Military capabilities in Europe: a framework for assessing the qualitative dimension

Bastian Giegerich and James Hackett

With contributions from Jean-Pierre Maulny, Tony Lawrence, Juha Pyykönen, Robbie J. Boyd, Marcin Terlikowski, Richard Barrons and Paul Rimmer

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Intense debate is once more taking place in Europe about the purpose of the continent’s armed forces, the tasks set for them and the means they need to achieve these, and also how to know whether they can meet these tasks. Following nearly three decades of crisis-management operations abroad, none of which was a response to an existential threat to European nations in NATO and the European Union (EU), deterring and defending against state-level aggression has returned as a challenge for the 2020s and beyond. As was argued at an international expert workshop convened by IISS–Europe in Berlin in October 2021, Europe’s strategic holiday is over. Examining issues around the nature of military capability and how it can most effectively be assessed from the perspective of selected European armed forces has added salience in the context of a deteriorating security environment, limited resources and a need for governments to better explain the benefits of defence investments with reference to whole-of-government and even whole-of-society approaches to security.

When examining military capabilities, the full range of inputs – quantitative and qualitative – that provide essential building blocks for capability need to be taken into account. Yet there is no ‘gold standard’ for military capability: states and defence establishments have diverse national ambitions for their armed forces and differing views on what constitutes their most important role. Only when those goals are understood is it possible to determine whether or not states are meeting them.

Diversity in ambition and roles is certainly reflected in Europe. During the Cold War, states in this region that were part of the ‘West’ looked to generate and maintain military power in order to deter and, if necessary, engage the forces of the Warsaw Pact states. They were also looking to do so through the prism of cooperation in NATO, which provided frameworks by which its members could harmonise their defence planning in a bid to generate effective, and interoperable, military power. After the Cold War, armed forces across the continent decreased in size, defence spending fell, a number of former Warsaw Pact states joined the EU and NATO, and the armed forces of many European states were reshaped for limited expeditionary operations. The period of crisis-management operations from the 1990s to the 2010s coincided with a loss of coherence and cohesiveness with regard to threat perceptions and even awareness within and among the societies of the EU and of NATO’s European member states. In the extreme, such trends might undermine these societies’ will to fight: a generation socialised into discretionary wars of choice might ultimately also come to view collective defence or even territorial defence as a choice and therefore optional.

### An assessment of Russian military modernisation at the beginning of the 2020s

Military reform and modernisation programmes launched in the wake of the poor performance of Russia’s armed forces in the short 2008 war with Georgia have achieved the following. They have:

- provided Russia’s political leaders with well-equipped conventional armed forces built around professional rather than conscript personnel;
- developed Russia’s armed forces into a credible tool for pursuing national policy goals;
- better equipped Russia’s ground forces, with elements of these – alongside the Airborne Forces – held at higher readiness than before;
- extended the firepower of Russia’s navy by the widespread introduction of land-attack cruise missiles;
- markedly improved the Aerospace Forces’ capability through the introduction of upgraded types of combat aircraft and associated weapons;
- focused predominantly on upgrades, as Moscow continues to grapple with the challenges of completing the development and production of new weapons.
- At the same time, Moscow continues to view nuclear forces as the ultimate security guarantor.
However, since 2014 – and amid renewed awareness that Russia was using its military capability as a tool to revive national influence and power – there has again in Europe been a focus on the potential for high-intensity conventional warfare, most clearly in those societies close to the threat. Russia fields capable conventional armed forces, which Moscow has been willing to use operationally, as well as the world’s second-largest arsenal of intercontinental-range ballistic missiles. Russia’s annexation of Crimea, its involvement in the war in eastern Ukraine and its apparently decisive intervention in the Syrian civil war exemplify growing military confidence and capability.
The need to evaluate military capabilities beyond simply quantitative indicators, such as sums allocated to defence spending, personnel numbers and equipment holdings, has long been recognised inside and outside government. Over many decades, defence and intelligence establishments as well as non-governmental experts have tried to define, conceptualise, assess and measure various dimensions of military capabilities. In doing so, they have often assessed another country’s military capabilities in comparison to their own. However, it is questionable whether these approaches necessarily answer the equally important question of what a particular country actually wants to achieve and, indeed, whether the capabilities it is generating are suited to these ambitions.

Defence establishments sometimes assess their performance by dividing military capabilities into several dimensions. In the United States, such an appraisal is split into four pillars: force structure, modernisation, readiness and sustainability. The Department of Defense also uses the DOTMLPF acronym, which stands for doctrine, organisation, training, materiel, leadership, personnel and facilities. In the United Kingdom, a similar breakdown under the ‘Defence Lines of Development’ uses the acronym TEPID OIL, for training, equipment, personnel, infrastructure, doctrine and concepts, organisation, information and logistics. France, meanwhile, focuses on six components forming the acronym DORESE: doctrine, organisation, ressources humaines (human resources), equipment, support, entraînement (training).

While these templates do provide pointers to some of the key dimensions of military capabilities, they are the product of the governments that designed them and may not be universally applicable. Moreover, previous studies assessing military capabilities have often paid less attention to the varying ambitions that countries have for their armed forces, as opposed to how they ‘measure up’ to leading nations or peer competitors. Each state’s military capability should also be assessed against the expectations that national policymakers and political constituencies have for their armed forces: the level of ambition that they set. However, while organising states according to levels of ambition may make categorisation slightly easier, it only partly helps the process of assessing their military capability.

Indeed, the IISS tackled this issue in a European context in a 2008 report entitled ‘European Military Capabilities: Building Armed Forces for Modern Operations’. The authors defined a set of criteria to measure European countries’ military capabilities: the number of troops deployed; the percentage of active forces deployed; the characteristics and duration of operations; the status of armed-forces reforms; a breakdown of defence spending; the level of the national defence technological and industrial base (DTIB); contribution to EU and NATO rapid-reaction capabilities; multinational exercises; participation in crisis-management operations; and legal and constitutional limits to the use of military force. But even this was neither sufficiently wide-ranging to capture the essential dimensions of military capabilities comprehensively, nor succinct enough to be suited to empirical comparisons across a wide range of countries.

To help in this process, the IISS looked to identify essential inputs necessary for creating, maintaining and enhancing military capability, applicable for all countries, bearing in mind that different states will have different requirements for each. In our view, these factors are:

- readiness and deployability: training, operational experience, maintenance and logistics (including reserve stocks)
- cohesion, leadership and morale
- planning and structure: organisation, command and control, doctrine and strategy
- material resources: defence spending and industry
- military enablers: such as space, cyber and emerging technologies
- intelligence: collection, assessment and dissemination
Without appropriate inputs from these six dimensions, armed forces will find it difficult to achieve the levels of military capability set as objectives for them. But each of these inputs need to be viewed in relation to a country’s assessed level of ambition. In other words, do countries have what they need, and are they attaining balanced investments across these input areas?

Of course, in Europe there is a coordinating factor for capability development in the guise of formal multilateral defence-focused institutions. Because of the important role these organisations play in providing frameworks by which their members can harmonise their defence planning, procurement or training in a bid to generate effective, and interoperable, military power, it is important to also examine how Europe’s multilateral defence organisations gauge members’ performance and requirements, and how they then decide what assistance they should deliver. This principally relates to NATO and the EU, but perhaps also includes other multilateral defence-related organisations like NORDEFCO or even the Visegrád Four.

