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The Future Russian Way of War Part 3: Military Reform

Introduction

In May 2025, the Stockholm Center for Eastern European Studies (SCEEUS) at the Swedish Institute of International Affairs gathered a group of leading specialists and researchers focusing on various dimensions of Russian security and military affairs. The conference, “The Future Russian Way of War,” was organized around four broad themes: 1) state mobilization; 2) hybrid tools; 3) military reform; and 4) nuclear deterrence.

Part 3: Military Reform

This is the third installment to be published from the conference, centered around its third theme, military reform. It contains three papers.

The first paper, by Aleksandr Golts, an analyst with the Stockholm Center for Eastern European Studies at the Swedish Institute of International Affairs, deals with the failure of Russia's armed forces to modernize as a result of combat experience. Instead, he argues, the Kremlin has reverted to a traditional Soviet model for running the armed forces—albeit in a modified form.

The second paper, by Samuel Bendett, a researcher with the Center for Naval Analyses (CNA), examines the role of Russian civil society in assisting the Russian military. He describes how civil society and non-state initiatives have played an important role in the delivery of crucial supplies – including tactical drones, vehicles, and medical equipment. However, there are also clear limits to how far this support may extend.

The last paper, by Konrad Muzyka, an independent defense analyst at Rochan Consulting, discusses how the war with Ukraine has given Russia a stark choice: either the country will learn from its operational failures and adapt its force structure and doctrine accordingly, or it will become ever more entrenched in outdated models characterized by political inertia and reluctance to change.

Adaptation without modernization

Aleksandr Golts

Until recently it was taken as a given that the experience of actual combat inevitably helps a country's armed forces to develop and modernise in order to become more efficient. Paradoxically, however, the experience which the Russian army has gained from its war in Ukraine has led it to do no more than "adopt"; it has not "modernised". Indeed, as a result of this "adaptation" the Kremlin reverted to what is clearly a Soviet model for running the armed forces (albeit in a modified form).

There are two interrelated reasons which have led to fundamental changes in the way the Russian armed forces are organised and how military operations have been conducted. The first of these is that combat operations which have been carried out in Ukraine over the past three years are significantly different from the 'future war' scenario which was envisaged in the wake of the American wars against Iraq and in Afghanistan.

Those wars were a triumph for the revolution in military affairs, and from the start showed the advantage that high quality military technology gave one side over the other. The war in Ukraine is between two armies which are roughly on the same technological level. The achievements of the revolution in military affairs – the mass use of air and sea drones, the means for carrying out electronic warfare, and also the limited use of precision-guided weapons – have led to a strategic stalemate. Neither side has the ability secretly to build up and concentrate any kind of sizeable force to carry out a major operation. The same time neither is capable of building up the kind of strategic reserve which would be essential to achieve a decisive victory. This means that it is not the level of preparedness of the troops or the quality of the weaponry which is of primary importance, but simply the amount of personnel and military equipment.

At the start of its military operation against Ukraine, the Russian army had insufficient manpower to take over a big European country. This was a result of the armed forces' reform of 2008 to 2012, the essence of which was the rejection of the concept of mass mobilisation. The concept dominated in the Russian military thought and practice for more than 300 years. The concept of mass mobilization presupposed the ability to train millions of reservists in peacetime and call up on the eve of war to existing skeleton units. These units took several weeks to become operational. According to mass mobilisation concept all of the country's industry, civilian or military, either had to produce or be ready to produce equipment for the military. Such an army could be effective only if the whole economy worked for it, and if the entire male population were regarded as "mobilisation resource" and, in theory, able to be called up at a moment's notice. Such a system could operate only in a totalitarian state. That's why the military top brass attempts to maintain the Soviet military system in the 1990s resulted in decay and a structural crisis, which affected all the basic principles underlying the formation of the Russian army. Radical military reform started at 2008 under the leadership of then Defence Minister Anatoly Serdyukov. The reformers' aim was to create a different type of army, with fully staffed units. Bearing in mind the demographic situation, this could be accomplished only by significantly reducing the number of units in the armed forces.

