



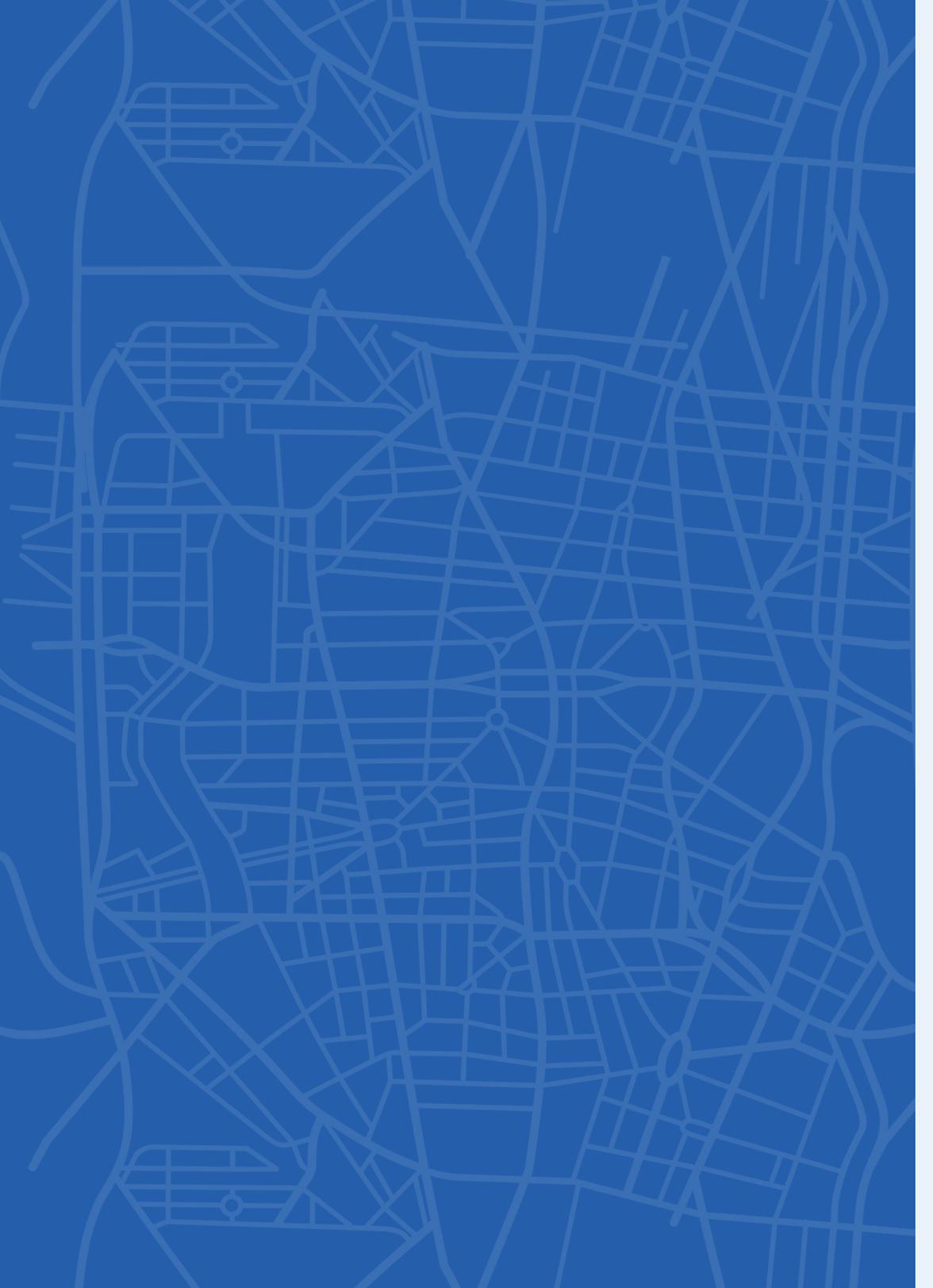
INTERNATIONAL CONFERENCE

DEFENDING BALTICS

From Crimea to the Baltic: Russian A2/AD and the Future of Regional Security



FRIEDRICH NAUMANN
FOUNDATION For Freedom.
Baltic States



“Defending Baltics” 2.0

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The Friedrich Naumann Foundation for Freedom is the creative innovation platform for the communication of freedom in society. From the Freedom Center in Vilnius the foundation focuses to strengthen security and defence policy cooperation between the Baltic states and Germany – with all member states of the European Union and NATO in the Baltic Sea region. In connection with the permanent stationing of a German Bundeswehr brigade in Lithuania, the foundation supports networking between civil society, military, and politics. The foundation has been active in the Baltic states since Estonia, Latvia and Lithuania regained their independence.

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Partner Foreword

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“The security of Vilnius is the security of Berlin.”

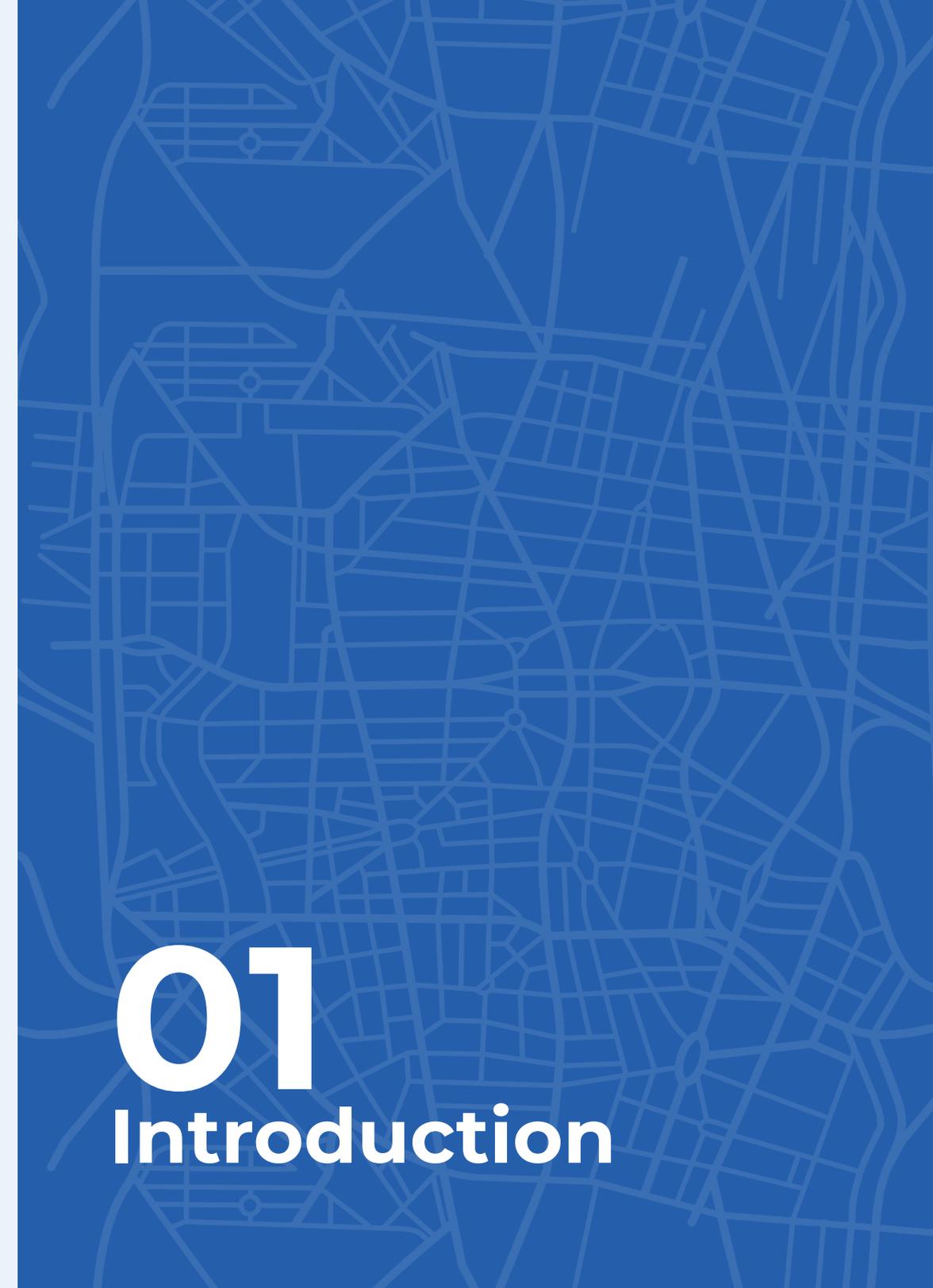
This was true before German Chancellor Friedrich Merz said it in his speech at the inauguration of the German armoured brigade 45 Litauen in Vilnius on 22 May 2025. Europe can only defend its freedom, democracy, and prosperity in a strong union. People in Vilnius can also emphasize to Germans that Ukraine’s security – Kyiv’s security – is inseparable from the security of a free Europe.