An additional important factor is the United States. European states continue to depend, to varying degrees, on the US for many demanding and high-end capabilities. For some states, defence policy seems to be primarily driven by the ambition to be able – in the event of war – to hold out until the US (and NATO) arrives to help, or to make themselves partners of choice for the US. While there are many indications that the US is in Europe to stay, it is undeniable that China has become and will continue to be the ‘pacing threat’ for Washington – the main driver of US capability development. Because the Indo-Pacific is the US armed forces’ priority theatre, the conversation in European capitals has turned to the question of what capabilities might need to be delivered by Europeans in order to strengthen the US commitment to Europe, and whether the answer needs to include some form of European military presence in the Indo-Pacific.
Essential inputs

Readiness and deployability
For all states, whatever their level of ambition, it is essential to ensure readiness and deployability, in particular through military training, operational experience, logistics and maintenance. However, the relative weight applied to each input will vary depending on the country’s goals: for instance, what do countries think readiness means for them (i.e., what are they ready for?) and what is the relative priority given to high-readiness formations? If states prioritise by readiness, does this mean that units held at lower readiness may possess lower levels of personnel, equipment and training? A key related question is whether there are mechanisms in place to bring units to higher readiness without the need to redistribute personnel and equipment and in turn reduce the readiness of other units, such as through ‘cannibalising’ equipment for spare parts. Another question is whether there are monitoring mechanisms to track readiness levels in order to identify deficiencies. This becomes more complex for countries with a mixed personnel model, with professionals and conscripts, as well as in states that routinely mobilise reservists for deployments. For instance, is the conscript term of service long enough to merit investment in generating the appropriate level of military skills, or does it lead to de facto ‘streaming’ between technology-intensive and lower-skilled trades, or between higher- or lower-readiness roles? In states where the mobilisation model includes reservists, are routine training levels adequate to ensure that these reservists can effectively integrate with their parent unit, or are there specialist mobilisation centres designed to achieve this?

While adequate training is an essential contributor to, and indicator of, readiness, it is also important to gauge whether it is adapted to threat perceptions and the type of force employment that is envisaged. Exercises are important, but they do not constitute the whole measure of training. Other important elements include: the amount and standard of basic, trade and continuation training; the institutional structure of military education; whether a country’s armed forces maintain training relationships with allies and partners in order to benefit from their experiences; and whether a country itself possesses adequate training areas (or has agreements in place to use training areas in other countries) that are suitable for exercising all its military roles. The level of investment in synthetic training could also be important. Similarly, there would be a question about which exercises are significant in relation to capability. These would include exercises conducted by individual units or exercises with specific aims. It could, for instance, be important to know whether units intended for rapid-reaction tasks are engaged in more numerous – or more complex – exercises than other units. Or whether a nation is starting to use exercises to regenerate a capability that was previously lost, for instance opposed river-crossings. Other useful indicators might be whether units ‘win’ or ‘lose’ exercises rather than just participate in them, whether exercises involve ‘freeplay’ rather than just formal rehearsed set-plays, and if units receive critical feedback. Other quantitative indicators related to training include training days, days at sea and flying hours, though in the latter case it would be important to gauge what proportion was spent transiting to a training area, or on currency check or familiarisation flights, as opposed to role-related training sorties.

With regard to operational experience, one could look to assess the type and number of deployments, length of deployments, intensity of operations, success of operations and casualties taken. For logistics and maintenance, materiel indicators such as the inventory holdings of fuel, rations, munitions and medical supplies come to mind, as they suggest how long a country’s armed forces might be able to fight. But such data is often hard to obtain from open sources. For this reason, the number and size of ships, aircraft and vehicles available for logistic support may be relevant and necessary indicators, alongside other factors such as defence-industrial capacity and the areas in which national defence industries operate. Other factors could
include the breadth and quality of military infrastructure, and benefits from foreign military-to-military relations such as joint exercises and deployments.

Meanwhile, deploying for operational purposes requires internal and external enabling capacities. For example, a formation might have the capacity to move units using its own organic equipment but, alternatively, it might need to draw this from other elements of the armed forces, or indeed from allies’ or partners’ forces, or from the civilian sector. The availability and effectiveness of these enabling capacities might influence the military effectiveness of a unit, formation or service.

It may also be useful to examine whether the broader civilian infrastructure is suitable for the movement of military assets: for instance, are roads, railways and bridges suitable for military movements? At the same time, it would be useful to know whether a particular country maintains dedicated military air and sea points of arrival and departure, so that military forces would be able to move at short notice without undue notification of civilian authorities, or indeed what levels of maintenance their organic formations can perform in bases, or in the field, before equipment has to be either withdrawn from service or returned to the original equipment manufacturer.

Lessons learned from France’s military engagements in foreign operations and internal security
Jean-Pierre Maulny, Deputy Director, French Institute for International and Strategic Affairs (IRIS)

Armies must be built for wartime, not peacetime. This is the lesson that France has learned in recent years from its involvement in military operations. An army cannot be built solely on paper: it must be put to the test to see if its capabilities are effective operationally. More specifically, it is essential to guarantee its capabilities’ operational readiness, which depends on the forces’ training and the availability of equipment, together with the sustainability of these forces in the event of protracted military engagements.

In recent years, France has found it difficult to strike the right balance between the need to manufacture new equipment using the latest and most sophisticated technologies in order to gain an edge over adversaries, and the need to have an army that is fit for combat over an extended period of time. Two experiences have proved very useful for determining the proper ratio between the different domains that constitute a military capability’s effectiveness.

The first of these is Opération Sentinel, which can be described as internal-security deterrence following the terrorist attacks that struck France on 13 November 2015. It was decided at the time to deploy 10,000 soldiers to patrol within France, more specifically near sites that could be described as sensitive and potential targets for terrorist attacks, such as train stations and airports, through which large numbers of people transit. This figure of 10,000 soldiers corresponds to the national-security operational contract set down in the 2013 White Paper on Defence and National Security. The 10,000 soldiers were swiftly deployed, reflecting both their operational readiness and the command’s capacity to plan an operation of this type. However, it proved to be impossible for command authorities to schedule these troops’ mandatory relief after a four-month deployment. The number of soldiers turned out to be insufficient to allow for personnel to be rotated and take time off to rest and recuperate. Under the 2014–19 military planning law, adopted in 2013, the number of military personnel was to decrease, while a reorganisation was designed to increase the percentage of officers relative to the number of other ranks. But to continue Opération Sentinel and fulfil the operational contract for 10,000 personnel in the long term, it would be necessary to stop reducing the number of basic soldiers.

The second lesson learned concerns France’s concurrent involvement in Operation Inherent Resolve in Iraq and Syria and Opération Barkhane in the Sahel from the end of 2014. From that time, French forces were engaged in two external operations that required significant air assets in Iraq, with aircraft deployed either on the ground or on the Charles de Gaulle aircraft carrier, along with substantial land-based assets in the Sahel (with 5,100 troops), also requiring air support. These two external operations and Opération Sentinel had a ‘snowball effect’ when it came to the operational readiness of the French armed forces:

- Firstly, the conjunction of Opération Sentinel and operations Inherent Resolve and Barkhane led to reduced training time for land forces and for pilots of combat aircraft, helicopters and especially transport aircraft, with the training shortfall amounting to nearly one-third of the intended flight hours. These personnel were on active duty and no longer receiving sufficient training.
- Secondly, the equipment was in intensive use and wearing out more quickly, but the budgets allocated for...
maintenance proved to be insufficient, which meant that equipment-readiness rates fell. Readiness rates were very low for transport and attack helicopters in particular – just over 50% in 2017 – and for the armoured vehicles used in the Sahel, only three-quarters of which were serviceable during the same period.

