of the second day, the concluding comments will also involve Ukraine. Undoubtedly, the opening sessions will have many Alliance leaders recognizing the valiant defense of Ukraine's armed forces and their ability to prevail for 16 months when few thought that they would survive 16 days against a massive attack by a much larger force. Likewise, at the close of the Summit, many leaders speaking with heartfelt outrage will criticize the duplicity and deprivations inflicted by Russia and express their solidarity with the Ukrainian people. All of this is laudatory, but in facing a 'Zeitenwende' challenge, what matters is not the words spoken at the start nor at the end of the Summit, but what is achieved in between.

Despite being more united than ever before, the NATO Alliance faces five strategic challenges that cannot be ignored, postponed, or covered with diplomatic rhetoric:

FIRST: NATO does not have a strategy to secure Eastern Europe from Putin's imperial ambition, and more than a dozen member states are threatened by the implications of what comes in the wake of the Russo-Ukrainian War. They know that Putin's Russia after licking its wounds and reconstituting

its military will be back to complete its imperial project against not just Ukraine but any other frontline state it has in its sights. In the face of disunity and insecurity various states will act differently – some with their Democracy undermined by Russian interference and sub-rosa influence operations may attempt accommodation with the bully; others may try self-sufficiency in constructing their own deterrent. Thus, this historic 'Zeitenwende' moment requires the NATO Alliance to develop and implement a strategy that, on the one hand, inhibits Russia. But on the other hand, encourages them to see that pursuing their imperial objectives is a loser and that they can gain by abandoning that and becoming part of a collective security environment.

SECOND: three critical centers of gravity determine the stability and security of Eastern Europe. NATO's next challenge at this Summit is to recognize not only the potential of these centers of gravity but also the inherent danger in not taking advantage of them. With Ukraine's success in the South and the accession of Finland and Sweden in the North, these areas are no longer disconnected flanks, but potentially integrated fronts in and of themselves, and yet there is a unique opportunity to create an integrated and synergistic defense whereby each contributes to the stability and effectiveness of the other. This potential has been alluded to, but how that is going to be realized has neither been explained nor committed as an action plan. Every center of gravity requires a defensible 'Hub,' which provides integrated command, unity of effort, a strategic reserve, and a source of extended sustainment. In the Baltic region, Finland provides that function, and while not land-linked to the Baltic Republics on the littoral, its naval and air potential nonetheless provides the strategic overwatch critical to successful NATO defense of the area. Likewise in the South, a Ukraine that has re-established its territorial sovereignty can provide with its bases and the prospect of Western combat aircraft a counter to Russian hegemony in the Black Sea, it provides a glacis protecting the weaker and newer members of NATO in the southern region and is critical in offsetting Russian forward deployments through Belarus aimed at Warsaw.

THIRD: NATO's challenge at the Summit is to recognize the strategic importance of Sweden and Ukraine being members. NATO needs them as much as they need NATO. And an Alliance with 31 countries that allows one or two rogue members to pre-emptively deny strategic opportunities that are critical to European security must either find an alternative to the unanimity or recognize that NATO is not a debating society. If it was, the contradictory behavior of Turkey would not be allowed and would need to be modified for continuation in the Alliance. Nor is there any room for active obstructionism. The same goes for Hungary, a former leader in the West that had the courage to revolt in 1956 against Soviet communism and one that led the effort to bring former Warsaw Pact states into NATO – but not petulantly. NATO's rules of association do not have a mechanism for removing members who would sacrifice collective security in pursuit of idiosyncratic games. But that does not mean that states that sabotage Alliance collective defense should be allowed to participate in military commands, joint exercises, or shared intelligence.

The current conflict is about NATO Enlargement threatening Russia, not in the militaristic way that it is portrayed, but because endorsing national self-determination in a collective security context is a direct block to Russian imperial expansion. Russia's more limited efforts earlier could be ignored or rationalized away but the 2022 invasion of Ukraine made it evident to all that Russia's Putin was willing to use massive military force to overcome barriers to Russia's imperial expansion. Few countries would have had the courage to stand up to the existential threat posed by Russia. In recent history, no country in Europe has experienced let alone persevered the pain inflicted on Ukraine. All NATO members owe Ukraine a debt of gratitude for their perseverance through hybrid warfare, occupation, and full-scale invasion since 2014. Now no one can dismiss the threat posed to any target of Russia's expansion. In retrospect, a lesson worth considering is NOT whether NATO expansion went TOO FAR but didn't GO FAR ENOUGH and should have more quickly covered Ukraine.

FOURTH: virtually every NATO communique since the end of the Cold War has reaffirmed and lauded

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the Alliance "deterrence" component of the collective security strategy. But there appears to be no recognition that the tactical/theater nuclear balance has been shifting significantly with Russia possessing several thousand modernized warheads for a wide range of ground, air and sea-based delivery vehicles compared to NATO's small stockpile of gravity bombs, delivered by only several dozen nuclear-certified aircraft operating from a handful of bases.

FIFTH: The failure of the Russian invasion to achieve its minimal objectives combined with the enormous costs of men and material, cannot help but produce severe strains in the Russian politique and exacerbate internal contradictions. Whether Putin remains "czar," is seceded by others committed to a Russian imperial expansion or is replaced by those focused on stabilizing domestic relations, the potential of instability that could impact NATO frontline members is likely to remain for years. The agenda for implementing strong centers of gravity for the Northern, Central, and Southern fronts, and developing a new NATO strategy designed to provide a Shield for Western values, the right of self-determination, and the rule of international law will be essential no matter what scenario plays out. While it is untoward and counter-productive to have individual Western leaders running to Moscow to "make a deal," at some point it is important to bring Russia back into a collective security context, which could: open a pathway to discussions with a future leadership in Russia focused on normalizing relations; introduce calibrated, mutually agreed and verifiable restraint on military deployments in order to increase opponent confidence; and, selectively withdraw economic sanctions in recognition of the requirements for mutual security. BOTTOM LINE: NATO should consider offering Russia, not "an off ramp" to the current conflict, but a vision of an optimistic future as a reintegrated member of Western civilization. The first step being to end the invasion of Ukraine and complete withdrawal of Russian forces.