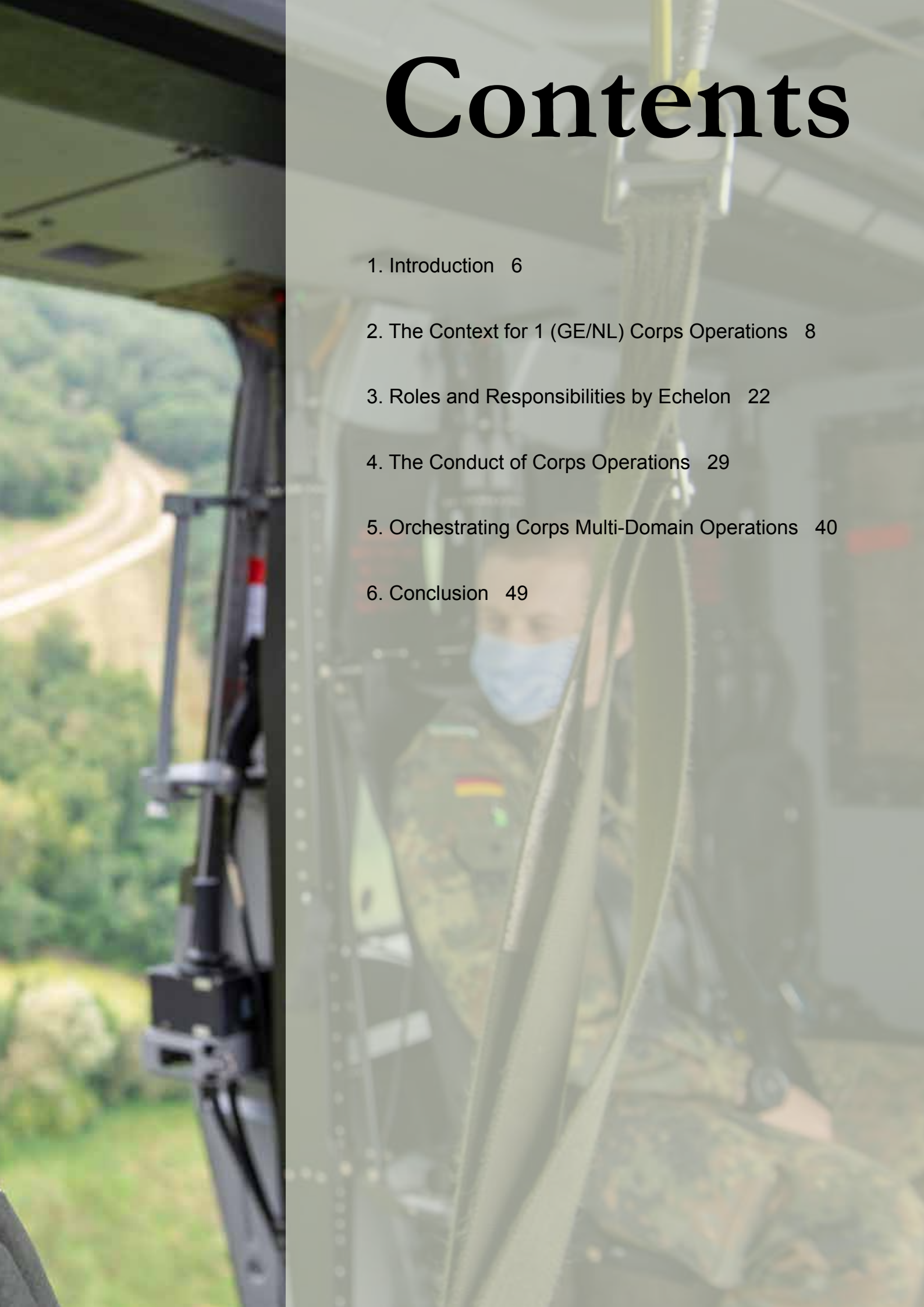




Corps Operating Concept

January 2022



A soldier wearing a blue face mask and a camouflage uniform is seated in the cockpit of a military helicopter. The soldier is looking forward, and the helicopter's interior structure, including a large yellow strap, is visible. The background shows a blurred landscape with green hills and a dirt road.

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Foreword

by Commander 1 German-Netherlands Corps



A. MARLOW

Lieutenant General
DEU ARMY

COM 1 (GE/NL) Corps

A stylized, handwritten signature in black ink, consisting of several loops and a long horizontal stroke.

Since its formation in 1995 as a result of the merger of the 1 German Corps and 1 Dutch Corps, 1 German Netherlands (GE/NL) Corps has repeatedly confirmed the commitment of its framework nations (Germany and Netherlands) to NATO, deploying to Afghanistan in 2003, 2009, and 2013. In order to remain a clear demonstration of commitment by its framework nations to NATO, deter aggression, and defend the Euro-Atlantic Area, 1 (GE/NL) Corps must demonstrate the ability to conduct large-scale combat operations as part of NATO against an enemy in an Article 5 scenario. The ability to conduct large-scale combat operations underpins the credibility of the Alliance's deterrence, and provides the basis for the defence of the Euro-Atlantic Area. This means that 1 (GE/NL) Corps must possess the ability to successfully perform the Warfighting Corps role following its 2023 stand-by period as the NATO Response Force (NRF) Land Component Command (LCC).

Execution of the Warfighting Corps role on the multi-domain battlefields of today and tomorrow requires specific capabilities, in the required capacities, along with the expertise necessary to employ them in an Article 5 scenario against a peer enemy. As part of its transformation into a Multi-Domain Operations (MDO)-capable Warfighting Corps, 1 (GE/NL) Corps has conducted a campaign of learning consisting of academics, war-gaming, and training and exercises (TREX). The results of this work are detailed in the 1 (GE/NL) Corps, *Corps Operating Concept: The Conduct of Corps Operations* and specify the roles and responsibilities of a NATO Warfighting Corps within MDO, define the requirements and the structure for an MDO-capable Warfighting Corps, and describe the conduct of Corps operations within the context of an Article 5 scenario. Furthermore this Corps Operating Concept operationalizes the multi-domain approach to operations found in the 1 (GE/NL) Corps, *Corps Warfighting Concept*.

The ability of 1 (GE/NL) Corps to fulfil the Warfighting Corps role in the conduct of large-scale combat operations underpins the credibility of the Alliance's deterrence. However, in order to successfully deter or prevail in armed conflict, 1 (GE/NL) Corps and the other GRF(L)s need to continue to develop the required capabilities at the capacity needed to be a capable of conducting large scale combat operations. The ability to employ these formations as described in this document requires realistic training and exercises that approach the intensity of modern operations, and finally an aggressive warrior mindset focused on defeating any potential enemy. The more professional we become in fulfilling the warfighting role, the more credible our efforts will be. In short, readiness and demonstrated warfighting competence are the foundation of effective deterrence.

Today again deterrence is the key to preventing conflict, because an aggressor must realize that the consequences for violent acts would be his defeat. NATO will remain the most powerful military alliance that has ever existed in history. As long as we maintain our cohesion, no potential enemy will be able to successfully attack any alliance member. 1 (GE/NL) Corps will continue to provide its contribution in this context.

A. MARLOW

Lt. Gen.

COM 1 (GE/NL) Corps

1. Introduction

"You may not be interested in war, but war is interested in you"

Leon Trotsky

The 1 (GE/NL) Corps, *Corps Operating Concept: The Conduct of Corps Operations* describes how 1 (GE/NL) Corps will conduct operations to deter adversaries and defeat or destroy enemy forces in the 2027-2040 timeframe. It details the operational approach and the required capabilities necessary to seize and control terrain, defeat or destroy enemy forces, protect populations, activities, and infrastructure to achieve the Corps's objectives. Furthermore, this *Corps Operating Concept* operationalizes the multi-domain approach to operations found in the 1 (GE/NL) Corps, *Corps Warfighting Concept*.

As part of, and with the Joint force and partners, the 1 (GE/NL) Corps conducts air-ground movement in depth with land forces supported by ground-based fires in conjunction with air, maritime, special operations forces (SOF), space and cyber generated effects to gain positions of advantage, penetrate enemy defenses, and conduct exploitation to defeat or destroy enemy forces. This echeloned maneuver by 1 (GE/NL) Corps provides agility, resilience, and flexibility to the force and enables independent maneuver of distributed formations or units to seize the initiative, achieve momentum, and control tempo, thus protecting the force. The conduct of echeloned maneuver by the Corps overcomes the difficulty of massing at the point of successful penetration enabling high-

er echelons to rapidly combine ground maneuver forces with effects from other domains across an expanded battlefield.¹ This operational approach enables the Corps to seize terrain, control and protect populations, and destroy or defeat enemy forces throughout the depth of its area of operations.

The *Corps Operating Concept* espouses the rapid and continuous integration of multi-domain, electromagnetic spectrum (EMS), and information environment (IE) capabilities to deter and, if necessary, prevail during competition short of armed conflict. If deterrence fails, 1 (GE/NL) Corps will rapidly converge capabilities from multiple domains to achieve a marked advantage over the enemy that will enable the freedom of action necessary for the Alliance's joint force to penetrate and disintegrate enemy A2/AD systems—specifically its long-range Integrated Air Defense System (IADS) and Integrated Fires Complex (IFC). Further, 1 (GE/NL) Corps will exploit the resulting freedom of action to defeat enemy systems and formations, while consolidating gains, to force a return to competition on terms more favorable to NATO.

The *Corps Operating Concept* describes how the 1 (GE/NL) Corps will continuously incorporate effects from all domains and environments to conduct operations throughout the competition continuum to defeat adversaries. Chapter 2 describes those aspects of the threat and expanded battlefield that are relevant to the conduct of operations by the 1 (GE/NL) Corps, and provides an overview of Multi-Domain Operations (MDO). Chapter 3 details the

roles and responsibilities for echelons from the Operational Echelon (JFC, (MC)LCC) to Division-level and depicts how the force is arrayed in time and space. Chapter 4 details the conduct of operations within the context of a campaign, and Chapter 5 describes how the Corps orchestrates Multi-Domain Operations.

1 (GE/NL) Corps, *Corps Operating Concept: The Conduct of Corps Operations* reflects the most current thinking of NATO and the Alliance's militaries on the threat and how to conduct operations against a peer enemy in the current and future operational environment. The conclusions in this document are not only based on concepts and doctrine, but also on experiences from exercises, experimentation, and wargaming, as well as engagements with military professionals and senior commanders. The "Warfighting Pyramid" (Figure 1-1), shows the relation between theory and praxis, the levels where they take place, to include the links between documents. Because 1 (GE/NL) Corps, *Corps Operating Concept: The Conduct of Corps Operations* details the employment of a combat-effective Warfighting Corps with affiliated Corps Troops, it also serves as the basis for a detailed roadmap with options to refine this concept and subordinate functional concepts (see annexes), train Corps Troops, those from Framework Nations (FNs), and throughout the Alliance in Warfighting.²



Figure 1-1: Warfighting Pyramid

Frameworks

The application of combat power requires military and non-military activity to be harmonized in time and space to find, fix, and strike a target in the physical, virtual, and cognitive environments in order to create and exploit an effect in the physical domain. These activities are either decisive, shaping or sustaining for operations. Hence a commander must be able to answer the following questions:

- What effects do I want to create by employing my capabilities within tactical / operational activities and how do these effects relate and achieve the objective(s)?
- How do these activities relate and create the desired effects?
- Where (and when) should I deploy these activities?

These are three interrelated frameworks available to help with answering these questions. These frameworks are used for planning, organizing, and synchronizing the deployment of combat power. They provide commanders with a conceptual picture for the use of scarce assets so that these assets can be deployed as effectively and efficiently as possible.

The importance of the different frameworks can vary per operation or activity, but it is only in association that they help to answer all questions. These three frameworks are in line with NATO doctrine.

Each of the frameworks assists in answering one of the above questions:

- The land operations framework. This framework describes how the effects to be created by tactical activities, achieve the desired objectives. It serves to bring effects, their interrelationship, and their relationship with

target groups and the OE, together into a whole. This supports the identification of the main effort and supported/supporting relationships.

- The functional framework. This framework supports the arrangement of activities to create the desired effects by synchronizing and integrating the core functions of find, fix, strike, and exploit. This arrangement helps to determine the organization of forces required to best create the desired effects.
- The geographical framework. This framework supports the arrangement of resources, command and control (C2) architecture, and activities in time and space in the OE. It describes 'where' and 'when' activities will take place. This also helps to identify (supported/supporting) relationships in time and space between the services.

Frameworks support the commander. They are a tool, not a purpose. If the commonly used frameworks are not usable/suitable/supportive in a given situation, other frameworks may be developed and used. In this case it is the obligation of commanders to ensure that everybody understands the framework. Some examples of less common frameworks:

- Understand, shape, engage, consolidate, and transform.
- Clear, hold, and build.

The frameworks are not mutually exclusive. Commanders may choose one framework or a combination of frameworks to develop, visualize and describe the operational concept. It will depend on which tool best suits the tactical challenge and their command style. Nevertheless, all questions need to be answered in order to develop an adequate and complete operational concept. Therefore, it is necessary to walk through (the idea behind) all frameworks, if only mentally. Multi-Domain Operations adds a new framework: Competition, Penetration and Dis-Integration, Exploitation, and Return to Competition. This is the framework that will be expanded upon throughout this concept.

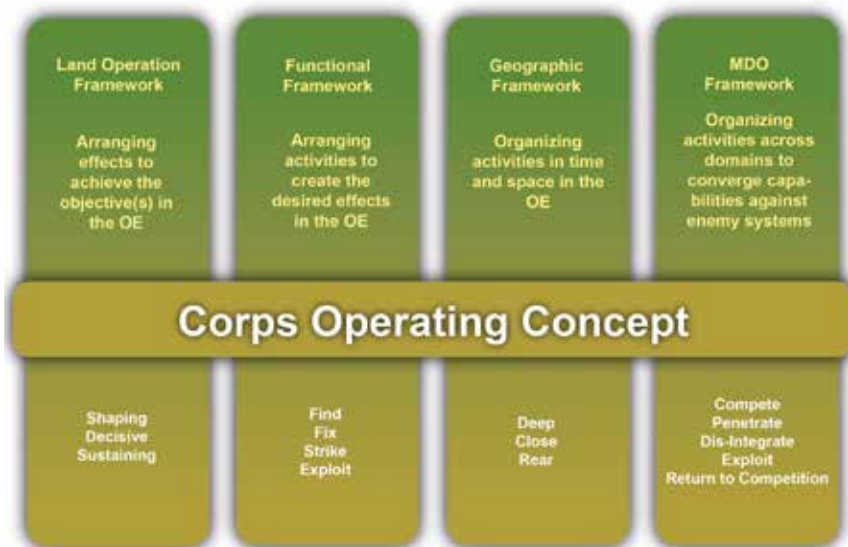


Figure 1-2: Three Interrelated Frameworks



Figure 1-3: A Toolbox with Frameworks

¹ Domain: Area of activity within the operational environment (land, air, maritime, space, and cyberspace) in which operations are organized and conducted.

² The definition of Warfighting used in this concept is derived from AJP-01 and defines Warfighting as: "In Warfighting, most of the activity is directed against a significant form of armed aggression perpetrated by large-scale military forces belonging to one or more states or to a well-organized and resourced non-state actor. These forces engage in combat operations in a series of battles and engagements at high intensity, varying in frequency and scale of forces involved. The immediate goal is to ensure freedom of action at the expense of their opponents. The rhythm of operations is often high with high logistics consumption. States' armed forces may also use irregular and CBRN activities to support their conventional forces' military objectives. Operating in a context where Warfighting is the predominant theme may be further exacerbated, perpetuated or exploited by irregular actors seeking to benefit from instability, whether through insurgency, terrorism, criminality or disorder." See Allied Joint Doctrine, AJP-01, Edition E version 1, February 2017.



2. The Context for 1 (GE/NL) Corps Operations

“Success will not attend the most technologically advanced army, but the army that best can harness technology to the traditional warlike attributes.”

Gen. Sir Frank Kitson

The current and near future – present through 2040 – Operational Environment (OE) will be characterized by new technologies, new doctrine, and revised strategic concepts that will enable our adversaries’ ability to challenge NATO in multiple domains. 1 (GE/NL) Corps and its subordinate forces will operate within a dynamic and expanded operational context that includes contested battlefields and domains, integrated enemy defences with stand-off, operational and strategic deterrence challenges, and multinational and governmental collaboration. 1 (GE/NL) Corps will confront highly lethal adversaries in an unpredictable operational environment, which combined with the new operational context informs the military problem of enabling the Alliance to compete with peer adversaries below armed conflict, penetrate and dis-integrate their anti-access and area denial systems (A2/AD) and ultimately defeat them in armed conflict and consolidate gains, and then return to non-crisis competition.

1 (GE/NL) Corps could face the armed forces of a number of potential adversaries such as Russia, Iran, China, or North Korea. This is in addition to the persistent threat posed by violent extremist organizations. Within this document the focus will be on the Russian military. This is not because a conflict between NATO and Russia is inevitable but because it represents the most likely employment of 1 (GE/NL) Corps in the Warfighting Corps role. The Russian military also provides

an excellent exemplar of the challenges that 1 (GE/NL) would face in combat against a peer enemy. As such, the Russian military provides the pacing threat for 1 (GE/NL) Corps.

1 (GE/NL) Corps’s Pacing Threat: How Russia Fights

Since 2008 Russia has reversed the decline of its military forces with a combined-arms force that focuses on the importance of mobility, firepower, and training to conduct large scale operations. The significant improvements of the Russian Federation Armed Forces (RFAF) have reduced and in some areas exceed the once substantial qualitative and technological advantage of NATO. These improvements come while RFAF are expanding their presence, not only in the west, but also in the Middle East, Africa and South-east Asia, at the same time maintaining more high readiness forces while gaining valuable combat experience from Syria and Ukraine.

The RFAF in Russia are postured to defend the homeland focusing on vital industrial and population centres. In order to defend its territory and avoid decisive engagement with a peer/ near peer enemy, RFAF has employed defensive systems and strike weapons with extended range. This will also be of operational advantage to the RFAF when conducting offensive operations in its near abroad. RFAF is said to have a limited number of long-range conventional precision strike capabilities that can be used against operational and strategic targets, especially those at known fixed locations (e.g. headquarters in fixed infrastructure, bunkers, missile silos, storage sites). However both the number of precision strike missiles and transporter erector launchers (TEL) are increasing fast. Russia operates 12 Combat Missile Brigades of the Iskander system; each Brigade includes 12 to 14 TELs and support vehicles. In addition the precision strike capabilities of the Navy

and Air Force are also increasing.

The RFAF have a conventional weakness when it comes to sustainment in an enduring/prolonged war; therefore, they will use different indirect strategies and unconventional actions (New Generation Warfare/Hybrid) across multiple domains to mitigate this military imbalance to NATO. The RFAF will highly likely need to reach its objectives early in a conflict and destroy the opposing forces’ combat potential. To do so Russia needs to think outside the box both in terms of means and methods. To win a conflict quickly and selectively in a limited but decisive way are likely to be principles of Russian military thinking. The ability to support the operational level with strategic assets in all domains, during all phases of an operation may remedy some of this weakness. Russian doctrinal thinking emphasises offensive strikes and the initial phase of war as being decisive. Pre-emptive action is a key element here, and it is highly likely that Russia will take action prior to any deployment of NATO force into a conflict area.

Russian Principles of War

“Strike hard, fast and first in order to disable the enemy”

- High combat readiness
- Surprise
- Aggression and decisiveness
- Persistence and initiative
- Combined arms coordination and joint operations
- Information warfare
- Exploitation of moral and political factors
- Comprehensive combat support (Arty, MLRS, TBM, Air Defence, Rotary and fixed Wing Aviation, EW)
- Timely restoration of reserves and combat potential

We have seen that the principles of high combat readiness, aggression and decisiveness, combined arms coordination and joint operations have been demonstrated in both exercises and operations like Ukraine in 2014. This is also seen in how Russia tries to exercise influence over nation states in its near abroad.

Command Structure

The command over the RFAF is exercised from Moscow; the General Staff has the operational control over five (5) military districts (MD) Northern Fleet, Western MD, Southern MD, Central MD and Eastern MD, which form the Joint Strategic Commands (JSC). A JSC commands most army, navy, and airforce elements within its respective geographic area.

Due to its importance the General Staff conducts direct operational control over the:

- Strategic Nuclear Forces: Strategic Missile Forces (strategic ballistic missiles), Nuclear Submarines (SSBNs), Long-Range Aviation
- Airborne Forces (VDV)
- Aerospace Forces, including Air Transport
- Special Operations Forces
- Certain Logistic functions

Operations are led from the National Defence Management Centre (NDMC). The NDMC is an interagency command, control, communication, computers, intelligence, surveillance and reconnaissance

(C4ISR) facility. Civilian agencies, local and regional governments are well integrated into the military and security services giving them a comprehensive and whole-of-government approach to planning and leading operations. According to RAND, Russia has come a long way in the process of implementing a modern whole-of-government C4ISR infrastructure that will enable Russia to pursue its vision of net-centric warfare.

Since 2008 Russia has used large resources in developing a modern and robust C4ISR structure and maintains multiple redundancies in its command and communications systems.

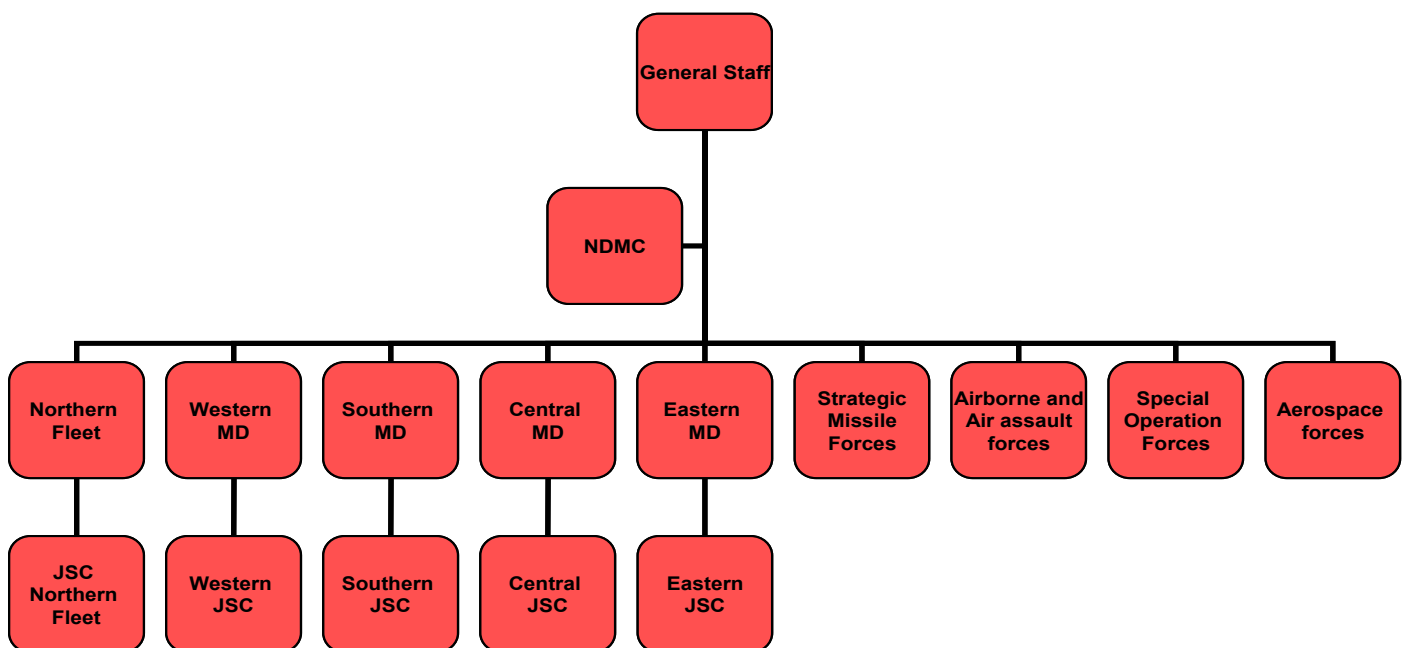


Figure 2-1. Russian Command structure



Russian Nuclear Deterrence

When considering “How Russia Fights” one must take into account that Russia is a nuclear power and the nuclear triad is an important part of Russian escalation dynamics.

Russia will use a series of measures that aim to control escalation dynamics. The ultimate insurance of RFAF escalation management is their tactical and strategic nuclear weapons. Russia continues to rely on nuclear weapons to deter and prevent regional and large scale conflicts, seeing nuclear weapons as complementary means within a comprehensive strategic deterrence system.

On 2nd of June 2020, President Putin signed the Russian nuclear policy “Basic Principals of State Policy of the Russian Federation on Nuclear Deterrence”. For the first time Russia has consolidated and publicly released its nuclear deterrence policy. The policy appears to confirm that

2) In case of aggression with weapons of mass destruction,

3) Reliable information about a launch of ballistic missile against its territory (it does not mention anything about payload, nuclear or conventional),

4) Attack or interference against critical military or civilian infrastructure that if successful, would result in undermining nuclear retaliation.

However in the end the ultimate decision to use nuclear weapons lies with the President of the Russian Federation.

New Generation Warfare

“Russia as a state lends itself to all kinds of notions of hybridity: hybrid war, hybrid democracy, hybrid autocracy”

Mark Galeotti and Anna Arutunyan

Some Russian military theorists use the

In the so-called non-kinetic toolbox information technology serves as a force multiplier and can even compensate for deficiencies in the physical arena. The role played by information confrontation is vital.³ This also includes media, but other important instruments include both political and financial support for minority groups and political parties that seek to challenge the legitimacy of the state. Long-term information confrontation aimed at weakening the target nation is to be preferred, and ideally Russia seeks to achieve its objective without fighting and even without conflict. If the non-kinetic information confrontation does not reach its objectives, there will be a change in policy towards a more kinetic approach. Gerasimov states that in New Generation Warfare the ratio between non-kinetic and kinetic operations should be 4:1 (Figure 2-2). Cyber operations are part of the Russian information domain, and can be both non-kinetic, (for instance as intelligence gathering or influencing operation) and kinetic (the Russian

Table 1. Global and regional nuclear deterrence

Aspect of nuclear threats	Global nuclear deterrence	Regional nuclear deterrence
Goals	Retaliation	Targeting an aggressor's military potential
Forms	Mutual nuclear weapons use	First use of nuclear weapons
Scale	Unlimited nuclear weapons use	Limited nuclear weapon use
Targets	Largely counter aggressor value targets	Largely military targets of the aggressor
Possible implementation timing	At the concluding stages of the aggression	At any stage during the escalation of aggression
Source: S.V. Kreydin, “Global and regional deterrence: toward a system of principles and criteria”, Military thought, no 4 (1999)		

Russia is less focused on East Asia, South Asia and the Middle East, leaving the west as the main threat. Russia continues to reserve the right to use nuclear weapons to end / win a conventional military conflict. The “exclusive” mission of Russia’s nuclear forces is to provide nuclear deterrence to “prevent aggression against the Russian Federation and/or its allies” but also to “the prevention of an escalation of military actions and their termination on conditions that are acceptable for the Russian Federation and/or its allies”. This means that once the conditions to use nuclear weapons are met and Russia decides to use nuclear weapons, Russia will do so intending to prevent further escalation and to end the conflict as favourably as possible for itself. Not escalate to deescalate but escalate to win.