Two measures were taken to respond to the lessons learned from the forces’ engagements during 2013–17. Importantly, all the French forces’ operations were cut back. Even though Operation Sentinel has been maintained, the number of troops deployed was reduced to 7,000 in 2016 and stands at only 3,000 today, but with the capacity for a rapid increase to 7,000. At the same time, the forces to be deployed in Operation Inherent Resolve have been reduced, while the deployment to Opération Barkhane in the Sahel will decrease from 5,100 to 2,500 troops in 2022, with deployment concentrated in the ‘three borders’ area between Mali, Niger and Burkina Faso. These arrangements will help prevent the units from becoming overstretched and unable to undertake sufficient training to achieve operational readiness.

Secondly, the Military Planning Law 2019–25 will accordingly factor in the lessons learned from the armed forces’ activities during 2013–17 to re-adjust the balance of budget allocations between new-build equipment and maintenance requirements, with a view to increasing the readiness rates of equipment in service. Maintenance budgets have been significantly increased. In 2019, nearly €400 million of additional funding was allocated, 10% more than the previous year. Over the entire period from 2019–25, maintenance funds will increase by one-third, excluding inflation, whereas the defence budget will increase by only 25% over the same period. This suggests that planners have realised they need to stop sacrificing maintenance costs so that they can instead guarantee equipment serviceability.

### French armed forces: selected examples of training required to reach full readiness

<table>
<thead>
<tr>
<th>Category</th>
<th>Training Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFANTRY</td>
<td>90 days’ operational preparedness per soldier, excluding external and internal operations</td>
</tr>
<tr>
<td>MAIN BATTLE TANKS</td>
<td>115 hours’ training per Leclerc tank crew</td>
</tr>
<tr>
<td>ARMoured INFANTRY FIGHTING VEHICLES</td>
<td>130 hours’ training per AFV crew</td>
</tr>
<tr>
<td>ARMoured PERSONNEL CARRIERS</td>
<td>1,100 kilometres per armoured personnel carrier (APC) or Griffon crew</td>
</tr>
<tr>
<td>RECONNAISSANCE VEHICLES</td>
<td>100 hours’ training per AMX 10 RCR or Jaguar crew</td>
</tr>
<tr>
<td>ARTILLERY</td>
<td>110 shots fired per CAESAR howitzer crew</td>
</tr>
<tr>
<td>HELICOPTERS</td>
<td>200 flight hours per French Army Light Aviation pilot; 220 flight hours for the special forces</td>
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### Cohesion

The cohesion factor, including leadership and morale, is significant whatever the country’s level of ambition, as is the related question of societal support for the armed forces. However, these dimensions of capability are particularly difficult to quantify. One possible objective measure is that of human-resources management. For instance, do officer-promotion patterns indicate the extent to which seniority is prioritised over competence? Or does the military force have adequate structures in place to manage military career structures? For instance, are there appropriate means in place to cycle long-serving personnel to retirement, so that the rank ‘pyramid’ retains the right shape and balance of junior, mid-rank and senior-rank personnel? Achieving such an outcome may not only be designed to generate an adequate number of deployable
personnel and a cohort capable of managing a continuous deployment cycle (i.e., one of planning and training/operational deployment/sustainment and return, recovery and reset), but may also be intended to make for more efficient budgeting.

Other indicators concerning human capital could include the educational level of recruits and/or military pay relative to civilian pay. With an eye to new and emerging capabilities, it could include whether the country and its defence formations are adaptable enough to attract and retain personnel of a ‘new type’ – such as cyber operators – in a way perhaps analogous to the means used to retain specialist medical personnel. Cohesion assessments could further include service, formation and unit tradition, and integration by gender, class, ethnicity and religion. In some countries, opinion polls of military personnel provide insights into levels of satisfaction with pay, working conditions and military leadership. And then there is the more elusive factor of esprit de corps, perhaps born of training or operational experience, and how, for instance, this is retained in periods outside of operations.

**Leadership, cohesion and interoperability: the Baltic states**

*Tony Lawrence, head of Defence Policy and Strategy Programme, International Centre for Defence and Security (ICDS)*

To varying degrees, but to a greater extent than most of their European allies, Estonia, Latvia and Lithuania rely on reserve forces to build the defence structures they consider necessary to deter, and if necessary defend against, an attack on their territories. All three Baltic states integrate volunteer reserves into their defence planning and all three would mobilise non-voluntary reservists – former regular personnel and, in Estonia and Lithuania, former conscripts – in times of crisis. Unit cohesion, an important, if intangible, component of military capability, is naturally more difficult to achieve in reserve-based structures than in regular forces. The three states have thus adopted a range of mitigation measures, including snap and scheduled call-up of reserves for refresher training and exercises, programmes to work with civilian employers to ensure that reservist obligations entail minimal disruption to business, reserve-officer training schemes and, ultimately, enforcement mechanisms to ensure that reservists do present themselves when required. Such measures, in particular reservist call-up, are also aimed at enhancing the readiness of the reserve structure, although in practice they perhaps do more to rehearse mobilisation in large numbers than they do to improve wider readiness.

The Baltic defence leadership can also rely on strong societal support for defence which, while probably contributing little to capability development, does at least provide for cohesion of purpose in the defence forces. This support is founded on historical experience and is largely intrinsic to the national character, but the leadership takes steps to encourage it, for example through defence education in the secondary-school curriculum and in novel approaches such as voluntary cyber-defence organisations that extend participation in defence to those who might otherwise be ineligible. A widespread belief in the necessity of strong defence, bolstered greatly by Russia’s 2014 illegal annexation of Crimea and intervention in eastern Ukraine, has allowed the Baltic states, by no means wealthy nations, to substantially increase defence spending (Latvia and Lithuania) or sustain already high spending (Estonia) in the years following the global financial crisis.

The task of the defence leadership in Estonia, Latvia and Lithuania is also simplified by a strong consensus concerning overall national defence priorities and policies. There is little disagreement in parliaments, media or among the public that the three countries should focus primarily on strengthening land forces (hence there is scarce inter-service rivalry) to provide for independent self-defence – the notion that the defence forces should withhold or blunt an attack until NATO reinforcements can arrive. In Estonia and Lithuania this policy also entails mandatory conscription, which again has wide societal backing. More broadly, high levels of support for defence allow the leadership to pursue comprehensive or whole-of-society defence policies. The willingness of the population to contribute to defence is evident in opinion polling, but in practice the Baltic states privilege military preparedness over preparedness in other areas, and this resource is consequently under-exploited.

In the alliance context, cohesion is important not only within national armed forces, but also between alliance members. At the practical level, cohesion can be enhanced through more and closer defence cooperation, either to acquire equipment and services or to improve mechanisms to operate multinationally. Among other advantages, generating military capability on a cooperative basis delivers better value for money, allows states to acquire capabilities that they could not,
Military capabilities in Europe: a framework for assessing the qualitative dimension

for technical or financial reasons, acquire alone, and ensures better interoperability. More broadly, it encourages shared understanding between allies and commonality of strategic culture. Defence cooperation is thus widely seen as a key mechanism to address Europe’s military capability shortfalls and has been promoted periodically by NATO (e.g., through the now largely moribund Smart Defence Initiative) and the EU (e.g., through Pooling and Sharing and, more recently, Permanent Structured Cooperation).