The core mission of the Friedrich Naumann Foundation for Freedom in the Baltic States is to amplify assessments and answers for security and defence from the Baltic States towards Germany. We believe that this is the best service we can do to the Baltic States, Germany, and Europe. The most important lesson Germany can learn from the Baltic States is a “spirit of winning”: the conviction that we can win this war together, and that each of us must find our role in mobilizing, defending, and deterring Russian aggression.

Beyond this, there is much to learn in the details. Defending Baltics foregrounds Ukrainian voices and the lessons of the battlefield. This publication highlights some of the most important insights and aims to inform both policy planners and public opinion. We thank the Lithuanian NGOs Civic Resilience Initiative and Locked N’ Loaded for their cooperation and leadership in organizing this conference and publication. This publication issued by the network of Lithuanian military experts distils key lessons from the Baltic states and formulates concrete recommendations for NATO countries, including Germany.

While brave Ukrainians defend Europe at its frontlines, the whole Europe operates under conditions of hybrid warfare. Military threats are combined with disinformation, cyberattacks, economic pressure, and political destabilization. Only by recognizing this reality can we defend ourselves effectively. The Baltic states have understood the threat and adapted to this environment. Germany has been following this path since 2022 but can still learn a lot from partners how to adapt quicker.

**We all need to listen, learn, and follow through. We can win this!
Thank you for your service!**



01

Introduction

On November 17–18, 2025, Vilnius hosted the international security and defence conference “Defending Baltics” for the second time. This forum brought together experts, senior military officers, and politicians from NATO countries and Ukraine to analyse the lessons of the Russian aggression against Ukraine for NATO’s eastern flank.¹

Traditionally, this analytical document is prepared after the conference. Its purpose is to highlight key lessons for countries in the Baltic Sea region and provide recommendations for the development of military thinking and capabilities. The 2024 analytical document focused on general recommendations at the strategic, operational, and tactical levels.²

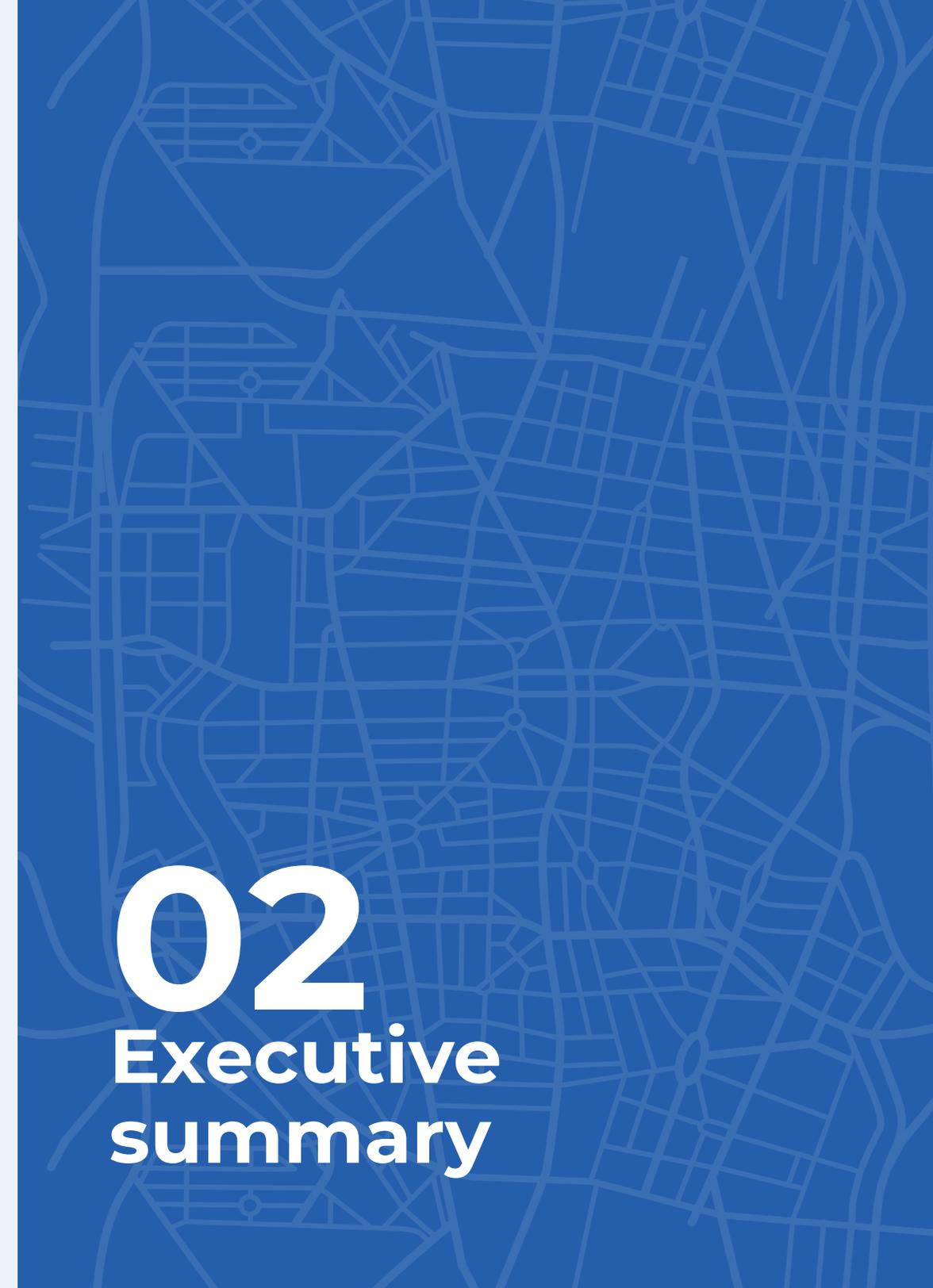
The 2025 “Defending Baltics” conference emphasized the Baltic Sea region’s defence preparedness. It is important to recognize that different standards of readiness for a potential conventional conflict with Russia should apply to this region compared to Western European or North American allies. This is due to the area’s close proximity to Russia, its shallow defence depth, and the unique aspects of its demographics, economy, and military capabilities.

Our view of the Baltic Sea region can sometimes be too limited, focusing only on challenges relevant to Lithuania, Latvia, and Estonia.

However, the Baltic Sea region includes eight countries directly bordering the sea that are part of Western civilization. This group features the European economic powerhouse Germany, Poland, which is emerging as a military force, and the new NATO members – Sweden and Finland. Additionally, security in the Baltic Sea region depends on the involvement of Norway, Denmark, the United Kingdom, France, Canada, and the US. Therefore, regions such as the Arctic, North Atlantic, Central, and Western Europe are vital for the security of the Baltic Sea area. Meanwhile, NATO’s eastern flank acts as the gateway from East to West, making the entire Western community invested in maintaining control and security of this region.

The focus of this document is on the experience and capabilities of a potential aggressor to ensure the A2/AD³ effects in the Baltic Sea region in the context of armed conflict. We will discuss Russia’s likely interests in the Baltic Sea region, review aspects of the Kremlin’s decision-making process and examine the shaping operations that could create the conditions to achieve related goals. We will analyse in detail Russia’s experience in conducting A2/AD operations. The document provides recommendations to decision-makers on the development of NATO and national capabilities.

³ A2/AD is an attempt to deny an adversary’s freedom of movement on the battlefield. Anti-access –inhibition of enemy military movement into an area of operations – utilizes attack aircraft, warships, and specialized ballistic and cruise missiles designed to strike key targets. Area denial – denial of enemy freedom of action in areas under friendly control – employs more defensive means, such as air and sea defense systems. Andrew Krepinevich, Barry Watts and Robert Work. “Meeting the Anti-Access and Area-Denial Challenge.” Center for Strategic and Budgetary Assessments



02

Executive summary

Russia is an aggressive dictatorship that aims to create conditions for achieving its strategic goals. Kremlin continues to pursue this course for domestic, regional, and geopolitical reasons. The Baltic Sea region is vital for Russia not only from an ideological standpoint, but also as an enabler for further aggressive activities against the West. Full scale aggression against Ukraine is led by comprehensive shaping operations or “active measures” in the political, energy, and military spheres. The same pattern is used against the states of the Baltic Sea region.

That is why region states should build their resilience and strength in advance. The first step in this task is to abandon the illusion that cooperation with Russia in economic and political spheres is possible. The Baltic Sea region states should agree on and implement the strategy of “deterrence through punishment”. Nationally and collectively, the states must take proper strategic decisions regarding collective defence, national defence planning, and resilience. The key element in this is the preparation for civil and military mobilization. Countries without conscription in their armed forces and prepared civilian mobilization component will likely face an almost impossible challenge to mobilize resources in case of a large-scale war, resulting in significant losses of population

and infrastructure. Therefore, addressing these issues now is critical.

