DSI Strategic Diagnosis and Discussion Paper

Emerging Defence: Offset and Competitive Strategies for Europe

At this crucial juncture, Europe needs better strategy - based on emerging defence technologies - to make its 'Big Bang' in defence spending work, ready itself to defeat Russia in the short-term, and position itself to compete geopolitically in the long-term.

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Emerging Defence: Offset and Competitive Strategies for Europe

Summary

Europe must ready itself to be able to *defeat* (not just defend against) a Russian attack within three-to-five years if not sooner *and,* as a key bastion of democracy, position itself to compete geopolitically against authoritarians in the long-term. Yet, if Europeans use their 'Big Bang' in defence funding to simply pump more money into fulfilling current force plans based on legacy platforms (tanks, infantry fighting vehicles, etc) they will likely fail – as they will be running Russia's race on platform production and risk being dragged into Russia's type of fight.

Going beyond the shortcomings of current proposals, the report presents a deeper diagnosis of the critical factors that any European strategy must address – including the problems of Europe's defence industrial base (DIB) and disruptive shifts in technology and the conduct of warfare. These shifts create serious risks of rapid obsolescence for legacy platforms but also create an opportunity for Europe to turn its military disadvantage into an advantage by embracing change.

This report proposes that Europeans should adopt **a short-term 'offset' strategy and a longer-term 'competitive strategies' approach**, focused on exploiting and massively scaling emerging defence technologies. The offset harnesses the commodification of precision networked warfare to rapidly boost combat power and multiply the effectiveness of existing forces so our democracies can survive Russian attack and coercion. The competitive strategies approach positions Europe to master the coming revolution in military affairs and thrive, geopolitically in the long term - and requires a 'net assessment' capability to inform it.

Key Takeaways

- Europe is at a crucial moment for its defence. It can choose to **embrace the future** and secure itself, fast, or stick to old ways and **face being timed out** of its race to deter the severe and urgent threat from Russia.

- Europe's 'Coalition of the Willing' must be clear about the immediate challenge they must meet – **to be clearly able to defeat Russia** and thus deter it from conventional attack, while deterring it from using nuclear weapons, and developing a '**European Way of War'**, based on defending forward and threatening key Russian assets. At the same time, they need to prepare Europe to compete geopolitically in the long-term

- Europe can play to its strengths in research and industrial capacity by rapidly developing, testing, refining and fielding **emerging defence technologies**, including mass produced precision strike capabilities, and massively scaling other emerging defence technologies, including for ISR and enabler functions, low-cost air-defence and upgrading legacy equipment through integration into advanced AI-powered battle networks.

- Europe should institute a 'New Force and Capability Plan' supplied by an '**Accelerated Military Technology and Industrial Capacity Plan'** to quicken development of promising technologies, create partnerships between SMEs and large advanced industrial manufacturers to broaden and diversify its DIB, and incentivise and facilitate private capital flows to emerging technology firms, which can also boost economic growth.

- In addition to emerging technologies, Europe's short-to-medium term **high-end capability investment** in should not be used for old platforms but, rather, ruthlessly focus on: nuclear and non-nuclear strategic and pre-strategic precision strike capabilities; massed precision guided munitions and uncrewed solutions to maximise the power of its air forces, including for suppression of enemy air defence (SEAD) and suppression of enemy air attack (SEAA); and on essential (battlefield, critical, population) air defence for Europe.

- **Ukraine must be integral to European strategy.** What happens with Russia's war in Ukraine will determine the timescale and severity of the threat the rest of Europe faces – and is integral to our future security. The European coalition should treat Ukraine as part of its Eastern flank after any ceasefire 'deal' and all opportunities for testing and co-producing emerging defence technologies should be seized.

Emerging Defence: Offset and Competitive Strategies for Europe

At this crucial juncture, Europe needs better strategy - based on emerging defence technologies - to make its 'Big Bang' in defence spending work, ready itself to defeat Russia in the short-term, and position itself to compete geopolitically in the long-term.

Introduction

Europe must ready itself to defeat a Russian attack within three-to-five years, if not sooner, *and* position itself to compete geopolitically against authoritarians in the long-term. Europeans are, finally, starting to throw serious money at the problem but if they stick to their current approach, even with (much) more funding, they will fail.

If Europe tries to fulfil old plans with legacy capability profiles and a platform-centric approach it would leave us running Russia's race, which we would lose. Russia is operating a hot war economy, while Europe's production of legacy platforms (e.g. tanks, IFVs, artillery) is too slow, too complex, too expensive – and not enough. Worse, focusing on these capabilities, *en masse,* would mean we are planning and arming for the last war, not the next or even the current one.

Rather, Europe needs to swiftly, yet strategically, transform its defence planning, procurement and production. Europeans should start playing to our strengths in innovation and industry to massively and rapidly scale-up emerging defence technologies, which should be the focus of our new defence plan, and ruthlessly target investment in high-end capabilities. This would be less costly, deliver faster results and trigger the longer-term restructuring and renewal of defence-industrial capacity that Europe needs to get in geopolitical shape.

Successful strategic transformation requires harnessing, rather than ignoring, the technological shifts we are living through, and which are seriously disrupting the conduct of warfare. Learning from past mastery of rapid periods of technological and military change, **Europe should embrace a short-term 'offset' strategy and a longer-term 'competitive strategies' approach**, both focused on exploiting emerging defence technologies to invert its capability and combat power imbalances against rivals. Europeans should integrate this approach with their support to Ukraine, recognising the latter's crucial role in current and future European security.

In both the short and the long-term, Europe must relinquish its reactive posture and get on the front foot by working to transform our strengths into true competitive advantages and exploiting our opponents' weaknesses, which requires they are assessed and understood. This 'competitive' approach requires clear understanding of the threat we face, the challenges we must meet and clear diagnosis of the critical factors that must be addressed in order to do so, as outlined below.