While NATO and the EU can encourage their members to do more together, individual cooperative projects are more usually implemented among clusters of like-minded states. Given their many similarities, the three Baltic states might be expected to naturally form such a cluster and to work closely together in defence. Indeed, in the 1990s, with substantial international assistance and the shared goal of demonstrating their commitment to becoming good allies, their flagship cooperation projects (the Baltic Peacekeeping Battalion, the Baltic Naval Squadron, the Baltic Defence College and the Baltic Air Surveillance Network) were an example to others.

But with the external pressures and incentives since removed, Baltic defence cooperation has largely stagnated and opportunities to work together, for example in the mechanisation of ground forces or in air defence, have been missed. Among the reasons are a lack of trust between the Baltic capitals, the emphasis they place on retaining sovereignty in defence matters – independent self-defence capability is a national, not a Baltic, policy – and divergent defence cultures (for example, although they all rely on reserves in their defence structures, they have each followed substantially different paths in implementing this policy). Most importantly perhaps, there appears to be little political will among the defence leadership to define the common rationale and objectives that would provide a solid foundation for Baltic defence cooperation, or the will to drive cooperation projects forward, rather than allow them to fail as inevitable problems arise. Cooperation has also occasionally been frustrated by the leadership itself becoming too closely involved in individual capability decisions, and challenged by the need, especially during times of rapidly growing defence budgets, for one state or another to spend money quickly or else lose it.

These problems are not unique to the Baltic states, and similar issues prevent the full potential of defence cooperation from being realised across Europe. Nonetheless, it is unfortunate that the military capability of Estonia, Latvia and Lithuania – states so similar in size, defence budget, geography, strategic circumstance and stage of defence development; and in the commendable seriousness with which they treat defence – is likely to be less, both quantitatively and qualitatively, than they could achieve by working together.

Cohesion and the will to fight in Finland
Brigadier General (Retd) Juha Pyykönen, Lic. Soc. Sc., Strategic Analysis Ltd

For Finland and its existence as a sovereign nation state, the paramount defence capability is its citizens’ collective will to defend its territory and integrity. Finland’s defence will stems from its history, location in a strategically important area, and the daily security-related notions of individual citizens. The key actor, if not a conductor, within this ongoing narrative is Russia, because its actions contribute directly to the national threat perception in Finland. A majority of Finnish citizens tend to follow almost daily what is happening in Russia. Recently, and repeatedly, Russia has weakened the security of Finland and its neighbouring areas. It has also lowered the threshold for the use of military force and extended the use of malicious information as well as cyber and hybrid tools. Consequently, it is self-evident that Finland, as a militarily non-aligned state, must be ready and fully prepared to defend itself with all its resources. Therefore, comprehensive defence, or total defence, is the sub-system within the overall security structure, which is readily available, regularly tested and exercised.

A functioning, comprehensive defence system requires strong cohesion within society. For instance, a clear majority of inhabitants must share a common understanding of values worth defending with arms. Awareness of the security situation at any one time must be high and shared. Also, mutual trust between government and administration, business operators, municipalities, universities, organisations in the third sector and individuals is vital. These actors maintain a network of comprehensive security in which they share information, set common objectives, and operate together at all levels and in all regions. Through regular cooperation, exercises and continuous dialogue between actors, mutual trust is further strengthened. And when the time comes, trust is measured in a crisis. Pertaining to the current COVID-19 pandemic, this
system is being tested and developed for the enhanced cohesion, or coherence, of society. To date, the main lessons learned are related to crisis leadership, clarity of responsibilities and functions, and efficiency and relevance of actions implemented.

Capabilities for response are selected to meet criteria based on various security threats. Finland has a comprehensive defence system which is based on seven functions vital for society’s security, each of which serves the common good. These functions maintain a secure daily life via, for instance, a well-functioning judicial system, sufficient border control, the traffic system and a healthy living environment. Each of these seven functions is delegated to a designated ministry, or administration branch, with a legally binding tasking document to prepare its organisation according to the National Risk Assessment. Depending on the specific characteristics of the crisis at hand, one of the ministries is declared as the lead actor, while the remaining ministries take on supporting roles. For the defence capability, which is one of the seven functions vital for security, the Ministry of Defence leads all aspects of military defence in peace, crisis and war. During the COVID-19 pandemic the lead actor has been the Ministry of Social Affairs and Health. This division of labour applies to all hierarchical levels in all situations and covers the whole country.

From Finland’s perspective, there are three ways to describe potential military threats: military pressure, a rapidly evolving military threat, and a large-scale attack. However, while neither officials nor citizens currently see an immediate military threat to Finland, potential threats are traditional topics for debate and are frequently discussed. The official policy declares that Finland could not remain on the sidelines if a military threat emerged in Europe. In both cases – an actual military threat and Finland’s involvement in a European crisis – readiness and defence capabilities must be maintained.

Public support for national defence is strong among citizens not only because of history and geography, but also because of a high level of awareness of security issues within society. This is mainly achieved due to conscript service, which is compulsory for all male citizens and voluntary for female citizens, in either a military or civilian capacity (some 70% of men undertake military conscript service). This is one of the cornerstones of Finland’s defence will, but it also promotes nationwide acceptance of a comprehensive defence system in which all citizens are obliged to do their share if a crisis emerges.

In modern society, concepts of security and related issues are in flux. Legislation, decision-making structures and policies must be updated regularly to meet evolving domestic and external requirements. For instance, the parliamentary committee is currently finalising a report on an update to the conscript service system. The committee has addressed, among other things, current legislation on conscript service so that it is not only relevant and cost-effective for military defence but also promotes issues such as gender equality. The main goal is to ensure that in the future, the conscript service system remains one of the foundations of national defence and supports the maintenance of strong defence ‘will’.

In practice, national defence has always been and remains a concern of every individual, firstly because the conscript service system touches almost every family, and secondly because the fluctuating security situation around Finland makes its existential security concerns relevant.

Planning and structure

Without proper planning and structure, the assumption is that military organisations will be unable to organise themselves to achieve the goals assigned to them. Is the organisation, along with the country’s doctrine and strategy, adapted to its threat perceptions and level of ambition? Do defence plans adequately reflect strategy and technical capacity? Does the country have the institutional structures and experience to critically review its own performance and learn lessons? Are its structures adaptable enough to engage in such processes at short notice, and independent of external support? When it comes to doctrine, a starting point may be whether a country’s armed forces have effective centres for generating and disseminating doctrine. If a particular country’s armed forces are seeking to develop more effective capabilities for conventional warfare, it could be important to assess the extent to which national military doctrine emphasises joint service or multinational cooperation, and the degree to which organisational changes and procurement practices support such integration.

During the October IISS–Europe workshop in Berlin, a number of participants noted a move to threat-based planning among European nations. Others preferred terms like ‘capabilities-based but threat-informed’. In general usage, capability-based planning refers to attempts to provide capability solutions for a range of challenges in the context of uncertain future contingencies. A threat-based perspective would focus more on
requirements of specific threats and associated scenarios. As the ‘capabilities-based but threat-informed’ construction already suggests, force planning might rely on a blended model of the two approaches. It would otherwise be nearly impossible to bring today’s requirements into any balance with the task of preparing for future contingencies and acknowledging the significant amount of uncertainty that characterises the international security environment. Nevertheless, the return of the threat-based approach to the conversation reflects a sense that Russia has returned as an adversary, while China looms as another.