The nuclear policy declares that the use of nuclear weapons is limited to four (4) distinct scenarios:

1) Nuclear use in response to a conventional attack if the very existence of the state is threatened,

term “non-linear warfare”, sometimes referred to as ‘hybrid warfare’ in the West. Aleksandr Bartosh, a member of the Russian Academy of Military Science, stated that Russian Hybrid Warfare encompasses any type of action designed to intentionally weaken an opponent, even through economic, cultural or environmental policies. By utilising hybrid means, Russia will try to identify vulnerabilities in the target states, which will be used to reach their own objectives. Examples of vulnerabilities may be structural and therefore well known to the opponent and planned well in advance, while others may be recognized suddenly, forcing the opponent to think fast and act, if they want to benefit from the opportunity. In this type of warfare an undefended spot may be a weakness and therefore the aim of an attack. Therefore it is important to take into consideration that Russia will utilise all means of the state to reach its objectives in a rising conflict, both non-kinetic and kinetic.

“Supreme excellence consists of breaking the enemy's resistance without fighting”

Sandworm groups attack on the Ukrainian power grid in 2014 and -16, taking full control over the power grid and then turned off electricity to a quarter of million of people, they are also responsible for the “NotPet-ya” malware that caused severe damage in Europe 2017).

For a number of years now, western and Russian military scientists agree that in “new” conflicts, there is no longer a well defined battlespace, where blue fights red. These are wars of the past, the modern battlefield is hard to define and will take place within all the (D)PMESII factors. In theory, one can say that the whole world is the battlefield in any modern conflict, not only where troops are deployed. Weapon systems like EW, cyber, and long -range missiles are not hampered by borders and can have a devastating effect on the opponent almost anywhere in the world.

Prior to a Russian attack there will be a significant increase in information confrontations and other hybrid activities aimed at weakening the opponent in order to reach the objectives. This will high-

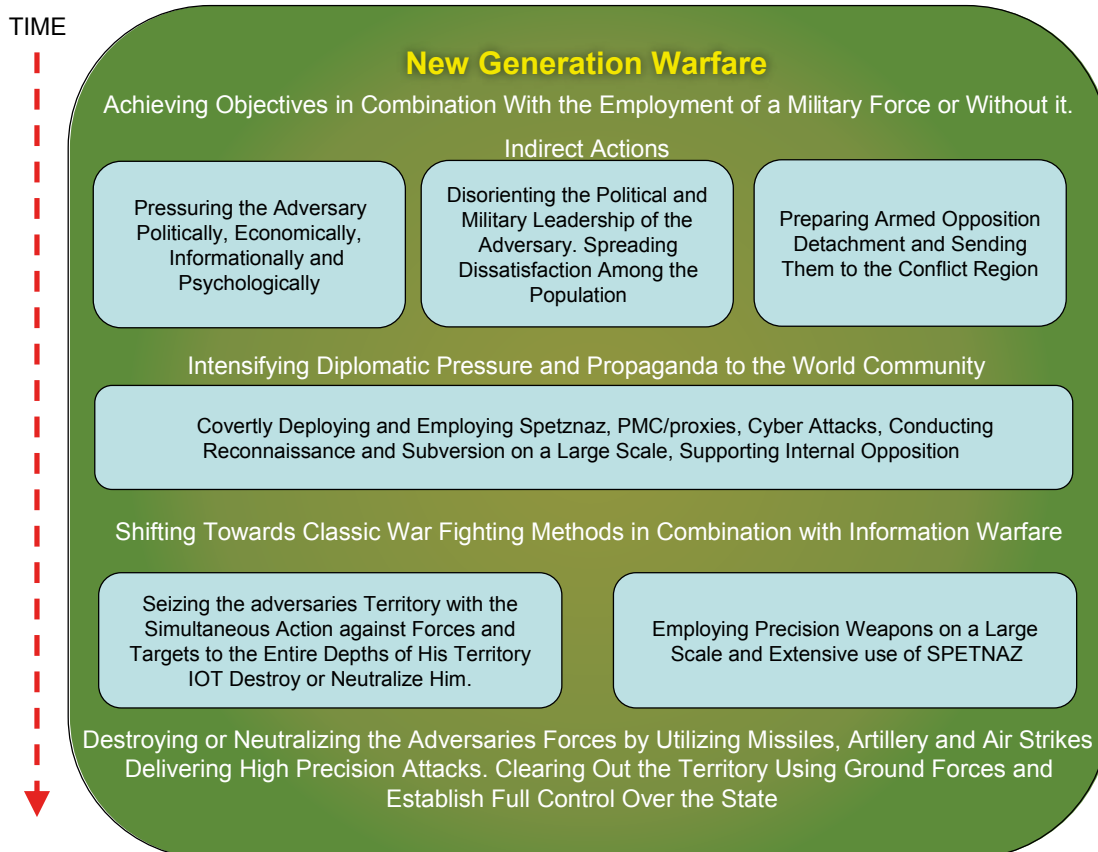


Figure 2-2. Ways of Conducting New Generation Warfare.

ly likely start prior to NATO deployment and in NATO nations, aimed at hampering decision making processes, slowing down information flow (i.e. cutting under-sea communication cables, hampering satellite communication, jamming, cyber attack) and disrupting vital infrastructure like harbours, land and sea lines of communication.

In the early phases of a conflict there will be covert operations utilising a mix of conventional and unconventional warfare, deployment of Spetsnaz, private military companies (PMCs), paramilitaries/proxies and utilising sympathetic civilians. Populations supporting the Russian forces can provide information, targeting support and support throughout the battlespace in order to set conditions for further military operations and employment if needed. The coordinated use of both non-kinetic and kinetic tools makes this a very cost efficient way of waging war.

Precision-Strike Capabilities

Russia has invested significantly in precision strike systems in combination with a sophisticated and innovative command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) system and electronic warfare (EW). These advancements have likely ended the military technology advantage enjoyed by the West. Systems

like the SRBM SS-26 STONE/GLCM R-500 SSC-7 (Iskander) with a range of 500km and GLCM SSC-8 NOVATOR (Iskander-K) with a range of 2500km are highly mobile and will pose a threat far outside the conflict area. Both missiles are capable of carrying both conventional and tactical nuclear warheads. Most of Europe is well within reach from Russian territory, and if we add the navy and air force capabilities the conventional missile coverage reaches far out in the Atlantic. Russia has the capabilities to disrupt NATO reinforcements, communication and strike assets without leaving its territory, land or sea. Many of the long-range precision strike weapons are dual-purpose, and can carry both conventional and nuclear warheads.

One of the most important lessons Russia has drawn from the conflict in Syria is that the military needs a swift and continual strike capacity against the enemy, enabled by an advanced "Reconnaissance Fire System". Russian precision-strike capabilities give them the ability to deter, threaten or destroy an enemy (i.e. target the opponents critical nodes such as decision making centres, headquarters, logistics, massed forces and critical infrastructure very early in a conflict and deep behind the opponents lines). The combination of unmanned aerial vehicles (UAVs), EW, pre-reconnoitred targets, proxies and special operations forces

(Spetsnaz) to deliver target data has proven to be a very effective and fast way to take out high priority targets.

By utilising long-range high-speed precision capabilities Russia can strike a strategic target from Russian territory or the sea. This can force an opponent into submission, prior to Russian forces having to enter the theatre of an active conflict.

Russian doctrinal thinking emphasizes the early phases of war as being decisive. Pre-emptive action is one of the key elements here. Russian doctrine foresees the use of precision-strike capabilities employed at an early stage to neutralise the opponent's strategic assets. Furthermore, Russia would highly likely use precision-strike systems to create a wider zone of exclusion around key areas / territories that opponents want to reinforce (i.e. Black Sea, Baltic Sea region, and the High North). The increased Russian conventional precision-strike capabilities may lower the threshold for early use of force. The Russian precision-strike capabilities are likely part of Russia's new doctrine when it comes to winning conflicts quickly and selectively, in limited yet decisive manners.

Russian Ground Forces

The amount of organic air defence in combination with the strategic and operational air defence (Figure 3) will pose a challenge to the NATO's air and joint air-ground integration. Russia will highly likely have air superiority in the early stages of a conflict. Typically the Russian ground forces are heavily defended by air defence systems rather than air support. RFAF will aim to disorient the adversaries and prevent them from operating in their preferred fashion. Russian efforts will include deception, EW and strikes against enemy command and control (C2) in order to disrupt and slow down the adversaries' ability to respond to developments on the battlefield.

Russia will highly likely deploy its forces and attack early in a conflict, prior to, or at an early stage of NATO mobilization of forces.

Russian manoeuvre warfare is characterized by hard hitting and fast moving tac-

tority over an enemy, through the use of massed indirect fires (Figure 2-3), while supported by highly mobile vehicles with substantial direct fire capability.

The development of new and more modern ISR capabilities (UAV, EW, Space), extended range of artillery systems and the continuing involvement of the "reconnaissance-fire system" makes the RFAF capable of identifying and destroying targets at very long distances within minutes. Most modern Russian artillery and multiple rocket launchers out-range their western equivalents. The reconnaissance-fire system includes an extended use of different sensors, including ground-based battlefield surveillance radars, wide spectrum of UAVs, EW, proxies, and Spetsnaz employed to find and target adversaries.

Headquarters and concentrations of combat support and combat service support will be high on the target list and seen upon as very important to neutralise or destroy early in a conflict.

and AWACS). NATO is encountering an increasingly capable RFAF in the air, maritime, land and cyber domains. Russia is continuing its focus on developing and deploying an impressive amount of different EW systems as force enablers and multipliers.

In recent conflicts we have also seen that EW is a organic part of Russia's kinetic and non-kinetic operations, and can be used integrated with conventional forces, independently, or as support to proxy forces.

Russia is developing a "total package" of EW systems. In addition to such systems covering surveillance, protection and countermeasures (jamming), they also cover measures to protect its own usage of the electromagnetic spectrum (EMS). These systems also offer countermeasures against opponents' civilian and military usage of the EMS. Most of these EW systems are highly mobile and includes small systems that are deployable by

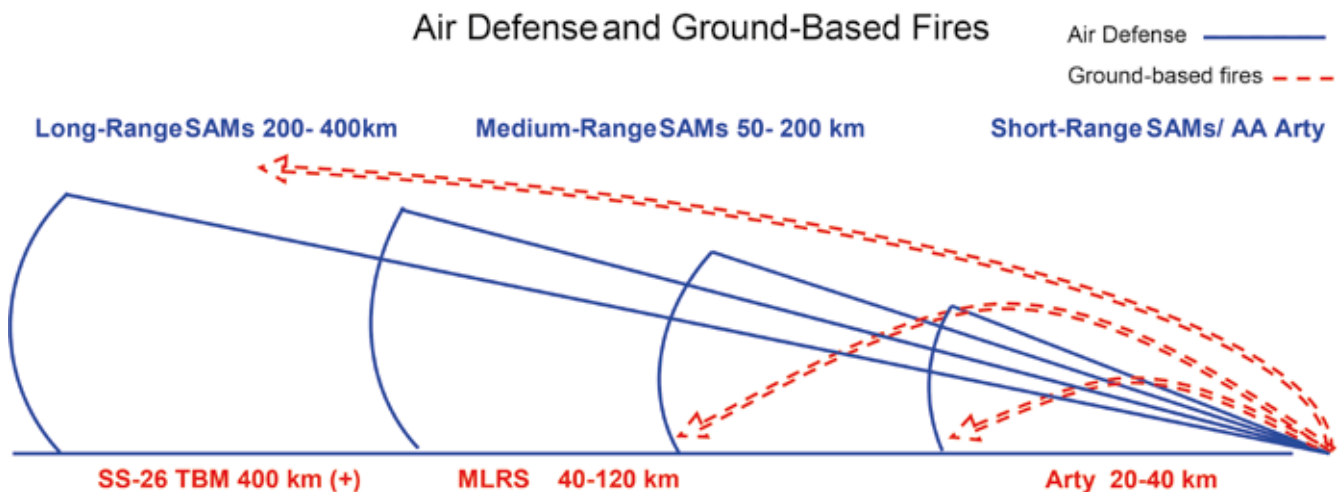


Figure 2-3. The Combination of a Layered Integrated Air Defence and Ground Based Indirect Fires Systems

tics. They will utilise speed, surprise, and integrated combined arms of manoeuvre forces in order to disrupt and overwhelm the enemy once encountered. Russian operations will highly likely involve a rapid, coordinated attack with little to no warning time, in order to achieve campaign objectives in a very short period. It is highly likely airborne forces will take control of key terrain and key infrastructure before linking up with regular ground forces via ground and/or air. RFAF main battle tanks (MBT), will be utilised to spearhead a breakthrough where the enemy is weak, and not surge head on with opposing MBT units. The RFAF will employ their manoeuvre units in order to find and fix an enemy. Then, they will utilise blocking tactics (*blokirovaniye*) to box-in an enemy force in order to facilitate its destruction by massed artillery and missile fire. Therefore, the Russians are heavily focused on gaining and maintaining fire superi-

Electronic Warfare

Russia's radio electronic warfare (EW) (*radioelektronnayabor'ba*—REB) capability has gone through a massive modernization in recent years; it has evolved into a formidable combat support asset, which forms a key part of its overall conventional Armed Forces. RFAF's EW capability development is already posing a serious threat to proper planning and execution of the defence of NATO's entire Eastern Flank. EW plays a major role and is an integral part of Russia's A2/AD approach and is tailored to target NATO's C4ISR. EW also plays a major part in Russian information confrontations.

Russia's growing technological advances in EW will allow its forces to jam, disrupt and interfere with any opponents C4ISR, (e.g. radar, satellites, missiles, and other sensor systems, like UAVs, Global Hawk,

UAVs, making targeting and neutralizing them even more complex. We will likely encounter an ever-growing convergence of Russia's EW, cyber- and information warfare approaches, which will further challenge NATO's concepts and practices.

Russia's use of EW is part of a wider effort to strengthen Russia's network-centric capability, which focuses upon C4ISR integration. RFAF has already fielded automated command and control (C2) systems that are feeding directly into EW systems. For example, the Baikal-1ME brigade/regiment-level automated control system is interoperable with systems used by EW units.⁴ These systems are highly mobile, which makes them difficult to locate. Such developments allow, for instance, Russian forces to establish a highly integrated air defence network and consequently improve response times, increase the situational awareness and

Electronic Attack

- Functional attack
- Electronic countermeasures
- Anti-radiation missiles
- Electronic simulation / imitation

Electronic Protection

- Protection against electronic attack
- Electromagnetic compatibility

Countermeasures Against Technical Reconnaissance

Radioelectronic Information Support Measures

- Technical reconnaissance (radio-, radar, optoelectronic, acoustic & hydro-acoustic reconnaissance)
- Comprehensive technical control (KTK)
- Electronic warfare information effort

Figure 2-4.: The Modern Russian EW Definition with its Four Subdivisions.
Source: Guzenko & Moraresku (2017).

enhance coordination between force elements. Russian EW capability extends well beyond the range of both air defence and A2/AD, as it is fielding a wide multitude of systems to assist, for example, psychological operations (PSYOPS) and cyber operations. This capability will be deployed against opponents enabling them access to soldiers and civilians means of communication, allowing them to undermine and degrade morale. Russia's ability to contest the EMS, combined with its holistic thinking, means that EW capability will be exploited and effects created well beyond the traditional realm where "Western" thinking about EW is

rooted. As a result, NATO must plan, and train to conduct defensive and offensive operations in a fiercely contested EMS battle space. Where disrupting or destroying NATO C4ISR is one of the main tasks for Russian EW capabilities.

Contested C2

At the operational and tactical level, Russia will place high priority on disrupting, neutralising or destroying an enemy's headquarters. This will be high on the target list for Russian commanders in order to disrupt and/or destroy the enemy's ability to conduct Command and Control (C2) and to project its power. This effect can be

reached by utilising multiple means:

- Locating and destroying the enemy's command and control systems (C2S) through kinetic means (Direct Action and/ or Short-Range Ballistic Missiles (SRBMs), Cruise Missiles, MLRS, and Artillery).
- Locating and neutralising the enemy's C2 through electronic warfare and/ or cyber means.
- A very rapid deployment and advance in order to minimize the time the enemy has to identify the primary course of action in order to develop an appropriate response.

Contested Electromagnetic Spectrum

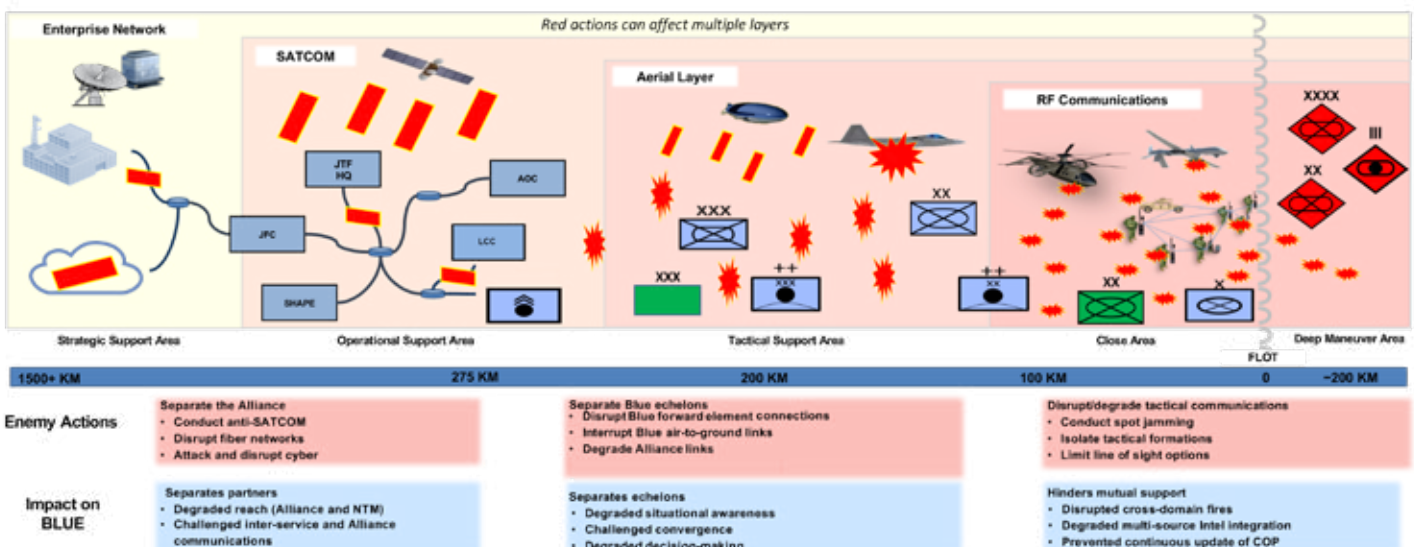


Figure 2-5

- The Russians will utilise deception, decoys, concealment of forces and intentions (*Maskirovka*) in order to misdirect the enemy of their real intentions and course of action.

Russian A2/AD

First of all, there is no Russian equivalent to the western term A2/AD. This is a western construct that suggests how Russia may use its different weapon and missile systems in order to deny access to a territory in offensive or defensive operations against the west. However, there is a Russian term that describes something similar to “Disorganization”.⁶ Russian disorganization efforts aim to disrupt/jam enemy C2 links, whether by soft (EW, cyber, etc.) or hard (physical destruction) means. Another term is “bastion” or “bastion defence”. But since A2/AD is a familiar term it will be used further in this document.

The U.S. Defence Intelligence Agency (DIA) released a document in 2017 “Russia: Military Power”, that stated that Russia’s A2/AD plans are accomplished by using information confrontation (which appears closest in content to disorganization, since it focuses on information control), strategic air operations, integrated air defence systems, and modern precision strike capabilities. The main purpose behind the Russian A2/AD concept is to prevent an enemy from reaching its operational objective. The Russian A2/AD capabilities might look defensive in the first place, but will highly likely be employed in supporting or conducting offensive operations if needed.

Operations in the proximity of Russia or its near-abroad will be conducted in a highly contested space. Figure 2-6 shows a very simplified layout of the range of selected weapon systems based on their peace-time locations. Other systems contributing to the A2/AD have a range exceeding far what is depicted in Figure 2-6.

It is important to understand that Russia’s A2/AD concept consists of several different weapons systems and platforms (most of them highly manoeuvrable):

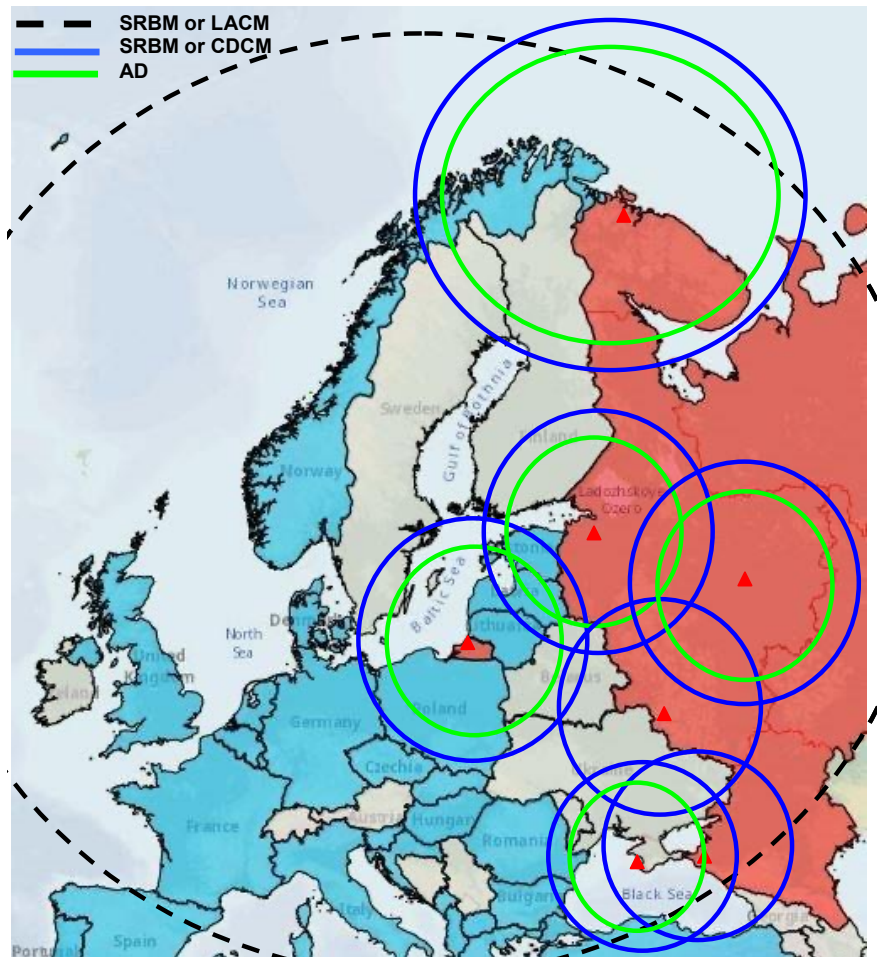


Figure 2-6. Russian AD, SRBM and LACM Ranges from Peace Time Locations.

- Multi-layered integrated air defence system, consisting of modern fighter/ attack aircraft, fixed and mobile surface to air missiles and coastal defence.
- Cruise and ballistic missile systems that can be launched from multiple air, naval, and land based platforms.
- Long-range artillery and multiple launch rocket systems (MRLS)
- Submarines, including SSBNs
- Advanced sea mines
- Anti-satellite weapons, kinetic and non- kinetic
- Cyber warfare
- EW
- ISR systems and platforms
- UAVs and Unmanned Combat Air System (UCAS)
- Spetsnaz

All these weapons, systems and platforms will contribute to create a robust A2/AD environment in a given time and space. These systems can be put to effect simultaneously or individually providing the RFAF freedom of movement while simultaneously denying access to any enemy who wants to enter the contested area.

Summary

Though Russia may not currently be regarded as an imminent threat to NATO or the West, and military operations against

⁵A2/AD as defined by the NATO Defense College: The objective of an anti-access or area-denial strategy is to prevent the attacker from bringing force in to the contested region (A2) or to prevent the attacker from freely operating within the region and maximizing its combat power(AD)

NATO or the West are assessed to be unlikely the RFAF must be looked upon as a peer competitor to western military units (i.e. NATO). In recent years, the Russian Federation has built up their armed forces, modernized their combat systems and equipment, and increased the number of professional soldiers. Russia has been rotating several brigades and regiments through eastern Ukraine since 2014 where they have gained valuable combat experience, making the RFAF a force to be reckoned with on today's battlefield.

If a conflict with Russia is to occur RFAF will not wait for NATO to mobilise and deploy forces to the conflict area; they will highly likely react pre-emptively, utilising precision strike capabilities and attack the contested area with ground forces in or-

der to reach its objectives prior to NATO force intervention. Offensive operations from Russia will likely occur with little to no warning.

A conflict with Russia will be on a highly contested battlefield. Hybrid means will be utilised in all domains, i.e. to deny C4ISR, hamper decision-making, cyber attacks, sabotage (e.g. against critical infrastructure and communication nodes) and dis-information.

Military Forces in Europe are already in range of Russian conventional precision strike capabilities, from Russia or Russian territorial waters. Russia will highly likely act pre-emptively and try to deny NATO reinforcement to the theatre of conflict and take out strategically important targets

with precision strike capabilities. It is likely that Russia's new doctrine may consider that Russia will achieve more by a first-strike approach than waiting for a NATO build-up of forces in a emerging crisis.

The Russian A2/AD will challenge the deployment of NATO forces, even from their peacetime locations. Most of the systems are highly manoeuvrable and the naval forces will pose a major threat to land forces.

EW and information confrontation (incl. cyber) will play a major role in Russian operations. It will have a large impact on western forces ability to conduct C4ISR. Russian forces take into account that C4ISR will be difficult and train and exercise regularly on combat operations in an EW environment.

Russian ground forces are equipped with substantial indirect fires systems, air defences, EW and the ability to conduct battalion, brigade/regiment and division-size combined-arms operations. And, they have substantial support from the strategic level. However, Russia does not have the resources to sustain their ground forces in prolonged operations against NATO. Therefore, they need to reach their objectives early in a conflict, and rely on other means to end the conflict to their favour.

