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Equipping Ukraine for the Long Haul: A Role for Swedish JAS Gripen?

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Summary

There will be a long-term requirement for significant western input into Ukrainian defence. Serious consideration must begin to the nature and scale of that input. Equipment is the most expensive element of capability and takes the longest to generate. The emphasis should continue to be on the supply of existing platforms, rather than the development or manufacture of new systems. On land, the United States has a great deal of effective equipment in storage, including tanks, armoured fighting vehicles and self-propelled artillery, of sufficient quality and in sufficient quantity to provide adequate defensive capabilities. Poland could also play a major role in a lend-lease capacity.

In the air, the focus should be on reinforcing Ukrainian success by a deeper and wider supply of ground-based air defence systems and drones, alongside a realistic appreciation of the requirement for crewed aircraft. The most suitable fighter/strike jet is the Swedish Gripen C/D, a sufficient number of which could be available over the next few years. At sea, attention should be given to new and relatively cheap assets such as uncrewed submarines, and crewed missile and patrol boats. Most importantly, whatever platforms are preferred, serious consideration of these matters must begin now.

Current US and European supplies of the weapons required to ensure Ukraine's survival and success are a temporary but essential palliative to an acute crisis. In the absence of a comprehensive peace deal, the chronic underlying threat from Russia will remain.[1] It will be difficult to build sustainable combat power in Europe in the next decade as the United States and its closest allies focus more on the "pacing challenge" from China.[2] This US focus is likely to persist into the late 2020s and beyond.[3]

Understandably, the long-term needs of Ukraine's defence (2025–35) have received little attention in the rush to provide immediate defensive equipment.[4] This is postponing a problem that must be addressed now. It will take several years for policy or procurement decisions to bear fruit in terms of military capability. Provided that it is soundly based, any decision is better than none.

The purpose of this short paper is to offer initial ideas on the development of tangible elements of a sound and credible deterrent capability for Ukraine, which in turn will provide a bulwark for Europe more broadly. There are two implicit assumptions in the material set out below. First, Ukraine will undergo a severe financial crisis and will be unable to afford a high-end sovereign suite of equipment. It will need to integrate a great deal of received assets. Second, European and North American states will continue to consider Ukraine an essential bulwark against Russian aggression and a future NATO member. This will require the evolution of a closer command and control arrangement.

This paper addresses three combat domains: land, sea and air. Different considerations apply to the space and cyber[5] domains. *Equipment* is not the same as *capability*, which is a function of many other factors – notably training and support.[6] The focus here is on equipment as it is the most expensive, takes the longest to generate and will require the most intense discussion and debate.

Land: the Primary Ukrainian Domain

On land, it must be remembered that notwithstanding the large influx of western weapons, the vast bulk of Ukrainian equipment remains ex-Soviet in design.[7] As attrition continues to

1 "NATO's generals reckon that Russia could rebuild its land forces in 3-5 years. Ultimately the conditions would be ripe for Putin or his successor to have another go," The Economist, 25 February 2023, p. 17.

2 This is a term commonly used in official statements; for example https://www.defense.gov/News/News-Stories/Article/Article/3294255/dod-is-focused-on-china-defense-official-says/

3 For an analysis of the West Pacific as the US priority, as per the 2022 US National Strategy, see https://www.fpri.org/article/2022/10/the-new-us-national-security-strategy-four-takeaways-for-asia-policy/

4 There has been some discussion at the political level. See for example https://eda.europa.eu/webzine/issue23/interview/ukraine-war-confirms-need-define-long-term-strategy and https://ecfr.eu/article/more-tortoise-less-hare-how-europeans-can-ramp-up-military-supplies-for-ukraine-in-the-long-war/

5 "Western governmental, military and commercial actors are directly engaging Russian attackers and taking on a swath of responsibilities for taking on Russian attackers and defending Ukrainian networks, data and capabilities' and are likely to continue to do so". See Nick Beecroft, "Evaluating the international support to Ukrainian cyber defense", Carnegie, November 2022, available at https://carnegieendowment.org/2022/11/03/evaluating-international-support-to-ukrainian-cyber-defense-pub-88322

6 Capability is a product of equipment, personnel, training and support amongst other factors. Integration of NATO doctrine and practices is beginning at the informal level, with extensive training programmes taking place throughout Europe and the United States. Serious consideration should be given to the development of a cross-fertilising training and doctrine centre of excellence to capture and integrate lessons from the current war.