While this report concludes by suggesting potential pillars of offset and competitive strategies, the primary purpose here is **diagnostic**, with the intention of initiating debate on a better approach to European defence and defence industrial strategy and actions needed to give substance to them – in order that those actions may succeed in defending Europe's democracies.

I. The Threat and The Challenge

The threat that Europe (understood here as European NATO states, EU member states and Ukraine) faces is urgent, severe and both military and political in nature. Russia's governing elite (and many in its population) see successful European democracies as ideologically incompatible with and threatening to their country's aims and values, and as obstacles to their imperial ambitions. Moscow has repeatedly shown its willingness to use force and coercion to get its way.

Russia is already waging full-scale war in Ukraine and conducting a campaign of hybrid attacks and subversion across Europe. As EU Defence and Space Commissioner Andrius Kubilius has argued that Europe's lack of military capabilities and enablers to defend itself creates a "temptation" for the Putin regime to test Europe's defences and its resolve.

Numerous European agencies and political leaders have warned that, depending on the course of the conflict in Ukraine and any 'deal' to cease hostilities, Russia will be ready to directly, militarily attack European NATO and EU states by 2028-2030, making use of its conventional military advantage and nuclear superiority over a Europe that cannot rely on the US security guarantee or on American capabilities and enablers. This threat was already significant *before* the second Trump administration and has now only increased due to the further capability imbalance US unreliability creates between Russia and Europe.

Russia would, however, prefer to win without firing a shot by using its military advantage to achieve psychological effect via blackmail and coercion. Russia would wish to subjugate Europe by undermining the EU and NATO, and picking off member states whose populations fear the military imbalance it could turn against them, hollowing out both our collective security and individual democracies in the process.

The military capability imbalance (conventional but also nuclear) thus also remains key to the psychological threat. This is, of course, the very threat that NATO was created to face down – but which, given the uncertainty over US commitment under the Trump administration, the alliance can no longer be counted on to counter. Europe currently lacks the capabilities and enablers to deliver on NATO's regional plans to defeat an attack and deter Russia without the United States upon which it became dependent but upon which it can no longer depend.

The most urgent challenge for Europe is, thus, to ready itself to be able (and willing) to *defeat* (not just defend against) a Russian military attack, while deterring Moscow from using nuclear weapons, within this three-to-five-year timeframe, frontloaded as much as possible to the shorter end of this timeframe and progressively building up. As Christian Brose put it: "the only way to deter wars is to be so clearly capable of winning them that no rival power ever seeks to get its way through violence."

Ultimately, to deter is to threaten, and being able to *defeat* a Russian attack would threaten Russia (and its rulers) and, thus, would be an effective deterrent against direct military aggression as well as a defence against psychological coercion. This is what Europe must be willing and able to do in the short-to-medium-term.

At the same time Europe needs to start positioning itself to survive as a democratic zone in long-term competition against Russia, China and other authoritarians keen to carve out imperial spheres of influence and subjugate free societies. This is of course not a purely military challenge, but it will be essential to be competitive in the military and defence-industrial aspects of this competition, if Europe is to rise to it. Moreover, meeting this challenge must be done in parallel with meeting the short-to-medium-term threat from Russia and so approaches that serve both goals, without diluting the urgent quest for readiness should be preferred.

Worryingly, on current plans, Europe is not poised to meet either challenge.

II. Current Approach: *Much* More of the Same – Big Bucks For No Big Bang

The good news is that Europe's vulnerability, based on its deficiencies in military capabilities and enablers, is increasingly recognised by European leaders and decision-makers. This is far from universal across the continent, but awareness is growing and this growth has been rapidly accelerated, not least among German elites, with the sudden unreliability of the US security guarantee, raising the possibility of the weight of the world's third largest economy swinging behind Europe's defence. Under the rubric of 'ReArm Europe' EU leaders have pledged 150bn EUR in loans and opened up 650bn EUR of fiscal room for member states to use on defence and Germany's incoming chancellor, Friedrich Merz, has pledged to spend "whatever it takes" on defence.

There are still notable obstacles to be overcome to ensure sufficient funding, including traditional stumbling blocks of 'distribution' (who gets what), 'origin' (where equipment is purchased from), and unevenness. Some countries will be on the hook for European defence while others continue to cheap ride, but the signs are that coalitions of the willing are forming to drive progress on defence.

The bad news is that, even if these obstacles are overcome, most of the proposals so far amount to a large funding boost at a mixture of EU and national level to pump money into European defence in order to unlock the potential and capacity of Europe's defence industrial base (DIB) to produce more of the type of platforms that Europe already has. This is not bad news because more money is not necessary, but because it is not sufficient.

As the two following sections discuss, without major restructuring and refocusing of Europe's defence-industrial approach, as well as radical overhaul of force planning, any such plan will likely fail to deliver the capability and combat power, and thus the deterrence, Europe needs in the timeframe we need it. Nor will it give Europe the DIB it needs to position itself for the longer-term competition. Europe's current approach risks being what Christian Brose called in the US context "one giant, costly leap into the past."

This is for three main reasons. First, the shortcomings of Europe's DIB – at least in how it is commonly understood as primarily composed of large defence 'prime contractors' who would gain the lion's share of such a funding boost. These shortcomings should not be entrenched, which the current

plans would do, but addressed as proposed in section V of this report, by and broadening Europe's understanding of its DIB.

Second, Europe's military planning and doctrine remain stuck in US planning and doctrine and Europe risks trying to simply replace the platforms and enablers that it can no longer rely on the US to provide. This will not only be near-impossible in the timescale noted above, it would also play to Russia's strengths rather than using Europe's strengths to meet its own goals.

Third, concurrent disruptive shifts in technological and military affairs that may render many of the planned platforms obsolete sooner rather than later and would condemn Europe to fighting in a way that would be less likely to work and which would not leverage our advantages.

Examining the three 'blocks' of action in EU Defence and Space Commissioner Andrius Kubilius' proposed 'Big Bang' for European defence is instructive. Kubilius specified three 'blocks' of action:

1. Military support for the defence of Ukraine;
2. Ramping up defence industry production to meet NATO capability targets by 2030;
3. Financing the urgent needs of defence preparedness.