Operations against a peer enemy such as the Russian Federation Armed Forces represent the toughest challenge for the 1 (GE/NL) Corps. The A2/AD capabilities of the RFAF place 1 (GE/NL) Corps in contact from its peacetime location to the close combat area, and can deny 1 (GE/NL) Corps from support emanating from other domains (chiefly air and maritime). While the militaries of other potential adversaries such as Iran, China, or North Korea may not have all of the same systems as the RFAF, they do possess or are trying to acquire these systems or similar capabilities. Likewise, the militaries of Iran, China, and North Korea are influenced by the methods of employment demonstrated by the RFAF during

Key takeaways:

- Whole-of-government approach to operations. You are fighting Russia, not only the RFAF.
- No clearly defined battlefield.
- Non-linear warfare (Hybrid) means will dominate in the early phases of a conflict.
- Use of hybrid means and precision fires to deny the opponent's ability to access to the contested area.
- NATO SLOCs and LLOCs disrupted.
- Will highly likely react pre-emptively.
- Europe in reach of precision strike assets.
- Large threat to land forces from navy.
- Strategic level able to support operational level with substantial combat assets (EW, Cyber, missiles (air, sea, land launched))
- Strategic mobility is practiced regularly.
- Russia's land forces (Ground, Airborne and Naval infantry) are about 430.000 strong
- Able to field about 80 brigade (Bde)/ regiment (Rgt) sized units
- All land forces are mechanized, equipped with a range of extensively upgraded Soviet-era vehicles and more modern systems. Newer systems increasingly match, or over match western equivalents.



exercises and in ongoing operations in Ukraine and Syria. Because of these reasons and the geographical proximity of Russia, the RFAF serve as the pacing threat for 1 (GE/NL) Corps in the Warfighting Corps role.

The Expanded Battlefield

The modern battlefield in which the 1 (GE/NL) Corps will operate has expanded such that previous battlefield geometry is insufficient to guide operations. The inclusion of the competition space along the competition continuum, the inclusion of two domains that were lacking in previous battlefield frameworks, (namely space and cyberspace), and the global reach of modern weapons systems have expanded the battlefield in space, even as the information age has compressed the world in time (Figure 2-7).

Due to battlefield expansion, confronting a peer enemy with multi-domain operations requires a new understanding of the depth and breadth of the multi-domain battlefield and an expanded battlefield framework. Depth and breadth have spatial, temporal, virtual, and cognitive aspects. The increased size of the physical space, the increased lethality, range, and speed of weapon systems, as well as, the additional virtual and cognitive environments requires increased understanding of the battlefield. Those facets of competition and conflict combined with the fact all echelons will be in contact simultaneously demands optimization across the depth of the battlefield. To succeed in optimizing this complex battlefield, the 1 (GE/NL) Corps and its subordinate formations must have the necessary staffs at echelon and appropriately manned in terms of

numbers and talent. The increasing size and scope of the battlefield will continue to evolve and challenge leaders at all levels to optimize the battlefield to achieve tactical, operational, and strategic objectives (Figure 2-8).

Confronting a peer enemy involves understanding the depth and breadth of the battlefield framework. The inclusion of new domains and environments not constrained by physics alter notions of depth and can create opportunities for 1 (GE/NL) Corps to conduct multi-domain operations. However, with the inclusion of these new domains and environments, the complexity of operations increases at every echelon. Other relevant aspects to the execution of multi-domain operations include time, correlation of forces and means, capabilities, warfighting systems,

MANEUVER EVOLUTION - EXPANDING BATTLESPACE

EXPANDED BATTLEFIELD

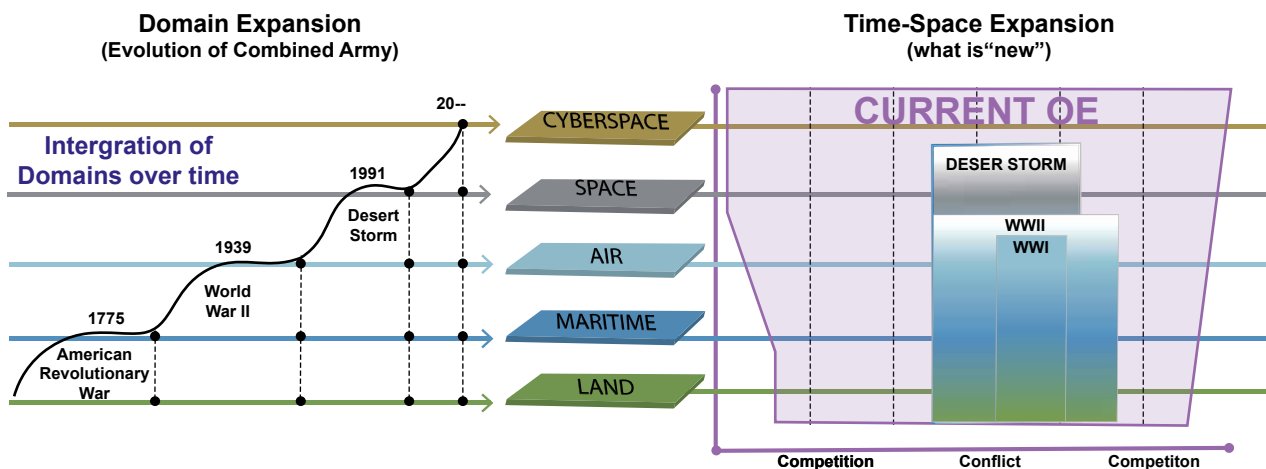
EXPANDED DIMENSIONS

EXPANDED TIME

SMALLER ARMIES

“Future Joint Forces will leverage better intergration to improve cross-domain synergy - the complimentary vice merly additive employment of capabillities across domains, time and space... Our ability to project force across domains generates our decisive advantage.”

The role of the military professional has expanded exponentially over time.



The expansion of time, space and domain in warfare requires NATO forces to operate in a state of competition prior to armed conflict, and to remain in competition following conflict.

The diagram above shows that the role of military professionals has exponentially increased over time - in relevant domains and in time-space.

Figure 2-7 Expanding the Battlefield

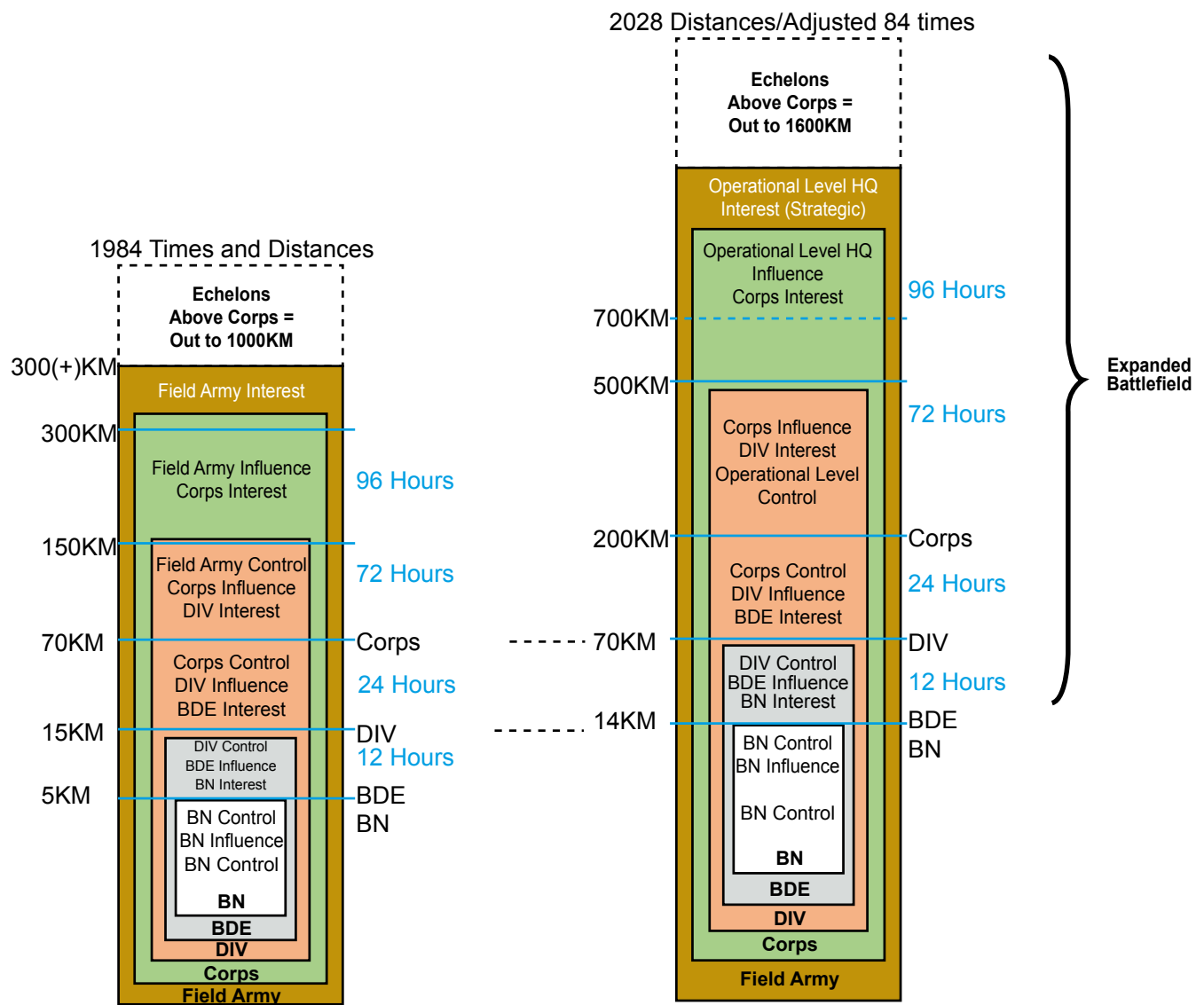


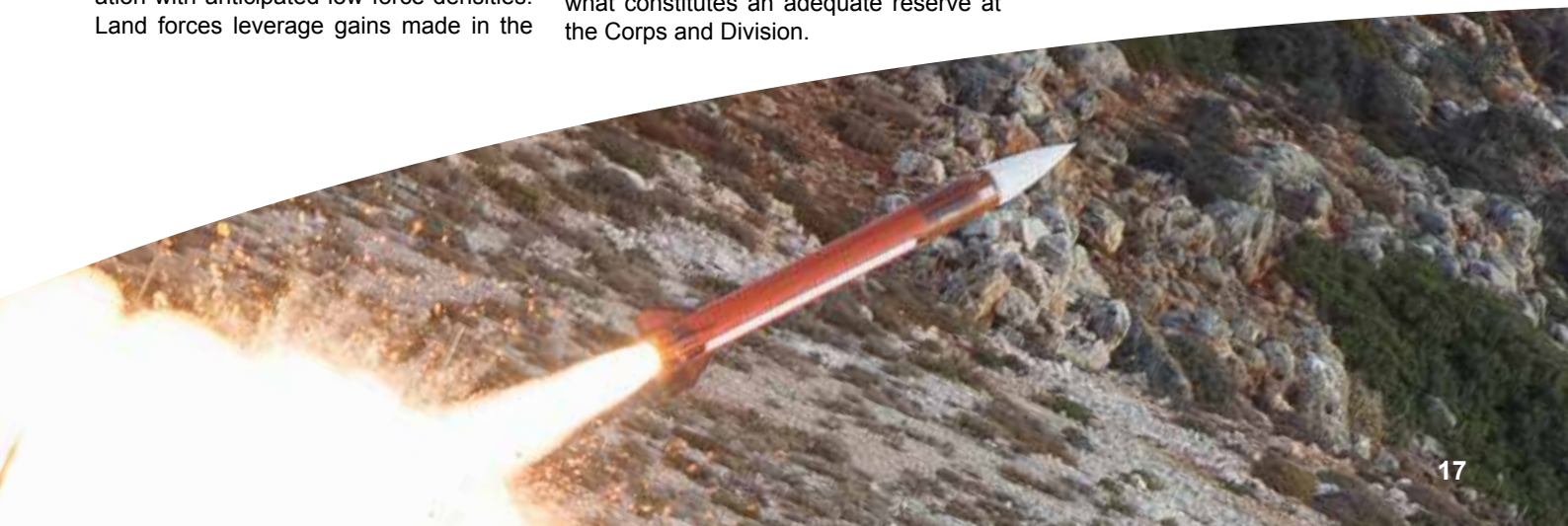
Figure 2-8 Historical Time and Distance Comparison

combat ratios, and emerging capabilities. This list is not all inclusive, but indicative of the nature of modern warfare and the aspects to be considered when developing a framework or tool to determine the area of operations, area of influence, and area of interest for a unit or echelon.

The expanded battlefield and the lethality of the Five-Domain Fight present a significant time distance problem for land forces. Forces must remain distributed to survive and to develop penetration opportunities to exploit throughout large areas of operation with anticipated low force densities. Land forces leverage gains made in the

virtual and cognitive environments to aid in the control of key terrain. However, land forces must mass rapidly to sustain ground penetrations, seize the initiative, and establish a tempo overwhelming the enemy to achieve their tactical and operational objectives. Overcoming this time-distance dilemma requires echeloned maneuver where higher echelons control forces not in contact to ensure they can move rapidly to points of penetration or exploit penetrations. In this regard, it is possible the maneuver fight on the expanded battlefield will change the ratio of what constitutes an adequate reserve at the Corps and Division.

Ubiquitous surveillance afforded by the inclusion of non-physical domains creates an unprecedented ability to simultaneously mass effects with accuracy throughout the battlefield. These effects enable the ability to gain and retain positions of relative advantage with the assistance of virtual presence, thus expanding the complexity each echelon faces in the future. Time, distance, and depth and breadth of the battlefield are impacted by the mission, enemy, terrain, troops available (within the constraints of calibrated force posture), and civilian considerations.



However, the description of the seven area MDO framework (Figure 2-9) does not adequately address the issue of physical time-distance relationships of each of those areas sufficient to distinguish them for the purpose of conducting operations at echelon (principally the measurement of Cyber and Electromagnetic Activities (CEMA) and space-based activities). Therefore, 1 (GE/NL) Corps will use the existing, broader, and better understood “deep-close-rear area” framework for simplicity. 1 (GE/NL) Corps will use the Deep-Close-Rear battlefield framework instead of the subdivisions of the MDO framework because the MDO framework does not differentiate roles, missions, tasks, and functions at echelon or enable a graphical visualization that is conducive to better describing and conducting Corps operations as outlined in this concept.

1 (GE/NL) Corps and its subordinate echelons will still plan and conduct operations using a deep-close-rear area framework that expands upon those found in current doctrine (Figure 2-8.). The MDO framework remains a useful cognitive tool to understand strategic and theater level operations, and processes such as design.

Multi-Domain Operations

“War is progressive, because all the instruments and elements of war are progressive.”

Multi-Domain Operations (MDO) provides a way to overcome problems that NATO military forces may encounter throughout the competition continuum. The successful employment of NATO military forces will require that Alliance land forces integrate capabilities in all domains, the EMS, and the information environment in a manner that enables the Alliance to solve the military problem posed by peer adversaries. A thorough understanding of MDO is essential if 1 (GE/NL) Corps is to play its role in NATO operations.

MDO enables the NATO military forces to compete, and if necessary, defeat an enemy's *fait accompli* campaigns or leave the Alliance better postured and capable of winning a protracted conflict. For NATO to compete, it must prevent or defeat attempts to destabilize a region, deter escalation of violence, and enable the rapid transition to conflict if deterrence fails. If NATO enters armed conflict, it must first penetrate enemy anti-access and area denial (A2/AD) systems in the support areas to enable strategic and operational maneuver. To facilitate operational and tactical maneuver, NATO military forces must dis-integrate A2/AD systems throughout the enemy's depth. The ability of the Alliance joint force to exploit free-

dom of maneuver to defeat an enemy in the close and deep maneuver areas enables it to achieve operational and strategic objectives. It is at this point that NATO can return to competition, consolidate gains, set the conditions for long-term deterrence, and establish a security environment favoring Alliance interests. Critical assumptions central to the MDO discussion within 1 (GE/NL) Corps are contained in the 1 (GE/NL) Corps, *Corps Warfighting Concept*.

Tenets of MDO.

MDO is designed to achieve (NATO) strategic military objectives through echeloned activity in competition and conflict. The way that MDO addresses the issues described above is through the application of three tenets: calibrated force posture, multi-domain formations, and convergence. This requires a form of integration and cooperation within and between component commands and their subordinate elements.

Calibrated Force Posture. The combination of capacity, capability, position, and the ability to maneuver across strategic distances found in forward presence forces and expeditionary forces augmented with national-level capabilities and the appropriate authorities. The calibrated force posture of Alliance land forces enables it

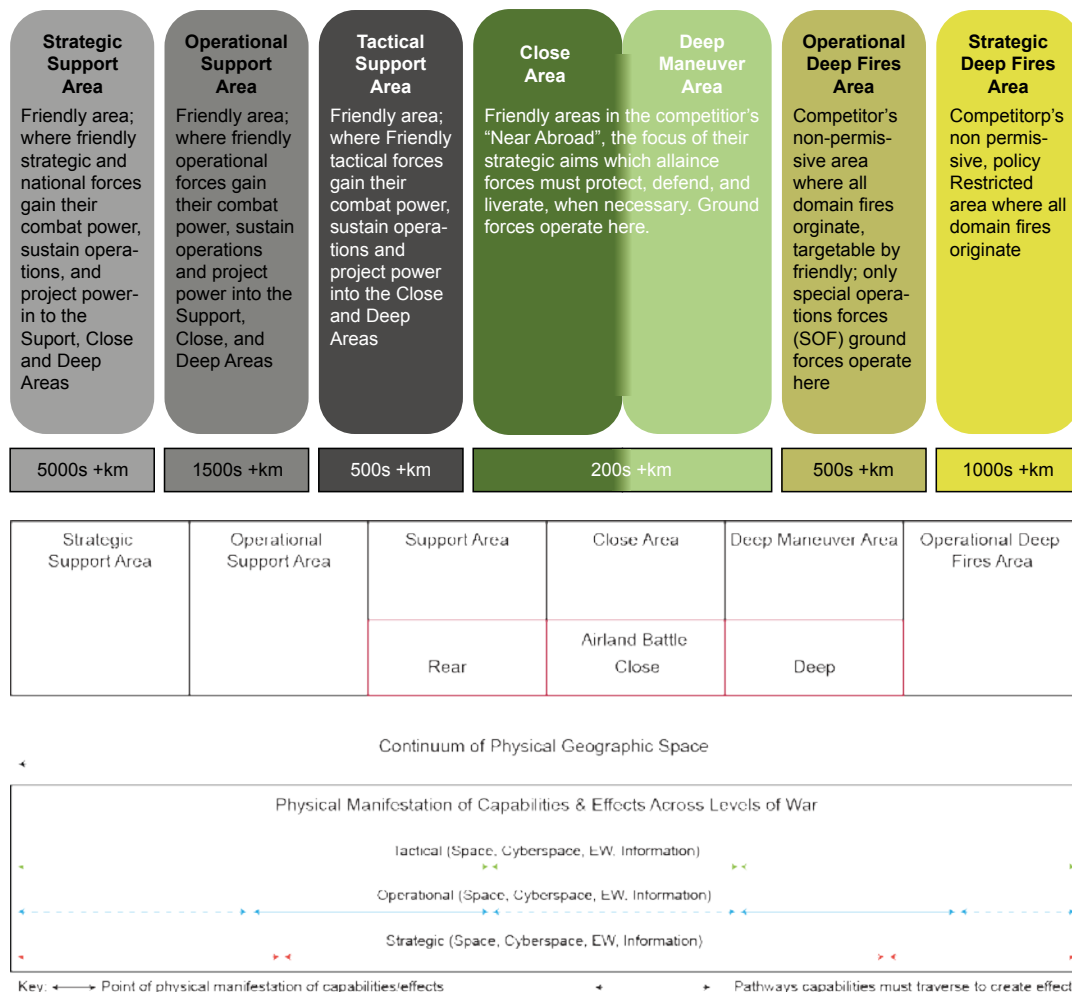


Figure 2-9 MDO Framework

to support NATO joint force objectives in competition; deters armed conflict; and, if deterrence fails, enables the rapid transition to armed conflict and the ability to seize the initiative. Forward deployed units combined with rotational units—both with a wide array of capabilities—provide a forward deployed presence as part of the dynamic employment of the NATO joint force. Units based outside of the area of operations—deploying with their equipment or drawing from pre-positioned stocks in theater—maneuver from strategic distances by air and/or sea and serve as expeditionary forces to reinforce and sustain large-scale ground combat operations. Complementing forward deployed and expeditionary forces are national-level capabilities that require extensive coordination—intelligence, cyber, space-based, and some kinetic strike capabilities controlled above theater-level. To enable MDO in all domains, the EMS, and the information environment land forces require tailored authorities at the appropriate echelon for access, surveillance, and employment—this applies all along the competition continuum (i.e. to both non-crisis competition and conflict). As location and speed are essential for calibrated force posture during conflict, the key to success is detailed coordination during competition. Calibrated force posture also facilitates understanding of the operational environment and threat, to include the robust Comprehensive Understanding of the Operational Environment (CUOE) required to achieve convergence against a peer enemy.

Multi-Domain Formations. These formations possess a combination of capacity, capability, resilience, and endurance so they can operate across multiple domains to conduct independent maneuver, employ cross-domain fires, and maximize their human potential. Possessing organic sustainment and protection capabilities, multi-domain formations are enabled by enhanced communications, network, medical, maneuver, and deception capabilities so they can operate independently under the constraints of the operational environment. Multi-domain formations, enabled by mission command, can survive and operate with degraded communications when threat forces converge their capabilities. Utilizing organic and external ISR capabilities, multi-domain formations are capable of employing cross-domain fires to enable cross-domain maneuver. The selection, training, and education of leaders and soldiers enables multi-domain formations to build the breadth and depth of technical and professional expertise to execute MDO against a peer enemy. It is a prerequisite that 1 (GE/NL) Corps be a Multi-Domain Formation in order to execute Multi-Domain Operations. The following chapter describes 1 (GE/NL) Corps as a Multi-Domain Formation.

Convergence. The rapid and continuous integration of capabilities in all domains, the EMS, and the information environment. Convergence optimizes effects to overmatch an enemy through cross-domain synergy and multiple forms of attack all enabled by mission command and dis-

ciplined initiative.⁷

Convergence entails the integration of all domains at echelon oriented on identified threats in the decisive space.⁸ This integration creates a total that is greater than the sum of the individual parts, resulting in overmatch. There are two principles of convergence. The first is the ability to integrate effects through the stacking of all domains. The second is the resiliency and redundancy created in kill chains resulting from the layering of effects, so that there are multiple pathways to success. An enemy will feel the effects of convergence continuously.

Convergence is not synchronization, both the speed and frequency are different. Unlike synchronization, convergence is continuous and not episodic. This makes the preparatory work done in competition vital to success.

Providing NATO military forces with multiple options for attacking adversaries in decisive spaces, convergence complicates enemy attempts to conceal and defend their center of gravity. Convergence at its simplest is any sensor, any shooter, any C2 node, in near real-time targeting threat systems with the appropriate authorities.

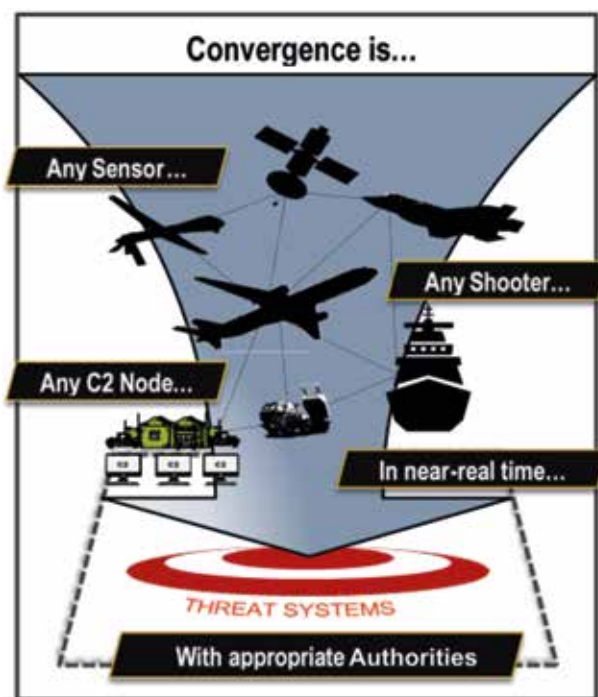


Figure 2-10 – Convergence is...

⁷ Overmatch: Application of capabilities or unique tactics either directly or indirectly, with the intent to prevent or mitigate opposing forces from using their current or projected equipment or tactics.

⁸ Decisive Space: Conceptual geographic and temporal location where the full optimization of the employment of cross-domain capabilities generates a marked advantage over an enemy and greatly influences the outcome of an operation.

Figure 2-11 readily depicts the advantages of convergence over single- and cross-domain solutions. The complementary effects of synergy and layered options produces effects greater than the sum of the individual parts, complicating the ability of adversaries to act. Synergy achieves maximum effect from available resources by optimizing capabilities across domains, the EMS, and the information environment. By layering multiple forms of convergence, commanders can target enemy vulnerabilities in unexpected ways utilizing various options to impose an additional level of complexity on adversaries due to the array of threats to which they must respond.

Convergence is a multi-echelon activity more so than current joint combined arms. Today, echelons integrate their own operations but synchronization and integration across echelons is seldom required. Even when a higher echelon provides resources to a lower echelon, those capabilities are integrated by the supported commander or at the point of attack. However, convergence of globally tasked space assets and highly controlled cyber effects at speed, scale, and scope will require convergence of capabilities at multiple echelons against widely distributed targets in time and space to enable ground maneuver at a decisive point. In effect, this fight will require that we converge strategic, operational, and tactical assets in order to conduct even basic tactical actions in order to achieve the required speed of attack and re-attack, and to maintain tempo. In that way, multiple echelons, rather than hindering convergence, are essential to achieving it at will.