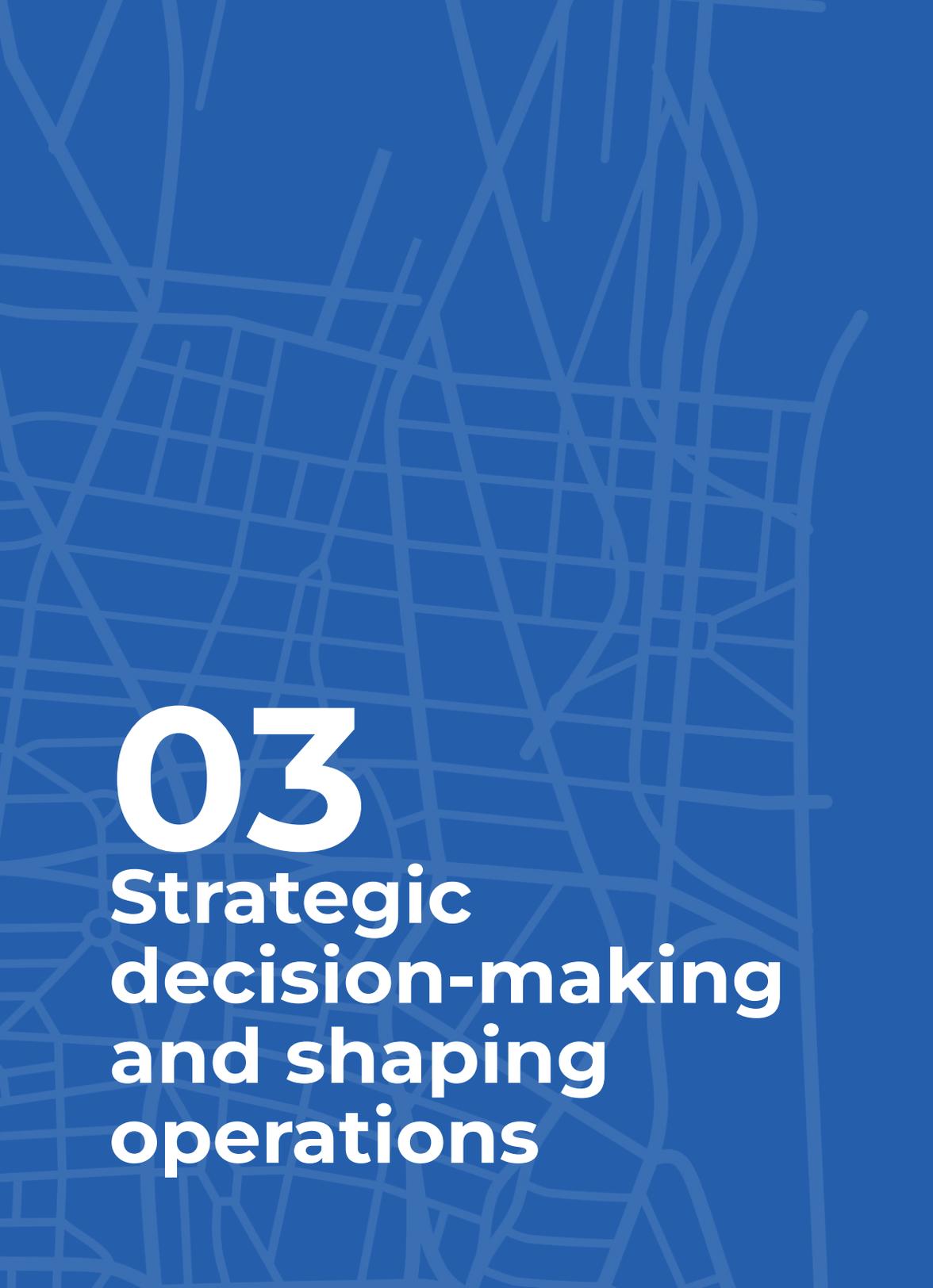
Russia’s aggression against Ukraine proved that Kremlin could take political decision to start full scale war based on groundless ambition. On the battlefield, Russia faces great problems mainly in all battle functions. However, its political leadership has high motivation to continue attrition war. That is the reason why Russian forces adapt their structures, tactics, and weaponry to mitigate problems mentioned above.

This is why the Baltic Sea region states nationally and collectively should enhance the air defence, integrating missile defence, anti-drone systems, and protection against enemy aircraft into a cohesive system.

In addition, NATO countries need to strengthen their A2/AD capabilities in the North, Norway’s seas and the Baltic Sea region, including maritime drone technology, to not only hinder Russia’s efforts to build forces for potential aggression but also limit its attempts to disrupt Allied operations and logistics in the North Atlantic. To properly achieve this task, it is crucial to develop and strengthen European intelligence capabilities – especially space-based intelligence – to ensure early threat warning, support deep strike capabilities, and battle damage assessments. This would

give possibility to develop a preventive or first deep strike capability that would cause unacceptable damage to the enemy.

However, preventive strike does not automatically mean, that the Baltic Sea region states will avoid direct fighting with the enemy's ground forces. The initial phase (first days) of a possible Russian land operation in the Baltic Sea region could be critical. Therefore, it is significant to strengthen collective and national defence capabilities in the Baltic Sea area, particularly on its eastern flank. This will help prevent the aggressor from dominating the region during a conflict and counter the enemy's attempts to conduct A2/AD and deep-strike operations against the North Atlantic and Western Europe from the Baltic Sea region.



03

**Strategic
decision-making
and shaping
operations**

Russia is an aggressive dictatorship that aims to create conditions for achieving its strategic goals. The term “active measures” is well known to the public and refers to the information, psychological operations, and provocations carried out by Soviet intelligence during the Cold War. In the 21st century, this toolkit has expanded (e.g., by integrating cyber operations), but Russia’s approach remains the same.

3.1. Lessons identified from the Russian aggression against Ukraine.

Russia was not deterred from its aggression against Ukraine. It is important to note that, in 2022, the Ukrainian Armed Forces possessed a full spectrum of conventional capabilities – land forces, aviation, and a navy – had been gaining combat experience since 2014, and had significant mobilization potential (41 million inhabitants in 2022)⁴. The Moscow decision was also not swayed by official and unofficial warnings from the West against starting a war against Ukraine.

However, the “active measures” started well before 2022. Since the Soviet times, a complex web of political, economic, and corruption ties has enabled Russia to influence Ukraine’s foreign and domestic policies for decades. Ukraine’s energy dependence on Russia was a powerful tool in this arsenal. For example, after the 2004 Orange Revolution in Ukraine, the Kremlin aimed to bring Kyiv back into its sphere of influence by increasing gas prices.

Russia also took active kinetic measures. Crimea became the focal point of these actions. Since the collapse of the Soviet Union, the Kremlin has aimed to maintain control over the Crimean A2/AD “bubble” to exert decisive influence in the Black Sea. Therefore, Moscow has positioned the Black Sea Fleet bases within the territory of Ukraine, creating a springboard for potential future operations.

One of the earliest serious encounters was the Tuzla incident in 2003, when Russia clearly started building a bridge from its territory to the Ukrainian-controlled island of Tuzla. In 2018, Russia attacked Ukrainian ships trying to reach the Ukrainian seaport of Mariupol on the coast of the Sea of Azov via the Kerch Strait.

As mentioned earlier, the Crimean issue has consistently been Russia’s leverage to escalate tensions with Ukraine. In 2013–2014, during the Maidan revolution in Kyiv and

other cities, the Kremlin chose this region for its first act of aggression. Using armed forces, intelligence agents, and special units transferred from Russia, they managed to seize, occupy, and later illegally annex the Crimean Peninsula. In the first phase of the Russian aggression against Ukraine (2014–2022), Moscow actively expanded its A2/AD capabilities and developed infrastructure on the peninsula. Notably, the construction of the Kerch Bridge served not only as a symbolic tool to reinforce Crimea’s “return” to Russia but also as a critical military logistics route. This bridge enabled the

transportation of weapons, troops, fuel, and equipment by rail and road to the Crimean Peninsula, easing some of the pressure on the fleet.

The main reason for launching a large-scale military operation against Ukraine was Kremlin’s political ambition, which was fuelled by misleading data from Russian intelligence services about the supposed “collapse of the Kyiv regime.” This shows that the initial phase of the 2022 invasion was based on an operational plan that was militarily insufficient.

- In February 2022, the ratio of Russian forces along the Ukrainian border to Ukrainian forces was roughly 1:1 (about 200,000 troops on the Russian side and approximately 190,000 to 200,000 on the Ukrainian side). However, military theory calls for at least a three-to-one advantage for the attacking force.
- Russia deployed these forces in five directions along the entire border with Ukraine, aiming to capture major cities, such as Kyiv, Kharkiv, Sloviansk, Kherson, and Odesa.
- Therefore, the force concentration along the main effort axis (Kyiv) was inadequate.