It is first important to note that recognising the key role of Ukraine in Europe's security is essential as the course of Russia's war there will determine the timescale and severity of the threat that the rest of Europe faces. Moreover, there will be no lasting security or stable order in Europe without Russian defeat – either in Ukraine or elsewhere – and so achieving this in Ukraine would be the fastest route to European security. Furthermore, Ukraine not only provides valuable lessons in how to fight Russia in a different way, and how technological shifts are changing the character of war, but is also an indispensable testing ground for new defence technology, doctrine and force organisation.

Similarly, it is hard to disagree with the stated imperative of financing the urgent needs of defence preparedness – this is the necessity of additional money noted above. The insufficiency comes mainly in point 2 – ramping up production to meet NATO capability targets. In the same speech, making the case for a 'Big Bang' in the order of the 500bn EUR over ten years that was mentioned in the EU's Draghi report, Kubilius cited a media report which argued that:

> NATO is asking its Member States to prepare [an] additional 49 brigades, which will need further 1,200 tanks, 900 pieces of artillery, 2,700 Infantry Fighting Vehicles, 3,000 Armoured personnel carriers; 1170 Anti-aircraft ground-based units.

Similarly, a recent study by the Brussels think tank Bruegel based, inter alia, on counting what would be required to replace core US capabilities (after the inability to rely on the US became apparent) saw a need for 1,400 tanks, 2,000 infantry fighting vehicles and 700 artillery pieces, as well as up to 300,000 new troops with a 250bn EUR price tag.

However, these type of calculations fall into an old trap in defence planning. As longstanding director of the Pentagon's Office of Net Assessment (ONA), Andrew Marshall, explained in conversation with

strategist Richard Rumelt, when talking about why in the 1960s and 1970s US military procurement was failing to deliver what was needed:

> The Joint Chiefs developed an assessment of the Soviet threat, which was essentially an estimate of their present and planned weapons inventory. The Pentagon then developed a response to the threat that amounted to a shopping list [...] This process of justifying expenditures as counters to Soviet expenditures *conditioned U.S. actions on Soviet strengths, expressed as threats*, *not on Soviet weaknesses and constraints*.

Learning this lesson, Europe should not simply count what is needed to replace the missing American platforms. Nor should it look at what platforms Russia has a lot of and seek to match that. Instead, Europe should clearly focus on what it needs to defeat Russia in the short-to-medium-term, based on what it *can* produce and field in the timescale needed.

Europe is unlikely to generate or sufficiently train and equip 300,000 extra troops nor the logistics to move, deploy, support and sustain them effectively in this timeframe. Moreover, Europe's DIB is unlikely to be able to deliver this scale of capability in the platforms noted by Bruegel and Kubilius in the three-to-five years in which it is required.

III. Problems in Europe's Defence Industrial Base

Europe's Defence Industrial Base (DIB) and its various 'Military-Industrial-Ministerial Complexes' have suffered from consistent underfunding in the post-cold war period, leading to low production capacity and 'hollowed out' militaries (unable to deploy or sustain even the relatively small platform and troop numbers they have 'on paper'). Poor states of maintenance and readiness, deficits in logistics and military mobility, as well as desperately shallow magazines of both basic (artillery shells) and high-end (air-to-air and air-to-ground missiles) munitions

Underfunding and cuts to support as well as front-line functions, exacerbated by DIB responses to them, as well as preferences among military services, which both focused on prestige-boosting high-end, highly-complex, high-cost 'exquisite platforms'. Often seen as 'state-of-the-art', some analysts dismiss them as exorbitantly expensive 'new versions of old things' which, while they could earn high margins on low unit numbers in ever more complex and expensive iterations, are not what is required now and even less so in the foreseeable future. Ongoing debates about the value of ever-more expensive tanks, given the very-low cost of tank-killing FPV drones which can be fielded *en masse*, is a case in point.

More than three years of Russia's full-scale war in Ukraine have made clear that Europe's DIB is not set up to deliver mass, fast. Moreover, European defence industrial capacity has failed to significantly increase, relative to Ukraine's needs and certainly not relative to the likely future European need, in the time it needs it. The notorious failure to keep a promise to supply Ukraine with one million shells within a year was a symbolic case but the problem extends more widely, including to the kind of equipment that Kubilius and the Bruegel study both focus on.

Overall capacity growth has been inadequate despite investments made by large defence companies, including Rheinmetall, Poland's PGZ and BAE Systems. Indeed, as Kubilius has noted "prices are going through the roof," as a result of supply capacity failing to keep pace with demand. Anti-defence/ anti-military sentiments and 'Environmental, Social and Governance' regulations have hindered private and venture capital from reaching defence and dual use start-ups and scale-ups in the quantities needed. Entrenched preferences for complex systems and particular suppliers (described anonymously by a former European defence minister as 'locked-in relationships' with defence primes), as well as high production costs, may act as informal barriers to market entry, deterring new firms from adding capacity, boosting supply and driving prices down.

It is often claimed that a lack of major, long-term orders, prevents defence companies from investing in the additional capacity that would help speed up and scale-up production. Yet, a IISS study from 2023 notes that many European defence companies show "robust corporate results and order books" and a 2024 Politico report details the record profits being generated by European defence companies on the back of record orders.

And, in fact, relatively large orders *are* being placed, such as Italy's recent decision to acquire 1000 Lynx IFVs and over 300 KF-51 Panther tanks from a Rheinmetall-Leonardo joint venture. These platforms will not be delivered in full before 2032 - even if all goes to plan.
The IISS report notes that supply bottlenecks in materials for explosives, and specialised components (including due to previous low demand), as well as materials such as the steel for tank armour, contributed to long production cycles. So too have issues at key suppliers such as MTU which provides propulsion units for tanks and which has seen investment limited due to problems in Rolls Royce (its parent company's) other divisions.