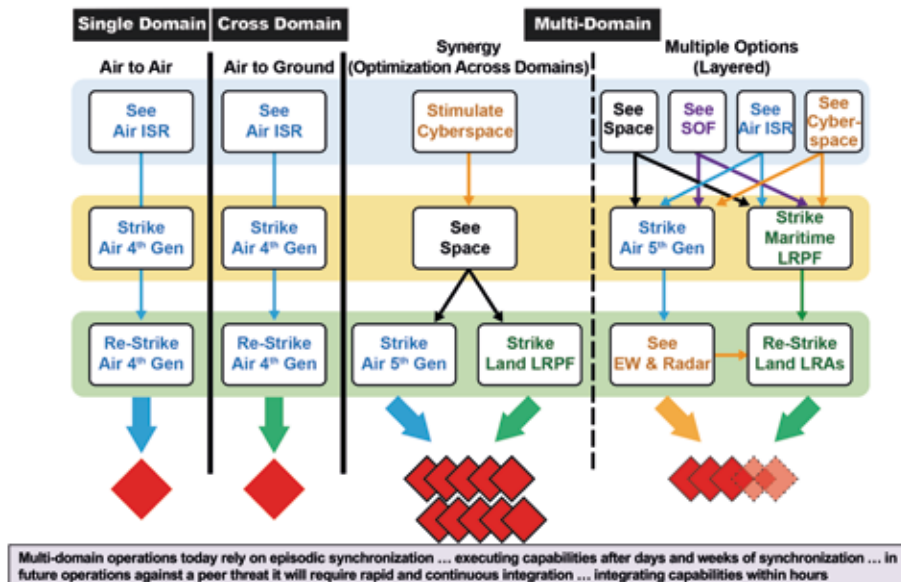


Figure 2-11 - Convergence

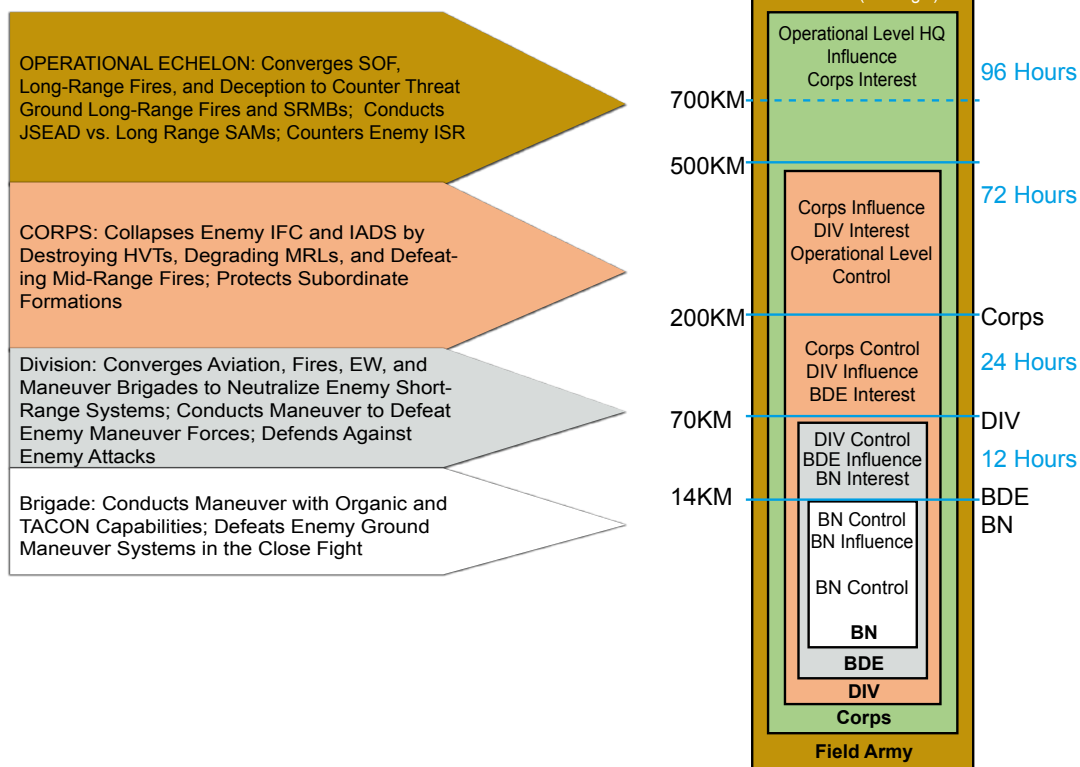


Figure 2-12. Convergence Efforts by Echelon Example

Tactical Level Convergence

The tactical level (Corps, Divisions, and Brigades) converges effects to dis-integrate units, while simultaneously observing the enemy with tools from multiple domains. Convergence activities effect enemy units, even if not directly targeted from the multiple domains. Corps and below convergence differs from the other levels of war in that the Corps does not have the ability to sustain convergence activities over long periods, so the convergence activities are more episodic, sharper, and quicker than higher levels of war.

Corps. Expeditionary forces that shape multiple enemy combined arms armies simultaneously by assisting with the defeat of long-range systems and the neutralization of mid-range systems. Responsible for converging capabilities against all enemy long-range systems within areas designated by the Joint Force Commander. Converges capabilities against enemy mid-range formations within its area of operations. The Corps is responsible for converging large amounts of joint fires, it also converges national- and theater-level offensive cyberspace with other capabilities to achieve operational and tactical objectives. This echelon creates conditions for convergence at lower echelons by allocating resources. In competition and conflict, the Corps conducts intelligence analysis to converge national, theater, and organic ISR collection to support tactical ground objectives.

Division. Divisions conduct maneuver, command multiple maneuver Brigades and enabling Brigades, and defeats a shaped enemy army in the Close Area i.e. wins the close fight. It converges aviation, fires, EW, maneuver support, and multi-brigade maneuver to achieve positions of advantage in order to defeat or destroy an enemy combined arms army. With assistance from higher echelons, the Division may be able to converge national-level and offensive space capabilities into its national- or theater-level intelligence sources with its organic ISR.

Brigade. Brigades conducts maneuver with organic and TACON capabilities in order to defeat enemy ground maneuver systems in the close fight.⁹ They integrate cross-domain reconnaissance and security operations, and conduct dispersed operations. Brigades integrate and exploit opportunities created by enabling support from Corps and Divisions, which continuously converge and synchronize lethal and nonlethal effects across multiple domains, the EMS, and information environment to enable Brigades operations.

In practice, the effective execution of multi-domain operations will rely on the simultaneous multi-echelon convergence of capabilities from all domains and environments. Because sensors are not unlimited, each echelon focuses its sensors on a specific area of the expanded battlefield. In order to successfully attack enemy functions, echelons must be ca-

pable of either handing off targeting data between echelons at the tempo of operations, or be prepared to attack those enemy systems that are the focus of their higher echelon(s)

Summary of MDO.

As the solution for countering peer and emergent threats in the current and future operational environment, MDO serves as a way to overcome the problems the Joint Force may encounter throughout the competition continuum. The ways employed will integrate capabilities in all domains, the EMS, and the information environment. This will require flexible command relationships across functional components and echelons. Calibrated force posture, multi-domain formations, and convergence enables land forces, as part of the joint force to provide an echeloned MDO-capable deterrent during competition. Should deterrence fail, Alliance forces can quickly assume the offensive to penetrate, dis-integrate, exploit, and then return to competition against a peer enemy employing mission command.

1 (GE/NL) Corps will develop and continuously refine the subordinate functional concepts to the *Corps Operational Concept* and its SOIs as it refines how to achieve convergence against a peer enemy. The goal is to be able to employ specific formations and capabilities in operations executed at the scale and tempo needed to create an effective kill web against a peer enemy.

Simultaneous Multi-Echelon Convergence

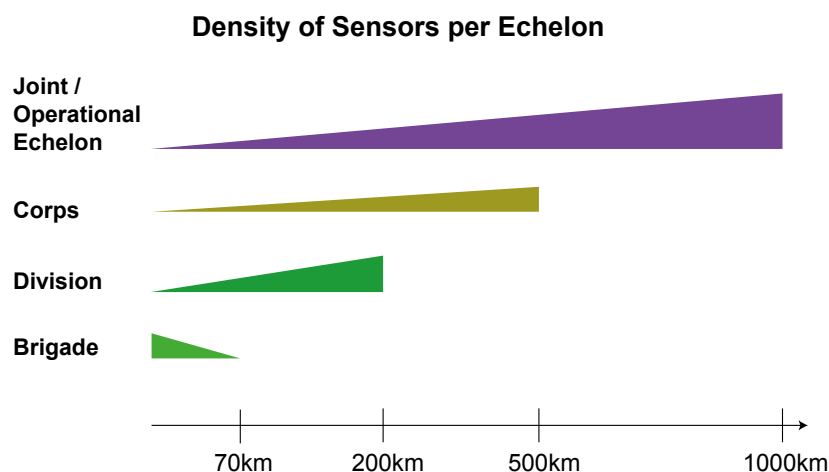


Figure 2-13 Simultaneous Multi-Echelon Convergence

⁹Tactical Control (TACON): the detailed and, usually, local direction and control of movements or manoeuvres necessary to accomplish missions or tasks assigned. TACON is generally used to indicate those units that will be located within another unit or formation's assigned geographical boundaries, and by so assigning, the gaining unit becomes responsible for coordination aspects within the shared area of operations. The gaining commander has authority to coordinate local defence, force protection and terrain allocation.

3. Roles and Responsibilities by Echelon

"Great things are achieved only when we take great risks."

Frederick the Great

It is important, to clearly define the roles and responsibilities of the echelons of command to ensure that the fight can be organized effectively. All units and elements on the battlefield have certain tasks, certain strengths and weaknesses. It is a system of capabilities, which has to be orchestrated. Each level brings additional capabilities and adds value to the system. The different levels are connected to each other because of the interconnected nature of multi-domain operations.

Operational Echelon (JFC, (MC) LCC)

In the event of an Article 5 operation 1 (GE/ NL) Corps's higher headquarters could be one of the Joint Force Commands (JFCs), an (MC)LCC, or even U.S. Army Europe and Africa (USAREUR-AF) acting as the LCC for NATO. Between these three entities there is no common or agreed upon organization or structure. Regardless of the entity or its structure, the Operational Echelon will need to execute a number of tasks, these include:

- Command and control multiple Corps.
- Execute the campaign of competition

against an enemy.

- Maintain the necessary formations and other capabilities necessary to provide credible deterrence and ensure the ability to respond quickly to escalation.
- Serve as an operational headquarters commanding one or more Corps together with supporting commands.
- Prepare for conflict.
- Integrate land force capabilities with supported component operations.
- Converge joint and national effects against enemy long-range layered stand off.
- Integrate and support interagency organizations in operations.
- Integrate effects from SOF with conventional force operations.
- Maintain area of responsibility-wide situational awareness.

The key task of the Operational Echelon is to converge national-level capabilities, SOF, long-range fires, and deception to penetrate and dis-integrate the enemy's long-range ground based A2/AD systems—specifically its integrated and air defence (IADS) and integrated fires complex (IFC). The collapse of the enemy's long-range air defences (composed of systems such as the S-400) and long-range integrated fires complex (including the Iskander and other systems) enables freedom of action for the Alliance joint force. This includes supporting its subordinate manoeuvre forces so that they can close with and defeat or destroy the

enemy in the direct fire fight with the necessary support from the air and other domains

To do so, the Operational Echelon must create options for convergence through focused planning and preparation during competition, to include for Alliance multi-domain interoperability. The Operational Echelon serves as a conduit to national level intelligence means, cyber and space resources, and the Theater Special Operations Command (TSOC) for subordinate echelons. The Operational Echelon establishes the baseline linkage to these capabilities during competition. The Operational Echelon coordinates the use of national technical means to confront an enemy's cyber, electronic warfare (EW), and intelligence, surveillance, and reconnaissance (ISR) efforts to disrupt and delay Alliance forces and disrupt their efforts to posture for potential armed conflict.

Area of responsibility-wide monitoring of an enemy's efforts to influence the information environment by the Operational Echelon contributes to an information operations campaign to counter an enemy's information warfare efforts and inoculates local populations against their influence. Leveraging and coordinating the use of Alliance and national assets, the Operational Echelon enables Allied responses to an enemy's information confrontation operations attempting to destabilize nations within the area of responsibility and confronts the enemy's attempts to legitimize their actions to their own populace.

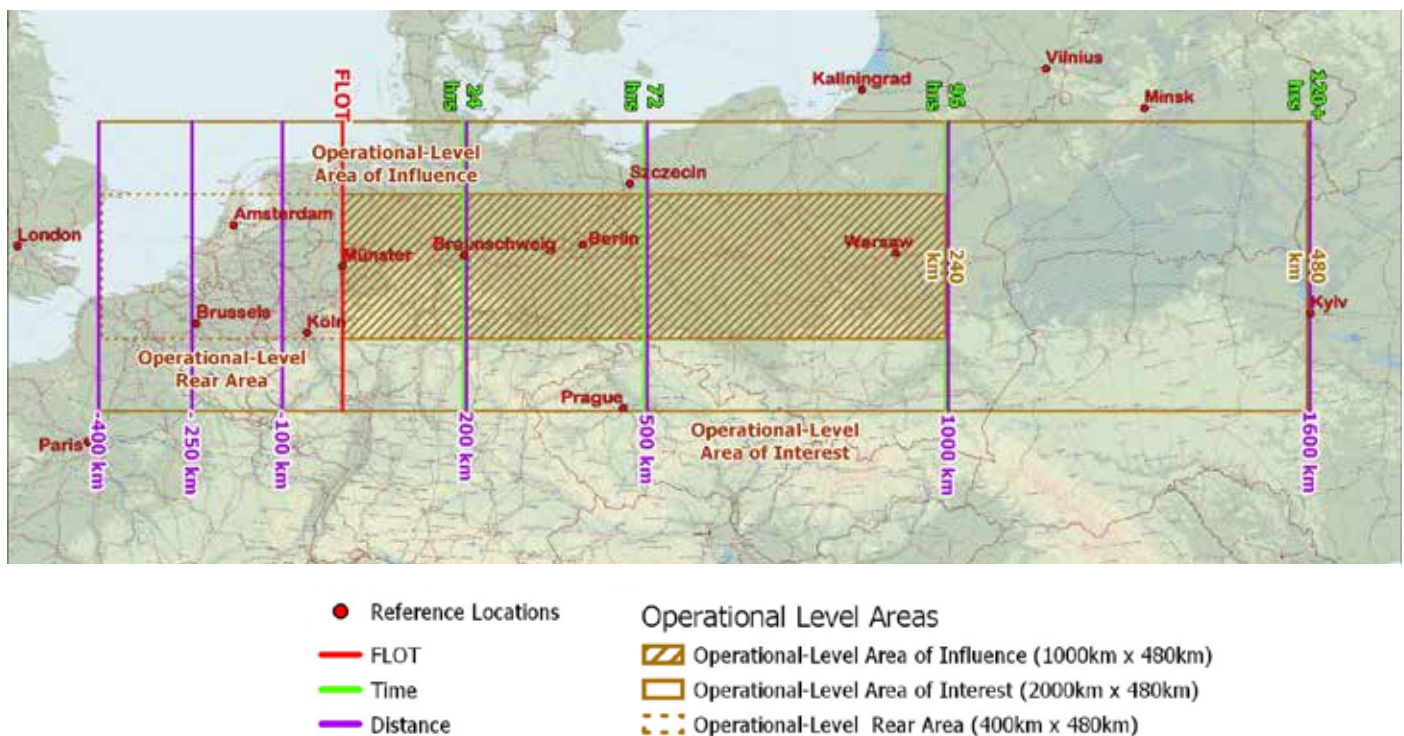


Figure 3-1. Operational Echelon Battlefield Geometry
Note: Lines are illustrative and not adapted to the terrain.

As the theatre shifts from competition to armed conflict, the requirement for additional forces and capabilities to provide the Alliance with the combat power required to defeat aggression increases substantially. These forces are necessary to offset enemy actions during competition in an attempt to prevent conflict, or failing that to defeat the enemy. Area air and missile defence is a crucial task that enables the conduct of sustainment operations and the rapid expansion of Alliance force structure. The Operational Echelon ensures that critical logistics nodes and population centres are protected from attack. The Operational Echelon's role in overseeing the deception plan is critical to protecting Alliance forces and populations.

A particular concern for the Operational Echelon is the fact that fixed-base support activities located deep within the theater will be prime targets for an enemy's unconventional warfare (UW) forces. While the host nation has primary responsibility for security of these facilities, the Operational Echelon staff and Military Police assets will coordinate with and assist – when required and/or at the request of – the host nation's law enforcement agencies. The operational-level command assumes specific operational responsibility for large and complex multi-domain capabilities and effects across the expanded battlefield. As demonstrated in Figure 3-1, the operational-level commander directs, sup-

ports, and facilitates operations over an area of up to 240,000km² against a peer enemy in large-scale combat operations. Assuming the Operational Echelon consists of two Corps abreast, the Area of Operations for the Operational Echelon is 1000km x 240km. The Operational Echelon's Area of Influence¹⁰ extends out 1000km / 96hrs, while the Operational Echelon's Area of Interest¹¹ extends out to 1600km / 120+hrs. The Operational Echelon's Rear Area proceeds from the Forward Line of Own Troops (FLOT) to 350-400km to the rear.

Corps

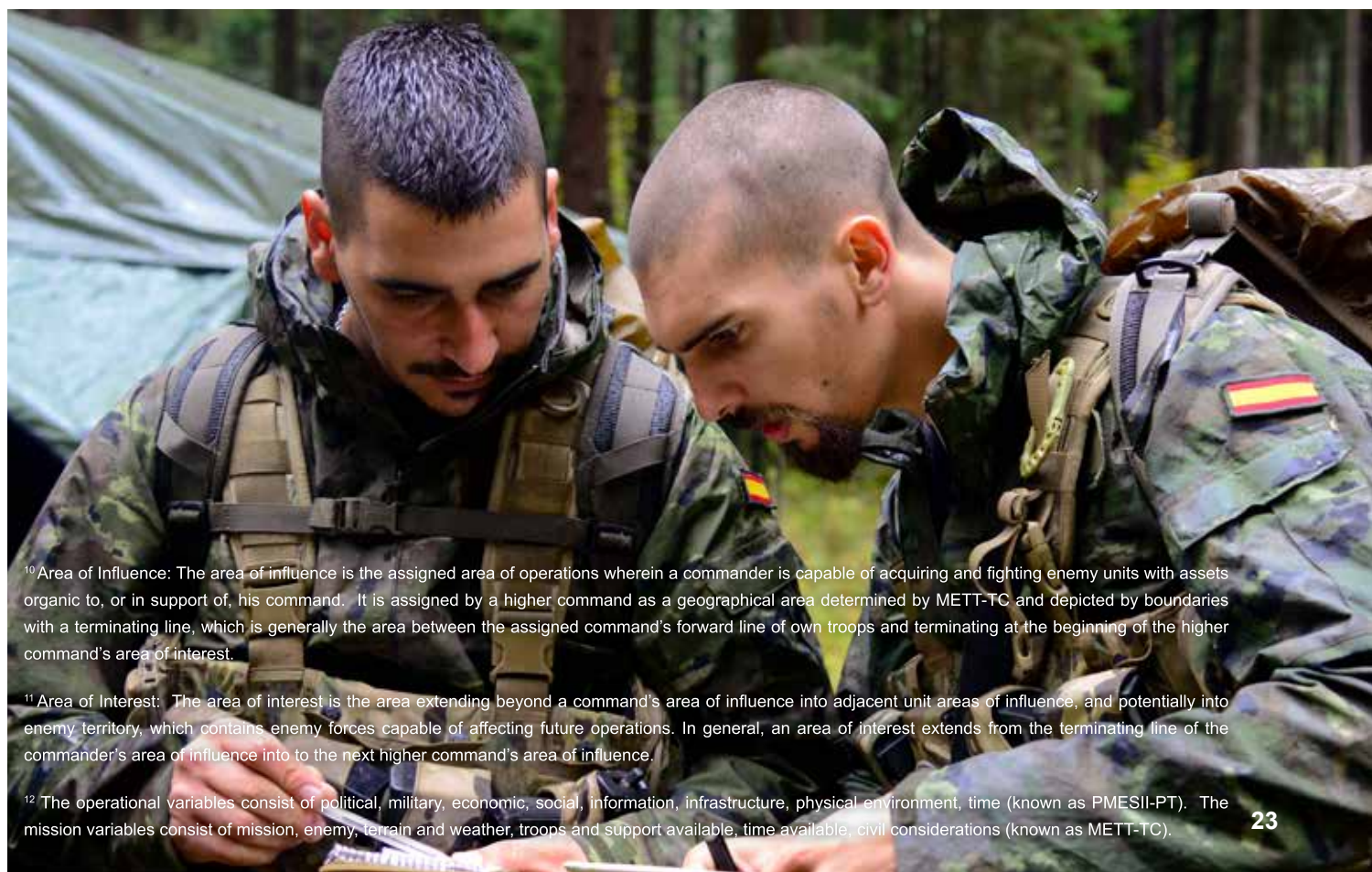
1 (GE/NL) Corps is a multi-national headquarters and assigned to NATO. Therefore, NATO-compatible equipment (CIS), processes and procedures (OPP, DMP, APP-28, etc.) will be used. It is capable of translating operational inputs into tactical outputs. The Corps is the highest tactical level headquarters. It synchronizes manoeuvre, fires, and effects with the requisite manoeuvre support and sustainment to shape the environment for subordinate forces and accomplish tactical missions to achieve operational and strategic objectives. The Corps accomplishes this through planning and mission orders to subordinate forces, making the best use of their capabilities and capacities while enforcing unity of command and achieving unity of effort.

The Corps consists of multiple nationalities and therefore must keep the enemy from sowing the seeds of internal discord designed to fracture the Alliance's

cohesion and delay the Alliance's ability to respond to aggression. NATO cannot afford to be reactive in this effort.

In contrast to stabilization operations in which the Corps acted as a C2 node, for warfighting operations the Corps functions not only as a headquarters but as a formation. A Corps consists of its headquarters, combat and manoeuvre support forces, sustainment, and other functional support units assigned, attached, or OPCON to the Corps. The Corps also includes functional support capabilities operating in direct support to the Corps or its subordinate Divisions. Functional support units operating in the Corps are of operations as general support (GS), but not part of the Corps are normally not included in the Corps formation.

When operating in the context described above, the Corps level is the highest tactical echelon. It is task organized for the operation, taking into account the operational and mission variables.¹² The number of Divisions assigned or attached to the Corps is dependent on the relative combat power of the enemy formations with which the Corps will be engaged, the mission it receives, and the size of the area of operations in which it will operate. The Corps is capable of commanding up to 5 Divisions and associated Corps Troops organized in separate Regiments or Brigades.



¹⁰ Area of Influence: The area of influence is the assigned area of operations wherein a commander is capable of acquiring and fighting enemy units with assets organic to, or in support of, his command. It is assigned by a higher command as a geographical area determined by METT-TC and depicted by boundaries with a terminating line, which is generally the area between the assigned command's forward line of own troops and terminating at the beginning of the higher command's area of interest.

¹¹ Area of Interest: The area of interest is the area extending beyond a command's area of influence into adjacent unit areas of influence, and potentially into enemy territory, which contains enemy forces capable of affecting future operations. In general, an area of interest extends from the terminating line of the commander's area of influence into the next higher command's area of influence.

¹² The operational variables consist of political, military, economic, social, information, infrastructure, physical environment, time (known as PMESII-PT). The mission variables consist of mission, enemy, terrain and weather, troops and support available, time available, civil considerations (known as METT-TC).

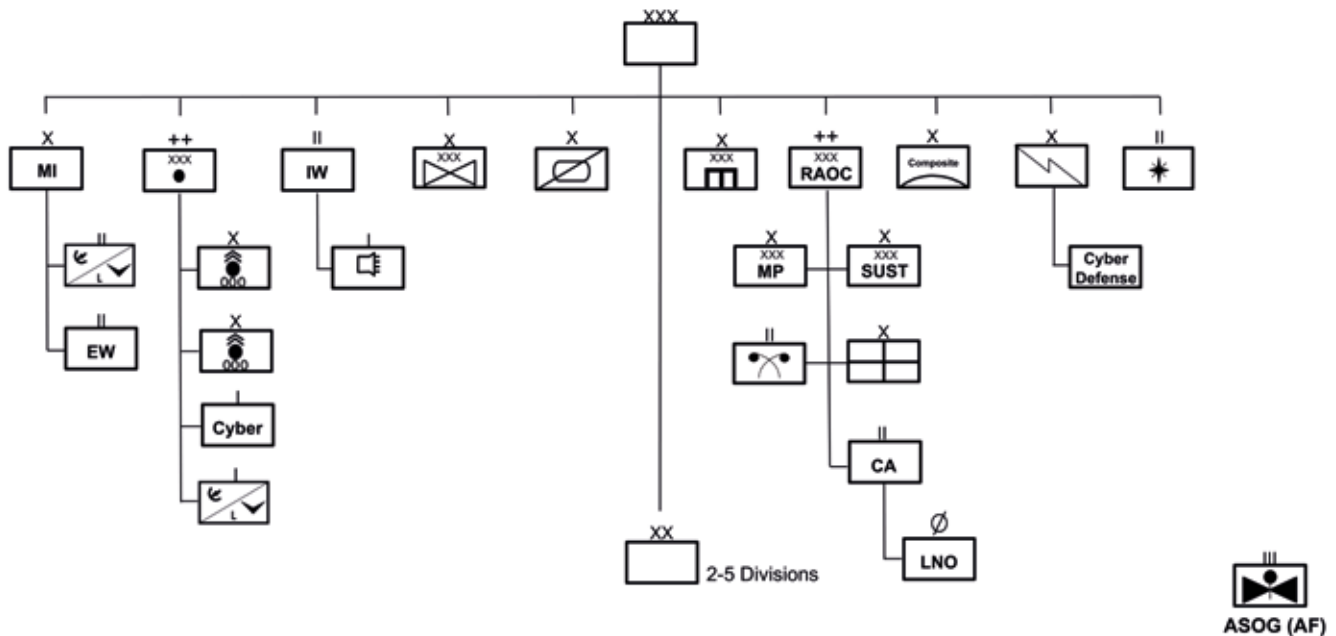


Figure 3-2 Corps Structure

The Corps formation includes:

- 2-5 Divisions
- 1 x Military Intelligence Brigade
- 1 x ISR battalion equipped with UASs and UGSs
- 1 x Electronic Warfare Battalion
- 1 x Corps Fires Command
- 2 x Long-range Artillery Brigades
- 1 x Cyber Coy
- 1 x ISR / Targeting Battery equipped with UASs and UGSs
- 1 x Aviation Brigade
- 1 x Armoured Reconnaissance and Surveillance Brigade
- 1 x Information Warfare Battalion
- 1 x PSYOPs Coy
- 1 x Engineer Brigade (including CBRN capacity)
- 1 x Air Defence Brigade
- 1 x Signal Brigade with a dedicated Cyber Defence organisation
- 1 x Rear Area Operations Command
- 1 x Sustainment Brigade
- 1 x Medical Brigade
- 1 x Military Police Brigade
- 1 x CBRN Defence Battalion
- 1 x Civil Affairs (CIMIC) Battalion with a political liaison team
- 1 x Space Battalion (includes High Altitude Coys for use as ISR or signal platforms)
- Other forces may be assigned, attached, or provided OPCON to give the Corps additional capabilities or additional capacity.