Despite the defeats experienced in 2022, Russia’s political and military leaders stayed highly motivated and committed to continuing the aggression. What began as an attempt to change the regime in Ukraine quickly transformed into a war of attrition that Moscow can sustain.

In 2022, Ukraine’s political and military leaders did not effectively use strategic intelligence warnings from Western countries and Ukrainian intelligence services to prepare for large-scale aggression. This is evident because general mobilization was only announced on February 24,

2022, and there was insufficient preparation and lack of decisions in some areas. For example, Russian forces quickly advanced from Crimea, causing significant Ukrainian territorial losses in the early weeks of the large-scale war. Kherson, a strategically important city located 100 km from the con-

tact line behind the defensible Dnieper River, was lost in just five days. This loss had a significant impact on other regions, including Berdyansk, Melitopol, Tokmak, and Mariupol. Although Russia's attack on Kyiv was unsuccessful, its forces also managed to advance about 100 km in five days.

3.2. Lessons learned for the Baltic Sea region.

Russia has been “waging war” against the West through its propaganda channels since the beginning of the 21st century and prepared Russian society for this escalation. As a result, as many as 70% of Russians hold a negative view of the EU and the US, and 65% blame the West for the deaths in Ukraine. Moreover, 58% of Russians believe that the current situation will escalate into a large-scale conflict with NATO⁵.

The history of Russia, especially its aggression against Ukraine, shows that the Kremlin regime relies on a strategy of “de-escalation through escalation.” This is especially evident in the Baltic Sea region. In April 2016, Russia tried to limit the West's response to its aggression by sending two Russian Su-24s to simulate an attack on the US Navy ship USS Donald Cook in the Baltic Sea and flying dangerously close to the vessel. For many years, Russian air forces has been flying over the Baltic Sea with their transponders turned off, creating a hazard to civilian aviation.

Since 2022, Kremlin's aggressive actions have only intensified. Systematic attacks on undersea infrastructure belonging to the Baltic states have been recorded. There have also been reports of drones launched from ships linked to Russia towards European cities, which have systematically disrupted the operations of civilian airports⁶. In addition, the Baltic Sea is a venue for Russian strategic bomber exercises.⁷

Europe's dependence on Russian energy sources for many years has created the illusion that cooperation between the Kremlin and the West is practical, leaving no room for aggressive actions. The example of Ukraine demonstrates that economic integration, energy reliance, and corrupt political ties do not help increase security and prevent aggression. Meanwhile, the traditional Western strategy of “deterrence through defence” does not allow quick response to the Kremlin's actions or proactive measures to stabilize security in the Baltic region.

The threat of a first strike or retaliation or rapid, devastating conventional strike targeting the strategic command and control systems, the nuclear triad, and energy resource production and transportation infrastructure could serve as a deterrent to the Kremlin. Therefore, it is unlikely that the conventional military capabilities of Baltic region states will prevent Russia from conducting military operations in the area. However, strengthening these

capabilities aims to raise the costs of such aggressive actions. In the context of the ongoing Russian aggression against Ukraine, this will delay aggression in the Baltic Sea region.

Considering Russia's technological gap compared to the West, demographic challenges, and unstable international alliances, it is very likely that the aggressor will start armed conflict in the Baltic Sea region under these conditions:

- Shaping operations in the region or in a specific Baltic Sea country will produce clear results and create opportunities to benefit from them.
- A fractured transatlantic relationship.
- A large-scale conflict outside Europe that would directly compel the US to participate in resolving it.

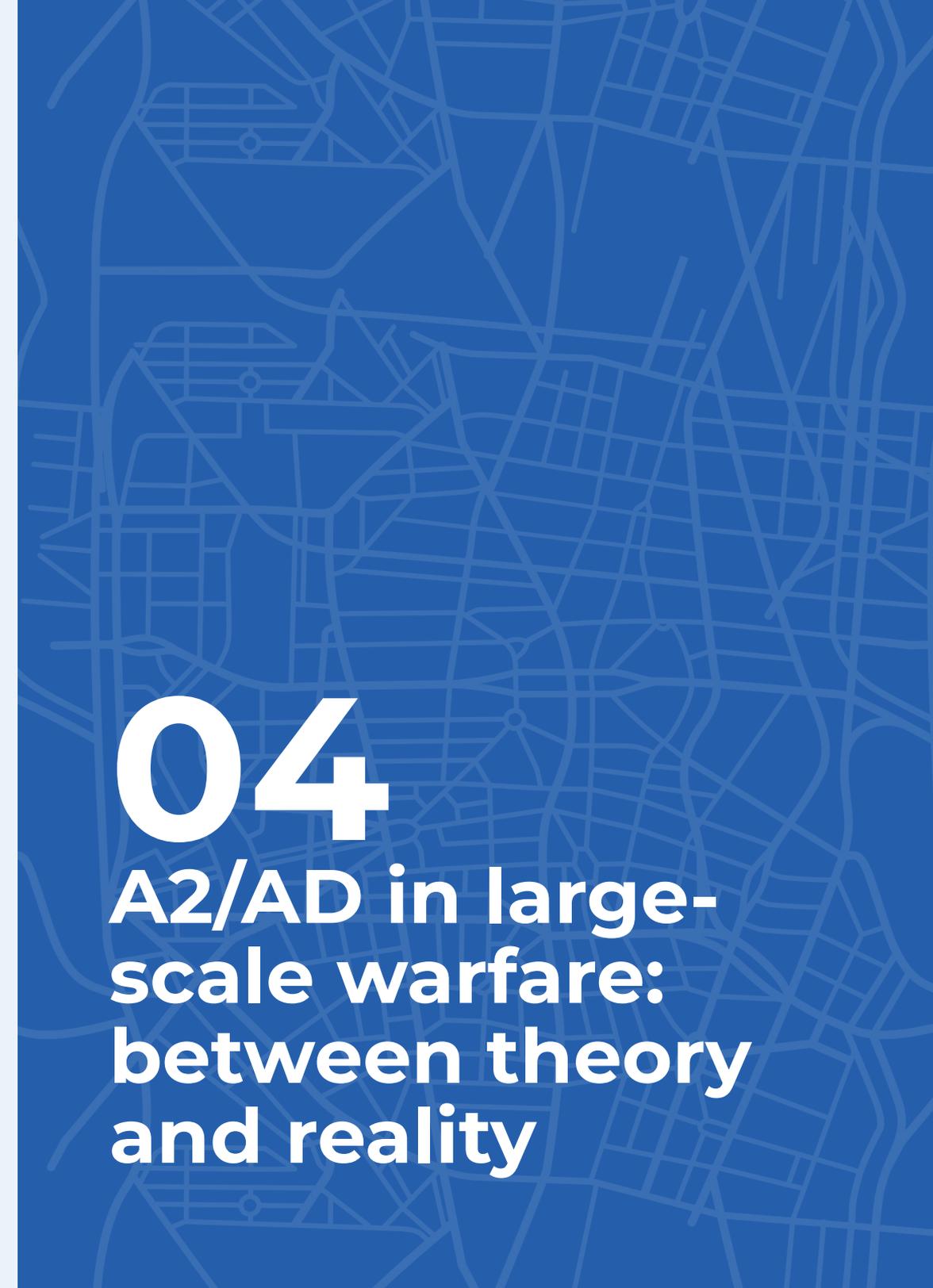
It cannot be ruled out that, given the ambiguous US policy toward Ukraine and Washington's desire for a greater European contribution to the security of the Old Continent, the Kremlin may interpret these actions as favourable conditions for increasing pressure on the Baltic Sea region countries.

The Baltic Sea region is critically important to Russia for several reasons:

- Under the "threat from the West" narrative, the Kremlin aims to satisfy its imperial ambitions and meet the expectations of Russian society, shaped by years of propaganda. One of the main strategies to achieve these goals is to regain influence in the Baltic Sea region.
- To support the Kremlin economy, Russia tries to secure sea lines of communication (SLOC) from the country's ports on the Baltic Sea to global markets. For example, to ensure the export of sanctioned oil products to global markets by using a shadow fleet under a third-country flags and thus feed Kremlin's war machine.
- To enable and defend its A2/AD, deep strike, and land operations in a possible military conflict with the West.
- To ensure SLOC for Russian nuclear submarines from the Zapadnaya Litsa Naval Base through the White Sea and the Barents Sea to the North Atlantic.