The complexity – and quality – of many of the platforms being produced also partly explains the long production times. In 2023, BAE Systems noted that it would take over two years to restart production of M777 howitzers. In 2024, Nexter has increased production capacity for Caesar self-propelled howitzers to more than six-per-month (at a cost of nearly 6m EUR each), but the time taken to produce each gun remained over three years with similar timescales estimated for KNDS' PzH-2000 self-propelled guns (c.18m EUR). Likewise, Leopard 2 tanks take between 2-3 years to produce in current conditions, total capacity is considerably below the late Cold War peak, and would take time to revive, while the average cost for the latest models that Germany ordered is between 27-30m EUR per unit.

Slow and expensive production is exacerbated by widespread procurement issues in Europe, including in the two highest defence spenders in absolute terms, Germany and the UK. Germany's problems in this regard are legion and longstanding and, yet, three years after Chancellor Scholz announced a Zeitenwende (or sea change) in German security policy, remain a top agenda item for reform by the *next* government. In the UK, the AJAX IFV and APC platform, which was supposed to deliver over 500 armoured vehicles in 2017 is often used to illustrate the need for reform - the first of the vehicles will actually be operational in 2025 with the remainder being fully operational by 2029. This provides a cautionary tale against relying on rapid mass production and procurement of complex core capabilities and was described as a complete and utter disaster [...] a real shambles" by a senior UK military figure.

Overall, the situation in Europe's DIB means that banking on massive capability increases on the scale that both Kubilius and the Bruegel report suggest, would be extremely risky. It would be even riskier if the time window for a direct Russian attack may shorten - and its capability overmatch lengthen as it is currently outproducing Europe in many of the capability categories noted - if there is a 'ceasefire' deal in Ukraine and the US continues its trajectory of pulling out of European security.

Moreover, as the next section shows, even if Europe was able to do this, which would come at massive expense (likely a multiple of the 1.5 trn EUR Kubilius publicly estimated as the cost for all the capabilities Europe needs and all the enablers to support them, because of the need to do so at high speed), these may well not be the platforms and force profile Europe actually needs.

IV. Threat and Opportunity: Turning Overlapping Revolutions in Military Affairs to Europe's Advantage

Revolutions in Military Affairs (RMAs – sometimes known as Military-Technical Revolutions [MTRs]) are disruptive shifts in the character of warfare related to significant changes in the technical possibilities for conducting armed conflict. Combining technological elements with new or drastically revised doctrine and operational concepts, force structures and systems of military organisation, they can quickly create or destroy longstanding advantages or disadvantages between competing actors. Such rapid and discontinuous shifts can also quickly make certain new military platforms and applications essential, while older ones can suddenly become obsolete.

For Europe, facing a negative military imbalance in relation to Russia, harnessing such a disruptive shift to invert its disadvantage is an appealing prospect. Moreover, Europe's relative disarmament may actually make it easier to pivot to a new way of war, based on new platforms, as it is not encumbered with massive quantities of outdated or soon to be outdated equipment and the obligation to use it which can acts as a drag on change in doctrine and force organisation. The relative impoverishment of Europe in doctrine, having outsourced much of this to the US (should also be thought of as a chance to start fresh (or at least fresher), and to quickly develop a European way of war, targeted initially at defeating the Russian threat – and doing so in a smart way. The US remains overly reliant on a platform-centric model in which it has struggled, as experts including Andrew Krepinevich and Christian Brose have noted, to align its technology, procurement, operational concepts and force organisation.

Europe should seize the chance to create genuinely networked way of warfare that plays to its strengths (and needs) in the short and the long-term. Moreover, there is not just one, but two overlapping RMAs that could be harnessed by Europe to do so, should it act boldly, swiftly and strategically.

IV.I The Revolution to Come

The first, which is the subject of most discussion at the moment, is the coming revolution that is likely to be wrought by emergent technological developments in Artificial Intelligence (AI), Additive

Manufacturing (3D Printing), robotics, quantum computing, space technology (and combat), directed energy and hypersonic weapons, and biotechnology.

The shape of this RMA is not yet clear, though glimpses are visible through, inter alia, the use of drones and other uncrewed systems in new ways, such as in autonomous swarming, that don't merely stand in for existing capabilities. Numerous experts, including Krepinevich, Brose, Mick Ryan, Christopher Kirchoff and Raj Shah, have written about potential implications of these changes while acknowledging the uncertainty that comes from the currently unknowable effects of future combinations of technology, doctrine and force organisation.

The key point for Europe in this longer-term perspective, is that should it now invest in massive quantities of platforms that are already seen by some to be rapidly obsolescing it would not help it master the next RMA. Nor, given which companies produce these platforms, would it help restructure Europe's DIB in the way that is needed for long-term competitiveness.

From the work of Krepinevich (itself informed by a rich historical survey and the author's experience at the Pentagon's Office of Net Assessment) on historical examples of militaries and states that have mastered RMAs to decisive advantage, at least five ways in which Europe needs to – and can – give itself the best chance to harness *the next* disruptive shift can be identified:

1. Develop agile, scalable industrial capacity along with the funds to exploit it rapidly and at scale when needed;
2. Ditch obsolete platforms to avoid doctrinal and organisational inertia and experiment widely with new designs, but don't lock-in too soon on particular applications;
3. Test, realistically exercise, and assess new capabilities and develop measures of effectiveness for the new paradigm rather than relying on the old;
4. Enlist military *and* civilian leadership to the task, as both will be needed;
5. Develop a clear vision for change, based on proper diagnosis of the critical factors in play and assessment of own and opponents' strengths and weaknesses.

Much in this approach would play to Europe's strengths in innovation and industry and preparing for this RMA in the medium-to-long term is an essential part of positioning Europe to prevail in the long-term competition against authoritarians, as detailed in the final section, below.