As a result of Serdyukov's reforms, the Kremlin had at its disposal a few dozen fully equipped and staffed units, which meant that a military command could be carried out within a few hours of it being issued. Putin immediately used these units to achieve his geopolitical goals. In February 2014, Russian forces seized Crimea and united it with Russia. Even more impressive was the rapid deployment of Russian troops to the Russo-Ukrainian border at the end of February 2014. In just a day and a half 40,000 soldiers could be [stationed](#) on the border with Ukraine.

The Kremlin misinterpreted these successes. They decided that this reformed army, which had been created to ensure victory in a brief, local conflict, could fulfil any task, including an attack on Ukraine. This error became clear in February 2022, when Putin set the army the impossible task of seizing this large European country. He simply did not have sufficient forces. What was more, the reforms, which had been interrupted when they had been only half-completed, had not been thought through and carried out at the strategic level. In military colleges and academies, they were continuing to teach a doctrine based on a mass mobilised army which no longer existed. Russian officers were incapable of conducting a war in the way that they had been taught.

It is likely that after the painful defeats near Kharkiv and in Kherson Region in 2022, Putin turned to his generals for advice. And they recommended a return to the only model they knew for running the armed forces and carrying out military operations. All they could recommend to Putin was to adopt mass mobilisation once again. This was what happened in the autumn of 2022, when a so-called "limited mobilisation" was declared, which [resulted](#) in 300,000 reservists being sent to the armed forces. At the same time, Yevgeny Prigozhin, an entrepreneur with a criminal background, was given permission to recruit prisoners, which [produced](#) a further 50,000 soldiers. These measures allowed the high command to stabilise the situation on the frontline at the start of 2023. But the Kremlin was shaken by the strongly negative reaction to this mobilisation throughout society, which led to hundreds of thousands of young people fleeing the country.

Meanwhile with the military operation bogged down and reinforcements being constantly needed because of the huge losses of personnel, the Kremlin had to create a type of mobilisation which would not lead to protests in society. To solve the issue they turned to "market recruitment". The Kremlin began to pay those who took part in military actions sums of money which were enormous by Russian standards. The return to the concept of mass mobilisation, combined with the altered character of military operations led to the rebirth of Soviet methods of military training, albeit in a somewhat different format. The constant flow of personnel allowed for dead or wounded soldiers to be replaced by new recruits, without withdrawing whole units from the frontline for rest and reorganisation. Nine reserve regiments have been [formed](#) to support the fighting units. The training of recruits is limited now to individual training and acting in small tactical groups: pairs, trios or groups of five. After two to three weeks of such basic training, these units are being sent into action.

As far as we can tell, the Russian high command has managed to solve the problem of replacing junior officers. The closest [estimates](#) suggest that over the course of the three years of the war, losses of officers amount to around 40–50,000. About 13,000 lieutenants [graduate](#) from Russian military colleges each year. The gap that this has left means that lieutenants are being replaced by privates and sergeants who have excelled on the battlefield being put through short, intensive courses to become officers. In a situation where combat involves small units, such lieutenants probably have sufficient skills and knowledge.

Preparing for a protracted conventional war against NATO the USSR produced as much weaponry as possible in peacetime. Russian military industry nowadays has neither the capacity nor the speed of production to cover Russian losses of military equipment during hostilities in Ukraine. Instead, they have begun to bring up to operational capacity tanks, armed vehicles and artillery pieces which were produced 40 to 50 years ago.

Turning back to Soviet concepts and models of mobilisation has allowed Putin to create a relatively sustainable system for running the armed forces and conducting military operations. At the current level of intensity, the Kremlin should be able to continue the war for a further two years until the reserves of Soviet weaponry are exhausted.

The most important question becomes, what kind of concept will the Russian leadership choose for the future development of the armed forces? The leadership's representatives have on more than one occasion [spoken](#) of the need to make wide-ranging preparations for a military conflict against NATO forces; a conflict which could happen even in the current decade. Looked at rationally, Russian military planning has no choice but to take account of the fact that the army can no longer rely on the two points which gave it an advantage in the war in Ukraine: the greater numbers of personnel, and the old military equipment Russia had in store. However military planners look at it, the production of new types of weapons, particularly drones, demands an advanced combat control system. In the same way, the demographic chasm into which Russia is unavoidably falling means that the 40-year old soldiers who are serving on contracts and who today form the backbone of the armed forces will retire, and there are significantly fewer people in the next generation.