7 A brief glance at the Ukraine chapter of the standard work on military equipment "The Military Balance 2023", International Institute of Strategic Studies, London, pp. 201ff clearly supports this.

take its toll, this equipment will be "flushed out" of Ukraine's arsenal. There is currently a veritable zoo of different European and US platforms, which creates an extremely difficult logistical challenge requiring multiple repair and supply chains.[8] Preparations must begin now to ensure that, as time goes on, the logistical burden is reduced as far as possible, and that to this end a very low number of variant-types of tanks, artillery and armoured fighting vehicle are procured. In other words, Ukraine should ideally seek to procure a single type each of tank, mobile artillery system and infantry fighting vehicle. Furthermore, a firm balance should be struck between mass, affordability and efficacy.

On tanks, it is not clear that available stocks of the German Leopard offer the numbers (mass) required. However, there are over 2000 extremely effective and fully combat-proven US M1A1/2 Abrams tanks in storage,[9] which would be useless for any Asian contingency currently planned. However, these tanks are extremely expensive to maintain and run. The US also has about 850 M109 self-propelled 155-mm guns in storage.[10] These platforms exist now and are unlikely to be recommissioned in any other context. The same applies to the Bradley armoured fighting vehicle, of which there are 2000 in storage. The Bradley was specifically designed to work alongside Abrams tanks.[11] The Bradley, Abrams and M109 combination would provide a more than adequate basis for the maintenance of a sound combined arms force that would be at least equivalent to Russian systems into the 2030s. Over a period of 2–3 years, an adequate supply could be accomplished with whatever numbers are required, subject to the political will and the finance.

Current orders for new multi-launcher rocket systems (MLRS, which are similar to US HIMARs) for Ukraine will take many years to be filled.[12] Poland will shortly be taking delivery of new US HIMARS and Korean Chunmoo MLRS.[13] In order to provide the basis for an MLRS capability, one option might be Polish lend-lease of some of these systems, along with training facilities. Clearly, such a decision would present something of a risk to Poland; that said, these systems are being bought precisely to provide a deterrent capability against Russia. The same considerations apply to Poland's soon to be acquired tanks from South Korea and the US.

The Air Domain

Ukraine's surprising success in defending its airspace is nothing to do with having a modern air force armed with fighter jets. Instead, success can be attributed to its demonstrable ability

8 For example, there are at least 12 foreign artillery systems in Ukrainian service, each with a different supply chain, and many with different types of shells and charge bags. See Mark Cancian et al "Expanding equipment options for Ukraine; the case of artillery", CSIS, 2023, available at https://www.csis.org/analysis/expanding-equipment-options-ukraine-case-artillery. There is an equal number of ex-Soviet types.

9 See "Military Balance 2023, p 37.

10 Ibid

11 Ibid

12 See US Defense Department News announcement, 22 September 2022, available at https://www.defense.gov/News/News-Stories/Article/Article/3173752/latest-us-support-for-ukraine-targets-long-term-security-investment/

13 See "Poland to buy hundreds of S Korean Chunmoo Muli-Launch systems", Defense News, 22 October 2022, available at https://www.defensenews.com/global/europe/2022/10/14/poland-to-buy-hundreds-of-s-korean-chunmoo-multiple-rocket-launchers/

to disperse its deployment of assets and to move its support network.[14] This is of course an approach generally similar to Swedish and Finnish doctrine.