IV.II The Revolution We Have – Commodified Precision Networked Warfare

Europe also needs to rapidly increase its combat power in the short-term to be ready to defeat Russia in time. This is where the second relevant RMA, the maturation of the previous RMA – precision networked warfare – comes in.

The transformation of warfighting, led by the United States, via the introduction and extensive development of precision guided munitions and basic battle networks and, later, doctrinal and force organisation development, largely fulfilled the now famous 1977 vision of then Under-Secretary of Defence William Perry:

To be able to see all high-value targets on the battlefield at any time;
to be able to make a direct hit on any target we can see;
and to be able to destroy any target we can hit.

This approach informed US capability planning and doctrinal development (e.g. AirLand Battle, Assault Breaker and Air Defence Rollback) through the last decade of the Cold War and helped the US establish global military primacy as the sole 'hyperpower' in the two decades that followed. Now, the situation has now changed as the technology and capabilities, as well as some platforms, were emulated and evolved by large powers such as Russia and, especially, China, which used it to create operational, doctrinal and organisation counters to US dominance, including 'Anti-Access/Area Denial' (A2AD) warfare, which many analyses conclude could put the US on the back foot. The maturation of the RMA thus yielded **proliferation** of precision networked warfare to other militaries, which were able to construct their own effective 'reconnaissance-strike' (recce-strike) complexes, some of which – notably China's – which some analysts see as being better networked and configured than that of the US for emerging types of warfare.

However, the maturation of the RMA has also seen **commodification** of some of its key technologies. Short and even longer-range precision strike effects (mainly via drones), advanced enabler effects (especially in sensor capability through ISR drones) and battle network functions including fast information processing, targeting and command, control and communications (C3) are now available for a fraction of their previous cost – and can be mass produced or scaled.

It is this aspect of the maturation of precision networked warfare that has the greatest significance for Europe in its short-to-mid-term race to be ready to defeat Russia. The consequences of commodified precision strike, and the advent of 'precise mass' in particular, have been seen in Ukraine's fight against Russia, in which tactical UAVs (drones) "currently account for 60-70 percent of damaged and destroyed Russian systems" according to RUSI and, per Roman Kostenko, chair of the Ukrainian parliament's defence and intelligence committee "inflict about 70 percent of casualties on both sides."

Harnessing and refining this commodification would play to Europe's advanced industrial and manufacturing strength – beyond its DIB – and could, if allied to doctrinal and organisational developments be used to rapidly 'offset' Russia's advantage in the capabilities noted by Kubilius and Bruegel, instead of trying to match it, which would be playing to Russia's strengths.

Moreover, if targeted in the right way, doing so could help introduce both greater capacity and competition into the DIB and, ultimately, transform it into a true Defence-Technological-Industrial-Base (DTIB) of the kind needed to master the coming RMA (from AI, AM, Quantum, etc) and help Europe compete geopolitically in the long-term.

These are the twin aims of the dual strategy provisionally outlined in the final section.

V. Developing Offset and Competitive Strategies for Europe

The threat and the challenge outlined above are commonly understood (in broad terms) in both the analysis presented here and in the approach presented by Commissioner Kubilius and others:

> **To be able to defeat (not just defend against) a Russian attack within three-to-five years and to position Europe to be geopolitically competitive, including in its military and defence-industrial dimensions in the longer term.**

Where the present analysis – and proposed approach - differ from that of Kubilius and others offering versions of the 'Big Bang' is in the diagnosis it is based on, and thus the available option set. The diagnosis that gave rise to 'Big bang' and similar approaches sees funding and fragmentation as the critical factors to be addressed. These *are* critical factors, especially funding, but they are not the only critical factors that any successful strategy to meet Europe's challenges must address.

To summarise the diagnostic analysis presented here, other critical factors which any European strategy must address include: the problems of Europe's DIB (slow, expensive and insufficient total production) and Military-Industrial-Ministerial Complexes (locked-in relationships with defence primes, outdated preferences and force planning), and the threat of rapid obsolescence of current and proposed platforms, capabilities and doctrine posed by disruptive shifts in technology and the conduct of warfare. At the same time, the opportunity presented by the commodification of precision networked warfare should be considered a critical factor and seized. So too should the chance to transform Europe's force planning and doctrine to develop a European way of war that fits Europe's means and ends, initially focused on the Eastern flank, and expanded and adapted in the medium-to-long-term.

To address these problems and seize these opportunities, Europe should adopt two sub-strategies to adapt, amplify and hedge its Big Bang – versions of which are likely to continue to dominate political and official thinking, regardless of how 'big' the financial uplift for European defence ends up being.

The first, focused on the short-to-mid-term, is a balanced '**Offset' Strategy** focused on emerging defence technology, but accompanied by targeted high-end investment, to deliver the capability to defeat a Russian attack within the three-to-five year timeframe. This offset should also be used to start the process of and lay the foundations for the second strategy, which should run in parallel, but aims at the mid-to-long term. This is a '**Competitive Strategies' approach**, focused on delivering the DTIB, doctrine, force organisation, capabilities and enablers that Europe needs to compete geopolitically in the long term – based on leveraging and developing European strengths and imposing disproportionate costs on rivals. This second, competitive strategy approach also requires the establishment of a European 'net assessment' capability to guide its development and ensure Europe understands, develops, and can use its own strengths as well as its opponents' weaknesses.

V.I Offset and Competitive Strategies – and the Role of 'Net Assessment'

An offset strategy is a type of competitive strategy that aims to compensate for and overcome a disadvantage by leveraging an asymmetry or imbalance in the competition between one or more actors and transform this to the advantage of the actor pursuing the offset. This study draws on the

experience of the US in successfully overcoming disadvantages by using offset and competitive strategies to transform the cold war balance and, ultimately, to secure victory.

It is relevant for Europe to now draw on previous US examples, as that is where the majority of strategic thinking of this kind has been done in recent times. There are also (more distant) European historical examples of strategies to harness technological revolutions and invert military imbalances, including those identified by Krepinevich, which implicitly inform this study, and which can be further drawn on in future. Yet, as they were not explicitly offset strategies, the focus here is on the US examples.