Switching to a Western model of running the armed forces, with relatively small numbers of personnel and high levels of technology would inevitably mean going back to Serdyukov's method for running the armed forces. An attempt to return to this model would again lead to conflict with the Russian traditional principles of armed forces management. The demand to create an effective combat control system would mean considering the idea of network-centric warfare. In its turn, this raises a question which is impossible for the current regime to solve: that of allowing junior commanders to take decisions depending on the situation on the battlefield, rather than being afraid of being punished if they do not adhere strictly to orders given earlier. From this point of view, [integrating](#) 'drone troops' into the combat control system presents a huge problem, even though such an arm of the armed forces is supposed to be introduced in 2025. At any given moment, the situation on the battlefield is bound to differ from what it was at the time that the higher command gave their orders. A return to Serdyukov's army model will inevitably lead to a contradiction between the armed forces' limited capabilities, and the fundamental ideological principles of the regime, which are based on the militarisation of the state and which take over every aspect of the life of the country.

It is likely that the General Staff will not choose such a rational approach just to protect itself. The military leadership will try to convince Putin that a future conflict with NATO would be similar to the war in Ukraine. The main argument which they would put forward would be to repeat the Soviet concept of a lengthy conventional war, fundamentally because they would reckon that the West would not be able to tolerate massive casualties. And as in Soviet times, the generals would try to convince the man in the Kremlin that pressure from their own people would force the leaders of NATO countries to sue for a swift peace, on terms which would be favourable to the Kremlin.

If it is decided that the Russo-Ukrainian war serves as a model for future wars, this will lead to a further return to the Soviet way of organising the armed forces; namely, maintaining as large an army as possible in peacetime. The General Staff will try to [bring](#) the actual manpower up to 1.5 million. If this is the case, then the majority of those currently fighting in Ukraine will not be demobilised. They will be tasked with creating and guarding the new border in the captured territories. Another [priority](#) will be to provide a full component of troops for the Leningrad Military District, which was created in 2024.

In order to widen the resources for a mobilisation, the MOD will attempt to increase the number of conscript soldiers. To achieve this, the rules for conscription have been made stricter, and a unified digital [register](#) has been created of all those eligible to be called up. The authorities have openly [stated](#) that this has been done first and foremost so there will be effective mobilisation in the event of any future wide-ranging war.

Preparation for such a war will have to be accompanied by an overhaul of military industry, which as things stand would be incapable of fulfilling the demands of a mass-mobilised army. With the exception of a few high-tech areas, such as drones, electronic warfare means, long-distance precision weapons, military satellites and nuclear weapons, military industry will focus on the mass production of simple, cheap weaponry. Given the industry's low productivity, an increase in production can be achieved by increasing the number of factories making military equipment. Bearing in mind the huge costs involved in building new factories, it can be assumed that – following Soviet practice – «mobilisation tasks» will be given in the main to enterprises that are currently producing goods for the civilian market. This is in direct contradiction to the laws of the market economy and, as a result, will lead to the return of the planned economy. Ultimately, this will mean renationalisation, which in practice has already begun. What is not clear, though, is how sustainable this model of USSR 2.0 will prove to be.

If the Soviet mobilisation model is followed, the country would be ready to conduct a new military conflict only after the losses of military equipment had been replaced and essential reserves of such equipment had been put in place. There would also need to be a significant replacement of personnel and the creation of a reliable reserve which could be called up. As mentioned above, military industry is limited in its capabilities. For example, it can [produce](#) around 300 new tanks each year. It would take four to five years to create sufficient reserves to wage a war lasting a year. Roughly the same amount of time would be needed in order to build up the essential reserve of manpower, if 300–350,000 conscripts were to receive military training over the course of a year.

However, it cannot be ruled out that the Kremlin will decide on a conflict with NATO soon after the war against Ukraine is over. It should also be borne in mind that while in the 1970s and 1980s the Soviet leadership wanted to avoid a direct military confrontation with NATO, the same cannot be said about Putin. Some sort of risky move cannot be excluded, such as a local operation to seize Narva (in Estonia, on the border with Russia), or the Suwałki Gap (the 65 km long stretch of land on the border between Poland and Lithuania, which represents the shortest distance between Belarus and the Russian enclave of Kaliningrad). This could successfully push NATO into an internal conflict and help Russian domination over Eastern Europe. Two factors could encourage the Kremlin to make such a move.