During the workshop it became apparent that several nations struggled to implement and follow through on agreed plans. It was observed, for example, that in the case of Germany, the Bundeswehr in its current shape still reflects the efforts of the previous two to three decades to prepare for expeditionary operations other than war, where the timing and level of engagement was a political choice. The workshop also referred to plans to reconceptualise the armed forces based on defence-planning assumptions agreed in Germany at the national level and multinationally anchored in NATO’s defence-planning process between 2017 and 2018. According to the plans, the armed forces would be refocused on deterrence and defence as their main objectives, and in particular on the ability of the German armed forces to take on a major role in the conventional defence of NATO territory against threats on the eastern flank. However, since the plans were devised, a lack of political support has meant the financial resources made available through the defence budget have lagged significantly behind what is required to implement them. The result of this is that the future German armed forces seem destined to fall short of their conceptual ambition.

Leadership and planning in NATO
Brigadier (Retd) Robbie J. Boyd, former military assistant and principal political/military adviser to NATO’s chair of the Military Committee, 2018–21

‘NATO undergoes significant change with some regularity … The fact of these changes and their boldness and frequency over a period of nearly seventy years distinguish NATO from other international institutions.’ – Seth A. Johnston

NATO adapts. Indeed, it adapts so quickly at the grand-strategic level that Johnston’s 2017 magnum opus on the subject is already out of date. It is a valuable quality amid many political and military challenges to achieving cohesion among 30 allies – and 40 partners across the globe – that share NATO’s values in preserving liberal democracy and the rules-based international order. It remains the most successful alliance in history, surviving internal and external threats and generating relevance based on realism. States who wish to threaten its membership have been deterred for 70 years.

But adaption does not just happen. It cannot be demanded by one ally alone. It requires a collective response, a unifying strategic vision and, above all, good strategic leadership to see it through. As a military and, increasingly, political alliance (its success grounded in the former), NATO has been well led of late. Politically, it has helped that its two most talented leaders – Secretary General Jens Stoltenberg and Germany’s Chancellor (until late 2021) Angela Merkel – are experienced practitioners of statecraft, grounded in realism and possessing a better understanding of the threats than most. But military leadership has also played a part, often unsung, in the latest NATO awakening. Significant strategic philosophical changes have happened already; the reset began four years ago with military advice offered by the Alliance’s chiefs of defence. Now, NATO is moving from being capability-focused and threat-informed to becoming threat-based and capability-informed.

As NATO moves towards holding annual leadership summits and increasing its headquarters’ strategic staffing tempo and political decision-making four-fold, it will embrace a new Strategic Concept for the defence of Europe, the High North, the North Atlantic and North America. The strategy is informed by military realism, honest appraisal and integrity – ‘unfettered military advice,’ in NATO speak – from all allied chiefs of defence. Under the leadership of their elected chair, Air Chief Marshal Sir Stuart Peach, in 2019 the chiefs delivered their advice to the Alliance’s political leadership in the form of aKeystone document: the NATO Military Strategy. They put threats ahead of industry-led national-capability drivers (what we should have, instead of what we could have, if you like), changing the paradigm back towards state threats but acknowledging the enduring risk of terrorism. As such, the strategy effectively invites industry to inform, but not lead, national
The NATO chiefs’ advice expanded in 2020 to include two threat-based concepts: how the Supreme Allied Commander Europe’s Supreme Allied Headquarters fights today (the Concept for the Deterrence and Defence of the Euro-Atlantic Area, or ‘DDA’ for short) and the Supreme Allied Commander Transformation’s longer-term horizon scan on who and how NATO will fight tomorrow (the NATO Warfighting Capstone Concept). The latter was loosely based on the United States’ reversal of its threat-versus-capability balance through its own successful Warfighting Capstone Concept, though NATO delivered its version more quickly, thanks to its military leadership adopting the philosophy immediately. Not an easy task, but for Peach it was one he had been chosen by his fellow chiefs to lead. Corralling the chiefs required skillful chairmanship to deliver collegiate wisdom and unified military judgment, grounded in realism.

In political and policy circles, such a philosophical reversal as advised by military chiefs could be perceived as an unwelcome challenge, particularly for those nations with strong domestic defence-industrial bases. In this case, the virtue of speaking military truth to power has been acknowledged by NATO’s own political leadership. Ultimately, the final wording of the Strategic Concept in 2022 will demonstrate the extent to which this military advice has been accepted. There may be some who try and tone the language down to achieve compromise for policy and/or political consensus. The question will be whether it meets the military leadership’s intent in the final drafting. Will it confirm that NATO is threat-focused?

Another notable change in NATO capability development, largely unnoticed by commentators, is NATO’s expansion into fielding genuine strategic enablers. The Alliance Ground Surveillance capability, Global Hawk, is a notable example of what is arguably another philosophical turning point at the strategic level. NATO is no longer solely reliant on nations sharing intelligence. Further capability-informed intelligence from industry – particularly in the emerging disruptive, artificial intelligence, space and quantum fields and in the established arena of cyberspace – could now be developed as NATO’s innovation initiatives mature. In doing so, NATO may help ease the burden on the United States to provide such capabilities for its allies and also for partners. Provision for the latter could lead to further NATO expansion by negating the need for bilateral US arrangements that take away a reason for membership, tidying up the European contribution to NATO against state threats and finally enticing interoperable nations, such as Finland and Sweden, to join. It could even take NATO on a more global membership path as its geopolitical interests naturally expand towards the Pacific over a High North that is opening northern sea lanes due to climate change, and which will need to be protected.

However, as NATO’s future path develops, it should be based on realism, be military-informed and threat-based. Unified military and political leadership will need to continue to deliver a threat-focused and capability-informed Alliance. Now that Peach has retired, another leader will be needed to continue the vision post-Stoltenberg. Meanwhile, NATO will need to guard against internal dilutors if Seth A. Johnston is to publish a new edition on NATO’s adaptability. The chiefs’ advice appears clear enough: change the emphasis to state threats while continuing to contribute, where military means are suitable, against enduring terrorist activity. Optimise our limited resources by concentrating on a threat identified through honest geopolitical realism, with allies resisting internal pressure to push capability upon themselves rather than pulling useful capabilities from industry in order to overmatch state-based threats. The result should increase NATO leaders’ chances of delivering deterrence and defence for around a billion people. It could increase NATO’s strategic enablers. It would ease the burden on the United States. And it might lead to useful expansion.

**Material resources**

Turning to material resources, an important factor to consider could be how efficiently armed forces can obtain the equipment they require for their assigned roles. This includes, therefore, not only matters relating to national defence industry, but also questions about the effectiveness of procurement processes. Certainly, discussions need to move beyond the sometimes-assumed equivalence between defence spending and military capabilities, but this dimension – alongside defence-industrial capabilities – is nevertheless important and should not be discounted. The question is not necessarily the size of the defence budget, but rather whether budget levels reflect the country’s military needs. And are defence funds being allocated properly in terms of the assigned purpose of the armed forces – for example, if threats are primarily maritime, does the navy receive an adequate share of the budget? In terms of defence industry, from a defence (rather than economic) perspective, a key question is the reliability of supplies for the armed forces.
forces: a country may not need a strong domestic defence-industrial base if it can be sure of obtaining its needs from external sources. However, if there are security-of-supply concerns, it may be more important to retain national defence-industrial capacity. There is also the question of the extent to which a country requires national defence science and research and development capabilities, which may be vital in providing specific niche capabilities and assuring a ‘technological edge’ in key areas.