The presence of long-range fires systems is one of the key capabilities needed to deter a peer threat. This capability provides the Corps with an organic, long-range fires capability to engage enemy long and mid-range fires systems and support assigned forces or other component commanders if conflict should occur. The Corps's capability to link sensors to specific shooters enables it to converge capabilities in support of operational objectives and enhances the deterrent effect of ground forces.

The Corps Fires Command integrates joint, inter-organizational and multi-national targeting capabilities. The Corps Fires Command plans, coordinates, and delivers joint all domain fires to shape operations. It consists of long and medium-range rockets and missile systems. The scale and scope of operations against a peer enemy necessitates multiple Brigades of long-range artillery. The Corps requires a minimum of two assigned Field Artillery Brigades. This provides the Corps with the means to defeat an enemy's long and mid-range fires and integrated air defense systems (IADS) to enable divisional tactical operations.

Depending on the composition of the Corps's higher echelon and subordinate Divisions and Brigades, the Corps may require additional capabilities or capacity. These capability gaps are most likely to be found in EW, fires, ISR, and intelligence. During Article 5 operations, Divisions will require additional assets to assist in converging effects from multiple domains. While the Corps does not own space or SOF assets and its organic cyberspace capabilities are limited, the Corps does possess the necessary tie-ins and expertise to integrate these domains into its operations. The Corps manning strength

has to reflect this need to provide assets concurrently to multiple Divisions.

In order to defeat the enemy, the Corps executes five functions: 1. Shapes the enemy forces in the Corps Deep Area with available Corps and Joint capabilities; 2. Manoeuvres Divisions and other combat formations to gain positions of advantage to close with and destroy or defeat enemy forces and compel their surrender or withdrawal. The Corps synchronizes the manoeuvre of Divisions and Brigades to reduce friction, coordinate the simultaneous manoeuvre of multiple formations to gain cooperation and arrange tactical actions, in time and space; 3. Initiates, executes, implements, ensures, and supports consolidation activities to set conditions for transition to a sustainable political end state; 4. Sustains close, deep, and consolidation operations; and 5. Generates combat power through RSOM&I and reconstitution.

It sets the conditions for subordinate Divisions to focus on the close fight by integrating all elements of combat power in time and space to disrupt, interdict, and degrade the enemy while shaping the operating environment and enabling friendly forces in order to ensure freedom of action at the expense of its opponent. While the Corps is leveraging Alliance joint capabilities to achieve effects in its area of operations, and is fundamentally a tactical, land-centric formation.

In the conduct of its operations it is essential that the Corps set an operational tempo that does not permit the enemy to recover, and to establish an inexorable momentum through the use of echeloned manoeuvre to ensure that once contact is gained that it is maintained. The Corps feeds forces into the main battle area and controls the dispersion and mass of manoeuvre units. Divisions do the same at their level. The Corps enables operational tempo at the Division level by keeping enemy space, cyber, air defence, and long and mid-range fires under constant pressure. This allows the Divisions to finish decisively once they gain contact with the enemy. Momentum and tempo are vital to the Corps, and a metric the Corps Commander uses to gauge success.

Momentum and tempo are the thread that runs through the Corps's operations and ensure that the enemy faces a continuous onslaught of simultaneous multi-echelon convergence. The importance of controlling the pace of operations challenges command and control because the Corps must maintain forces not in contact to ensure fresh forces can reinforce success. Follow and assume and follow and support missions for manoeuvre Brigades become more common and are essential to driving the pace of operations. They are

the essence of echeloned manoeuvre. The side that sets an overwhelming tempo will win. However, the speed component of tempo is not just speed of decision but also the cumulative speed of all of our actions from planning and issuing orders to executing movements, fire missions, and transmitting decisions.

The Corps maintains joint, inter-service, and multi-national relationships to facilitate the quick transition to conflict. These relationships help prepare the Corps for its role as the senior land tactical headquarters and are developed and maintained through multi- and bilateral training events and exchanges as well as the multi-national lay-out of the headquarters itself. 1 (GE/NL) Corps emphasizes and trains the comprehensive approach in all phases of competition, conflict, and post-conflict.

Corps Tasks:

- Task-organize and employ Divisions and Brigades
- Continuously generate combat power
- Sustain operations throughout the Expanded Battlefield
- Integrate and synchronize operations of Divisions and Brigades
- Synchronize and deconflict Corps operations and effects with adjacent echelons
- Mass effects at decisive points
- Conduct shaping operations throughout the Corps area of operations
- Allocate resources and set priorities
- Conduct military deception
- Integrate joint and multi-national capabilities
- Enable Freedom of Action for the Alliance's Joint Force
- Control terrain, secure populations, and consolidate gains
- Set conditions for successful transition to sustainable solutions
- Conduct continuous operations

The presence of a Corps and its subordinate units serves as a deterrent force capable of simultaneously engaging multiple enemy combined arms armies and provides the means to shape the area of responsibility.

The Corps in Competition

In order to be successful, the Corps must set the conditions prior to conflict (i.e. in competition). The Corps's major focus during competition will be to conduct intelligence activities to set the conditions for successful combat operations, the Corps continuously conducts and refines the threat systems analysis and comprehensive understanding of the operational environment (CUOE) necessary to understand and target key enemy systems so



that the Corps can begin the penetration and dis-integration of the enemy's mid and long-range IADS and IFC during the transition to conflict. This analysis supports the convergence Alliance, national, and organic assets and the achievement of tactical objectives.

Vital to the success of these efforts is the Corps's ability to exercise command and control throughout the depth of the expanded battlefield. In order to command and control throughout the entirety of its area of operations the Corps will employ a distributive command post structure using multiple, dispersed, and mobile command posts in order to provide flexible, redundant, and uninterrupted command and control. Maintenance of an interoperable common operational picture (COP) across not only dispersed Corps command posts but also a multinational Corps—Corps Troops and subordinate Divisions—will be essential to integrating operations throughout the expanded battlefield. The Corps must continually take steps to prevent or minimise enemy interference with its command, control, and communications.

The Corps denies/deters the ability of an enemy's ISR and EW systems to target NATO formations and facilities to gather information about capabilities. In addition, as deception is a key function of the Corps, it will focus on deceiving and denying adversaries access to information related to current and future operating locations, units, and equipment. The Corps will also monitor and report enemy activities involving information confrontation and criminal activity against Alliance facilities.

The Corps in Conflict

Operating principally at the tactical level, the Corps synchronizes and integrates combat power to achieve decisive effects on an enemy during combat operations against a peer enemy. The Corps shapes the lower operational and upper tactical environments and is especially vital to Alliance operations during the initial period of the war when enemy long-range IADS will deny, or at a minimum contest, the Alliance's use of the air domain.

The focus of the Corps is on the conduct of the fight in the Deep Area—with the goal of enabling joint force freedom of maneuver, thus setting the conditions for a successful close fight by its subordinate Divisions. The Corps does this by collapsing the enemy's long and mid-range IFC and IADS. It is important to remember that this is not a targeting drill, the Corps attacks these mid- and long-range enemy systems to enable maneuver and freedom of action. Only by defeating the enemy's layered stand off will the Alliance be able to apply its air assets, and will the Corps's

subordinate Divisions get to close fight with combat power to prevail.

The Corps utilizes an array of interconnected sensors—artillery delivered, unmanned aircraft systems (UAS), cyberspace, space, and infiltrated—that place enemy systems at risk. These allow the Corps to employ its long-range artillery to destroy targets throughout the depth of the Corps area of operations.

The Corps is the central echelon in the planning and execution of multi-domain operations and is the lowest echelon capable of converging all domains. The Corps creates the conditions for convergence at lower echelons by allocating resources, sequencing Division manoeuvre, and incorporating it with deception. The Corps is the primary integrator and synchronizer of multi-domain capability in the forward conflict area and arrays assigned capabilities to defeat enemy systems and enable tactical maneuver.

The Corps coordinates for, it does not execute, and integrates effects from the space and cyberspace domains. These include effects to disrupt satellite communications to compound effects by organic EW against key C2 nodes to degrade enemy positioning, navigation, and timing (PNT), cyberspace and space-based ISR, and offensive cyberspace operations. Though the Corps may not have the organic capabilities in all domains; the Corps must possess the ability—to include the necessary staff bandwidth and expertise—to access effects from the space, cyberspace, and other domains.

The Corps synchronises all reconnaissance and security operations across subordinate units, coordinates intelligence requirements, fuses intelligence from multiple echelons to support echeloned manoeuvre and actively inform and integrate the full range of capabilities in all domains throughout the depth of the battlefield. Additionally, as a tactical command, the Corps unburdens subordinate formations by narrowing their focus, reducing their span of control and maintaining the broader perspective in time and space, across the expanded battlefield. The planning horizon of a Corps is typically 72-96(+) hours in advance of execution.

The Corps supports Division-level tactical maneuver. In the close fight it will support its major subordinate units by reinforcing them with forces, especially in the main effort ("*Schwerpunkt*") and by applying joint effects, fire support, air and missile defence and – to a limited extent – cyber defence. The Corps will have to conduct information activities and additional stability tasks as well.

In the Rear Area the Corps conducts ad-

ministrative and logistic activities, protection of critical assets and infrastructure, real-estate management, and generates or reconstitutes combat power. Additionally, the Corps must be able to conduct area damage control after an attack or incident. However, operations in the Rear Area may require the full range of offensive and defensive activities to include combined arms manoeuvre and stability activities to maintain or gain host nation consent.

In order to preserve the Corps' freedom of action for operations in the Deep and Close Areas and to extend the force's operational reach the Corps must provide security in the Rear Area. In order to prevent or minimize disruption of Combat Support and Combat Service Support from the Rear Area forward and provide unimpeded movement of friendly forces throughout the Rear Area. To do this the Corps must be able to find, fix, and defeat enemy incursions into the Rear Area. This will require close coordination with host nation defence and security forces, and non-military actors.

The Corps must wage this fight to protect its formations in the Rear and Close Areas while simultaneously waging a fight in the Deep Area to set conditions for exploitation, and manage forces out of contact to ensure exploitation can be sustained and reinforced. The Corps must provide for the echelonment of formations to ensure depth and agility to maintain tempo once a penetration occurs. The Corps will also need to protect itself and its subordinate formations from threats to its flanks, to include those from other domains or from enemy formations occupying areas that they perceive as sanctuary.

The Corps protects its subordinate tactical formations from attacks originating in other domains. Especially important is the requirement to provide air and missile defence against the enemy's substantial inventory of artillery and ground and air launched missiles. The Corps must protect its subordinate tactical formations in order to enable the Divisions to engage in the close fight with favorable combat power ratios. To do this, the Corps must not only possess the necessary air and missile defence assets but also incorporate deception and EMS management into its operations. The main effort will be on proactive counter-fire.

The Corps' area of operations and responsibility, while substantially reduced from operational-level commands, can extend up to 500 km deep, and includes multiple echelons of tactical and operational-level enemy capabilities. Figure 3-3 highlights how a Corps operates across more than 60,000 km² during large-scale combat operations. Assuming that the Corps con-

sists of two Divisions abreast, the Area of Operations for the Corps could be 500km x 120km. However, it is likely that this will not be a continuous FLOT due to the density of the forces employed. The Corps Area of Influence would extend out 500km / 72hrs, while the Corps Area of Interest would extend out to 1000km / 96hrs. In this example the Corps Rear Area proceeds from the Forward Line of Own Troops (FLOT) to 200-250km to the rear.

During competition the Division employs its capabilities to identify and deter those enemy EW systems targeting its tactical systems. Additional efforts by the Division will focus on denying/detering the ability of enemy ISR systems to gather information about capabilities by targeting NATO formations and facilities. The Division will monitor and report enemy activities involving information confrontation and criminal activity against NATO facilities. The Division trains for the close fight; working with partners and allies to increase combat effectiveness with special attention paid to

The Division is the echelon that converges aviation, fires, EW, manoeuvre support, and multi-brigade manoeuvre to achieve positions of advantage against to disrupt and then defeat or destroy, enemy main attack formations—typically a combined arms army—in the close fight/area. This requires the Corps to neutralize or destroy the enemy's long and mid-range fires systems, and the Division to neutralize enemy short-range systems.

With assistance from higher echelons, the Division can converge national-level

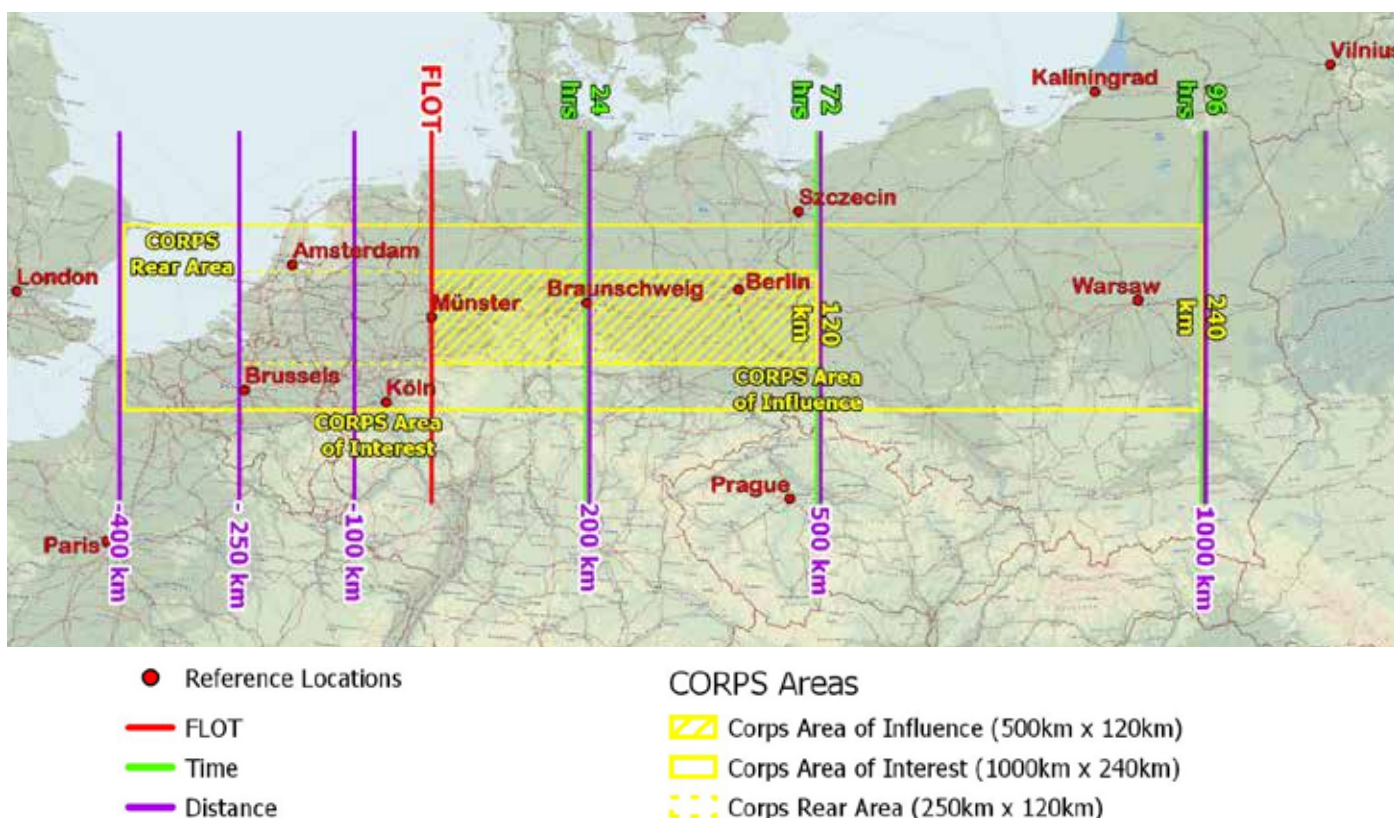


Figure 3-3. Corps Battlefield Geometry
Note: Lines are illustrative and not adapted to the terrain.

Division

The Division is a tactical headquarters that controls multiple manoeuvre Brigades and enablers. Any gaps in the Division's capabilities have implications for the Corps and the Division's subordinate Brigades; Brigade capability gaps impact the Division. The divisional echelon is the lowest level, where the range of capabilities and the balance of arms allow for the possibility of planning, integrating, and executing of multi-domain operations. However, the Division will typically rely on the Corps for assistance in employing effects from other domains. A Division is capable of planning and executing operations simultaneously and capable of distributed command. The planning horizon of a Division is typically 12-48 hours prior to execution.

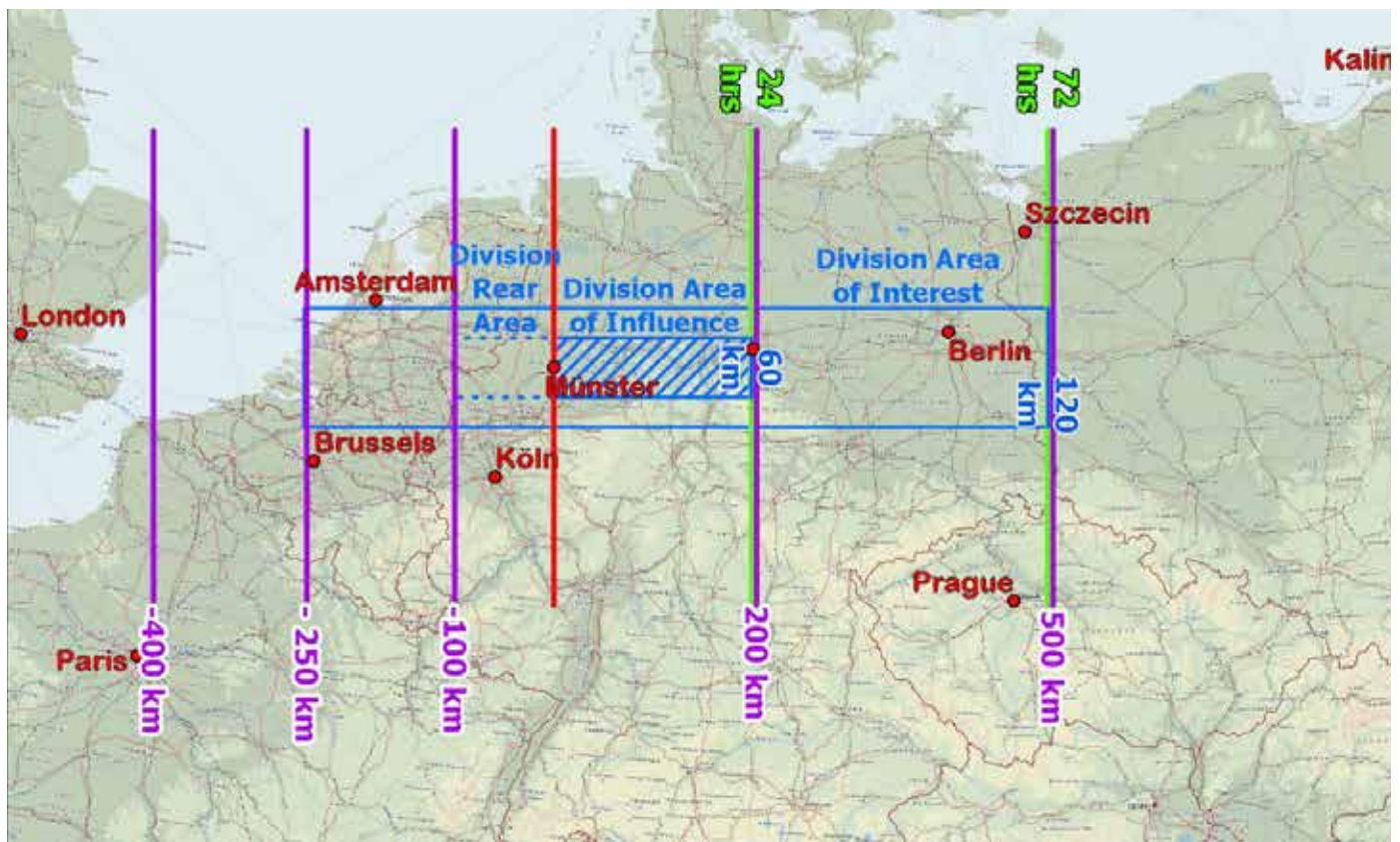
interoperability. Critical to the Division's success in combat is the CUOE work done during competition.

Upon transition to conflict the Division defeats enemy forces in the Close Area. During the approach, the Division relies upon the Corps to neutralize or destroy the enemy's long and mid-range fires systems so that the Division can maneuver to the close fight with the forces needed to prevail. The main task of a Division is to shape the enemy and set the conditions for the success for the Brigades' close battles. The Division shapes its Deep Area to set the conditions for the close fight that its subordinate Brigades will be in, and conducts and enables that close fight. Because of the ranges over which these tasks will occur, Divisions require a mix of rocket and howitzer artillery.

el cyber and offensive space capabilities into its scheme of manoeuvre. It also has the analytical capacity to converge limited amounts of national- or theater-level intelligence sources with its organic ISR. Typically, the Division exploits opportunities created by the Corps in these domains.

Tactical forces are capable of penetrating or exploiting, but at lower echelons will seldom be capable of both. Tactical commanders and forces dynamically leverage available effects—from any available domain—and whether organic, joint, multinational—to bring them to bear against localized enemy forces or objectives.

The Division conducts tactical operations and activities in a much smaller area of operations and interest than higher echelons but serves as the critical coordinator of high-density effects in the close combat environment highlighted in Figure 3-4



- Reference Locations
- FLOT
- Time
- Distance

Division Areas

- Division Area of Influence (200km x 60km)
- Division Area of Interest (750km x 120km)
- Division Rear Area (100km x 60km)

Figure 3-4. Division Battlefield Geometry
Note: Lines are illustrative and not adapted to the terrain.

the Area of Operations for the Division is 200km x 60km. The Division Area of Influence extends out 200km / 24hrs, while the Division Area of Interest extends out to 500km / 72hrs. The Division Rear Area proceeds from the Forward Line of Own Troops (FLOT) to 90-100km to the rear. The ability of the Division to assign, deliver, and assess effects within short periods of time remains critical to operational success.

The tasks described above will be difficult for most Alliance forces to accomplish with

their current organization and training. However, the ability to accomplish these tasks is essential to military success. Our enemies will not handicap themselves in order to oblige the Alliance's lack of investment in warfighting.

4. The Conduct of Corps Operations

"Luck in the long run is given only to the efficient."

Generalfeldmarschall Helmuth Graf von Moltke

Since any conflict in Europe will likely begin with an attack by Russian forces, possibly as part of a *fait accompli* campaign, this chapter will seek to describe Corps operations in that context. The organization of the chapter into sections focused on penetration, dis-integration, and exploitation that will occur until de-escalation and a return to non-crisis competition is not meant to denote phases but continuous cycles of activity that will occur in multi-domain operations.

Competition

Operational Echelon During Competition

The Operational Echelon is oriented on a specified geographical area. In competition, the Operational Echelon is focused on maintaining situational awareness of

Russian activities and deterring Russia from taking decisive actions within the Joint Operations Area (JOA). Should these actions fail, the Operational Echelon must be prepared to engage and defeat Russian aggression.

Corps During Competition

During competition the Corps's focus is on preparing to conduct operations in its potential area of operations. This entails rigorous planning by the Corps to enable it to rapidly deploy to its area of operations and defeat Russian military forces in combat operations. This planning is based on a rigorous and continuous CUOE that results in necessary appreciation of the terrain, information environment, and understanding of the likely Russian actions and capabilities to the systems level. This CUOE informs not only the Corps but also its subordinate formations.

One of the Corps's missions in competition is to enhance the conventional deterrence capabilities of NATO through its demonstrated proficiency executing multi-domain operations. During competition the

Corps trains to achieve the necessary expertise in multi-domain operations so that it can defeat Russian Combined Arms Armies. This will typically entail multi-echelon training, which is the simultaneous training of more than one echelon on different tasks, conducted under conditions that simulate combat with the Corps's subordinate formations and potentially the Operational Echelon for the Joint Operations Area (JOA) that the Corps's area of operations falls in. The Corps will regularly exercise the employment and convergence of capabilities from not only the air and maritime domains but also the space and cyberspace domains in order to stimulate, see, and strike Russian capabilities—especially long and mid-range integrated fires complex (IFC) and integrated air defence system (IADS) so that it can enable its Divisions to manoeuvre to the close fight with favourable combat power ratios relative to the enemy. The Corps works with the framework nations and the broader NATO alliance to set the conditions for the employment of cyber effects to disrupt, degrade, or target for lethal strikes Russian systems which in some cases may take years to prepare.



Through the conduct of cooperative engagements, participation in multi-national training exercises, and military-to-military partnerships, the Corps is able to develop relationships with other Alliance forces and the interagency, enhancing the capabilities and interoperability—both conceptual and technical—of all involved. These exercises also allow the Corps to practice sustaining itself and work out the details needed to deploy, sustain, and reconstitute a combat ready force. In addition, exercising sustainment of the Corps helps to build relationships with the host nation and other entities that will be invaluable in the event of conflict. Developing the Corps's ability to conduct multi-domain operations is critical to being interoperable with U.S. formations and therefore to the Alliance's ability to deter aggression and support to NATO information operations.

The routine deployment of the Corps and its subordinate formations to conduct training and exercises makes their deployment during times of tension less complicated and escalatory than it would be otherwise. As tensions rise, forward-presence Corps forces rapidly reposition to dispersed locations and conduct multi-domain deception operations to complicate Russian targeting and decision-making activities. These deception efforts are rooted in training and exercises which provide a valuable opportunity to provide a false pattern of emissions in order to train Russian systems with bad data and to provide Russian EW operators with corrupted libraries. The creation of multiple, to include false, pictures in the EMS aids in deceiving the enemy. It slows down his ability to identify and target friendly formations and command posts. The complexities of planning for deception at the scale required do not reside in any echelon lower than the Corps.

The Corps supports the early phase deployment of joint and multinational SOF by providing suppression of Russian sensor systems and capabilities. It also serves as the central forward tactical integration element for joint and multi-domain capabilities, to facilitate dispersed and resilient command and control.

The Corps and its subordinate formations must be capable of rapid deployment, transition to combat operations, and of fighting a very intense battle at short notice. The Corps will not be allowed to conduct an uncontested deployment and build-up of combat power, instead the Corps will be contested as it manoeuvres from its peacetime location to its assigned area of operations where the Corps will likely proceed directly into contact. This initial battle will be part of a campaign because modern militaries are too resilient to be defeated in a single battle. Success in this initial battle is vital to setting condi-

tions for the rest of the campaign and posturing NATO for a favourable conclusion to the conflict.