3.3. Recommendations:

- The Baltic Sea region countries should abandon the illusion that cooperation with Russia in economic and political spheres, along with mere demonstrations of force and rhetoric, will deter a potential aggressor. Strategic political and military decisions, acquisitions, consistent and vigorous capacity development, and preparedness can compel the aggressor to increase the costs of their preparations for aggression. Most importantly, this would enable the states of the Baltic Sea region to meet aggression at the highest level of readiness.
- During peacetime, the Baltic Sea region states should agree and implement a “deterrence through punishment” strategy. Every aggressive Kremlin action against the Baltic Sea region countries should have clear and painful consequences for Kremlin. The best way to achieve this is by focusing on political, economic, and military support for Ukraine through more intensive intelligence sharing, transfer of medium-range (up to 300 km) and long-range (more than 300 km) capabilities, and financial contributions to Ukraine's military industry development.
- In the face of an imminent and unavoidable armed conflict, decision-makers in the Baltic Sea region must not repeat Ukraine's mistakes. Critical decisions for the defence of the countries and the region need to be made, including initiating NATO Articles 4 and 5, activating defence plans (such as preventive strikes), declaring mobilization, and more.
- The issue of mobilization requires careful attention. It is vital to recognize that having plans alone is insufficient; there must also be specific mobilization reserve capabilities, including personnel and resources. Countries without conscription in their armed forces and without a prepared civilian mobilization component will likely face an almost impossible challenge to mobilize resources during a large-scale war, resulting in significant losses of population and infrastructure. Therefore, addressing these issues now is critically important.



04

**A2/AD in large-
scale warfare:
between theory
and reality**

For a long time, the A2/AD concept was viewed as a way to prevent an opponent or adversary from entering a specific area by using a combination of air forces, naval forces, air defence, electronic warfare, and deep-strike capabilities, all concentrated within a relatively small zone. In the case of Russia, the A2/AD “bubbles” in Kola, St. Petersburg, Kaliningrad, Crimea, and other regions

have caused significant concern among Western scholars, sparking intense debate within the security of community and moved onto the agenda of decision-makers. Meanwhile, Kremlin propaganda actively promoted the idea that these “bubbles” are invincible. However, Russia’s aggression against Ukraine has revealed new perspectives for this concept.

4.1. Lessons identified from the Russian aggression against Ukraine.

• *The classic A2/AD “bubble” in a large-scale war.*

In 2022, when the large-scale invasion began, Crimea served as an A2/AD platform. As a result, the Ukrainian navy suffered heavy losses in the first phase of open aggression. Russia’s attempt to restrict the movement of Ukrainian grain by sea was painful for the Ukrainian economy. In addition, regular strikes from Crimea with ballistic, cruise missiles, and long-range attack drones limit the operation of the port of Odesa, disrupt military logistics, and cause socio-economic problems. Russia’s deep strike infrastructure

in Crimea, especially its ballistic missile systems, allows the aggressor to reach high-value targets in Odesa quickly.

However, from a strategic standpoint, Russian military goals have not been met. After nearly four years of open conflict, the Crimean A2/AD “bubble” has failed to cut off or destroy the Ukrainian Izmail – Odessa – Mykolaiv logistics hub. This is because Ukraine has adopted a flexible and aggressive approach, preventing Russia from gaining dominance in the Black Sea.

• Based on timely intelligence and precise targeting, the Ukrainians used cruise missiles and naval drones to force the Russian Black Sea Fleet out of the Western part of the sea. As of December 1, 2025, Russia’s Black Sea Fleet had lost 28 ships of various types. Additionally, Ukrainian strikes reduced Crimea’s capability to serve as a base for the Black Sea Fleet. A clear example is the Ukrainian strike with Storm Shadow missiles on Sevastopol, which heavily damaged a Russian Kilo-class submarine.⁸ For

these reasons, the Russian Black Sea Fleet was forced to move eastward to Novorossiysk. However, even there, Ukrainian forces could attack the aggressor's infrastructure and forces. On December 15th, 2025, Ukrainian forces with underwater drone "Sub Sea Baby" attacked Novorossiysk Naval base and damaged or destroyed Kilo class submarine.⁹

- Ukrainian forces are taking control of (or aiming to take control of) infrastructure in the Black Sea that could be a part of A2/AD system. One can recall the recapture of Snake Island by Ukrainian forces in June 2022, as well as ongoing efforts to prevent the Russians from accessing gas and oil platforms in the Black Sea.

- Ukrainian deep strike capabilities regularly and systematically target military objectives within the Crimean A2/AD "bubble". The most frequent attacks focus on the air force and air defense infrastructure. Still, strikes are also launched against Russian deep-strike capabilities, logistics hubs (Kerch Bridge, Dzhankoy), and oil and energy infrastructure.¹⁰

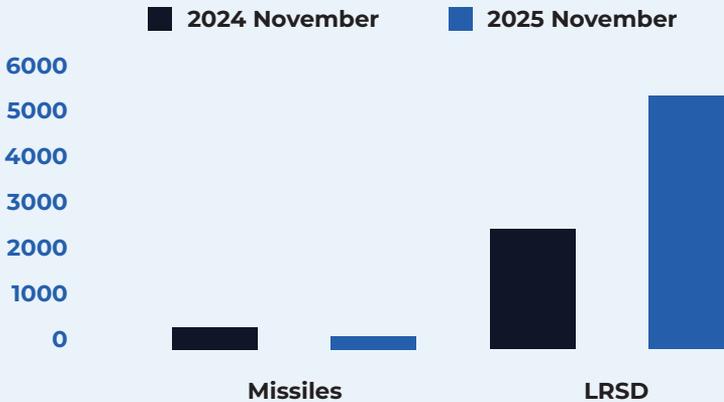
In this regard, the active pursuit of the A2/AD "bubble" concept not only produced limited results but also made Crimea a strategic dilemma for Russia. Conversely, it is important to recognize that Russia is also employing different strategies in the context of a large-scale invasion.

- *Deep and middle strike.*

Russia, with ballistic, aeroballistic, cruise, and, less frequently, anti-ship missiles, as well as various types of long-range strike drones

(LRSD), targets Ukraine's logistics, troop concentration, and Western support hubs, thus creating a large-scale A2/AD effect. Russia is carrying out combined strikes, using missiles and attack drones together to overload Ukraine's air defences, find the gaps, and multiply strike effects.¹¹ It is important to note that LRSD are not only improving technologically (e.g., using the Geran 3 with a jet engine), but its scope of use is also rapidly expanding (air defence, FPV drones carriers etc.)

Russian deep strike tools against Ukraine



Source: Ukraine General Staff of Armed Forces

Deep (more than 300 km) and middle (300 km and less) strike operation areas can be divided into:

Strategic

Locations, such as seaports, airports, land roads, and railways through which Western military aid arrives, as well as the initial collection and distribution points for this aid (e.g. Izmail – Odessa – Mykolaiv; Western Ukraine).

Operational

A network of logistics hubs near the Dnieper River (Kyiv, Kremenchuk, Dnipro, Zaporizhia).

Tactical

Logistical points on the eastern side of the Dnieper River, 100–120 km from the contact line (Pavlohrad, Slovyansk – Kramatorsk, Izyum, Balaklya, Kharkiv, Poltava, Sumy, Konotop, etc.).

On one hand, this division allows the aggressor to concentrate on reconnaissance (such as long-range drones) and strike capabilities (such as ballistic and aeroballistic missiles). On the other, when an opportunity presents itself to create a significant impact (for example, after obtaining intelligence), strategic weapons (such as ballistic missiles) are also employed within the tactical A2/AD zone. These cases are often recorded around Pavlohrad, Kharkiv, or Poltava areas.

Additionally, Russia consistently targets civilian sites and energy facilities. This not only disrupts supply chains but also might heighten social pressure and cre-

ates tension between the public and Ukrainian decision makers and institutions.

It is important to note that the locations (launch sites) of these deep and middle strike tools are determined not by the desire to focus the entire spectrum of A2/AD capabilities in one area, thus creating a direct counterbalance to the opponent's air defence, but by infrastructure conditions, which often dictate that deep or middle strike elements are used in specific locations. For example, the permanent bases of missile units, drone launch infrastructure established at a military airfield, and planned launch sites for cruise missiles in the air or at sea. Russia's deep and middle strike capabilities theoretically allow targeting most locations in Ukraine from various points, not just from the "bubbles". Therefore, in a large-scale war, forming an A2/AD "bubble" is neither always necessary nor a safe option, as it can become a target for the opponent's deep and mid-strike capabilities (as in Crimea).

It is important to note that the aggressor's capabilities against Ukraine are expanded by the use of 9M729 cruise missiles, whose secret production led the US to withdraw from the Intermediate-Range Nuclear Forces Treaty in 2019. It has been recorded that these 2,500 km range surface-to-surface missiles have been used against Ukraine 23 times.¹²

Interesting, that Russian strategic bombers sometimes recorded striking targets at closer ranges than would be expected based on the technical and tactical data of the missiles used in these strikes. For example, on December 1st, 2025, strategic bombers attacked targets from the Rostov-on-Don region with Kh101 missiles. Until then, those missiles were most often used to target locations 650-1200 km from the line of contact (Vologda, Astrakhan, Saratov regions). The Rostov-on-Don region is 340 km from the line of contact. The Kh-101 missile has a range of 3,500 km, so there is no theoretical need to get closer to the contact line.