Firstly, Russia now has around 700,000 soldiers under arms who have combat experience. A significant number of these soldiers who are already over 45 years of age will be demobilised over the course of the next five years. Putin may be tempted to make use of these experienced soldiers in the near future. Secondly, NATO's European members have nothing like this number of military personnel. All of NATO's plans have been built on US forces being sent across the Atlantic Ocean in case of a crisis. With the political changes that have taken place in the United States, it is by no means certain that this would happen. The Kremlin has reason to believe that any aggressive actions on Russia's part would cause political discussions within NATO. And while such discussions were taking place, the military operation could be over and the world would be presented with a *fait accompli*.

NATO's European members should recognise that a militaristic regime has long been established in Russia, and its continued existence relies on either preparation for war or conducting a war. As well as the increase in military production specifically European structures must be created either within NATO or in some other format, which will be capable of conducting military operations should the United States refuse to take part. The exceedingly difficult decision must be taken for European armies once again to be organised on the basis of conscription.

The impact of Russia's People's VPK on the war

Samuel Bendett

From the start of Russia's February 2022 invasion of Ukraine, Russian civil society has mobilized to an unprecedented degree to assist the military. The need for much of this assistance was linked to the Russian military's lack of preparedness for the type of war it eventually encountered in Ukraine. By mid-2022, Russian soldiers rapidly began to run out of certain basic supplies, and Moscow's invasion laid bare the lack of specific technologies, such as tactical drones that are key to close-range ISR and combat requirements. To address these needs, numerous Russian voluntary and civil society organizations, small technical start-ups and individuals took to social media platforms such as Telegram to call for assistance, advertise their efforts or actively fundraise to purchase all manner of supplies and equipment. This assistance comprised drones, counter-drone technology, EW and SIGINT systems and equipment, drone detectors, frequency analysers and antennae, as well as vehicles and commercial vans, UGVs, uniforms, medical equipment, masking nets, spare parts and food items – essentially, anything and everything needed by the soldiers on the frontline.

A significant and often under-discussed consequences of these initiatives is the approach by the Russian Ministry of Defence (MOD) to such voluntary assistance. For the most part, the Russian military bureaucracy still allows the flow of such civilian-acquired and built supplies and technologies directly to the front, often to specific units and soldiers. Many volunteers can travel to the frontline unimpeded to deliver such technology and equipment.¹ Across dozens of Russian-language Telegram channels, soldiers and units report on such acquisitions, often to express thanks for items such as quadcopters, FPVs and other supplies.² Many voluntary organizations have since morphed into influential efforts capable of raising significant funds for large-scale purchases, and into national efforts that can manufacture such technologies at scale.

The extent of Russian government support for what has been dubbed the "People's VPK" is not always clear. (VPK is a Russian acronym for the military-industrial complex.) Some efforts receive MOD assistance and facilitation, while others receive assistance from local and regional governments. Others claim that their efforts are supported entirely by donations from regular citizens and wealthy individuals.³ Some three years into such efforts, the Russian government and the MOD have publicly recognized their impact on the war and on the procurement of key supplies and technologies for soldiers. In late 2024, President Putin even ordered the domestic defence sector to work more closely with the People's VPK.⁴ In December 2024, Defence Minister Belousov noted that the MOD's traditional development and acquisition procedures,

1 Rebyata, my s vami, Telegram post, July 13, 2024, https://t.me/rebyata_my_s_vami/18038, and KatyaValya, Telegram post, July 10, 2024, https://t.me/katya_valya_dnr/5049.

2 KatyaValya, Telegram posts, July 8, 2024, https://t.me/katya_valya_dnr/5046 and July 7, 2024, https://t.me/katya_valya_dnr/5039.