Poland’s investment plans: opportunities and risks
Marcin Terlikowski, head of the International Security Programme, Polish Institute of International Affairs (PISM)

Out of all NATO members, Poland currently has one of the most ambitious plans regarding investment in new military capabilities. Worth more than USD134 billion in the 2021–35 time frame, the Technical Modernization Plan (TMP) is meant to thoroughly modernise the armed forces, which still operate a number of legacy weapons systems. This is a considerable task: to underwrite it, not only is Poland’s defence expenditure planned to grow to 2.5% of GDP in 2026 (for 2022, it is set at 2.2% of GDP or USD15bn), but it will also likely establish extra-budgetary vehicle(s) of a yet-unknown size.

What Poland plans to acquire makes for an impressive list: 32 F-35 multi-role combat aircraft (USD4.6bn); 250 M1A2 SEPv3 Abrams main battle tanks (MBT) (USD6bn), eight batteries of Patriot air-defence systems in a ‘Polish’ version (USD4.75bn for the first two batteries); 11 batteries of Narew short-range air-defence systems (costs estimated at USD15bn); and three air-defence Miecznik frigates (USD2bn). And these are only the programmes already ongoing, while yet more are in the pipeline, for example attack helicopters, submarines, new tracked APCs and armed UAVs.

These investments – together with an increase in the size of the force – will confirm Poland’s position as the most militarily capable nation on NATO’s eastern flank. It is widely understood that in contingencies involving Russia the role of the modernised Polish force will be twofold: to provide some defence options at the national level – fully credible, even if limited – before NATO and the US react; and to enable operations of allied reinforcements when they arrive in theatre.

Given these ambitions, the prerequisite of an effective defence of Poland is to deploy a modern force that is fully interoperable with allies (mostly the US) and able to operate in a highly contested environment (Russia’s anti-access/area-denial capabilities, competent electronic warfare elements, ability to saturate the battlefield with heavy armour, and its air superiority). At the same time, some of the flagship programmes with greater participation by indigenous companies – such as Narew or Miecznik – are meant to provide a decisive technological impulse for the national DTIB, long-troubled with low competitiveness and legacy technologies.

The TMP, however, is burdened with several obstacles:
- delays and lags between commitment to a programme and its full implementation
- cost overruns due to inflation and depreciation of the Polish zloty
- procedural chokepoints in the Polish defence-acquisition system
- deterioration of the DTIB
- potentially weakening public and political backing for the increased defence effort

The time gap between a decision being taken on a certain programme and this system reaching full operational capability is a well-known problem concerning all armed forces. Yet, in the case of Poland, it has an additional dimension: many platforms and weapons systems have already reached their end-of-life, while successors are not likely to arrive soon. This is true for armoured platforms such as BMP/BWP tracked APCs or T-72 MBTs; airframes such as the MiG-29 and Su-22; rotary-wing capabilities such as the fleet of Mi-8/-17/-245; or air- and missile-defence capabilities with outdated S-125 systems. Despite subsequent upgrades, these systems have little operational value today, particularly given the difficult theatre in which they are poised to operate. The result is that with every passing year, the deterioration of these systems risks a decline in some capability areas. Poland tries to address this challenge through bridging solutions. For instance, there is a plan to acquire two second-hand Swedish A17 Södermanland-class submarines before the programme for a next-generation boat enters the selection phase, and before the only existing Kilo-class submarine in the Polish inventory becomes permanently inoperable. This approach also involves upgrade/refurbishment programmes, like in the case of T-72S, over 300 of which will undergo an overhaul and receive new communications and fire-control systems to make them service-ready.
Procedural inefficiencies also generate delays in the TMP. To date, Poland’s acquisition system has been marked by lengthy and fragmented procedures. There were many different entities engaged in subsequent phases of the acquisition process, starting from the identification of needs and market analysis, through to choosing the prime contractor and, finally, negotiating parameters of the contract, including potential offset agreements. As a result, in addition to the notorious delays, there have been cases of programmes going back and forth through different phases only to bring no results or result in cancellation. This is meant to change with the establishment of the Armaments Agency on 3 January 2022. Loosely based on the French model (the Direction générale de l’armement), the agency is expected to centralise almost all capability-related processes with regard to the armed forces: not only acquisition, but also maintenance and withdrawal from service. This is something long called for by experts and practitioners. Swift launch of the agency may enable the TMP’s smooth implementation, but – as usual with administrative reforms – it may take some time before new procedures are streamlined, which entails a risk of further delays.

There is also the financing issue. The TMP was designed before the COVID-19 pandemic and assumed that Poland’s main macroeconomic indicators, such as GDP or inflation, would be stable. However, inflation is increasing (8.6% in December 2021, year-on-year) and the exchange rate has become volatile against the US dollar, depreciating some 11% in 2021 before a slight recovery towards the end of the year, leaving the Polish Zloty down some 8% compared to the beginning of 2021. This trend may result in Poland having to pay more than previously assumed for flagship programmes involving cooperation with foreign prime contractors, most of them American.

With the increased costs of modernising the armed forces comes the risk of waning public support for Poland’s increased defence effort. So far, Polish public opinion and political elites have been almost unequivocally supportive of increasing defence expenditure and investing in new capabilities. In 2020, only some minor voices suggested moving money from defence to battling the COVID-19 pandemic. With economic uncertainty looming, such voices – particularly from the left of the political spectrum – may become stronger. Consequently, it is now difficult to predict what approach to defence expenditure future Polish governments may adopt (the next parliamentary elections are scheduled for 2023).

Finally, Poland’s quest to overhaul its forces may not bring the expected benefits for the national DTIB, a development that would likely generate tensions over the implementation of the TMP. The focus on acquiring capabilities (relatively) quickly, and on achieving a high level of interoperability with the US and NATO systems, results in a clear preference for off-the-shelf procurement or offsets over developing new systems. Quite naturally, this approach leaves little room for national defence businesses to grow, as the likely technology transfer may involve only subsystems or components, or skills required only for maintenance. A remedy to this risk is the pursuit of national programmes – such as Narew, Miecznik or Borsuk (a new APC) – which largely assume integration of components and subsystems acquired from foreign prime contractors into indigenously designed platforms/systems of systems.

**Military enablers and technology**

The fifth dimension concerns emerging military capabilities such as space, cyber and emerging technologies. Although it is increasingly prominent, there are legitimate questions over how essential the cyber dimension is to all levels of military ambition and, as a consequence, what capability investments states need to make. For instance, it could be asked whether states that focus primarily on internal security or counter-insurgency need to perform as well in this aspect of military capability as those that focus on high-intensity manoeuvre warfare, or on expeditionary operations. These considerations may include whether there are adequate network-protection measures, whether a country has a computer-emergency response team in the armed forces and whether it possesses offensive as well as defensive cyber capacity. They may also include the relative balance between investments in the private sector and in government – does the country have ‘defence in depth’ when it comes to cyber capability? There are broader concerns, too. As military equipment increasingly makes use of sensor data, and as armed forces look to communicate faster, more securely, and in doing so move greater volumes of data than before, there are growing concerns about defence capacity in the electromagnetic spectrum. Is there an adequate national defence-industrial base in these areas? And what level of investment is needed in possible offensive requirements, such as in electronic attack, as well as in defensive measures? At the same time, many states are making greater use of space as a means of improving their military capability and broader economic
well-being. But only few countries have sovereign capability when it comes to space – certainly to space launch – so some will have to make judgements about their level of reliance on other states or on commercial firms. This links to questions about what level of space-based capability is required, and whether such ambitions can be adequately generated and sustained. Conversely, while countries look to derive benefits from activity in space, and from the electromagnetic spectrum, are they paying as much attention to vulnerability; can a state be overly dependent on space-based capabilities, and how can such concerns be alleviated?