However, Ukraine's missile defence intercepts these missiles at a very high rate. The main reason is early intelligence warning. As soon as the bombers take off, Ukraine is alerted to the threat of a missile attack. Additionally, for example, when attacking 1,000 km away from the target, the missile will reach it in about an hour (the missile's flight speed is approximately 990 km/h). Compared to other Russian missiles like Iskander M and Kh-22, it is significantly slower. This gives Ukraine's missile defence time to prepare for such an attack. Therefore, it is likely that by decreasing the distance to the target, the Russians aim to increase the attack's effectiveness.

Russian deep strike launching sites

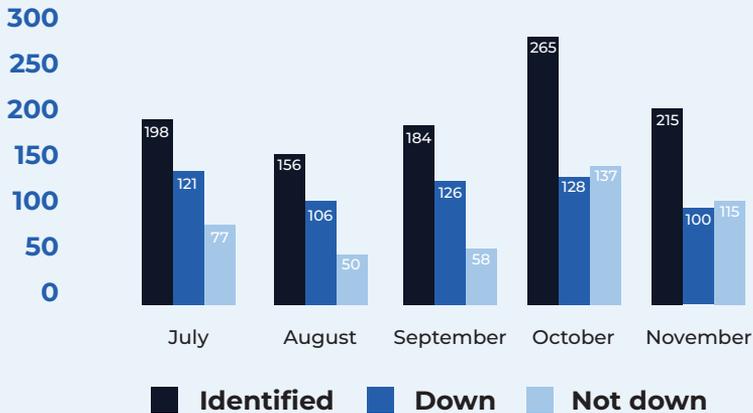


For their part, Ukrainians are striking the aggressor's A2/AD and deep/middle strike capabilities (e.g., Russia's 26th Missile Brigade¹³, Iskander base at Molokino¹⁴, Shahed drone depot at Donetsk airport¹⁵). In addition, the operation "Spiderweb" demonstrated that an asymmetric approach can give significant results in destroying the aggressor's strategic bombers. In addition, Ukrainian

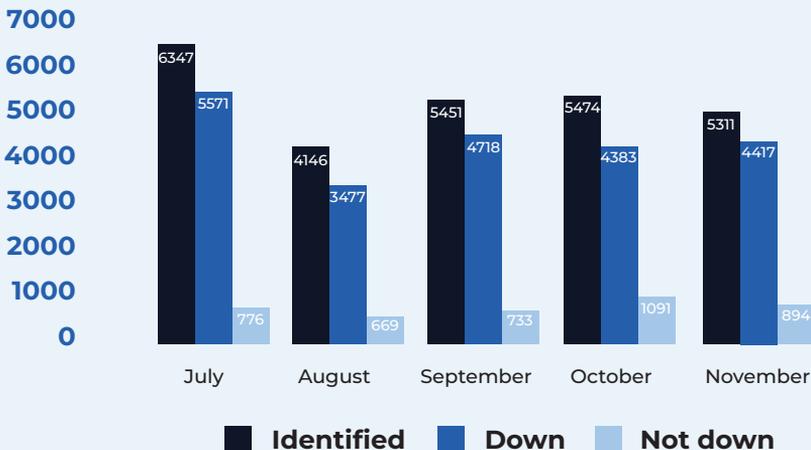
forces are conducting their own broader spectrum deep strike operations, which are focused on destroying Russian oil refinery and storage infrastructure, and disrupting its oil trading network.

Furthermore, Ukraine's anti-drone and anti-missile defences have maintained their ability to destroy drones and missiles for almost four years.

Ukrainian missile defence efficiency



Ukrainian LRSD defence efficiency



Source: Ukraine General Staff of Armed Forces

· Air superiority.

Although Russia claimed to have destroyed Ukraine's air force and achieved air dominance early in the war, this remained an unfulfilled goal for the aggressor. Over nearly four years of open conflict, Russia has failed to secure air superiority (Ukrainian air force still conduct operations on the contact line and provide middle strike operations). Thanks to Ukraine's air defence capabilities and Western support, Russian fighter jets do not dare to cross the line of contact. As a result, the A2/AD role is primarily carried out by Deep/Middle-strike capabilities. At the same time, combat aircraft (e.g., Su-34) operate along the contact line or in the immediate rear of Ukrainian forces.

However, in December 2025, Russian Geran 2 LRSD (with a flight range of up to 2,500 km), armed with R60 air-to-air missiles, were spotted. These missiles can destroy targets in the air at 8 km,

which could pose additional threats to Ukraine's air force in the deep rear of Ukrainian positions.

Additionally, in the autumn of 2023, the aggressor started developing a gliding bomb (KAB's in Russian) program. It means attaching navigation and gliding modules to old Soviet free-fall bombs, such as FAB 500. Due to the limited capabilities of Ukrainian fighter jets to push Russian aircraft at least 100 km away from the contact line and the large Soviet aviation bomb stockpile, Russia was able to conduct extensive experimentation. This has not only increased the glide bomb range from 70 to 150 km (with reports of experiments reaching targets at 400 km¹⁶) but also improved accuracy. This gives the aggressor the ability to hit the targets beyond the contact line. For instance, the aggressor is conducting strikes on Ukrainian logistics centres like Zaporizhia and Dnipro with these gliding bombs, thereby enhancing the A2/AD effect.

Ratio of Russian aviation activity and casualties



Source: Ukraine General Staff of Armed Forces (Downed aircrafts includes jets, helicopters downed in the air and on the ground)

· *A2/AD as a land operation.*

During its open aggression against Ukraine, Russia is aiming to achieve the A2/AD effect through offensive land operations.

a) Physical control of the A2/AD target. During a large-scale invasion, one of the operational objectives of Russian ground forces is to seize areas where A2/AD operations are underway. From late February to early March 2022, after Russians crossed the Dnieper River and captured Kherson, Russian forces moved toward Mykolaiv. Russians attempted to advance along the Mykolaiv–Odesa Road toward strategically vital seaport of Odesa, which has been a focus of A2/AD and deep-strike operations throughout the war. Rumours about Russian seaborne operation on Odesa shores were also in place.

b) One of the objectives of land operations is to enable deep strike or middle strike strikes, thus creating an A2/AD effect.

· In 2025, Russia's successful offensive in the Pokrovsk–Huliajpole sector and the tactical advancements Orihiv–Stepnohorsk sector enabled Russian gliding bombs to target not only Zaporizhia (about 30 km from the contact line) but also Dnipro (about 130 km from the contact line). Both cities are critically important for Ukrainian forces to move troops and logistics across the Dnieper River toward the contact line.

· Land operations also enabled the aggressor to establish deep strike and mid-range strike infrastructure on the ground. For example, in August 2025, Russia secretly started developing an LRSD base at Donetsk Airport. In fall 2025, the distance from the contact line to Donetsk Airport was 40-46 km, placing it within Ukrainian MLRS range. It is likely that the aggressor aimed to activate this base after capturing Pokrovsk. This facility was probably planned for attacking Zaporizhia, Dnipro, and Izium. Drones departing from Donetsk to their targets would have a significantly shorter flight time compared to those from the closest LRSD launch site in Primorsk Akhtyrsk. The distance from Donetsk to Dnipro is 200 km (Geran 2 reaches the target in an hour, Geran 3 in 40 minutes), whereas from Primorsk Akhtyrsk it is 355 km (Geran 2 takes 1 hour 40 minutes, Geran 3 takes 1 hour). On November 6, 2025, Ukrainian forces destroyed this LRSD base.¹⁷

However,, because of the expanding kill zone caused by devolving drone capabilities, operations and fortifications, and rapidly declining Russian armoured vehicle reserves, the aggressor is deploying small infantry assault groups, in which mobility is often provided by unarmoured vehicles, and armoured vehicles are rarely used. Offensive and defensive actions are supported by drones and robotic systems (tactical reconnais-

sance, strike, fire & maneuver, air defence, logistics, engineer, etc.). For these reasons, Russian attacks are constant, but the pace of the Russian advance is very slow. For example, over the course of a year (November 1, 2024–November 1, 2025) in the main effort areas (e.g., Pokrovsk), Russian ground forces advanced only about 20 km in depth.

4.2. Lessons learned for the Baltic Sea region.

Considering the experience of the war against Ukraine, it is unlikely that Russia would rely on A2/AD “bubbles” as a primary and decisive method to prevent allies from entering the operational area in the event of a large-scale invasion in the Baltic Sea region. It is more probable that the main goal would be to achieve the A2/AD effect through complex operations.