Thus far, Ukraine has been most effective in its use of anti-aircraft systems (Ground-Based Air Defence Systems, GBAD) of ex-Soviet design. The number and effectiveness of these relatively old systems will diminish through attrition in the form of losses and ammunition expenditure. The transfer of newer GBAD missile systems is only a beginning. Even now, these provide far from sufficient cover.[15] The programme of rearming Ukraine's GBAD will need to continue for many years and resourcing this will be extremely expensive. In view of the likely continuing predominance of Russian air power, GBAD must continue to be Ukraine's main effort in the air domain, reinforcing success.[16]

As matters stand, aircraft – most famously in the form of fighter/strike jets – are not a priority; nor should they become one. Finding suitable bases would be a challenge and protecting them from attack would draw valuable and scarce air defence assets from other, more vital areas. Furthermore, it is not entirely clear what Ukraine believes could be achieved with the type and quantity it is likely to obtain or has the resources to sustain.

There has been much talk about the US F-16 jet being the main candidate for a short- to medium-term solution. These are highly maintenance-intensive and have an extensive logistical and personnel footprint. They require a great number of well-trained personnel to operate to their potential.[17] In the context of Ukraine, they are not ideal.[18] They are generally regarded as "exquisite" aircraft that require very highly trained ground crews, extremely smooth runways and a suite of equipment on the ground for every mission. As a long-term solution, serious consideration should be given to rearming Ukraine's air force with the Saab Gripen C/D, which should become available as the Gripen E comes online, a process that is likely to be complete by 2027.[19] Given that the Ukrainian approach to dispersed air operations is similar to Swedish and Finnish doctrine, and that the Gripen was specifically designed for dispersed operations,[20] as well as the kind of low-level, non-permissive combat

14 See Zabrodovski. Watling, Danylyuk and Reynolds "Preliminary lessons in conventional warfighting from Russia's invasion of Ukraine February-July 2022", RUSI, 30 November 2022, available at https://static.rusi.org/359-SR-Ukraine-Preliminary-Lessons-Feb-July-2022-web-final.pdf

15 For more on the priority to be attached to Ground Based Air Defences see Bronk, Reynolds and Watling "The Russian Air War and Ukrainian requirements for Self Defence", RUSI, 7 November 2022, available at https://rusi.org/explore-our-research/publications/special-resources/russian-air-war-and-ukrainian-requirements-air-defence

16 For a sound and persuasive argument in support see Bremer and Grieco "Air Defense upgrades, not F-16s are a winning strategy for Ukraine" Defense News, 22 January 2023, available at https://www.defensenews.com/opinion/commentary/2023/01/25/air-defense-upgrades-not-f-16s-are-a-winning-strategy-for-ukraine/

17 For a basic summary of these issues see Bronk "Why the West is reluctant to give Ukraine F-16 Jets", Spectator 7 February 2023, available at https://www.spectator.co.uk/article/why-the-west-is-reluctant-to-give-ukraine-f-16s/; also see USAF Colonel Ganyard interviewed on ABC News "Could F-16 jets turn tide for Ukraine?" available at https://abcnews.go.com/International/16-jets-turn-tide-ukraine/story?id=97334644

18 For further discussion on this, see Losey "Which fighter jet is best for Ukraine as it fights off Russia"; Defense News, 7 March 2023, available at https://www.defensenews.com/air/2023/03/07/which-fighter-jet-is-best-for-ukraine-as-it-fights-off-russia/

19 See "Gripen for Ukraine; Sweden reveal show many spare aircraft it has", Ukrainian Defence News, 10 March 2023, available at https://en.defence-ua.com/news/gripen_for_ukraine_sweden_reveals_how_many_spare_aircraft_it_has-5754.html

20 See "Gripen designed for dispersed air basing system", Saab, August 2020, available at https://www.saab.com/newsroom/stories/2020/august/gripen-designed-for-dispersed-air-basing-system

that is prevalent in Ukraine, these would be an ideal solution. Either jet would allow Ukraine to be exposed to and integrated into NATO command and control systems.

Fighter-strike aircraft are useless without missiles and significant attention should be given to the provision of a significant arsenal, such as the US AMRAAM air-to-air missile (also used in the NASAMS anti-aircraft system now deployed in small numbers by Ukraine) or the Spear air-to-ground missile.[21] Given an adequate level of command and control arrangements, a reasonable number of such well-armed jets (30 to 40) could provide an affordable but invaluable contribution to NATO capabilities.