The transformation of armed forces for new threats in the digital age

General Sir Richard Barrons KCB CBE, co-chairman, Universal Defence & Security Services Ltd

The UK armed forces, like almost all their European counterparts, are wrestling with the challenge of managing the lowest point so far of a decline in mass, readiness and resilience dating back to the end of the Cold War. They are doing so just as the world becomes far more uncertain and dangerous – and just as new technology renders much of the remaining core capability obsolescent. Tinkering with implausible and unaffordable improvements by continuing to build fewer, marginally more effective yet exponentially more expensive versions of the platforms that have been in iterative development since the First World War is clearly a dead end. The UK’s recent Integrated Review has now illuminated (but does not yet resource) a different, far more promising path.

This approach recognises the return of grave threats to the security, prosperity and values of European states after a 30-year hiatus. It identifies the imperative to restore all dimensions of national resilience in order to face confrontation and conflict as well as natural disaster. It acknowledges that state-on-state ‘hybrid’ or ‘grey-space’ confrontation employing all levers of national power already exacts a heavy toll and needs to be ‘campaigned’ against. And it begins to define how military forces must change to be relevant and useful, letting go of equipment, organisation, culture and process that once served a purpose but whose continued use now would risk defeat against aggressive, modern powers.

For just as combinations of digital age technology are transforming how we live and work and play, so too are they transforming how defence and security capability is to be built, organised and operated. The advantages to be gained include: restoring the competitive edge to deter and defeat advanced potential opponents; lowering equipment acquisition and ownership costs; and new organisation and processes that unlock more effective and efficient manpower paradigms. This technology (data in the cloud, AI, networks, autonomy, robotics, biosciences and materials, etc.) is advancing in the civil sector in a high-tempo race, so we should not be surprised by a similarly fierce competition in global defence and security – one that Europe for sure is not yet winning. As this race is more about the application of technology developed for civil purposes than original innovation, it will move faster than militaries can comfortably control.

There are four inversions of the twentieth-century capability model that matter here. Firstly, armed forces will cease to be formed around diminishing numbers of iconic crewed platforms (typically ships, tanks and aircraft) connected by voice and data communications as an afterthought; they will instead be built on a core capability of data in secure cloud, AI-enabled decision-making, comprehensive synthetic replications of the operating environment, and high-capacity cyber resident networks – into which multi-domain combat power and supporting services are then connected and integrated.

Secondly, the steadily decreasing numbers of highly specified platforms manned by substantial numbers of skilled people in service today will be eclipsed by much larger combined teams of autonomous, uncrewed and crewed platforms operated by relatively fewer people. Complex weapons and sensors no longer need people alongside them to function, nor the same size or as exquisite a platform to deliver them. More, smaller, cheaper, resilient, losable autonomous platforms, especially, will restore a combat edge at a sustainable price. Robots do not receive pay or pensions and do not need to train, just update. Of course, there are legal and ethical concerns here, none of which will be managed by denial.

Thirdly, the twentieth-century primacy of the mobilisation, deployment and manoeuvre of high-end platforms at sea, on land and in the air is being eroded by the realities of an often-transparent battle space and the new prominence of very long-range precision fires. Surprise and undetected mass manoeuvre have already become far harder. This means that armed forces will first require effective air and missile defence, long-range intelligence, surveillance and reconnaissance and precision fires before then being able to manoeuvre the new mixes of crewed/uncrewed/autonomous combat power to seize and hold objectives. Firepower is resuming some ascendancy over manoeuvre, with the result that forces can only be concentrated at the point of decision to avoid destruction en route.
Finally, intelligence collection, assessment and dissemination are important to military capability, whatever the country’s level of ambition. To be most useful, intelligence must be timely, relevant, credible, understandable and actionable. However, the requirements for intelligence may differ. A key consideration would be to determine whether different levels of intelligence function are needed for different state goals. Is there a ministry-level defence-intelligence function that reports to policymakers, or is there instead a concentration on service-based military-intelligence functions that operate in a single-service framework? Or even if they operate in a joint framework, do they have liaison processes in place with other domestic intelligence agencies and government more broadly? There is also the question of whether the intelligence services are staffed and equipped accordingly: points to consider include budget allocations for intelligence services; whether they are responsive to reforms aimed at improving analytical processes (and whether they have internal functions to enable this, such as an accepted challenge function); the presence of and level of integration with special forces; and the extent of the national network of embassies and defenceattachés. A key challenge in assessing intelligence capacity is that, axiomatically, intelligence organisations, processes and activities are opaque. There is usually little obvious evidence whether, within a particular national government, the ‘intelligence chain’ or cycle is properly connected, as its effectiveness is (usually) not clear until after a conflict or military operation, when it is possible to assess its relative success or failure.

Fourthly, the use of all-volunteer regular forces – prevalent since the end of the Cold War and amplified by the limited interventions (by historical standards) in the Balkans, Iraq and Afghanistan – will be challenged. The search for optimal capability will mean blending four groups fulfilling complementary functions: regular forces for high readiness, the management of complex operations and to enable mobilisation; better reserves, to provide broader skills, mass and support to resilience; civil servants, for continuity in core areas such as intelligence; and industry, which will have greater understanding of technology and will build and sustain the new capability until it is actually required for employment.

Exploring this path is not optional, but nor is it without risk. There is no template to follow, so experimentation is required and this will often fail. Digital-age technology advances constantly and is not amenable to acquisition by cyclical, epochal changes. Blending military forces with public-sector capabilities and the greater reach and effect of private-sector power is more seamlessly done by autocracies than democracies in circumstances where coherent integration and high tempo will be decisive. And it makes no sense for one European nation to advance its digital-age capability agenda in ways that leave its allies trailing behind, when the imperative for effective collective defence and security has never been greater.

For all these reasons, the most profound transformation of military power for over 100 years must now advance in a planned, integrated and coherent way established at Alliance/EU level. The new NATO Strategic Concept and the EU’s evolving Strategic Compass must embrace this transformation by design, as well as determine strategy. It means industrial compromise, as Europe’s potential opponents are not troubled by military or industrial penny-packeting at national level. This is a competition in which Europe has no choice but to win – there are no prizes for second place.
decision-making. Furthermore, these are adversaries with sophisticated intelligence, counter-intelligence and deception capabilities. Whether at national political level – such as understanding Russia’s intentions towards Ukraine, or China’s in its immediate neighbourhood – or at defence-ministry level, for example in making equipment procurement decisions, broadly speaking this means that intelligence assessment is required to deliver three levels of understanding:

- Building situational awareness: probably the greatest function of intelligence assessment in volume terms. This is about describing a situation or development, e.g., that Russia has increased its troop levels on Ukraine’s border.
- Going a step further to be explanatory: in this example, putting the troop movements in the context of wider statements about Russia’s view of its relationship with Ukraine and the latter’s with NATO (or describing the technical capability of equipment deployed).
- Being predictive: saying something about how Russia might react to a joint exercise by NATO members with Ukraine or what its future stance or deployments might be.