Division During Competition

During non-Article 5 competition the Division serves as a pillar of NATO's conventional deterrence through its demonstrated proficiency in combined arms. The focus of the Division's efforts during competition is training to achieve the necessary expertise in combined arms and the ability to close with and defeat or destroy Russian maneuver forces. This will typically entail multi-echelon training, which is the simultaneous training of more than one echelon on different tasks, with the Corps and/or the Division's subordinate formations conducted under conditions that simulate combat. Through the conduct of cooperative engagements, participation in training exercises, and military-to-military partnerships, the Division is able to develop relationships with other Alliance forces, enhancing the capabilities and interoperability—both conceptual and technical—of all involved. Developing the Division's ability to close with and defeat Russian maneuver forces in close combat is critical to the Alliance's ability to deter aggression and support NATO information operations.

During competition the Division conducts CUOE to gain improved understanding of likely Russian actions, preferably focused on a specific area of operations. Divisions will habitually remain focused on understanding Russian short- and medium-range weapon systems and their tactical maneuver and employment capabilities, and on the key terrain it must occupy to deny Russia the ability to attain strategic and operational objectives.

The Division must be capable of rapidly transitioning from its peacetime posture to combat operations. Divisions must be capable of generating combat power immediately from their associated maneuver Brigades, aviation, field artillery, functional supporting formations, and available resources to disrupt enemy activities and set the conditions for the penetration and dis-integration of Russian stand-off capabilities. The Division's fires assets provide the Division with the capability to neutralize short-range fires, which enables semi-independent manoeuvre at the Brigade level – enhancing the Division's value as a deterrent to Russian aggression. The reliance on ad hoc relationships that has come to characterize operations should be minimized. The Division—like the Corps—must form habitual, if not formal, relationships with the forces it will employ in combat. This is critical to NATO's ability to prevent or deny Russia's ability to achieve its objectives with military force.

During the transition to conflict, Divisions formalize their linkages to joint and relevant interagency partners from throughout the Alliance, deploy combat and functional capabilities forward into the Joint Operations Area, and purposefully disperses and distributes its formations to preclude effective targeting by Russian forces or their proxies. Divisions employ information protection, operations security, and military deception to dis-integrate enemy target acquisition and intelligence gathering while protecting their own intelligence and information systems.

Divisions serve as a linking point for multinational and joint capabilities, as the lowest echelon headquarters with a fully functional Air Support Operations Center (ASOC) that can transition to a Joint Air-Ground Integration Center (JAGIC) during the transition to conflict—if the Division has not formed a standing JAGIC. Additionally, the organization of the Division allows for the receipt of multinational subordinate Brigades and formations with sufficient command and control capability to integrate these systems for training and conduct of tactical missions during Article 5 operations.

Penetration and Dis-Integration

Operational Echelon During Penetration and Dis-Integration

The Operational Echelon's focus during armed conflict is on Russian actions occurring within the JOA. Functioning as the JTF and/or land component command,

the Operational Echelon is responsible for the conduct of the campaign against Russian forces. Coordination with NATO intelligence assets enables the Operational Echelon to converge space, cyber, and air with long-range ground-based fires systems to penetrate and dis-integrate a Russian IADS and long-range fires systems of the IFC.

Lack of organic or attached ground-based fires capabilities will cause much of the responsibility for the execution of the fight against Russian long-range systems to fall to the Corps, at least until the Russian IADS is dis-integrated enough to allow for the employment of NATO's air assets. To illustrate the scale of the problem Table 2 is useful.

This table contains the numbers for the Western Military District's long-range systems. The scale of the problem posed by these systems is beyond the means of any existing Operational Echelon that could potentially command 1 (GE/NL) Corps. Therefore, the Corps will play a significant role in penetrating and dis-integrating these long-range systems in order to enable joint force freedom of action.

Western Military District

System		Type	Range	Quantity	Missiles	Remarks
Long-Range Systems						
S-500		AD	600/200km			
S-400		AD	400/185km			
S-300		AD	200/30km			
SS-26	SS-26	TBM	500km	48	192	
	SSC-7	TBM	500km			
(*4x High-Bay Launchers)	SSC-8	GLCM	2,500km	*4	32	
		SRBM/CM				
Tornado-S		Arty	<200km	18	UKN	
Bastion-P	SSC-5	CDCM	450km			Dual purpose land and sea
BAL	SSC-C	CDCM	150km			
Mid-Range Systems						
SA-27		AD	70/25km			
SA-17		AD	45/25km			
SA-11		AD	36/22km			
Uragan	MLRS	Arty	70km	56	UKN	Being replace by Tornado-S
Tornado-G	MLRS	Arty	<90km	108	UKN	
BM-21 Grand 122mm MRL	MLR	Arty	37,3km	194	UKN	Being replace by Tornado-G
2S35	SPA	Arty	40km		UKN	
2S19	SPA	Arty	29km	510		
2S7	SPA	Arty	24km	72		
2A36	Towed	Arty	40km	36		
2A65 MSTA	Towed	Arty	28,5km	204		
2S1 Gvozdika	SPH	Arty	21,9km	18		
Short-Range Systems						
SA-15		AD	12/10km			
Pantsir S-SM		AD	40km			
2S12		Morter	7,1km	510		
2S9 Nona	SPA	Arty	12,8	12		
2S4	SPHM	Arty	18km	16		
D-30		Arty	21,9km	72		
2B16	Towed	Arty	12km	24		
Tanks	T-72	Maneuver		976		Assessed 1,400 tanks in storage/reserve in WMD
	T-80			445		
	T-90			41		
IFV/APC/	BMP			1297		
	BTR			804		
	MTLB			686		
Anti Tank	9P149(AT-9)		5,8km	562		
TOS-1A			3,5km			
TOS-2			6km			
IFV/APC/	BMD	VDV	4km	1766		Konkurs missile (BMD-4)
Tanks	T-72	VDV		596		30mm AGS-17 1,700m
2S9 Nona	SPA	VDV Arty	12,8km	368		

Non deployed systems/storage

System	Quantity	Missiles
SS-26	7	542
SSC-8	4	Unknown
SS-21	292	25 1044
Scud	25	2400

Table 2 Key Systems in the Western Military District

Of note, this table only shows the systems in the Western Military District. If an attack on NATO from the Western Military District is the main strategic direction, as is likely, then it will be reinforced so these numbers would increase. Furthermore, this table only contains ground-based systems it does not depict aerospace or naval systems.

Operational Echelon Rear Area

Crucial to the NATO's ability to confront and defeat an aggressive Russia is the ability to sustain and protect Alliance forces as they deploy to a joint operational area and conduct operations. Within NATO sustainment is a national responsibility and 1 (GE/NL) Corps must develop good working partnership with the organizations that will be crucial to success in this area such as the Joint Medical Service (DEU) and Joint Support Service (DEU); NATO entities like Joint Support and Enabling Command (JSEC) and Joint Logistics Support Group (JLSG), and host nation organizations. The JLSG will be executor of sustainment (logistics, engineer, and medical) at the operational level and will provide Level III support to the Corps. The JLSG will be the priority user on the Joint Logistics Support Network (JLSN) which includes the Main Supply Routes (MSRs) to the final Level II node.

The Operational Echelon focuses solely on the protection of forces in the joint operations area. Responsible for conducting the campaign against Russia, the Operational Echelon enables its subordinate tactical formations to quickly respond to

threat escalation, rapidly close with Russian forces, and shape the close fight.

Because of the threat posed by Russian long-range missiles and fires, dispersion throughout the theatre of sustainment and other efforts enhances their survivability and protection. Protection of critical hard targets (aerial and seaports, cities, logistics centres) and soft targets (large formations) will entail the employment of theatre air and missile defence. Protection of critical infrastructure is crucial for the Alliance as it races to deploy enough combat power to defeat Russia's expansionist designs in Europe. Theatre air and missile defence capabilities provide the Alliance with a strategic defence against Russian aerial and long-range fires threats. Theatre Ballistic Missile (TBM) warning support enhances the effectiveness of upper-tier defence against ballistic missiles and aerial platforms threatening Alliance forces and select geopolitical assets.

The Operational Echelon's ability to employ intelligence, information warfare, cyber, and space capabilities are essential to the success of Alliance efforts. These critical capabilities enhance the Operational Echelon's sustainment and protection capabilities. Intelligence analysis is integral to unit protection efforts thus facilitating sustainment operations. At the Operational Echelon Military Intelligence provides multi-discipline intelligence analysis and an all source collection element. Additionally, the Operational Echelon connects the intelligence enterprise to the Corps. Finally, Alliance cyber and space capabilities

support collection activities focused within the Joint Operations Area and ensure that the Operational Echelon has the ability to communicate. Meanwhile, STRATCOM serves as the Operational Echelon's conduit to inform and influence the populace with the Joint Operations Area.

Corps During Penetration and Dis-Integration

Even prior to the initiation of open hostilities NATO forces will be operating inside the umbrella of Russia's IADS and IFC. With the beginning of open conflict Russian IADS and IFC will impede key elements of the Joint Force so that they will not be able to support Alliance ground operations, or at least will have their operations severely degraded. Instead, Alliance land forces must conduct operations in support of forces of other domains so that the full weight of the Alliance's capabilities can be brought to bear on the enemy.

In practice this will mean that at the onset of operations that the Corps can expect limited support from the air and maritime domains. The campaign against Russia's long and mid-range systems will be waged primarily by land based fires. In the absence of such a capability at the Operational Echelon, the Corps with its Corps Fires Command will be responsible for penetrating and dis-integrating Russian long and mid-range IADS and IFC in order to enable freedom of action for the Alliance's Joint Force. This will require the Corps to continuously integrate ground maneuver, land based fires, air, CEMA, cyber, space, information activities, and



SOF.

The CUOE that the Corps conducted in competition will be invaluable in conducting the predictive analysis to identify and, then during conflict, verify by ISR assets for targeting the position of Russian systems in order to dis-integrate the Russian IADS and IFC. Detecting and engaging these Russian systems will require the Corps to leverage not only organic capabilities such as UASs and UGSs, but also space, cyber, SOF, the EMS and limited quantities of 5th Generation Aircraft operating in an ISR role.

Although on the move, the Corps Fires Command provides on-order support to augment the Operational Echelon's operations to destroy high-value targets and degrade Russian long-range fires and air defences. Otherwise, the Corps Fires Command provides fire support to defeat Russian mid-range fires systems.

As soon as the Russian IADS is dis-integrated NATO can employ greater quantities of 5th Generation Aircraft until the Russian IADS is eventually collapsed and 4th Generation Aircraft can be unleashed against Russian forces. As the weight of air assets that NATO is allowed to commit against Russian ground forces increases, the Corps Fires Command is able to shift the priority of its fire support assets to defeat Russian mid-range fires systems and to support its manoeuvring Divisions.

In addition to its role in the penetration and dis-integration of Russian IADS and IFC, the Corps manoeuvres to seize ob-

jectives and defeat Russian forces. The Corps will employ a covering force to attrit Russian manoeuvre forces and gain intelligence about the strength and direction of potential Russian attacks. Just as importantly, this covering force will compel the Russians to deploy their forces and mount an attack. This will slow the rate of the Russian advance thus gaining time for the Corps to bring additional combat power into the fight and for NATO's campaign against the Russian IADS to create windows of opportunity for the employment of air and maritime assets against the Russian forces.

The ability to conduct multiple wet gap crossings will be critical to the success of the Corps. It is estimated that land forces operating in Eastern or Central Europe will have to conduct a wet gap crossing of a small water obstacle (6 meter-wide) every 20 kilometres, a medium sized river (100 meters-wide) every 35-60 kilometres, and cross a large river (100-300 meters-wide) every 100-150 kilometres. The ability to conduct a succession of these wet gap crossings—preferably from the march—is essential to the Corps's ability to maintain its momentum.

The Corps maintains a distributed posture and utilizes all domain resources available (air, missile, cyber, space, EW, UAS swarms, deception, and others) to maintain continuous pressure on both the IADS and IFC so they are disrupted and collapse. The Corps employs its subordinate Divisions to manoeuvre to gain positional advantage and seize or clear key terrain in

a manner that accelerates the collapse of the Russian IADS and IFC.

As the Corps manoeuvres, likely from its peacetime location, towards its area of operations to assume control of the tactical level fight it is liable to have to commit forces to the fight as they become available in order deny Russian military objectives—or at a minimum—extend the timeline for Russian forces to seize them, thus allowing NATO to commit more combat power to the fight. Under these chaotic conditions habitual, or preferably formalized and permanent, relationships will be critical to the performance and cohesion of the Corps.

With limited forces initially available, the Corps is responsible for preserving its combat power to enable success in close combat operations by conducting survivability, multi-domain deception, and obscuration operations. It is responsible for the sustainment and protection of subordinate formations as well as forward deployed Divisions as they manoeuvre to close with Russian forces. Additionally, the Corps prepares to receive additional forces as they deploy to the area of operations.

Casualties will be distributed throughout the depth of the battlefield to a greater extent than previous wars. This will pose challenges for casualty care—not only in terms of bed space and casualty evacuation (CASEVAC) but also with regard to the location of treatment facilities.



The Corps must be prepared to conduct non-contiguous defence spread out from front to rear over a distance of many kilometres. Given the ratio between space and forces available there cannot be anything approaching a continuous line of defence as this would be too brittle. The Corps will use complex terrain as strong-points to bolster the resiliency of its defence. This defensive battle will require a great deal of offensive action with opportunistic counterattacks to defeat exposed Russian forces and dislocate the Russian offensive.

Throughout the fight the Corps must extract sufficient forces from the fight to form a reserve large enough to influence events this applies to both when the Corps is attacking and defending. Forming a reserve will be especially difficult in the initial phase of the battle when the disparity of forces will be at their greatest, but the more difficult it is the more necessary it will be. The Corps must balance denying Russia from achieving its military objectives with the need to preserve sufficient combat power that it can exploit the disintegration of the Russian IADS by launching a major counterattack to defeat the attacking Russian Combined Arms Armies and eject them from Alliance territory.

Success by the Corps and its subordinate formations, or Russian setbacks, failures, and contradictions between words and deeds will be highlighted by information operations at the Corps and higher echelons. To be relevant and effective, information operations must always be tied to the physical domains.

Corps Operations in the Rear Area

The Corps is responsible for orchestrating and resourcing operations at the tactical level, this occurs in the Corps rear area. The Corps Rear Area encompasses an area up to 30,000km². It proceeds from the Forward Line of Own Troops (FLOT) up to 200-250km to the rear. Operations in the Corps rear area underpin its ability to generate and maintain the tempo and momentum that will result in Russian forces losing coherence and will ultimately allow the Corps to achieve freedom of action.

In addition to its organic and assigned warfighting formations, the Corps has capabilities that facilitate the sustainment and protection of its assets. The Corps Troops that enable and facilitate sustainment and protection operations are a Rear Area Operations Command, a Sustainment Brigade, a Medical Brigade, an Engineer Brigade, a Military Intelligence Brigade, a Military Police Brigade, a CIMIC Battalion with the ability to conduct liaison with Host Nation entities, a Signal Brigade, and an Information Warfare Battalion.

The Corps' Rear Area Operations Command (RAOC)—whether a subordinate unit headquarters with augmentation or a Corps Rear CP—provides command and control for the Corps rear area. The RAOC coordinates and synchronizes the warfighting functions of attached units across all domains to protect the force. To accomplish the myriad tasks it is responsible for, the RAOC is task organized with a tactical combat force, fires, engineers, Military Police Brigade, CBRN Battalion, CIMIC Battalion, and other attached capabilities such as Military Intelligence.

The Rear Area Operations Command is responsible for coordinating protection for the Corps Rear Area. The role of the RAOC is to ensure freedom of action and integrated security to facilitate the Corps's operations—to include sustainment. This is particularly important to the Corps's ability to build, sustain, and reconstitute combat power and to maintain tempo and momentum.

The significant amount of terrain occupied by the Corps Troops requires careful battlespace management in the Corps Rear Area. In addition to the amount of forces, ample terrain must be set aside for the Corps Fires Command to conduct survivability moves without causing other Corps Troops to inadvertently become targets of Russian counterfire. This battlespace management must also account for alternate positions for the Corps's Command Posts.

Battlespace Management in Corps Rear Area is executed through the RAOC. However, the JLSG will remain the priority user of the Main Supply Routes to the final Level II nodes. Because the JLSG is the main user of the MSRs, all movement in the Corps Rear Area will require coordination between the Corps, JLSG, Host Nation, battlespace owner (either Corps or Host Nation), IOs, and NGOs.

This coordination is important because a critical aspect of warfighting is the movement of major combat and support elements so that they are in position at the right time and place to influence the outcome of battles, operations, and campaigns—operational maneuver. It attempts to gain a position of advantage before battle and to exploit tactical successes to achieve operational results. Operational maneuver is vital to attaining the tempo and momentum necessary to achieve a position of relative advantage over opposing Russian forces.

Effective operational maneuver requires the anticipation of friendly and enemy actions well beyond the current fight, the careful coordination of tactical and logistical activities, and the movement of large formations to great depths. The Russians

consider the movement of large bodies of troops as an integral part of operational warfare. They view troop movements as comprising a large part of combat operations with maneuver not only preceding an attack, but also to constantly accompany and permeate it.

Merely moving a large force, such as the 1 (GE/NL) Corps, over a developed road network with good supporting air facilities and adequate supplies requires advanced staff skills. Pulling all that together so that every unit can be employed to its full potential and all supporting air and naval forces can be brought to bear in spite of Russian interference is staff work of the highest order.

The Corps requires practice during exercises if it is to possess the ability to rapidly shift forces both before the beginning of and during an operation. This requires an understanding of the complications of moving through other formations, the difficulties in moving at night, and the time needed to close in and resupply. Particular emphasis should be placed on battle drills—especially the meeting engagement—and the ability to deploy from column into pre-battle and attack formations, and the ability to quickly reform into columns. Finally, deception and protection of the march columns from Russian indirect fires and ground forces must be an integral part of operations.

In addition to the increased ranges of Russian layered stand-off capabilities that threaten the Corps rear area, Russia's irregular forces and SOF increase the force protection challenges in that portion of the expanded battlefield. The nature of this the threat and size of the Corps Rear Area mean that the RAOC will require a dedicated maneuver formation in order to have sufficient combat power to secure the Rear Area against Russian irregular forces or SOF, or defeat incursions by Russian ground forces.

The Corps Air Defence Brigade provides the Corps with an air defence capability for high to medium altitude Russian aerial and missile attack, surveillance, and air breathing threats. The limited amount of air and missile defence assets should not be deployed around command posts and other high value mobile assets as if they are static positions or in the same manner that is used to protect known fixed sites. Doing so will aid Russia's ability to successfully target these capabilities by giving away their position and increase the likelihood that they will be successfully engaged by Russian fires and strike assets. Instead, it may be more effective to deploy air and missile defence assets forward in a barrier defence that will not provide obvious tells to the enemy.

Corps sustainment is conducted in coordination with the JLSG, Host Nation, and National Support Elements. Corps level sustainment and health operations in the Rear Area are responsibility of the Corps's Sustainment Brigade and Medical Brigade. The Sustainment Brigade—which by its nature will be multi-national and reflect the composition of the Corps Troops—coordinates, synchronizes, monitors, and controls sustainment to the Corps Headquarters and Corps Troops. The Corps Sustainment Brigade is capable, together with the units, of maintaining 7 days of supply (Level I and II) for the Corps Headquarters and Troops. The movement control capability within the Sustainment Brigade coordinates movement within the Corps area of operations. The National Support Elements within the Sustainment Brigade are capable of providing Level II maintenance support (i.e. repairs requiring as an average no more than six hours of maintenance time), Level III repairs are a national responsibility and will require transfer to National Support Elements within the JLSG. In addition, the Corps must continue to provide maintenance and sustainment support to any Corps Troops attached to the Divisions or other subordinate units.

The Corps's Medical Brigade provides the Corps with Role II medical care with the ability to transfer those troops requiring Role III care to medical treatment facili-

tates resident within the JLSG or national systems. The abilities resident within the Sustainment Brigade and Medical Brigade, along with the ability to leverage support from the JLSG and National Support Elements are critical to the Corps's ability to reconstitute combat power

The Corps may also be given the task to protect or repair airstrips that are within the Corps rear area. This may require the employment, if not dedication, of engineering, and air defence assets, along with ground forces capable of providing airbase security. Either of these missions will require the Corps to coordinate with the Air Component Command (ACC).

Providing operational support to sustainment and protection operations are the Corps's Military Intelligence Brigade and Information Warfare Battalion. The Military Intelligence Brigade provides the Corps with multi-discipline intelligence capabilities that inform sustainment and protection activities within the Corps area of operations. The Information Warfare Battalion provides the Corps with the means to counter Russian influence and to conduct information warfare operations within the area of operations. The Corps exerts influence and provides information to local leadership and the populace by the means of the IW Battalion's Psychological Operations Coy.

The generation, maintenance—to include protection—and reconstitution of the Corps's combat power is critical to success of the Corps fight in the close and deep areas. The importance of adequate support to ensure the Corps has the personnel, equipment, and supplies cannot be understated. The sustainment decision cycle and the time to deliver the required support must support the tempo and momentum of the Corps's operations.

Operations throughout the battlefield framework are linked, and those in the Rear Area provided the basis and generate the options for operations in the close and deep areas.

Division During Penetration and Dis-Integration

All of the Divisions in the Corps may not arrive at the same time. Some Divisions may already be located inside the range of the Russian integrated fires complex and/or integrated air defense system, while other Divisions must deploy and manoeuvre to the area of operations while being contested by Russian layered stand-off. Because of this Alliance tactical units must be capable of fluid or dynamic task organization, especially until the Corps and its subordinate Divisions possess the capabilities necessary to conduct the multi-domain operations required on the battlefields of today and tomorrow.





The initial elements of the Division to reach the area of operations must be prepared to immediately manoeuvre to occupy decisive terrain from which to engage Russian forces in the close fight and contest their advance.¹³ This will have the additional benefit of covering the deployment of other NATO ground forces, and by delaying Russian forces extending the timeline of their offensive, thus making its defeat more likely.

Divisions must be capable of launching immediate spoiling or local counterattacks to defeat Russian forces and to reclaim the initiative. As Divisions gain greater freedom to manoeuvre, the Corps may employ them to conduct ground manoeuvre to exploit opportunities created to penetrate, envelop, or turn Russian manoeuvre forces to defeat key system nodes or disrupt critical pathways of the Russian IADS and IFC.

Throughout the fight the Division must proactively attack the large number of Russian short-range systems that can attack the Division's manoeuvre units. Divisional fires assets will not only have to counter Russian short-range systems but will also be called upon to assist the Corps with its fight against Russian mid and long-range systems. This will be a challenge for the Division and makes it critical that the Corps and Division are resourced with adequate fires assets.

Divisions maintain a distributed posture to avoid presenting themselves as high pay-off targets. Obscuration and deception are critical to the ability of Divisions and their subordinate elements to preserve combat power. Engineer units will concentrate on mobility and survivability efforts to support the Division. Divisions employ air and missile defense capabilities to protect manoeuvre forces by destroying and degrading Russian rotary wing, fixed wing, UASs, and by conducting counter-rocket, artillery, and missile defense to neutralize Russian ISR and ground attack capabilities.

Division Operations in the Rear Area

As the principal tactical echelon above Brigade, the Division has the role of commanding and sustaining multiple Manoeuvre Brigades and enabling formations. Providing sustainment and protection support at the Division level are the Division's organic or attached Sustainment, Medical, Engineer, Military Police, Military Intelligence, and CBRN protection assets. The Division manages and allocates these resources between subordinate units – rapidly task organizing resources as necessary to weight the main effort.

Within the close combat area, the Divisional Sustainment and Medical capabilities provide sustainment and health support for the Division. The Division receives sustainment support from National

Support Elements, which provides a link to the full range of services provided by troop contributing nations. Division medical assets provide the Division with modular medical C2, administrative assistance, logistical support, and technical supervision capability.

Sustainment and health readiness forces at the Division level are responsible for ensuring that sufficient supplies and equipment are on hand in the event of armed conflict. Due to the dynamic nature of the battlefield during the initial stages of armed conflict, these units must ensure that sufficient quantities of supplies and equipment are available during non-crisis competition to sustain combat operations.

The Division's organic or attached Engineer, Military Police, and CBRN protection assets are responsible for providing protection support to the Division. The Division plans, integrates, and directs engineer missions conducted by Engineer formations not organic to manoeuvre units. It provides general engineering, mobility/counter mobility, and sustainability in support of protection activities for the Division. Military Police are task organized to conduct military police operations within the Division's area of operations – providing response force capabilities and freedom of manoeuvre through traffic control for the Division. CBRN protection assets provide mission command for CBRN opera-

tions within the area of operations, coordinating assignments and task organizing units within the area of operations.

Supporting the Division's sustainment and protection activities are the Division's Military Intelligence capabilities. These conduct multi-discipline intelligence analysis and processing, exploitation, and dissemination (PED) support to the Division intelligence staff. Additionally, the Division's air defence assets provide the it with an indirect fire protection capability and medium- to short-range air defence from Russian indirect fires systems and unmanned aerial systems, rotary and fixed winged assets, and cruise missile threats.

If the Division is lacking the capabilities discussed above then the corresponding capabilities of the Corps will have to be increased in order to compensate.

Exploitation

Operational Echelon During Exploitation

Focused on the Joint Operations Area, the Operational Echelon continues operations to penetrate and disintegrate Russia's remaining long-range IFC and IADS, creating opportunities for the Corps to exploit. Reducing Russia's ability to contest Alliance air assets and threaten the Alliance's operational rear area with long-range fires, the Operational Echelon enables the Corps to manoeuvre to occupy key terrain to engage and defeat Russian forces in close combat. Additionally, the Operational Echelon facilitates the onward movement of additional Divisions and follow-on forces that enable the Corps to exploit successes in close combat.

With responsibility for logistical sustainment and protection, the Operational Echelon continues to maintain and secure lines of communications within the Joint Operations Area. This is to facilitate the flow of personnel, equipment, and supplies needed by the Corps as it conducts operations to defeat Russian military forces within the Corps area of operations. Coordinating with host nation assets, Operational Echelon units assist in operations to maintain and secure the operational Rear Area. Military Police, CIMIC, Intelligence, and Engineer units all play critical roles in these operations. Military Police units of the Operational Echelon have the responsibility, in conjunction with security elements of the host nation, for security along the lines of communication and at facilities within the Joint Operations Area. CIMIC formations will work with local officials to keep them aware of military operations, coordinating support for the populace and reporting on civil information. Engineer units will conduct mobility, general engineering, and survivability tasks to support operations within the Joint Operations Area. Military Intelli-

gence assets will continue to develop the common operating picture of the Joint Operations Area and assist the Corps in developing their situational understanding of the battlefield. Utilization of Information Warfare assets will provide information to the local populace and counter Russian disinformation.