The trope originated In the 1950s when the US sought to 'offset' the USSR's advantage in conventional forces by emphasising, pursuing and maintaining nuclear superiority to deter attack and contain communist expansion – as part of President Eisenhower's 'New look' for national security policy founded on 'massive retaliation'. In the 1970s, the US sought to offset the USSR's ongoing conventional forces advantage *and* recently achieved nuclear parity, at a time of declining US defence budgets, by transforming its force structure and doctrine to exploit America and its allies' advantage in emerging information technology and semiconductors.

The second of these two offset strategies was also the first in a series of successful 'competitive strategies' pursued by the US Department of Defence (DoD) under Secretaries of Defence Schlesinger, Rumsfeld, Brown and Weinberger (1973-1987), the years in which the platform for Cold War victory and subsequent military primacy was forged. The second offset was 'competitive' because it focused on an area of relative US strength and Soviet weakness to change the terms of the competition between the two superpowers, forcing the USSR to compete in a field that was far more costly for it to do so than it was for the US.

Long-term US competitive strategy was based on a crucial understanding that the burden of the defence budget was far higher as a percentage of Soviet GDP than had been previously estimated (est. 6%, actual c.15-35%) and the USSR's overall economic base was smaller than had been estimated. This led to the crucial insight that if the USSR continued to spend such a high, or even higher proportion of its wealth on defence in the long-term, it would be unable to hold its economy and society together.

Pursuing 'cost imposing' competitive strategies was thus judged an effective way for the US to outcompete the Soviets. It was this logic that drove the revival of the B1 bomber programme and the specification of the B2 stealth bomber programme in the early 1980s, both designed to impose massive costs on the USSR, which would need to upgrade the world's largest air defence network to meet these threats. These costs were not only far higher than those of the bomber programmes, and helped stretch Soviet finances to breaking point, but pushed the USSR into spending a lot more on defensive rather than offensive capacity.

Both the offset strategy and the general competitive strategies approach were based (to considerable degree) on the work of the Pentagon's 'Office of Net Assessment' and the understanding that the Cold War was a long-term competition rather than being a confrontation that was likely to have a definitive short-term resolution. Net assessment is, in essence, a way of understanding the relative strengths

and weaknesses – military, economic, technological and defence-industrial as well as organisational/cultural - of one's own state/organisation weighed against that of others, particularly rivals, opponents, enemies or competitors. Net Assessment drew heavily on inter-disciplinary scholarship, from history and anthropology to business and management studies, as well as extensive military and strategic expertise, with the specific intent of informing civilian leaders how they should plan to prevail in long-term competition. The 'diagnostic approach' that resulted has much in common with the approach to business strategy outlined by thought leaders in this field, especially Richard Rumelt, and inspired the analysis presented in this piece. That analysis makes the case for Europe to develop a rapid offset strategy in the short-to-mid-term and a competitive strategies approach in the longer-term.

V.II Developing Offset and Competitive Strategies for Europe

Europe faces a conventional forces disadvantage against Russia because even if some of its militaries may look strong on paper, their 'hollowed out' nature has resulted in a lack of preparedness and ability to get the platforms they have, where they need to be, and working as they should, with adequate manpower, logistics, sustainment, enablers and depth of magazine.

This disadvantage has been exacerbated by the unreliability of US forces and will not be addressed *in time* by pursuing a symmetric strategy of simply trying to match Russia by building much more of the same type of platforms or trying to replace the missing US platforms. Russia continues to outproduce Europe on the type of platforms noted by both Kubilius and Bruegel.

Moreover, trying to fill this gap would likely not address the problem or meet the challenge, as it plays to Russia's strengths, and runs up against European weaknesses in its DIB as outlined above. Instead, Europe should diversify, broaden and deepen its understanding of its DIB to include manufacturers which may not be primarily focused on defence but which could produce military capabilities and enablers – as was common and successful practice during the Second World War and the Cold War. For example, both Ford and Chrysler made M4 Sherman tanks during WW2 and, as The Economist recently noted:

> before the fall of the Berlin Wall only 6% of American defence spending went to specialist arms-makers. Most contracts went to companies that had both commercial and military arms. Ford made satellites until 1990, just as General Mills, better known for its cereal and cookies, made guidance systems for Intercontinental Ballistic Missiles (ICBMs).

The CEO of carmaker Volkswagen also recently indicated his firm's willingness to move into defence production – and the scale of such possibilities to grow European defence manufacturing should not be underestimated as recently emphasised by Sander Tordoir: "manufacturing accounts for 16.4 percent of the EU's gross value added compared to just 11 percent in the United States."

Yet, as well as broadening the DIB to increase production, *what is produced* matters most of all. If Europe sticks to the old, platform-centric approach and legacy capability profiles, and thus ends up producing mass quantities of expensive new versions or old things, we will not get the capabilities we

needs to boost our combat power in ways that would overmatch Russia. Rather, in trying in vain to replace missing US platforms, we would likely get drawn into the kind of fight that would suit Russia rather than Europe and which we would be far less likely to win.

Finally, pursuing a 'more of the same' approach would be foolish in light of the disruptive shifts in technology and warfare that can already be seen in Ukraine and which Russia is beginning to adapt to, but is not industrially equipped to take advantage of in the same way that Europe could. Instead of remaining stuck in the rapidly obsolescing 'platform-centric' paradigm, Europe can leapfrog ahead in its military technology, doctrine, force-planning and organisation to create and develop a heavy-firepower, light-footprint approach that *genuinely* networks its existing platforms with new capabilities and munitions. This could produce a potentially massive force multiplier effect which would provide the necessary overmatch to defeat and thus effectively deter Russia.