3 "Drones, compressors, tools: "United Russia" organized a collection of aid for SVO fighters [Дроны, компрессоры, инструменты: «Единая Россия» организовала сбор помощи для бойцов СВО]," *ER*, October 24, 2023, <https://er.ru/activity/news/drony-kompressory-instrumenty-edinaya-rossiya-organizovala-sbor-pomoshi-dlya-bojcov-svo> and Elza Kuznetsova, "Aktanysh volunteers will send drones to SVO soldiers [Актанышские волонтеры отправят дроны бойцам СВО]," *Tatar-Inform*, April 20, 2024, <https://www.tatar-inform.ru/news/aktanysskie-volontery-otpravlyat-drony-boicam-svo-5943673>.

4 Telegram post, Dec. 22, 2024, https://t.me/mod_russia/47143.

which provide for a long, strictly regulated process of weapon and systems development, testing and production, make it “extremely difficult” to rapidly provide the troops with much needed technical solutions.

Many key developments, such as of FPV drones, are therefore carried out within the framework of projects that combine the efforts of volunteers, philanthropists, the People's VPK and the MOD.⁵ Belousov highlighted that between April 2024 and December 2024, more than 65 People's VPK projects were delivered to the military, comprising 31 types of UAV, eight ground robotic systems, two types of electronic reconnaissance equipment, 20 electronic warfare systems and four types of unmanned surface vessel.⁶ He also noted that by December 2024, more than 100,000 products from small domestic design bureaus and civilian manufacturers had been purchased for military needs.⁷

Many small drones still used by the Russian military, such as the Chinese-made DJI Mavic quadcopter or FPVs assembled almost entirely from Chinese components, were procured from commercial marketplaces, generating new global supply chains and pipelines for all the necessary equipment and spare parts needed for their operation. A number of Russian voluntary and tech start-up efforts have also been launched, as well as numerous training and education efforts to teach military drone, UAV and counter-UAV operators the basics of maintaining and using such technologies.

In mid-2025, the Russian military was still depending on volunteer and start-up efforts for key technologies, systems and supplies, a trend that is likely to continue as long as the fighting in Ukraine. The lack of standardization among many domestic volunteer initiatives in purchasing, building and delivering to the front had decreased somewhat by mid-2025. The MOD has launched accelerator platforms as a bridge between developers and end-users. However, it is still unclear how many Russian developers trust or even engage with such official outlets, or instead work directly with specific commanders and units. A wide range of different quality systems are still being fielded unevenly by Russian units that often depend on a specific relationship between a given commander and a particular organization. The same patterns often apply to UGV development, manufacture and use, although less to USV development that is often conducted by the respective naval organizations and military development institutions.

Overall, the Russian defence industry maintains a monopoly over technology development and fielding, but the impact of so many voluntary organizations and their success have not gone unnoticed by many in the Russian government. Official recognition for the People's VPK means that there is now a true private sector military industry in Russia, and many tech efforts exist outside of the official VPK. Given the lack of historical and socio-cultural perspective on private sector military development in the country, some in the Russian government have defaulted to simply calling for the state to take control of this wider civil society initiative to “prevent the spread of UAS technology that could fall into the hands of terrorists”. Such calls reason that it is “abnormal that some private parties are involved in the production of FPV drones, something that could not be imagined in Soviet times, and therefore, this civil society effort must not remain outside the control of the state”.⁸ Supporters of these voluntary and start-up efforts in turn propose that instead of “nationalization”, there should be certain mechanisms that allow Russia's enterprising individuals to legally participate in UAV and related technology production.⁹

5 Telegram post, Dec. 22, 2024, https://t.me/mod_russia/47143.

6 Telegram post, Dec. 22, 2024, https://t.me/mod_russia/47143.

7 Telegram post, Dec. 22, 2024, https://t.me/mod_russia/47143.

8 Telegram post, July 12, 2025, <https://t.me/rybar/72103>.

9 Telegram post, July 12, 2025, <https://t.me/rybar/72103>.

Nonetheless, the fact that many such efforts exist outside of official government control continues to generate questions about their impact, as well as friction with some government institutions and individuals. To partially alleviate such tensions, many voluntary efforts have launched and hosted events and meet-ups that bring together Russian volunteers, technology developers, military end-users and government officials. Events such as the annual “Dronnitsa”, hosted by the Centre for Assistance to Novorissya, based in the Russia-controlled Donbas region, and a few smaller meet-ups that now regularly take place across the country, aim to ensure that volunteers can continue to do their work alongside and often in cooperation with the official Russian defence industry and military bureaucracy.