Allied and joint forces look to exploit opportunities created during penetration and disintegration operations. With ongoing operations throughout the Rear Area to defeat Enemy Unconventional Warfare (UW) elements, maintenance of lines of communication throughout the Joint Operations Area are critical to facilitating the movement of personnel, equipment, and materiel. Engineers and Military Police will conduct mobility operations and patrol to ensure that lines of communication remain open. In addition, the Operational Echelon continues to provide protection support throughout the Joint Operations Area to prevent the disruption of supplies, maintenance, and health care for the force.

Corps During Exploitation

In its role of conducting the tactical fight, the Corps will converge the capabilities of its operational and subordinate Divisional fires assets with space, cyber, and SOF assets along with air assets to stimulate, see, strike, and assess targets in the close combat area. The neutralization of each Combined Arms Army's 1st and 2nd echelon mid-range fires systems will allow the Corps's subordinate Divisions to isolate and defeat the leading elements of the attacking Combined Arms Armies' 1st echelon. With the defeat of these forces, the Corps is able to exploit the successes with its' available Divisions.

The Corps's Aviation Brigade will perform multiple roles. The attack assets will be available to execute deep strikes and to perform area of operations-wide security tasks. Because of the abundance of Russian air defence systems, deep strikes by attack aviation will most likely be conducted at night with smaller groups of aircraft using terrain masking for protection as they approach their objective. It is unlikely that these attacks will be conducted to the full depth of the Corps's area of influence—those will most likely be conducted with the Corps's long-range or joint fires. Use of lift assets will support sustainment operations throughout the area of operations. Intelligence assets in conjunction with signal assets will cross-cue with Corps Fires Command and/or Corps Aviation Brigade Unmanned Aerial Systems (UAS) to provide targetable data via the integrated fires network for strikes by the Corps Fires Command. The Corps' intelligence assets will utilize employed sensors to see and track displacing Russian elements to enable follow-on engagement.

The Corps' responsibility for protection of the Alliance's tactical formations continues to be crucial to the success of operations against Russia. To follow up success obtained in isolating the lead elements of the attacking Russian Combined Arms Armies, the Corps needs to be able to exploit advantages gained by the Alliance in any of the domains. To enable continued success, the Corps must provide its units the necessary support to conduct operations against Russian ground forces that result in a return by Russian forces to their territory and their assumption of a less threatening posture.

Division During Exploitation

The Corps manoeuvres its Divisions to interdict and defeat Russia's attacking Combined Arms Armies. Division fires assets focus on dis-integrating and neutralizing Russia's lead echelon's supporting short-range fires systems to prevent the coordination and massing of a "fire strike" on Allied manoeuvre units. The Division's Brigades rapidly move and employ multi-domain deception to close with the lead echelon of the assaulting Russian tank division. The desired effect is to negate the effectiveness of massed Russian fires by gaining and maintaining contact in the close fight with Russian manoeuvre units. The Brigades use rapid manoeuvre, deception, and the convergence of cyberspace effects provided by higher echelons in their efforts to stimulate, see, and strike Russian manoeuvre, fires, and command and control networks.

Directing the close fight with the Russian Combined Arms Armies, the Division focuses the Brigades's efforts on engaging and defeating Russian forces in close combat. In addition to providing sustainment and protection support to Brigades and supporting Brigades, the Division reinforces the Brigades with the necessary support to ensure success in the conduct of operations - aviation, fires, space, cyber, and intelligence.

The Division provides assets to weight the Brigade efforts as they engage Russian forces. Aviation, engineer, intelligence, and logistical support are all crucial to the success of the Division's operations. Aviation assets will provide close combat support, be available to conduct air assault operations, and support sustainment operations. Engineers will provide route clearance, mobility, and survivability support. Intelligence assets will continue to develop the battlefield. Aviation and fires assets will support intelligence efforts with air and artillery-launched ISR and loitering munitions to stimulate radio traffic and movement to identify specific Russian systems from attack.

De-escalation and Return to Competition

Operational Echelon During De-escalation and Return to Competition

Within the Joint Operations Area, the Operational Echelon continues actions to penetrate and dis-integrate Russia's long-range fires and integrated air defense systems utilizing fires assets from the land, air, and maritime domains enabled by cyber, space, and EMS capabilities. The Operational Echelon provides the bridge between tactical and strategic level support to include access to national level capabilities. Operational Echelon assets facilitate this support - providing protection, area-wide security, and maintaining lines of communications - while limiting Russia's efforts to target them and disrupt their ability to contribute to the fight

In addition to providing forces to maintain and secure lines of communication, the Operational Echelon also coordinates with national governments and international partners to meet JOA requirements. This includes coordinating area protection from remaining Russian unconventional warfare assets not already eliminated or neutralized.

Throughout the campaign, the Operational Echelon continues to generate combat power through the onward movement of forces as Alliance formations become available. The criticality of the Operational Echelon's role in providing support to

the Joint Operations Area is immeasurable. With the expected level of losses in equipment and personnel resulting from large-scale ground combat operations, the Operational Echelon's ability to coordinate with National Support Elements for the maintenance and repair of equipment, care for casualties, and replenish supplies at levels necessary to sustain continuously generate combat power enables the Corps to successfully prosecute the close fight can and begin consolidation operations to end the conflict on terms favourable to the Alliance.

While there is still a significant threat of violence the Operational Echelon has primary responsibility for orchestrating the consolidation of gains. From the outset of a campaign, the Operational Echelon plans, coordinates, and continually adjusts the conditions for a return to competition below armed conflict on more favourable terms. The goal of the Operational Echelon is to immediately reinforce and secure positions of advantage and quickly reorient to a competitive posture against any residual threat. A Corps assumes responsibility for consolidation of gains across the battlefield as the level of violence subsides and the number of committed friendly forces in the battlefield lessens to a Corps or less.

Success in close combat and consolidation operations will enable the Operational Echelon to undertake recovery and stability efforts within the Joint Operations Area in conjunction with interagency and

intergovernmental partners from various NATO nations, along with international organizations. Equally crucial at this point in the conflict is the provision of support for humanitarian relief operations.

The Operational Echelon may be required to act as a transitional military authority and control large-scale security force assistance activities to include restructuring of host-nation forces. The Operational Echelon maintains the necessary formations and other capabilities to provide credible deterrence and ensures the ability to quickly respond to escalation within the JOA.

Corps During De-escalation and Return to Competition

The Corps' highest priority remains the direction of the tactical fight against Russian forces. The Corps will continue to focus on defeating Russia's maneuver forces, the denial of key objectives, and the establishment of positions that give NATO an advantage during negotiations to end the conflict.

The Corps Fires Command, supported by Divisional fires assets, continues to conduct operations to neutralize and/or defeat Russian mid and short-range fires. This sets the conditions for the Corps to continue to manoeuvre its subordinate Divisions as they execute the close fight against Russian manoeuvre forces. The Corps and its subordinate units maintain, protect, and secure lines of communication with dedicated assets, masked by



obscurity and deception operations to ensure survivability. The provision of adequate support in the form of personnel, equipment, and supplies is essential to successful operations. Additionally, the Corps conducts reconstitution operations to regenerate combat power and begins the integration of any still arriving units into combat operations and consolidation efforts.

The focus of operations shifts to the Corps as violence subsides during the consolidation of gains. The Corps conducts deliberate planning and preparation to consolidate gains following the tactical success of its subordinate Divisions. While eventually Divisions and, at the completion of large-scale combat, all units conduct activities to consolidate gains, the Corps is responsible for overall planning, preparation, execution, and assessment to allow Divisions to remain focused on retaining the initiative and manoeuvring without a loss of momentum. Consolidation of gains entails those activities that, combined, make temporary tactical successes enduring; therefore, winning the close fight—tactical success—is of first importance. However, the tactical success will have been in vain without full and continuous consideration to the consolidation of operational and strategic gains. The Corps continually reorganizes its area of operations as appropriate to facilitate the rapid consolidation of gains. Activities to consolidate gains require a balance between security and stability tasks as well as influencing key audiences to support Alliance and Host

Nation political and security forces operating in the area of operations.

The Corps, with augmentation, may transition to a Joint Task Force designed to coordinate with interagency partners from various NATO nations, along with international organizations, to begin reconstruction and restore essential services. The Corps may be required to remain in the Joint Operations Area for a significant period to ensure stability while retaining the capability to renew offensive operations rapidly should hostilities resume.

Division During De-escalation and Return to Competition

Deployed Divisions initially remain forward-postured to deter armed conflict and challenge any renewed Russian anti-access and aerial denial activities. The Divisions position their subordinate Brigades in a hasty defence, blocking potential Russian counterattacks. The Divisions press forward with reconnaissance and prepares to continue offensive operations or, if necessary, transition to another mission. With more time, the Divisions commit manoeuvre forces to defeat remnants of bypassed enemy forces before they can reorganize for a counterattack.

During close combat, Divisions conduct the minimum-essential stability tasks of providing civil security, food, water, shelter, and medical treatment. When directed and provided more forces and other appropriate resources, a Division can organize a consolidation area and plan and

conduct longer term stability tasks as a second priority. If it has not already done so, the Corps may task a follow-and-support Division to execute command and control of the Corps' rear area as it grows in size during the campaign.

Divisions conduct assigned stability tasks while remaining postured for potential armed conflict should hostilities renew. Divisions partner with Host Nation Forces to ensure the security situation remains in the new lower level of competition. As the risk of armed conflict subsides to acceptable levels, the Division repositions rearward to protected locations or, if appropriate, redeploys to its home nation.



5. Orchestrating Corps Multi-Domain Operations

“An operation without Schwerpunkt is like a man without character.”

Generalfeldmarschall Paul von Hindenburg

Deep Operations

Deep operations are usually conducted at long-range and often over a protracted timescale and against enemy forces and resources not currently engaged in close operations. They may comprise intelligence gathering, fires, manoeuvre, and information activities, targeting key enemy systems. Chief among these will be the Russian long and mid-range integrated air defence systems (IADS) and integrated fires complex (IFC). Aggressive proactive counterfire by the Corps will be essential to the success of NATO forces.

Through continuous dynamic dialogue between the Operational Echelon, Corps, and Division, supported by rehearsed procedures to rapidly allocate capabilities, scarce resources can be employed flexibly in support of the overall scheme of manoeuvre. Battlespace management (BSM) enables the tracking and hand-off of targets to subordinates and facilitates air, aviation or ground manoeuvre in the deep area, while the application of fire support coordination measures (FSCM) enable forces to concentrate lethal and non-lethal actions. This is particularly important because sensors are not unlimited each echelon focuses its sensors on a specific area of the expanded battlefield. To successfully attack enemy functions, echelons must be capable of either handing off targeting data between echelons at the tempo of operations, or be prepared to attack those enemy systems that are the focus of their higher echelon(s)—this is also referred to as simultaneous multi-echelon convergence.

Deep operations enable joint force freedom of action and set the conditions for success in the close battle. They occur in the battlespace forward from the point where Brigades and battlegroups are in contact with the enemy, and are usually fought by Divisions, the Corps, the Operational Echelon and the other components. The deep battle will require a balancing of the commitment of resources to shape the enemy (and other actors) before they become decisively engaged in the close, but also ensuring that sufficient resources are still available to win the close battle. Critical to the success of the close battle is the Corps's ability to aggressively hunt key enemy systems (particularly long and mid-range IADS and IFC) in order to both enable Joint Force freedom of action and

to allow its subordinate Divisions to get to the close fight with the combat power necessary to prevail. Successful deep operations are likely to reduce the intensity of the close battle whereas a failure to shape the enemy in the deep area is likely to result in a greater demand for resources in support of the close battle (particularly at the Divisional level), reducing capacity to continue prosecuting the deep battle. This in turn will erode tempo and risk early culmination.

Deep operations will be fought with a combination of lethal and non-lethal actions in order to impact on the enemy's understanding, physical capability, will, and cohesion. The integration of air, land, SOF, cyber, and space, information activities is one of the most challenging jobs of the Corps.

Lethal land systems include artillery (for the Corps this is rocket, missile, and scatterable mines) and attack aviation, while joint systems include air-delivered weapons (missiles, rockets, bombs), naval gunfire support (NGS) and cruise missiles.

Non-lethal actions include information activities (IA) including PSYOPS; cyber and electromagnetic activities (CEMA), specifically electronic attack (EA); and public information.

Deep operations are conducted using the following capabilities:

- Fires. While the Corps will possess long-range fires assets, it will not be able to fully exploit their ability to conduct deep strikes against the enemy unless ISR assets with a commensurate range are available to the Corps. It is key that fires and ISR capabilities are coordinated, not only between the Operational Echelon, Corps, and Division but also those entities that can provide Cyber and Space support to targeting. The linkages between the Corps and these entities are critical to the successful simultaneous multi-echelon convergence and conducting deep operations throughout the depth of the expanded battlefield.
- Aviation find/strike. The Air Component possesses the key aviation capabilities to find and strike enemy systems throughout the depth of the expanded battlefield. The Corps will leverage ISR and strike capabilities from the Air Component to locate and attack targets, especially those located at great depth. The Corps Aviation Brigade is capable of conducting aviation strikes at considerable range from the forward edge of the battle area (FEBA). However, these strikes will not go to extreme depths and in order to increase the survivability of the aircraft conduct-

ing these attacks they will likely entail the employment of smaller packages of attack aviation than in the past. Against Russian forces, suppression of enemy air defence (SEAD) will require a coordinated effort by the Air Component and land-based fires, so aspects of aviation find/strike will be planned according to the Air Tasking Order (ATO) cycle, typically up to four days ahead. The main consideration is enabling aviation manoeuvre into the target area; other details of the engagement can be refined and confirmed relatively late in the planning cycle. In addition the Aviation Brigade will require forward arming and refuelling points (FARPs) to be located forward.

- CEMA. The Corps and Division will require CEMA assets as part of their Corps/Divisional Troops to employ in targeting for lethal strikes and to use to disrupt enemy command and control.
- Information Activities. Information activities include PSYOPS, engagement, deception, and presence, posture and profile. These activities take place within the Corps or national engagement framework, and will require reach back to Alliance and National entities.
- Space. Though the Corps does not own any space assets, it leverages space-based ISR to locate enemy systems and enable strikes throughout the depth of its area of operations.
- Air Manoeuvre. The Corps Aviation Brigade is capable of conducting air manoeuvre/assault operations over similar distances to aviation strike, with similar SEAD requirements. It will also require the forward provision of FARPs.
- Land Manoeuvre. Corps may direct forces to manoeuvre into the deep area. Its purpose might be to strike a discrete part of the enemy force or destroy vital infrastructure or materiel through raids, or when employing a larger combined arms force, to seize a piece of key terrain or an objective such as a wet gap crossing, or to act as a link-up force following an air manoeuvre insertion.
- Forward Detachments. The forward detachment is a highly mobile, capable, combined arms force of up to Brigade strength tasked to exploit forward rapidly. It routinely bypasses the enemy and typical tasks included striking enemy defences before they had solidified or seizing a crossing unopposed and holding the bridgehead until reinforced or relieved. When employing a forward detachment the composition must be

appropriate for the task and the enemy threat likely to be encountered. It can vary in construct from a lighter force that maximises speed and concealment to a heavy armoured force maximizing protection and firepower. The ability to move rapidly is essential to maximize surprise and to seize the initiative. The forward detachment requires integral fire support as well as support from aviation and air. Sufficient combat supplies are needed to achieve and maintain the mission until a secure line of communication can be established or a link-up or withdrawal is ordered or achieved.

Use of Forward Detachments. The offensive is characterized by surprise, speed, and a striving to preempt or forestall the enemy. Some subunits of first echelon forces may attempt to strike deep into the enemy forward defensive area before enemy defenses are fully organized and solidified. Such missions are likely given to forward detachments of the first echelon's Divisions, fully supported by artillery and close air support. It is also possible that an army could employ a tank-heavy regimental-sized "operational" forward detachment to achieve similar but deeper results in the enemy main defensive area.

Division forward detachments, normally reinforced tank battalions, could advance during the night before the offensive. They attack on multiple axes across the army's offensive zone to penetrate enemy covering forces. Then they drive at top speed in pre-battle or march formation to seize and hold key terrain within the main defensive area. Battalion sized heliborne assaults designed for linkup with the forward detachments also could be employed. The purpose of such operationally-planned tactics is to disrupt or preempt enemy defensive structure while opening multiple avenues for swift attacks by larger first echelon forces.

When generating lethal effects, deep operations are normally executed between the forward boundary, a phase line or the coordinated fire line (CFL) and the fire support coordination line (FSCL). The management of battlespace and FSCM coordination is critical and must be a source of constant dialogue between the Corps and Divisions. For land targets beyond the FSCL (as agreed with the JFC and appearing on the Joint Prioritized Target List (JPTL)), fires are coordinated by the Air Component Command but are struck in accordance with the Corps deep operations plan.

In addition to the facilitation and de-confliction of fires, the CFL and FSCL help delineate the areas of responsibility for target engagement. The area between the FSCL and Corps CFL assists in the visualization of the Corps deep fight. The area short of the Corps CFL is the responsibility of the Divisions, keeping in mind that the CFL is not a boundary, it is a permissive measure and surface-to-surface fires beyond it require no further coordination. The Corps JFCC will receive, collate, and publish the single, authoritative overlay for FSCMs to ensure common situational understanding of all permissive and restrictive measures. The authority both to define and move the FSCL lies with the Land Component Commander. The Corps may influence this by requesting or proposing amendments through the LCC. This is a significant factor to consider, especially in offensive operations, where exploitation by Corps manoeuvre formations may require a FSCL shift. The process and timelines for requesting an FSCL shift through the LCC must be understood, and if necessary, the requirement to do so must be anticipated and pre-planned. It must be stressed that these FSCMs must be permissive in nature. So long as there is effective liaison between Corps and the Air component, facilitated by the LCC's Ground Liaison Element, the Air component should be able



to operate effectively short of the FSCL as the LCC or Corps require.

While the Corps and Division are likely to use the battlefield framework to delineate where their shaping effects are to occur, the prosecution of each target set will more usually use the tactical frameworks of find, fix, strike, exploit or stimulate, see, strike, assess. This allows the formation to use the appropriate ISR assets to find/see the target and the appropriate lethal or non-lethal assets to strike the target.

Phases of Deep Operations *Find*

Crucial to successful prosecution of deep operations will be the deployment of the appropriate ISR assets and rapidly fusing their products with that provided from other sources such as the Host Nation forces, the joint commander and the other components, particularly air, space, and cyber assets. Using this information, the Corps can prioritise its activities, assign resources and execute deep operations. The ISR activity will continue throughout the depth of the battlefield, tracking potential targets and confirming the success of strikes against those already targeted, using predetermined measures of effectiveness (MOEs) such as battlefield damage assessment (BDA). The correct apportionment of ISR to support understanding versus targeting is key and will by necessity be dynamic and in constant tension.

The G2 using the integrated and continuous process of the Continuous Understanding of the Operational Environment (CUOE), provides the commander and staff with a fused understanding to enable planning, refinement and execution of deep operations. As an integrating process, CUOE is integral to planning, target-

ing, information collection, and decision making during execution in the deep area.

The G2 staff produces the collection plan based on the CCIRs and PIRs and the G3 staff assigns the appropriate ISR assets to collect the information.

The Corps will use organic ISR assets and joint assets to find, identify and track potential targets for prosecution. Depending on the range, ISR assets organic to the Corps and Division will be able to conduct the find in the deep area but will need to be supported by the Air Competent Command. Beyond this range, the find will primarily be conducted by joint assets supplemented by longer-range land ISR assets and EW.

Organic assets will include UAS, aviation, High Altitude Systems (balloons and airships), CEMA, acoustic sensors and radars, long-range reconnaissance patrols and ground mounted reconnaissance when task-organised. Non-organic assets can include but are not limited to: UAS, air (particularly 5th Generation Aircraft), manned air, joint EW assets, SOF, space and cyber.

Fix

Unless the target is a static facility or similar, there may be a requirement to fix to enable strike or to disrupt a pending strike. Enemy forces can be fixed in a number of ways:

- Physical attack to prevent or slow down their deployment/employment.
- Attacking infrastructure (such as roads, rails, runways etc.) preventing or degrading their deployment. The insertion of obstacles such as scatterable mines may have a similar effect on movement/mobility.

- Jamming or disrupting their C4ISR, preventing the passage of information, reducing situational awareness and slowing down reaction times.
- Creating civil unrest in order to slow down reaction times for deployment.
- Attacking the will or cohesion of a force prior or during deployment, preventing them from employing their full capability.
- Deceiving the enemy, to shift their main effort away from the Corps decisive action.

A combination of lethal and non-lethal actions can be used to fix an enemy. It is important that the need to use resources efficiently, and to minimise the risk of collateral and reputational damage is taken into account in planning. The commander must be cognizant of the overall effect required.

Strike

Strike into the deep area will be conducted through the use of joint fires (originating from the air, land, and maritime domains), air manoeuvre or CEMA assets which should be massed in support of the commander's intent with the utmost care being taken to avoid unnecessary harm to civilians or damage to civilian property and infrastructure. Joint fires shape the battlefield in accordance with the commander's plan, which will include a concept of influence and targeting objectives. Joint fires must be integrated using the appropriate FSCM which must be identified and understood at all levels. However, given the robust nature of the Russian long and mid-range IFC and IADS, land-based fires will be the primary means of providing fire support to the joint force at the outset of conflict and must enable freedom of action for the joint force. Information activities



will reinforce the success of the Corps's Deep Operations.

Targeting objectives are developed in terms of geographic location, time, influence and effect upon the enemy. These are included within the integrated targeting plan. Targeting products include: the high payoff target list (HPTL), the attack guidance matrix (AGM), the targets selection standards (TSS), and the input to the JPTL. Targeting is conducted within theatre rules of engagement (ROE), following a collateral damage estimate (CDE) and prosecuted in accordance with extant target engagement authority (TEA) and delegations.

Pre-planned targets will be articulated within the target engagement plan, which will confirm the plan for the engagement of prioritised targets from the JPTL, with particular regard to the need for air assets to be included within the current air tasking order (ATO).

Air and aviation is most successful when deliberately planned (pre-planned). Depending on the availability of aircraft, success may be achieved when dynamic (immediate) requests are executed, but the cost and repercussions to overall air support may be significant. The Corps should seek to identify air support requirements early for its own deep operations, and for those it has directed or delegated to Divisions, including SEAD tasks. Air and aviation tasking sit within plans to facilitate air planning and inclusion on the ATO. Bids from Divisions should be fed into the Corps for collation, prioritisation and allocation on his behalf. At the Corps and Division, the execution of fires and strikes into the deep area may be delivered by the Joint Air Ground Integration Center (JAGIC).

The primary function of the JAGIC is the execution of joint fires, targeting and air space management (ASM), under the direction of the G-3 in support of the Corps plan. The JAGIC allows close collaboration between Land and Air, providing commanders a technique to coordinate, integrate and control operations in Corps's assigned airspace. It aids coordination of fires and ISR in the close and executes the deep battle. The JAGIC gains its greatest efficiency through co-locating specific air component and land component personnel and systems, allowing rapid decisions and responsive fires, while simultaneously reducing the level of risk. At a minimum it combines the AOCC, deep and close artillery fires executors, Corps targeting, and G2 staff elements.

A cross FLOT strike by aviation requires a combined air operation (COMAO) for SEAD and DCA from the air component, to allow it to manoeuvre to its objective,

carry out the strike and withdraw. Without this the risk to aircraft will be high, especially when faced by Russia's layered, integrated air defence system. An aviation strike into the deep area may be planned in a similar manner to a raid.

Once a target is struck, an assessment should be made as to the effectiveness of the strike. If the correct effect has been achieved this may result in the target being removed from the JPTL (or reattacked if not). MOE such as BDA must be built into the ISR plan in conjunction with strike assets.

Exploit

Exploitation is the seizing of opportunities created by previous activity in order to achieve an objective, or directly to fulfil part of the commander's intent. Opportunities for exploitation may occur only fleetingly and commanders at all levels should anticipate and seize opportunities as they occur. Once the assessment of the effectiveness of the strike has been carried out then the opportunity for exploitation will be identified. The options open include:

- Continue the mission. If the effect has not been achieved, or only partially achieved, the option to restrike the target may be taken.
- Hand off the target. If the effect has been achieved then the target can be reprioritised or removed from the JPTL. In addition it may be handed off to another formation to deal with subsequently, such as an adjacent or subordinate formation.
- Switch targets. Deep fires can be switched to other targets on the JPTL.
- Expand the target array. If the effect has been achieved then this may have opened up additional opportunities and targets. These can include: (1) Greater use of air assets if enemy air defence assets have been sufficiently degraded. (2) The opportunity to switch the main effort or supporting efforts. (3) Use favourable outcomes as part of an expanded information activities effort.
- Switch assets. If the effect has been achieved then deep fires assets may be used in other areas such as supporting close operations.

Close Operations

Close operations are those conducted by the main body of a formation often in direct contact with the enemy. They are usually conducted at short-range and in an immediate timescale requiring the employment of direct fires and indirect fires as well as deception and rapid movement. While fire and movement is indicative of close operations, a combination of lethal

and non-lethal actions across the physical, human and information dimension may also be employed. Close operations are dependent upon the sustaining aspect of rear operations, the shaping of enemy forces and the effects generated by deep operations, in order to create the conditions for success.

Intensity and complexity of close operations. Close operations can be expected to be both intense and complex due to the violence of combat and the density of forces working in close proximity. It is not sufficient to simply resource the Brigades; the Division has a fundamental role in directing, coordinating and controlling activity in the close. The commander, supported by a mobile, protected CP, must retain the ability to influence close operations through personal presence and leadership. However, close operations do have the potential to absorb resources, including command and staff capacity, and therefore a balance must be maintained, particularly at the Divisional level, in order to maintain a focus on the deep battle and the next planning horizon in order to be effective in shaping the close battle and maintain the initiative.

Transition between tactical activities. In planning to fight close operations, the Corps will identify and synchronise a number of tactical activities in order to have an effect, or effects, on the enemy. A Corps's ability to generate tempo and seize or retain the initiative will depend to a degree, on its ability to rapidly transition between activities. This is achieved through the application of well-practised planning procedures and drills which can be executed without the need for lengthy, complex orders.

Coordination and synchronisation. It is the staff's responsibility to ensure that the coordination and synchronisation of lethal and non-lethal actions are sequenced in time and space to achieve the commander's intent. In doing so, the staff must retain the flexibility to adjust the plan as the situation changes. In the same way that the commander will seek to surprise the enemy, so too will the enemy, and the staff must plan to counter this; a 'counter-surprise' plan linked to decision points supported by a decision support overlay matrix is required.