Therefore, Europe (EU and European NATO states plus Ukraine) should act in a coalition of the willing, not being bound by the need for institutional unanimity and using/ combining/ repurposing/ reassigning existing structures and institutional capabilities where needed, should embrace an offset strategy that plays to its strengths, plays on Russian weaknesses, gives a chance to address the capability imbalance, and ready Europe to be able to defeat a Russian attack, in the necessary three-to-five-year timeline.

As noted above, the main purpose of this discussion paper is diagnostic and there is not space here to develop these strategies in detail, but key pillars of each, which are intended to be complementary, are proposed as a starting point for further development, challenge and refinement.

In both strategies, and in all aspects, the focus is on harnessing the potential and power of emerging defence technologies to leverage Europe's strength to rapid and substantial effect. The offset is particularly intended to harness the maturation and especially the commodification of precision strike and possibility to scale advanced battle networks to genuinely integrate and multiply the effectiveness of existing platforms in the short-term, so our democracies may survive Russian attack and coercion. The competitive strategies approach is intended to position Europe to master the coming revolution in military affairs and thrive, geopolitically in the long term.

Prospective pillars of the offset and competitive strategies for Europe are proposed on pages 16-19.

V.III Pillars of an Offset Strategy (OS) to be Able to Defeat Russia in 3-5 Years

1. Develop and evolve a **'European Way of War'** (New Doctrine/ Operational Concept) to **Defeat** a Russian Attack across the Eastern Flank (including Ukraine) in next three-to-five-years that provides a clear vision for short-to-mid-term change focused on:
    a. the forces, capabilities and enablers that *can* be fielded in this timeframe.
    b. sustained, heavy, networked precision firepower with a light footprint.
    c. not trying to fight like the US, without the US.
    d. repelling through massive, yet smart, fortification, counter mobility & firepower.
    e. offsetting Russian capabilities to **defend forward from the first moment**, not trade space for time, learning from Ukraine.
    f. threatening Russia on the battlefield, across rear areas and key assets.
    g. suppressing/destroying enemy air defences (SEAD/DEAD)
    h. suppressing/ destroying enemy air attack (SEAA/DEAA)
    i. establishing an intensive programme of wargaming, exercising, training and equipment testing [to coordinate with OS-3].
    j. updating doctrine and operational concept with technological and industrial development, as well as feedback from testing, wargaming and exercising.

2. Develop and evolve a 'short-to-mid-mid-term '**New Force and Capability Plan' (harmonised with and implemented alongside OS-5 – High-End Capability and Enabler Plan')** to deliver on the doctrine and operational concept and equip the European Way of War focused on:
    a. rapidly scalable, mass-producible, expendable, rapidly-software upgradeable, low-cost, high-effect emerging defence technologies, especially **mass precision,** learning from Ukraine and wider technological developments.
    b. amplifying the effectiveness of legacy platforms by upgrading through AI and battle network kits, integrating them with new tech [OS-2a] and sensors.
    c. AI and battle network amplification of effectiveness of off-the-shelf sensors and other tech in order to rapidly build enabler functions.
    d. space and satellite technology (incl. defence technology).
    e. develop measures of effectiveness for new force and capabilities.
    f. update the New Force and Capability Plan on basis of OS-1.d, 3.d and 3.e

3. Develop and evolve an '**Accelerated Military Technology and Industrial Capacity Plan'** to scale production of emerging defence technologies for New Force and Capability Plan:
    a. focusing initially on mass-producible and scalable semi-proven and promising capabilities and applications including strike drones (short and long-range), ISR drones, AI battle networks, AI and network upgrade kits for legacy technology, low-cost air defence, battlefield robotics, off-the-shelf sensor AI upgraders.
    b. provide a '**smart sandbox'** to pursue multiple options that could be rapidly scaled when proven effective - 'wildcatting' – while building sufficient stocks to reinforce Ukraine now and begin capability and doctrinal evolution in coalition states.
    c. create a **common fund** (ideally at least 50bn EUR – e.g. 1/3 of new EU funding) to place test run orders (which can be produced within 6 months) from startups, scaleups and SMEs from participating countries on a 6-monthly basis over the next five years (e.g. 5bn every 6 months) – and pay for rapid scaling when needed.
    d. make having a future licenced production arrangement with a large manufacturer or demonstrable capacity for mass production a condition for bidding and remove regulatory obstacles to and create incentives for non-defence manufacturers to act as preferred future scaling partners for technologies under testing

e. production in partnership with Ukrainian companies and licencing Ukrainian designs should be encouraged, as should joint ventures between companies from coalition states, including Ukraine.
f. create incentives for and remove regulatory and legal obstacles, as well as addressing cultural barriers to investing in defence SMEs
g. send half of test order capabilities to Ukraine for combat or near-combat testing, and half (via bid) to the militaries of the coalition countries, ideally for use in joint exercising and training.
h. provide feedback from testing to all coalition countries and incorporate into OS-1, OS-2.
i. create commonly development facilities– e.g. synthetic environments/ digital twins – available to successful bidding companies for further development.

4. Create a '**Combined Coalition Doctrinal Integration and Development Capability'**, allied to a nascent 'Net Assessment' capability [see CS-1] to:
    a. organise and evaluate short-term wargames.
    b. integrate the results together with those of technological experimenting and testing, military exercising, testing, training.
    c. evaluate exercises between coalition states to ensure usefulness.
    d. feedback into evolving doctrinal development, force and capability planning.
    e. Develop long-term war games, training. testing and exercising plans