- Disruption or elimination of allied operations in the vicinity of the Norwegian and North Seas through Russian naval operations.
- Target Allied deep strike infrastructure that could potentially dismantle Russian A2/AD “bubbles” using the most effective deep strike tools, including the possibility of employing nuclear weapons.
- Combined strikes with missiles and drones on logistical hubs and mobility corridors in Central/Western Europe and Northern Atlantic to disrupt the Allies’ access to the Baltic Sea region.
- Gaining superiority in the Baltic Sea, including the capture of strategically important islands, and underwater, such as using maritime and underwater drones.
- A land operation not only aimed at cutting off the Suwalki Corridor but also at creating a 200-300 km deep “buffer zone”, such as by occupying Polish territory in the Gdansk – Bialystok area.
- Once control of the Baltic Sea region (or part of it) has been established, the goal could be to use it as a base for A2/AD and deep strike operations in the North Atlantic and Central and Western Europe.

· *Land.*

It is unlikely that at the start of a war against NATO countries, Russia would conduct land operations based on the principles we currently see in Ukraine, such as small infantry groups and a slow attack pace. It is more probable that in the initial phase, Russia would attempt to quickly seize the targeted territory using mechanized and motorized forces, thereby protecting its A2/AD capabilities and enabling them to operate effectively. However, it is very likely that Russian ground forces will employ elements already tested and proven effective in the war against Ukraine, especially tactical reconnaissance, air defence, logistics drones, robotic systems, electronic warfare, and affordable, large scale of fire support elements such as drones, artillery and gliding bombs. support like drones, artillery, and gliding bombs.

As mentioned earlier, the Russian forces' advance of 100 km over 5 days has had long-term operational consequences in Ukraine, such as the loss of Kherson. Meanwhile, on the eastern Baltic coast, such a pace of advance could create problems at the strategic level, potentially cutting off the Suwałki Corridor, causing the loss of Białystok and Gdańsk, and reaching the approaches to Warsaw. While it is very likely that effective NATO intelligence will

prevent Russia from achieving the element of strategic surprise during an attack against the Baltic Sea region states, tactical surprise remains possible. A lack of political leadership, including will for preventive strikes, insufficient tools, and poor military readiness to confront the enemy from the first moments of aggression could have catastrophic consequences.

Incidentally, occupying these territories would allow the aggressor to protect and expand Kaliningrad's A2/AD "bubble" and other deep strike infrastructure. In addition, this would enable Russia to bring its deep-strike and middle-strike capabilities closer to the front lines and attack targets in Central and Western Europe and the North Atlantic quickly and with higher efficiency. This assumption is supported not only by examples from Ukraine but also by the fact that Russia is testing the Baltic Sea as a platform for deep strike attacks on Western Europe and the North Atlantic. The flights of Russian Tu-134 training strategic bombers over the Baltic Sea show that this is not only a display of power but also an effort to train personnel to conduct strikes if Russian land and air forces enable such operations.



■ **Tactical surprise.**
100 km line Russia reached in first 5 days of aggression against Ukraine (2022)

■ **No tactical surprise.**
20 km line Russia reached in 1 year on Pokrovsk direction (2024-2025)

· Sea.

The Russian navy would likely be a crucial factor in the event of an armed conflict. Assessing the capabilities of Russia's Baltic, Northern, Pacific, and Black Sea fleets, Russia's main priority in the Baltic Sea is mining and mine-clearance operations, which aim to disrupt the SLOC of NATO allies and ensure its own control over SLOC. Meanwhile, likely, the Northern Fleet and its activities in the North Atlantic (Norwegian and North Seas) would be the focus of Russian naval operations, with submarines playing a decisive role.

	Mine warfare	Submarines
Baltic Sea Fleet	12	1
Northern Fleet	7	22
Pacific Fleet	12	23
Black Sea Fleet	10	5

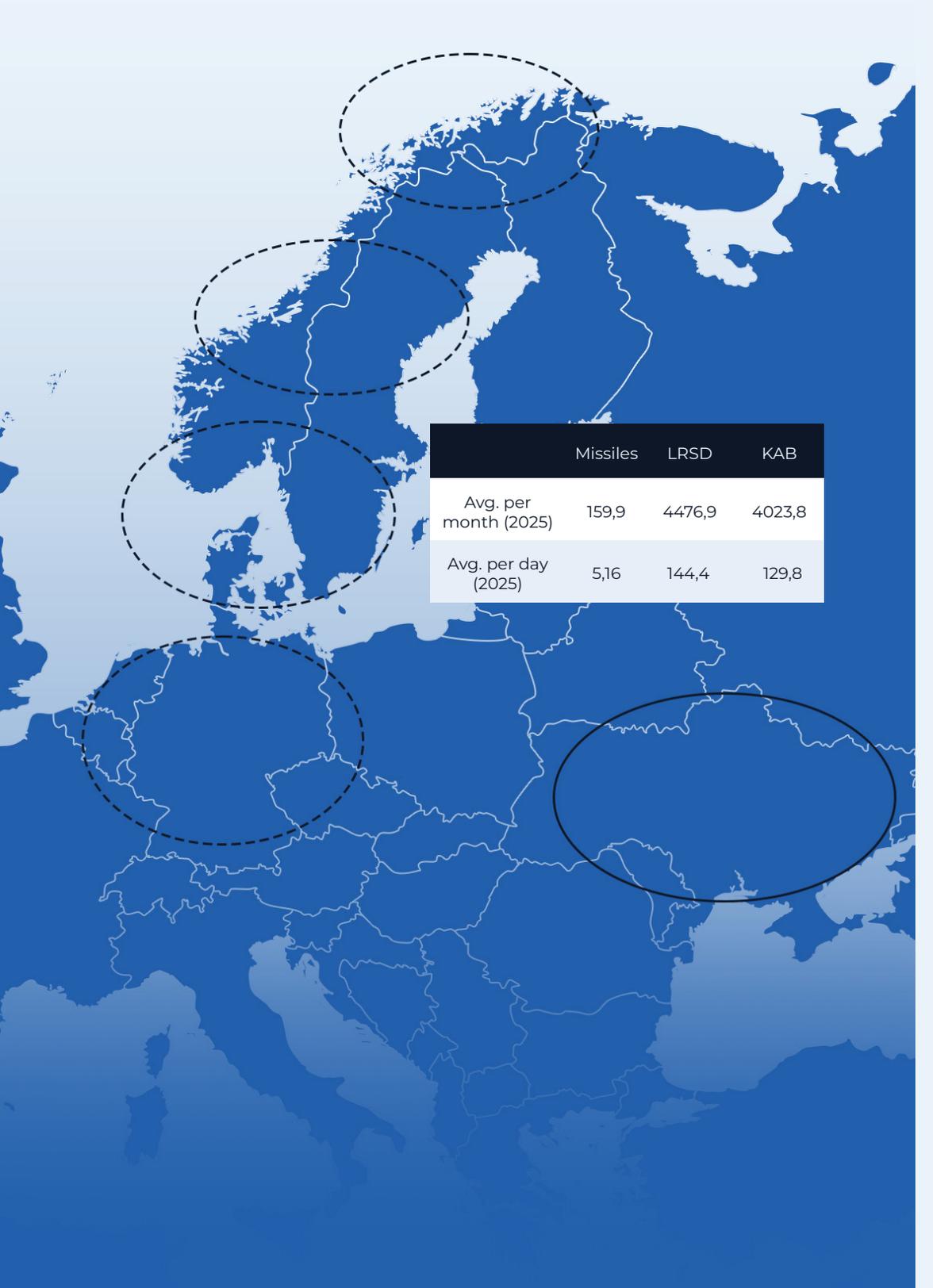
Source: *The International Institute for Strategic Studies*¹⁸

· Air.

Given Russia's performance in Ukraine, it is likely that NATO Allies will hold a significant advantage in the air. However, Russia may try to exploit the effects of gliding bombs and air defence drones (especially Geran 2 LRSD armed with air defence missiles) at the tactical level, thus gaining an edge in specific operational areas.

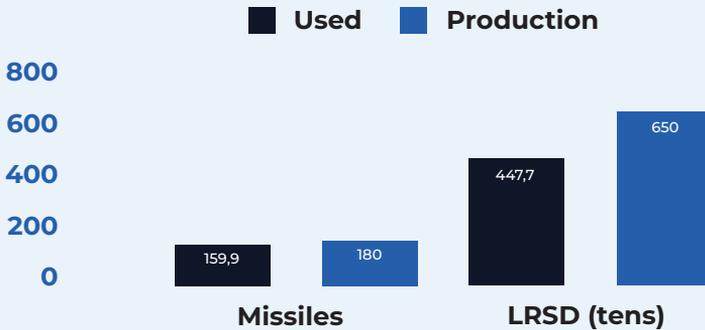
· Deep and mid-range strikes.