Allocation and tasking of Corps assets in support of close operations. The tactical activities in the Corps plan will be prosecuted by its Divisions and Brigades. The Corps must ensure its Divisions are properly resourced, requiring the staff to balance the support of multiple, simultaneous activities across the entire battlespace (deep, close and Rear Areas) with the need to concentrate combat power in a particular area to achieve the mission.

Corps assets such as ISR, fires, engineers and combat service support can be task-organised to the Divisions, but doing so will prevent the Corps from concentrating combat power rapidly where the commander seeks to reinforce the main effort and bring about a decision.

Rear Area Operations

The purpose of Rear Area operations is to enable the Corps to maintain its freedom of action by protecting the force, sustaining combat operations, generating and reconstituting combat power, and ensuring freedom of manoeuvre of uncommitted forces. It requires a combination of activities across the warfighting functions coordinated centrally to achieve success. Rear operations include many administrative and logistic activities, protection of formations, capabilities, critical assets and infrastructure, and real estate management. They may require stability activities to maintain or gain consent of a Host Nation and also the range of offensive and defensive activities through combined arms manoeuvre.

The Rear Area extends from the rear boundary of the rearmost Brigade to the Corps rear boundary. This is normally subdivided into Divisional and Corps Rear Areas as shown in Figure 5-1. Behind the Corps rear boundary there will be numerous other entities (the Operational Echelon, Joint Support Enabling Command, and Joint Logistics Support Group (JLSG)) that will all conduct their own rear operations.

Command and Control

To avoid potential clashes of interest or priorities, unity of rear command is essen-

tial. The commander can either choose to retain full command of rear operations, or can delegate it to another person such as a deputy commander or commander of a subordinate formation, to conduct on their behalf. In such an instance, it would be beneficial for a Rear Area CP, or Rear Area Operations Command (RAOC), to be established to support the Rear Area commander. The Rear Area CP will be required to be mobile to keep pace with Corps operations minimising its signature to improve survivability. If the commander chooses to retain control of rear operations from the main CP by using a Rear Area coordination cell (ROCC), they may choose to appoint a Rear Area coordinator to ensure unity of effort. The commander's decision as to which command model to apply is influenced by (but not limited to) factors such as: the nature of the mission, enemy, terrain, troops and time available, and the construct of the headquarters they are furnished with. The command organisation for operations in the Rear Area must include the capability to gather intelligence, to plan and the forces to mount operations across the tactical activities, in addition to its primary role of sustaining the force.

The Rear Area commander/coordinator has responsibility for the following activities conducted in the Rear Area:

- Sustainment.
- Movements.
- Offensive, defensive, enabling and stability activities (including host-nation support).
- Battlespace management.
- Security.
- Intelligence.

- Communications.
- Infrastructure.
- Force protection (including combat identification)

Sustainment

Responsibilities. The Corps is responsible for the planning, coordination and execution of sustainment activity in the Corps Rear Area. The scope of responsibilities and activities conducted will be dependent on the type of mission and the capability of assigned and attached logistic forces. The JLSG will continue to provide all sustainment to all BSAs in both the Close and Rear Areas. The Rear Area sustainment unit will then supply all Rear Area units that are not supplied from a BSA. Additional responsibilities may include:

- Logistic Level II support to Corps Troops and other logistically affiliated units operating within the Rear Area.
- Medical support including pre-hospital emergency care, deployed hospital care, evacuation and primary healthcare for troops in the Rear Area.
- The provision of administration support such as staff and personnel support; welfare support; the provision of legal advice; chaplaincy and pastoral care; military police and administrative functions to support the provision of health service support.

Lines of communication (LOC). During warfighting, formations require a considerable amount of materiel; for this, secure LOC are essential. A non-linear construct is difficult to sustain and vulnerable to a capable enemy who will seek to sever our lines of communications. A linear arrangement that can be secured is ideal, and requires rear operations to generate freedom of action for those operating in the Close and Deep Areas. Where guaranteed land lines of communications are not available, sustainment of ground forces or air manoeuvre forces in the deep area becomes difficult. These forces require either an alternative method of resupply (such as air delivery) or a link-up with the main force by land if they are to sustain operations beyond a few days.

Movement

The scale of movement in the Corps Rear Area is very significant and will demand considerable resources to provide traffic control and management. Wherever possible these should come from the Host Nation but these may well have to be bolstered by MP or from other Troop Contributing Nations.

The movement and transport staffs coordinate all movement along the lines of communications (LOCs) within the Corps Rear

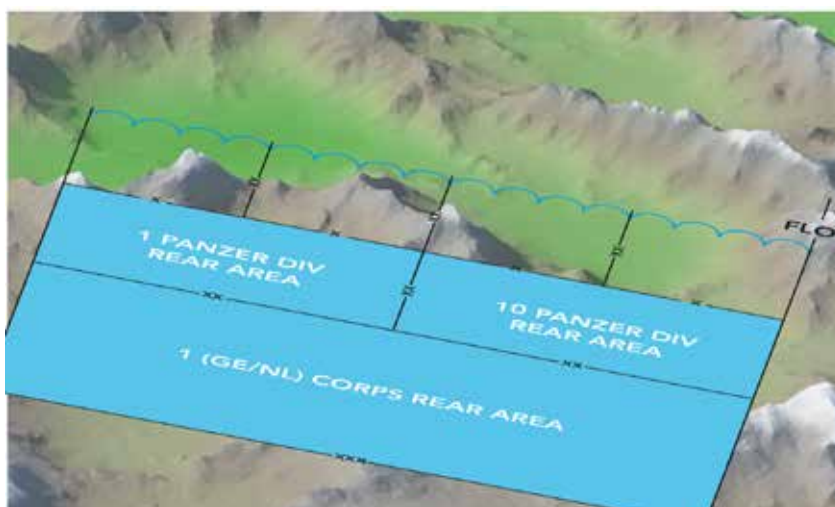


FIGURE 5-1 Generic Corps and Divisional Rear Area

Area, while coordination of movements within the Divisional areas of operations is routinely given to the Divisional headquarters to manage. Where transport networks are established by higher command/Host Nations and used by Corps assets, Corps Troops and individual users must formally apply for authority to the movement operations control centre (MOCC).

In order to coordinate this activity the MOCC maintains situational awareness across the Corps Rear Area and liaises with the specialist movement staff from those formations that move across the Corps area. Within the Divisional Rear Area, Divisional staff will liaise with the MOCC (and the Corps headquarters) to ensure that movement across the Divisional rear boundary is properly coordinated to ensure no delays are incurred.

Routes will have to be maintained and improved to ensure the flow of materiel is conducted with the greatest efficiency and capacity. While Host Nation resources should be used wherever possible, military assets may have to be deployed to ensure that movement is not impaired.

Stability Activities

Corps stability activities. Warfighting among the people will necessitate stability activities. While the overall direction for conducting stabilising activities will be directed by the Operational Echelon, the Corps will have a role in delivering this effort as well as dealing the fallout from combat operations in its area of operations. This will include displaced persons and refugees and, potentially, facilitating the delivery of humanitarian aid. This is done by the Corps CIMIC Battalion working directly with Host Nation authorities, international organizations and non-governmental organizations to identify the requirements.

The Corps retains control over forces such as Military Police, CIMIC, and Engineers so it can reinforce the Rear Area security force or conduct stability tasks directly. Stability tasks may include security and control activities such as control of civilians movement/deconfliction of routes, protection of civilians and critical infrastructure as well as restoration of essential services activities such as logistics (e.g. food, water) and medical support to populations affected by combat operations and the repair of electricity or water purification systems.

CIMIC units are critical resources in stability activities identifying stability requirements and identifying tasks in planning for stability operations and their associated transitions. Using this information, the Corps plans to task-organise forces, reallocate areas of operations, resources,

priorities of support, and request additional forces to perform stability tasks. These additional forces include Military Police, medical, sustainment, general engineering, and EOD units.

As combat operations diminish, the Corps adjusts the task organisation of its forces for anticipated or known stability activities.

Divisional stability activities. While the primary role of the Division in warfighting is combat operations, there is also likely to be a requirement for concurrent stability operations which cannot be left until the cessation of fighting. Stability activities must be considered from the outset, and failure to support Host Nation security, services and governance can lead to the failing of the state and a protracted, complex continuation of the crisis. The Division is the lowest level of command with the capacity and expertise able to plan and execute stability activities while concurrently warfighting. The balance of emphasis between combat and stability operations will depend upon the intensity of the fighting and the stage of the operation. The Corps may call on the Division to conduct such tasks as:

- Support to security sector reform in the form of accompanying partner forces on the battlefield.
- Security and control in the form of curfews, prevention of looting, escorts and provision of safe routes for displaced persons away from the battlefield.
- Security and control in the provision of urgently needed food and water for displaced persons on or near the battlefield.

Liaison with Host Nation. Despite being given a defined area of operations, military operations in the Rear Area will be conducted alongside Host Nation activities. Extensive liaison will be required with the relevant authorities; both military and civilian, to ensure activities coordinated (or at least deconflicted). Specific key leader engagements (KLE) will need to be carried out with Host Nation military units, local and regional governance and with the nongovernmental organization community if present.

Battlespace Management

Battlespace management (BSM) is a fundamental part of Rear Area operations. Failure to manage and control the battlespace properly will increase the force's vulnerability to attack, delay the movement of equipment and materiel to support deep and close operations and may have an adverse impact upon the host nation. BSM is a complex activity that will require close coordination between all relevant stakeholders in order to de-conflict the

requirements of the Corps Headquarters and Troops, National Support Elements, Host Nation forces, civilian population, and any other entities operating in the Rear Area.

At Corps level, the RAOC will allocate specific real estate in the Corps Rear Area for all troops operating within it, in conjunction with G3 BSM in the main CP. This will include Corps Troops, Corps sustainment formations, Rear Area security forces, echelon forces and the Corps reserve.

Security

In addition to sustaining activities the protection of the Rear Area in order to provide freedom of movement and action is a crucial activity. This is achieved by a combination of local defence and a Rear Area security (RAS) force.

Threat to Rear Area Operations. Friendly forces' Rear Area operations will be the target of the enemy's deep operations. Threats to the Rear Area are categorised by the levels of defence required to counter them. Each level (or all levels simultaneously) may exist within an area of operations. There is likely to be a general threat to the whole area of operations, in addition to specific local threats to deployed forces.

General threat. All units are responsible for the implementation of routine field security, local defence procedures, protective measures, and countersurveillance and emission control (EMCON) measures against:

- (1) CBRN Weapons.
- (2) Offensive Air and Attack Helicopter Operations.
- (3) Ballistic and Cruise Missiles.
- (4) Enemy Artillery.
- (5) Mines (and IEDs).
- (6) CEMA Activity.
- (7) Enemy Ground Forces and Irregular Forces.
- (8) UASs

Specific threat. The local area threat is categorised into three levels (Table 3).

Threat level	Threat	Response
Level 1	Enemies conducting espionage, subversion, sabotage, coercion, theft, terrorist acts and an insurgency. Capability is limited to unsophisticated weaponry, equipment scavenged from the battlefield and asymmetric tactics.	Ranging from unit self-defence measures equivalent to routine antiterrorist and field security procedures, to requiring tactical grouping of assets and a local QRF.
Level 2	More capable irregular adversaries through to countering special forces. Small tactical units up to reinforced company strength. Well-led and equipped.	The threat moves beyond unit defensive measures and requires the allocation of forces to conduct planned and coordinated counterirregular activities, requiring the gathering of intelligence and the conduct of offensive, defensive and enabling activities
Level 3	Regular tactical forces (battalion-sized or larger) including airborne, heliborne, amphibious and infiltration conducting conventional offensive tactical activities such as a raid.	Threatens multiple rear elements and the conduct of routine rear operations. Requires the committal of combat units or formations for area defence or as a tactical combat force.

FIGURE 5-1 Generic Corps and Divisional Rear Area

Units and formation headquarters. Units and formation headquarters will be responsible for providing their own security against level 1 threats, providing local guards, patrols and a quick reaction force (QRF).

Local defence groups. Wherever possible, formation headquarters and units will be sited in close proximity, to facilitate mutual support and share the protection burden. However, this must be balanced against the need to disperse forces in order to reduce their signature and make them more survivable. These groupings will be allocated their own local defence area and a commander will be appointed from one of the units. The grouping of units will allow for shared pooling of intelligence, to both enhance their own activities, and to increase security. These local defence areas will be responsible for dealing with a level 1 threat.

Rear Area security force. The Corps will normally assign a combat formation to act as the Rear Area security (RAS) force. At Corps level the RAS may be a designated Division or Brigade. This force will provide the security of key points, route protection and a reaction force both to deter and defeat level 2 and level 3 threats to the Rear Area. The commander of the RAS force may be delegated overall responsibility for Rear Area security, and will coordinate all security and protection matters with the Rear Area command as appropriate.

The responsibilities and authority of any

formation assigned as the RAS force must be formally and clearly articulated to ensure unity of effort in the conduct of their duties.

Intelligence

Crucial to freedom of action and movement is the ability to pass real-time intelligence to all units in the Rear Area, and between those units and the elements providing security. The organisation responsible for Rear Area operations must be assigned an appropriate allocation of ISR assets dependent on the area to be covered and the expected threat. In addition the use of local knowledge either from the Host Nation forces or the population will be crucial in providing the environmental information necessary for success.

Communications

The communications provided for the Rear Area need to be appropriate to the overall functions required and will have to be factored into the communications plan from the outset. The rear CP and the RAS force will require access to the appropriate CIS. Formations and organisations providing movement control and local security will need a method of communicating with the responsible authority for the Corps Rear Area and/or the RAS force headquarters as appropriate.

Infrastructure

There will be a requirement to provide and

protect key infrastructure in the Rear Area. This will be fundamental to the success of the mission. This might include the use of MSRs, key logistic and communications nodes as well as other facilities provided by the Host Nation. In addition critical national infrastructure (e.g. dams, power stations, air fields etc.) may well have to be protected. In all cases these will have been identified during the planning phases and will have to be coordinated with the Host Nation.

Protection

Air Defence assets assigned as Corps Troops will normally be deployed in support of commander's priorities unless the air and missile defence authority (normally COM JFAC) reallocates them in support of the joint prioritized critical asset list (JP-CAL). The Corps air and missile defence (AMD) cell along with the formation's air defence cells, and the commander of the air defense brigade in the Corps Troops will array available air defense assets in order to protect critical vulnerabilities across the Corps. The Corps air defence cell (ADC) in coordination with Corps AMD cell will relay air defence warnings to subordinate Divisions and Corps Troops, and pass the recognised air picture (RAP) to the lowest tactical level possible.

Corps air defense assets will deploy to defend critical assets/activities against air attack in order to support the Corps's freedom of manoeuvre. The AMD cell, within the JFSCC, seeks to maximise AMD com-

bat power through integration rather than de-confliction of all theatre assets. This involves maximising situational awareness and liaising closely with the airspace management (ASM) cell through the NATO integrated command and control system and the land CIS systems.

Theatre ballistic missile defence (TBMD) capable assets are normally not assigned directly to the Corps. Therefore, passive defence methods to protect against the TBM threat must always be employed by every formation. Warning of TBM launch and predicted impact area will be provided by the shared early warning system and passed on by the TBMD cell at the JFACC/AIRCOM via the Corps air operations coordination centre (AOCC(L))/Corps Air and Missile Defence (AMD) cell/ G3 Ops to affected units by the fastest possible means. If TBM defence assets are allocated to the Corps for an operation or period of time the AMD cell has the responsibility for coordinating their deployment in accordance with the joint prioritised defended asset list (JPDAL), but TACOM/TACON will remain with the air missile defence commander.

Corps AMD Planning. At the outset of any operation, the initial joint force planning process will provide sufficient information for the operations planning group (OPG) to conduct a hasty war game. Early in the joint force planning process the allocation of AMD resources (air defense fighters, TBM defence, SBAD and AMD assets) will be confirmed through the force generation process. The AMD cell within the Corps will request subordinate SBAD/AMD formations/units to provide planning teams to work alongside the AMD cell as part of the OPG. The joint force OPLAN and COM JFAC planning products will enable the AMD cell and the SBAD/AMD planning teams to generate the initial Corps AMD priorities and tasks in the form of a prioritised critical asset list (PCAL) as agreed during the CALWG. The PCAL is then submitted to the JFC for validation at the JDAWG and subsequent incorporation into the JPDAL. The following information is required to inform the AMD planning process:

- **A2 Products.** A2 products will be produced by JFAC and should include the enemy air ORBAT (e.g. TBM, fixed wing (FW), cruise missile (CM) unmanned aerial vehicles (UAVs), anti-radiation missiles (ARMs), capabilities, tactics, sorties, training levels and airbase locations.
- **G2 Products.** G2 products will be produced by the Corps which should include the enemy land/army ORBAT (e.g. TBM, rotary wing (RW), UAV, UCAV and or CM assets), capabilities, likely tactics and operating/forward base locations.

- **Air Intelligence Preparation of the Battlespace (AIPB).** G2 will further develop A2 products from JFACC to include relevant air avenues of approach, key terrain, choke points, weather and time, in order to identify AMD areas of interest. Subordinate AMD units will subsequently refine their own air IPB specific to their area of operations.
- **AMD Estimate.** An AMD estimate will be conducted by the Corps AMD cell based on information produced by A2/ G2. This will interpret the Corps commander's intent; scheme of manoeuvre; coverage and activities (current and planned) of other AMD assets - including EAC, maritime and air components; command and control (C2); combat service support (CSS); time and space; Corps deception plan, operational security (OPSEC); and timings. The selected COA will incorporate the Operational Echelon's air defence priorities in accordance with the PCAL.

CBRN Warning and Reporting. The Corps assesses the impact of CBRN incidents employing CBRN analysis software to provide a timely, accurate and evaluated CBRN evaluation. Warning and reporting is the process by which reports of CBRN incidents are forwarded through the chain of command, and units are warned of the resulting hazards and predicted hazard areas. The process is coordinated by a hierarchical structure of CBRN centres. The purposes of CBRN warning & reporting are:

- Reporting and exchanging of information on all CBRN incidents.
- Predicting and warning of hazard areas from CBRN incidents.
- Evaluation of CBRN information so that an assessment can be made of the influence of CBRN incidents on operations.
- Exchange of CBRN information between the higher unit (e.g. Operational Echelon), adjacent units (e.g. Corps) and subordinate units.

Battlespace Management (BSM)

Battlespace management is the planning, controlling, coordination and deconfliction of all aspects of air, surface, maritime and electromagnetic aspects of the battlespace in order to achieve the mission. BSM aims to maximise the effectiveness of operations by promoting the ability of land, air and maritime forces to operate in an efficient, integrated and flexible manner with minimum mutual interference and without undue restraint and risk to friendly forces.

BSM control measures will be produced

either by G5 Plans during the planning phase and/or by G35 during the refinement phase and confirmed by G3 Current Ops during the execution phase and disseminated as part of warning orders, OPLANs and FRAGOs. Changes and updates to BSM are made using FRAGOs and messages.

Fire Support Coordination Measures (FSCM). Coordination measures are used to coordinate and integrate land, air, and maritime indirect fires to support the manoeuvre commander's intent and plan. The purpose of coordination measures is to allow the maximum exploitation of all available fire support assets while ensuring the safety of own troops against the effect of own fires. In the event that fires or the effect of fires are outside the area of operations or close to the boundaries of that commander, permission/coordination by liaison must be obtained prior to execution. It also implies that when requested to clear fires, the command controlling that zone of operation has a clear responsibility to provide either clearance or denial of clearance to execute those fires. To facilitate this clearance of fire, FSCM and ACM may be used. There are:

-**Permissive Measures.** Permissive measures have the purpose of facilitating the attack of targets. With the establishment of a permissive measure, no further coordination is required for the engagement of targets affected by the measure. The two most prevalent permissive Fire Support Coordination Measures (FSCM) in the deep operations are the Coordinated Firing Line (CFL) and Fire Support Coordination Line (FSCL), defined below.

-**Restrictive Measures.** Restrictive measures have the purpose of providing safeguards to friendly forces or objects. The establishment of a restrictive measure imposes certain requirements for specific coordination prior to the engagement of those targets affected by the measure. Restrictive measures for example include restrictive fire line (RFL), no-fire area (NFA) and the restricted fire area (RFA). Boundaries have the same effect on fires as an RFL.

Definitions. While the definitive definitions of all FSCM can be found in AJP-3.3.5 Doctrine for Air Space Control and AArtyP-05(B) NATO Fire Support Doctrine. The most important ones are replicated here for convenience.

- **Fire Support Coordination Line (FSCL).** Within an assigned area of operations, a line established by a land or amphibious force commander to denote coordination requirements for fires by other force elements which may affect the commander's current and planned operations. The FSCL

applies to fires of air, ground or sea weapons using any type of ammunition against surface or ground targets. The establishment of the FSCL must be coordinated with the appropriate commanders and supporting elements. Attacks against surface or ground targets short of the FSCL must be conducted under the positive control or procedural clearance of the associated land or amphibious force commander. Unless in exceptional circumstances, commanders of forces attacking targets beyond the FSCL must coordinate with all affected commanders in order to avoid fratricide and to harmonise joint objectives.

- **Coordinated Fire Line (CFL).** The CFL is a line beyond which conventional, indirect, surface fire support means may fire at any time within the boundaries of the establishing headquarters without additional coordination.
- **Free-Fire Area (FFA).** The FFA is a specific designated area into which any weapon system may fire without additional coordination with the establishing headquarters.
- **No-Fire Area (NFA).** The NFA is an area into which no fires or the effect of fires are allowed except if temporarily authorised by the establishing authority or if an enemy force within this area engages our forces.
- **Restricted Fire Area (RFA).** The RFA is an area in which specific restrictions are imposed and in which fires that exceed those restrictions are not delivered without coordination with the establishing headquarters.
- **Restrictive Fire Line (RFL).** The RFL is a line established between converging friendly forces (one or both may be moving) that prohibit all fire or effect from fires across the line without coordination with the affected force. By default unit/formation boundaries are RFLs.

Reserves and Echelon Forces

Echelon Forces. The Corps will usually allocate echelon forces to maintain the momentum of an operation. Echelon forces are usually given pre-planned tasks such as the capture of subsequent objectives, exploit enemy weaknesses or conduct a pursuit.

Reserve Forces. The reserve is an uncommitted force that the commander can use to counter unplanned or unexpected enemy action, react to opportunity and difficulty, or commit to the achievement of the main effort. The reserve is a fundamental component of the concept of operations but if a mission cannot be accomplished without the commitment of the reserve, then the concept of operations

is flawed. The size and composition of the reserve depends upon the likely opportunities or threats that may trigger its commitment. The reserve should have sufficient combat power to affect changing tactical conditions that are beyond the capability of the subordinate formations, but not so large that it seriously impairs the combat power assigned to the formations to accomplish their missions in the first place. The reserve should be mobile enough that it is in supporting distance of Corps tactical operations. The commander considers capability and location when positioning or designating the reserve and the commander alone has the authority to commit the reserve. Once committed, the commander issues orders to reconstitute the reserve from available units within the Corps.

The commander has two options for control of the reserve; direct control or subordinate control.

Direct Control. Once committed, the reserve will be treated as an additional manoeuvre element with its own battlespace. This usually requires a reallocation from the existing battlespace. The advantages are that it avoids regrouping the reserve under an existing formation at a time when that formation may be under pressure and reduces any issues of interoperability between formations especially in a multinational Corps. However, it adds a span of command to the headquarters and may require additional resources to sustain and protect it during its move into position. In addition it will almost always require a forward passage of lines controlled by the deploying headquarters.

Subordinate Control. The allocation of the reserve to an existing formation reduces the requirement for the Corps to allocate battlespace and prevents interference in the subordinate's mission. The advantages are that it reduces the workload of the headquarters. However, it increases the workload of the formation in combat, requiring them to control a passage of lines within their formation and the reallocation of battlespace. In addition the action of regrouping the reserve with another formation will require a change in the CIS flow and may have additional interoperability issues, especially between two national forces.

6. Conclusion

"The education of a man is never completed until he dies"

General Robert E. Lee

The 1 (GE/NL) Corps, *Corps Operating Concept: The Conduct of Corps Operations* provides an operating logic to address the aspects of the operating environment that are significant to the conduct of Corps operations within Multi-Domain Operations.

1 (GE/NL) Corps will always be in contact and required to conduct maneuver because strategic or operational sanctuary no longer exists; this includes areas and activities conducted within our homelands. Therefore, this concept acknowledges 1 (GE/NL) Corps is always in contact with the enemy and must act accordingly.

The battlefield has expanded in time, domains, geography, and number of actors, even as time is compressed due to the cyber domain, and the speed and range of weapons systems. Therefore, 1 (GE/NL) Corps must contest all domains throughout the depth and breadth of the expanded battlefield to generate overmatch.

The distinctions between actions below

armed conflict and conflict have been blurred, enabling malign actors to achieve strategic objectives short of war. In order to contribute to NATO's conventional deterrent, 1 (GE/NL) Corps must consist of combat ready forces with sufficient resources and authorities to compete in both physical and non-physical domains and environments. In addition, if deterrence fails, these forces are required if 1 (GE/NL) Corps is to contribute to NATO's ability to immediately contest enemy aggression.

During competition, NATO positions formations to compete with, and immediately contest, enemy action in all domains, the EMS, and information environment. This requires that 1 (GE/NL) Corps be postured, organized, and equipped to present a credible deterrent which can conduct operations to degrade and interdict enemy influence during competition, and transition rapidly to offensive operations to support decisive campaigns during conflict. These forces operate throughout the competition continuum—conducting CUOE, bolstering the internal defense of Alliance members, and taking decisive action against internal threats as required.

In conflict, 1 (GE/NL) Corps leverages an interoperable, mobile, and redundant

command and control to converge Alliance joint capabilities to create a marked advantage for the Alliance and preclude enemy isolation of critical warfighting functional capabilities. The Corps attacks throughout the depth of the battlefield and achieves desired effects by employing an echeloned approach to maneuver. Simultaneous multi-echelon convergence of capabilities from all domains enables 1 (GE/NL) Corps to penetrate and dis-integrate the enemy's layered stand-off—specifically its mid- and long-range IADS and IFC. 1 (GE/NL) Corps generates temporary windows of superiority, exploits those opportunities to seize the initiative, gain positions of relative advantage, and defeat or destroy enemy forces in close combat. 1 (GE/NL) Corps begins to consolidate gains in areas where combat operations subside or cease altogether.

Upon the achievement of its objectives, strategic and operational commands focus joint force efforts to consolidate gains and secure the initiative by maintaining contact in all domains. 1 (GE/NL) Corps is always in contact with the enemy, and the battlefield remains expanded, the operating logic remains valid, even when the Alliance returns to competition on favorable terms.





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