Drones are now of far more importance than crewed aircraft and will remain so into the future. Joint development is already under way with several western countries, such as the Kindred drones developed by QINETIQ in the UK. This kind of cooperation must be deepened and broadened.

Maritime

The Black Sea is vital to Ukraine's viability as an economy. The capacity to hold at risk Russian ships and submarines in the western portion of the Black Sea would be a significant starting point for national economic security. The Ukrainian navy demonstrated superb innovative thinking in its use of maritime drones in its attacks on Sevastopol. It has also done severe damage to the Russian navy and deterred deployment of its surface fleet through use of its excellent Neptune missile system, in addition to other western-donated missile systems. Ukraine will continue to develop capabilities to challenge Russian naval power.[22] Strengthening Ukraine's coastal defences is a priority that might be assisted, for example, with further deliveries of Sweden's "Robot 17" portable missile system, which is already being used by Ukraine. Sweden, Finland and Norway can also offer the fruits of their extensive experience of layered coastal defence, also in the form of missile-armed and/or anti-submarine patrol boats and corvettes. However, nothing at or near the sea provides better deterrent capability at sea than submarines.

Of all the categories of equipment mentioned above, crewed submarines would be by far the most expensive and almost certainly the most impractical. Ukraine will not be able to afford to buy submarines of sufficient quality, along with the supporting infrastructure, including training. With some innovative thinking, however, the west could provide some submarine capability in the form of rapidly maturing technologies, such as the uncrewed partially autonomous "Cetus" submarines currently being developed and soon to be deployed by the British Royal Navy.[23] As currently envisaged, the main role of this platform is surveillance but further roles will certainly be developed. Submarines such as Cetus will be operationally deployed by the middle of this decade, working in conjunction with naval and air forces. At a relatively cheap £15.7m (with the caveat that support and other systems would at least

21 See Bronk "Regenerating warfighting credibility for European Air Forces", RUSI, February 2023, p. 33 available at https://static.rusi.org/whr_regenerating-warfighting-credibility-nato_0.pdf

22 Concerning options for anti-submarine warfare, see https://www.rusi.org/explore-our-research/publications/commentary/tackling-underwater-threat-how-ukraine-can-combat-russian-submarines

23 See "Royal Navy orders first crewless submarine to dominate underwater battleground", British Royal Navy official site, 1 December 2022, available at https://www.royalnavy.mod.uk/news-and-latest-activity/news/2022/december/01/20221201-royal-navy-orders-first-crewless-submarine-to-dominate-underwater-battleground

double this cost), these offer a potentially very great return on investment. The addition of a relatively affordable submarine surveillance capability alone would be significant. However, Ukraine has demonstrated considerable capacities for integrating maritime strike drones into its operations, and Cetus, or something similar, offers extensive potential for innovative deployment.

Similarly affordable options are available for the development of a small but formidable surface flotilla of patrol and missile attack boats along the lines of those operated by Norway, Sweden and Finland. Furthermore, a much-improved mine-clearance capability (in close cooperation with Black Sea NATO states) would be a relatively cheap but essential investment if sea lanes are not to be threatened.

Policy Recommendations

- The West – especially Europe, given the US focus on the western Pacific – must give serious consideration now to developing realistic options for the military support of Ukraine in the medium to long term (2025–2035).

- Greater attention should be paid to balancing mass, quality and affordability based around as few types of existing high-quality platforms as possible.

- While having regard to potential shifts in adversary doctrine, the focus should be on reinforcement of successful approaches and enduring principles. This is especially the case when sustaining Ukraine's ground-based integrated air and missile defence system. A substantial fighter/strike aircraft force is desirable and care must be taken to supply the most suitable jets.

- The maritime domain is as crucial for Ukraine's security as the air or ground domains. More attention should be paid now to reinforcing Ukraine's navy and leveraging affordable developments in sub-sea and surface weaponry.

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