5. Develop a '**Targeted High-End Capability and Enabler Plan**' to deliver aspects of European Way of War that cannot be achieved through emerging, low-cost, high-effect defence tech, focusing on:
    a. offensive capabilities and imposing costs on Russia, including by forcing Russia to focus on building costly, defensive assets including air-defence [see 7] taking advantage of historical fears of air attack and large Russian territory to be defended, by massing offensive strike capability.
    b. using incentivised fast-industrial programmes and licencing between defence primes and non-defence advanced manufacturers (with multiple companies involved to boost speed if necessary)
    c. planning to develop aspects of **full nuclear triad (air-sea-land) with gradated 'strategic' and 'pre-strategic'/ theatre effect capabilities,** with progressive build up and out from current UK and French nuclear capabilities, across the coalition.
    d. rapidly building stocks of **non-nuclear strategic effect munitions** (especially long-range stealthy cruise missiles), launch platforms and enablers through incentivised fast-industrial programmes and licencing between defence primes and non-defence manufacturers.
    e. rapidly building massive stocks of air-to-ground and air-to-air munitions to maximise effectiveness of coalition air power – and also encouraging new, lower-cost, high-effect alternatives where possible.
    f. Developing cost-effective new enabler effect/function solutions where possible but where not, rapidly build enablers needed for European Way of War, using incentivised accelerated and licenced production agreements with advanced manufacturers

6. Develop a '**Short-to-Mid-Term Legacy Force Integration, Mobility and Logistics Plan'** to fill gaps in necessary legacy platforms and build troop and force strength and effectiveness
    a. even with the new, lighter-footprint, low-cost, high-effect European Way of War, it is recognised that more of some legacy platforms are needed – though new investment and production of these platforms should be minimised.

b. legacy force network integration plan, using new technologies such as bolt-on network and AI upgrade kits, to genuinely network older technology and achieve force multiplier effects is needed urgently and should be rolled out rapidly and sequentially to extant equipment and added to new equipment as it is produced.
c. logistics, military mobility and enablers to make new and extant legacy platforms work – and get them to where they are required to work are needed.
d. so too are sufficient trained troops and other military personnel.
e. through licencing, joint ventures (including between defence and non-defence manufacturers), and incentivisation, the aim should be rapid production, fielding and deployment of these capabilities, together with necessary AI and new battle network integration [see 2b]
f. Institute mass training in coalition state populations to expand reserve forces and introduce mandatory or bounded-mandatory military service across coalition states to ensure required number of troops and other military personnel.
g. integration with the long-term capability planning across all domains and potential theatres [see CS below] with poh

7. Develop a new '**Strategic and Operational Air Defence Concept'** focused on:
    a. hitting the archer not the arrow: rolling back the Russian capacity to threaten by hitting launch sites, and launch platforms as hard and early as possible and develop a **SEAA/DEAA Suppression/Destruction of Enemy Air Attack– doctrine,** with the capabilities to deliver it.
    b. providing necessary reassurance protection for military, critical governing, warfighting, industrial and infrastructure assets, as well as civilian population centres,
    c. through a mixture of low-cost, mass air defence using emerging technologies – working toward an 'autonomous dome' - and high-end defence against ballistic, cruise and hypersonic threats.
    d. But focused, especially in the short-to-mid-term on SEAA/DEAA by providing Europe's air forces with the munitions to make the best use of their legacy air platforms and rapidly fielding new, uncrewed systems and munitions.

V.IV Pillars of a Competitive Strategies (CS) Approach for Europe to Prevail in the Military and Defence Industrial Aspects of Long-Term Geopolitical Competition

1. **Institute a European Office of Net Assessment (EurONA)** to continually assess key balances in short-medium and long-term perspective between the European coalition and Russia, China and other authoritarian powers, especially relative military, economic, technological and defence-industrial strengths and weaknesses. EurONA's work should inform the development of competitive strategies and to coordinate the processes of and feedback mechanisms from training, testing, experimenting and wargaming into European defence and defence industrial strategy [see OS-4]. To report to defence leaders at the level of the European coalition – or to the Defence Commissioner and a (European-focused successor to) the NATO Secretary General.

2. **Mastering the Coming RMA** - Under EurONA [CS-1] create a specific programme, complementary to the '**Accelerated Military Technology and Industrial Capacity Plan**' (OS-3) to drive civil-military leadership cooperation on and buy-in to strategy, doctrine, technological and capability development and to drive research, development, testing and experimentation programmes for multiple applications and capabilities in promising and

significant fields – including AI, AM, Quantum, Robotics, Uncrewed Systems, Directed Energy, Hypersonics, Space technology and Space Weapons - aimed at mastering the coming RMA. This programme should tackle mid-to-long-term aspects of optimising the legal, regulatory, normative and financial landscape for defence, technological sovereignty, and economic dynamism.

3. **Comprehensive Defence Strategy for Europe** - Build on the early development of the 'European Way of War' [OS-1], the New Force and Capability Plan [OS-2], the 'Targeted High-End Capability and Enabler Plan' [O-5], the Short-Term Legacy Core Capability Plan [OS-6] and the New Strategic and Operational Air Defence Concept and Plan [OS-7] to create a 'Comprehensive Defence Strategy for Europe', with force, capability and enabler planning going beyond the Eastern flank and into all potential theatres in which Europe needs to be engaged.

4. **European Capability Development, Procurement and Review Programme –** Based on the Comprehensive Defence Strategy for Europe [CS-3] and the programme to master the coming RMA [CS-2], an ongoing review body, led by EurONA [CS-1] would review capabilities, platforms, applications and networks and recommend procurement, continuation or discontinuation according to ongoing military relevance.

5. **Technological Leadership Strategy for Europe** - under the Comprehensive Defence Strategy [CS-3] there should be a sub strategy to drive dual use technological development that will help fuel European prosperity, as well as military advancement. Incentivising and facilitating the flow of private capital to emerging defence technology and dual use start-ups and scale-ups, as well as leveraging Europe's wider industrial base to scale innovation will be essential in assuring technological sovereignty and competitiveness.

6. **Build the DTIB to deliver the flexible scalable industrial capacity to rapidly mass produce capabilities when needed -** Build on the 'Accelerated Military Technology and Industrial Capacity Plan' [OS-3] to develop the broader, deeper Defence Technological Industrial Base (DTIB) Europe will need to be able to exploit the coming revolution in military affairs. Ensure that this DTIB is composed of smaller as well as larger firms, a mixture of firms focused on defence and other manufacturers capable of producing defence assets if necessary – and incentivised to retain the capacity to do so.

About the Author

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