Ukraine's territory, targeted by Russian deep- and mid-range capabilities, is comparable to critical regions for Baltic Sea defence, including the ports of northern Norway, the Baltic Sea straits, and key logistics routes in the Benelux, Germany, and Poland. The magnitude of Russia's deep strikes against Ukraine might partly show the potential of such attacks against the West. Open sources suggest that the aggressor cannot currently significantly increase strike intensity or sustain this level for long.



	Missiles	LRSD	KAB
Avg. per month (2025)	159,9	4476,9	4023,8
Avg. per day (2025)	5,16	144,4	129,8

Russian deep strike balance per month



However, since deep strike might be one of the few options available for the Kremlin to disable or destroy the arrival of Allied forces in the Baltic Sea region, it is likely that Russia will aim to significantly expand its reserves of deep strike capabilities. This assumption is based on:

- The rapidly increasing scale of production and use of LRSD, along with the continuous improvement of technologies (e.g., jet drones).
- The improvement of missile and drone resistance to electronic warfare.
- The 9M729 ground-to-ground cruise missile, which is being tested against Ukraine, is used on a small scale. Its 2,500 km range allows these missiles to be launched from Russian or Belarusian territory to reach the regions mentioned above, which are vital to defence in the Baltic Sea region.
- Low pace of Western air, anti-missile, anti-drone defence adaptation.
- The use of missiles like the Kh22/32 or Tsirkon against Ukraine is quite limited, although the aggressor is producing them at a similar rate to the Kinzhal or Iskander K, which are actively used against Ukraine. Likely, this allows Russia to build reserve of such missiles.
- North Korea is supplying Russia with KN23, an equivalent of Iskander M, at a high rate. Chinese companies are helping to bypass sanctions, which has led to at least a threefold increase in the production of ballistic and cruise Iskander missiles.¹⁹ It cannot be ruled out that this cooperation has not reached its limit, especially if a conflict arises between global powers.

On the other hand, the Russian aggression against Ukraine has revealed the following systemic problems for Russia:

- Russia remains substantially behind the West in technology.
- Ukraine's operation "Spiderweb" revealed consistent gaps in Russia's physical security of critical military sites, short-range air and anti-drone defences, and counterintelligence.
- Ukraine's deep strike operations against Russian military targets (strategically important ammunition depots²⁰, military industrial facilities²¹) and oil refining infrastructure²² demonstrates systemic problems in Russia's air and anti-missile defence.

The countries in the Baltic Sea region, with a broader and more advanced deep strike arsenal than Ukraine and untapped technological potential, could use those Russian gaps in their regards. The efforts by European countries, including those in the Baltic Sea region, to develop their deep strike capabilities are promising. The European Long-Range Strike Approach (ELSA) initiative, launched in June 2024, aims to enhance European nations' deep-strike capabilities and the supporting elements, such as intelligence²³. Half of the countries participating in ELSA are from the Baltic Sea region – Germany, Poland, and Sweden. It is important that other Baltic Sea region countries would also consider joining this initiative or contributing by implementing separate projects. Hopefully, this initiative will foster the unification of deep-strike capabilities and expand production and supply chains, which are critically important in conventional warfare.

However, in this context, the resistance of deep strike capabilities to electronic jamming could be developed more systematically. At the same time, in conventional warfare, investing solely in highly modern tools, which are expensive and time-consuming to manufacture, could cause disruptions in supply chains, preventing forces from striking at the right pace.

Therefore, ELSA could act as a platform for developing not only missiles but also medium- and long-range attack (air and sea) and reconnaissance drones. This would help smaller countries in the Baltic Sea region find their niche and build capabilities that reduce reliance on highly accurate but expensive systems. It would allow countries in the region to effectively target a potential aggressor's deep strike and middle strike capabilities, command and control systems, military industry, and other key targets.

4.3. Recommendations:

Given Russia's efforts to develop a flexible and numerous deep strike infrastructure and adapt it to evolving battle dynamics, it is crucial to enhance the air defence of the Baltic Sea region countries, accordingly, integrating anti - missile defence, anti-drone systems, and protection against enemy aircraft into a cohesive system. It is important to remember Russia's strategy of targeting not only military but also civilian targets and energy infrastructure with missiles and large numbers of drones. Therefore, it is worth considering prioritizing air defence capabilities, exploring flexible solutions such as air defence drones, and deploying or involving paramilitary forces.

- NATO countries need to enhance their A2/AD capabilities in the North, Norway's seas, and the Baltic Sea region, including maritime drone technology, to not only hinder Russia's efforts to build forces for potential aggression but also limit its attempts to disrupt Allied operations and logistics in the North Atlantic.
- To develop a preventive or first deep strike capability that would cause unacceptable damage to the enemy. It is equally important to develop significantly cheaper and faster-to-produce capabilities (e.g., drones) alongside high-tech missiles, integrating them into the overall deep strike system. The ELSA initiative could serve as a unifying platform for this task.
- Given the uncertainty about US leadership in NATO and European defence involvement, it is crucial to develop and strengthen European intelligence capabilities – especially space-based intelligence – to ensure early threat warning, support deep strike capabilities and battle damage assessments.
- The initial phase (first days) of a possible Russian land operation in the Baltic Sea region could be critical. Therefore, it is important to strengthen collective and national defence capabilities in the Baltic Sea area, particularly on its eastern flank. This will help prevent the aggressor from dominating the region during a conflict and counter his attempts to conduct A2/AD and deep-strike operations against the North Atlantic and Western Europe from the Baltic Sea region.

¹ <https://sc.bns.lt/view/item/military-experts-at-defending-baltics-nato-countries-should-not-replace-conventional-capabilities-with-drones-519349>

² <https://www.gssc.it/en/publication/defending-baltics-war-lessons-from-ukraine/>

³ A2/AD is an attempt to deny an adversary's freedom of movement on the battlefield. Anti-access –inhibition of enemy military movement into an area of operations – utilizes attack aircraft, warships, and specialized ballistic and cruise missiles designed to strike key targets. Area denial – denial of enemy freedom of action in areas under friendly control – employs more defensive means, such as air and sea defense systems. Andrew Krepinevich, Barry Watts and Robert Work. "Meeting the Anti-Access and Area-Denial Challenge." Center for Strategic and Budgetary Assessments

⁴ These figures include the population of Russian-occupied territories. Excluding Russian-occupied territories, Ukraine had a population of 36 million.

⁵ <https://www.levada.ru/indikatory/otnoshenie-k-stranam/>

⁶ <https://www.france24.com/en/europe/20250926-denmark-drone-incursions-all-signs-point-to-russia-suspect-ships>

⁷ <https://x.com/flygvapnet/status/1994403920781980003?s=20>

⁸ <https://ukdefencejournal.org.uk/images-show-storm-shadow-missile-damage-to-russian-submarine/>

⁹ <https://edition.cnn.com/2025/12/15/europe/ukraine-underwater-drone-submarine-novorossiysk-russia-intl>

¹⁰ https://en.defence-ua.com/news/ukraine_takes_out_russian_mig_29_and_irtysh_radar_in_dual_strike_on_crimea_video-16710.html

¹¹ <https://www.lrt.lt/en/news-in-english/19/2629352/russia-s-long-range-drones-shifting-threat-to-nato-s-eastern-flank>

¹² <https://www.reuters.com/business/aerospace-defense/russia-uses-missile-ukraine-that-led-trump-quit-nuclear-treaty-kyiv-says-2025-10-31/>

¹³ https://en.defence-ua.com/analysis/details_emerge_of_ukraines_strike_on_russian_iskander_system-14764.html

¹⁴ <https://united24media.com/latest-news/ukraine-hits-russian-iskander-base-at-molkino-destroys-six-missile-system-vehicles-11896>

¹⁵ https://en.defence-ua.com/industries/ukrainian_special_operations_forces_blow_up_russian_shahed_drone_depot_at_donetsk_airport-16398.html

¹⁶ <https://ukranews.com/en/news/1117229-russia-plans-to-produce-up-to-120-000-kabs-and-is-working-on-a-400-kilometer-modification>

¹⁷ <https://www.businessinsider.com/satellite-imagery-shows-damage-new-russian-drone-base-ukrainian-attack-2025-11>

¹⁸ The Military Balance 2025

¹⁹ <https://militaryni.com/en/news/russia-ramps-up-iskander-missile-production-with-chinese-made-machinery/>

²⁰ <https://www.cbsnews.com/news/ukraine-hits-russia-drone-attack-toropets-military-depot-explosions/>

²¹ <https://www.pravda.com.ua/eng/news/2025/06/15/7517257/>

²² <https://www.bloomberg.com/news/articles/2025-12-01/ukraine-carries-out-record-attacks-on-russia-oil-infrastructure>

²³ <https://www.iiss.org/research-paper/2025/11/deep-precision-strike-europes-quest-for-long-range-missile-capabilities/>



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