In terms of being predictive, the topic of ‘warning’ has come again to the fore. Having been a central responsibility of defence intelligence organisations during the Cold War, the ‘warning’ function tended to be sidelined in the West as rather less relevant after the fall of the Berlin Wall. The failure to foresee the Russian invasion of Crimea, however, highlighted the need for warning in the new environment. In those ministries and organisations (such as NATO) where it has now seen something of a revival, this warning function is recognised as a key input into strategic-level decision-making. But to be successful, this function needs to be recognised as a specific discipline that should be adopted across the Alliance to ensure that local insights, intelligence and analytical capability can most effectively be brought to bear.

But all aspects of intelligence assessment today face the challenge of the sheer volume of information potentially available to the analyst. While the secret intelligence agencies such as MI6 and the CIA will have stepped up their efforts, and defence intelligence organisations may have increased the staff allocated to analysing Russia, for instance, those analysts cannot rely solely on secret inputs. They will depend critically on the effective harvesting, triage and analysis of open source or publicly available information, including from the internet, social media, ‘citizen analysts’ and commercial satellites. This implies more agile IT improvements, deeper relationships with innovative suppliers and the application, at scale, of automation and artificial intelligence if they are not to fall so far behind the private sector’s ability to supply valuable insights that they are unable to catch up. This is recognised in the UK’s Integrated Review and Defence Command Paper, both published in March 2021, which strongly emphasise the importance of investing in technology to regain the technical lead the West had over its adversaries as the Cold War ended, but which has been eroded in the years since.

Better IT, however, is not the whole answer. Analysts need to be trained professionals, able to process and analyse data from a wide range of sources, work with allies, understand analytic principles and present their conclusions in an effective and persuasive manner. Their customers, too, need to recognise that what they are getting is the considered work of professionals in their field and not simply another point of view or opinion. They also need to be prepared to engage with their intelligence providers to determine priorities and think about the questions they want answers to – including which of the three categories set out above apply, and hence the scope and depth of answer required. All of this implies the need for the intelligence assessment community, particularly in defence, to have a voice. They need to be part of the community of decision-makers, trusted and invited to attend the right policy and operational meetings, if they are really to have impact. But that also means that from time to time they will tell decision-makers things that might not fit their preconceptions, or which are difficult or uncomfortable for them to hear. If the relationship is to be effective and to genuinely inform decision-making, often at speed, the onus is on both sides to be prepared to speak or receive ‘truth to power’ without fear or favour.
In Europe, home-grown concerns motivated military policy during the Cold War, and they still do today: Europe’s periphery to the south is, for some countries, as much a concern as the East. If anything, for Europe’s armed forces, reorienting military priorities towards the possibility of high-intensity war sharpens questions over whether the investments they are making in defence are adequately addressing the full range of factors needed to generate military capability and what their relative strengths and weaknesses are.

The IISS holds a wealth of defence and military data to support such assessments in its annual publication *The Military Balance* and in its online database, the Military Balance+. While these publications combine quantitative and qualitative metrics to enable further analysis, in this paper we wanted to outline a framework for even deeper investigation of the qualitative dimension of military capability which can then be applied to specific countries. We proposed six dimensions as being of particular relevance: readiness and deployability; cohesion, including leadership and morale; planning and structure; material resources; military enablers and technology; and intelligence. A range of contributors offered short vignettes, often with reference to specific countries, to illustrate their thoughts on what lies behind these lines of enquiry and their relative importance to European states’ military capability now and in the future.

During the October 2021 workshop it was pointed out that the armed forces of countries that place diverse operational requirements on them – abroad and at home – benefit on the one hand from operational experience, but on the other they also pay the price in terms of training shortfalls and overstretched maintenance and equipment support functions. Those who try to expand their forces have on occasion found it hard to train personnel to operate new equipment and generate new formations. An uneven appetite to digitise and to pursue digital-age armed forces among European nations, along with the potentially significant costs of doing so, may generate new and additional interoperability challenges further down the line.

The question of political will – understood for centuries to be an essential element of military capability – has transformed into a whole-of-society issue in its own right, because threat perceptions and even awareness of security challenges in general are variable, while the place defence and military matters occupy in political discourse differs markedly across European nations. This exploratory paper suggests that on all six dimensions introduced here, future analysis can yield important insights.

However, framing the questions that analysts need to ask when gathering data for assessment is only becoming more of a challenge, and complicates any research methodology. The issue of will, for instance, has long been a consideration when it relates to the morale of troops, a factor that is difficult to measure by itself. But bringing in issues relating to will in broader government, and across society, only sharpens the challenge, not least by simply increasing the number of questions the analyst needs to consider. As noted in the vignette on Finland, one way of doing this may be to conduct regular polling on similar questions and track responses. Leadership was highlighted by many workshop participants, and features in this report. Here there are empirical factors to consider, such as measures of training and operational experience and also the status of leadership ‘processes’ within countries and organisations, but analyst judgement on questions of quality will in many cases still be required.

Nonetheless, in the European context there is at least something of a mark against which to begin measuring the six factors highlighted in this report: there is enough data on regional states’ military ambitions to be able to determine judgements on levels of ambition. Indeed, the authors of the IISS report ‘European Military Capabilities: Building Armed Forces for Modern Operations’ did so just under 15 years ago. European capabilities remain greatly influenced by different levels of defence ambitions. Whereas for some governments and societies the need to defend themselves in as autonomous a fashion as possible is clearly articulated, others seem to accept that
salvation can only lie in interoperability and the speedy arrival of allies. Some European nations continue to hold notable expeditionary ambitions, whereas for others the essential purpose of the use of force has become blurred and unclear. So military ambitions differ in Europe, but for the most part the analyst at least has documentation available to make judgements; in other regions with less history of creating and publishing defence documents (and perhaps more opaque administration), reaching such determinations is a more taxing process requiring greater analytical judgement.

For some of the other factors considered in the workshop, the factors for analytical consideration are potentially vast, so for future study it will be important to refine methodological frameworks. Of course, much depends on the level of ambition assigned to a country, but for a medium power with global deployment ambitions and aspirations to conduct high-end manoeuvre warfare, assessment of these six factors will lead to the generation of potentially hundreds of data questions. So, reaching judgements on how to refine methodological frameworks will be important, such that the analyst can focus on the most essential aspects of each capability dimension. The IISS Defence and Military Analysis Programme is continuing its work in this process.
Notes


2 In France, this operation was named *Opération Chammal*.


5 When asked the question ‘If Finland were attacked, should Finns, in your opinion, take up arms to defend themselves in all situations, even if the outcome seemed uncertain?’, 65% (68% in 2019) answered in the affirmative and 17% had no opinion. Finnish Social Science Data Archive and Advisory Board for Defence Information (ABDI), https://findikaattori.fi/en/77, visited 22 November 2021, 14 December 2020, next update 14 December 2021. The surveys contain a set of core questions repeated over the years.


8 The seven functions of the Comprehensive Security System of Finland are leadership; international and EU activities; defence capability; internal security; economy, infrastructure, and security of supply; functional capacity of the population and services; and psychological resilience. See The Security Committee, ‘Security Strategy for Society’.


11 Current prices as per 2020 average exchange rate.

Table 1: Defence budgets 1990–2020 (2015 USD/international dollar)

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* Total military expenditure
Source: IISS Military Balance+

Map 1: Operational activity during Europe's 'strategic holiday'

Sources: EU External Action Service, NATO

Annex
Acknowledgements

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