In June 2025, several Russian military bloggers and commentators discussed where this national volunteer efforts stands at this point in the war. One such commentary remarked that “...the world of [Russian] military volunteers is not very big, and all volunteer groups are connected by horizontal contacts, with everyone knowing each other – even if a small volunteer group that you have never met before approaches you and asks for support or publicity, you will always find a way to find out who these people are”.¹⁰ Moreover, Russian commentary acknowledges that national volunteer efforts have grown into something “more significant for the SVO [special military operation, the Russian term for its invasion of Ukraine] – a civil society has suddenly emerged in Russia, a part of the population, without state support, that has self-organized and was able to develop and deliver the necessary supplies to the Russian army; this is an incredible event in itself”.¹¹ This society “...has emerged from below, without orders from the authorities, and today, it is entering an evolutionary stage – people are assessed not by their words, but by their deeds”.¹²

At the same time, many prominent volunteers, such as Aleksei Chadaev, who is one of the co-organizers of the annual Dronnitsa event and is behind the effort to set up Ushkuynik enterprise that assembles KVN fibreoptic drones, notes that significant issues still need to be addressed to enable voluntary assistance to the military, given that the official system for evaluating and financing their inventions is still taking shape. In June 2025, Chadaev noted that “crowds of Kulibins [a Russian term for self-taught inventors, after the Russian inventor Ivan Kulibin] are still besieging various front entrances [government and MOD offices] ...and usually failing to achieve any implementation of their inventions; they then curse the “system”, “officials” and “thieves and traitors” – each of them believes that his main problem is lack of funding, which is spent on anything but his brilliant idea; few of these Kulibins thirst for personal enrichment – most are sincerely convinced that they are working for the good of the Fatherland”.¹³ At the same time, “...forcing two such Kulibins to unite into a team and share their developments with each other is very difficult – each considers his know-how priceless and is most afraid of having it stolen”.¹⁴

Chadaev then noted that instead of many ad hoc efforts, Russian culture prefers a vertical arrangement for managing efforts and directing resources, since it is easier for many Russians to listen to authority “from above” rather than attempt to build cooperative efforts themselves: “...that is why it is quicker and more convenient when the [higher-up] bosses simply give an order for work, and sign off on responsibility. In this sense, the point is not at all that we are

10 Telegram post, June 26, 2025, <https://t.me/MedvedevVesti/21513>.

11 Telegram post, June 29, 2025, <https://t.me/UAVDEV/8598>.

12 Telegram post, June 29, 2025, <https://t.me/UAVDEV/8598>.

13 Telegram post, June 28, 2025, <https://t.me/chadayevru/3917>.

14 Telegram post, June 28, 2025, <https://t.me/chadayevru/3917>.

some kind of “serfs”; it is even stranger – we are bad at negotiating, and therefore prefer the vertical to the horizontal, for which, although we grumble, we are morally better prepared than for a partnership”.¹⁵

In December 2024, Chadaev gave an interview to the Russian-language media that highlighted that the real divide in developing technologies for the front is “between those who work on the state defence order and those who do not”, explaining that the state defence order requires two years of research and development, two years of design and refinement, followed by testing and eventually acceptance into service. Therefore, the shortest Russian MOD product development cycle is 6–8 years, while in Ukraine combat, the weapons update cycle is three months”.¹⁶

Thus, Chadaev noted that small development teams that have proliferated in Russia can provide rapid product development or a fast technology update, since they are more mobile than large defence enterprises that suffer from a lot of inertia with multiple requirements and limitations. At the same time, Chadaev admitted that the “old slow [product] implementation” also has its advantages through multiple state-mandated tests and reliability standards, since “raw” products are currently being delivered to the front by small-scale efforts and “we learn about many of their properties, both negative and positive, during actual combat use”. He specifically acknowledged that there are things that simply cannot be quickly implemented by small enterprises, such as mass production of ammunition for drones.¹⁷

Other Russian commentators have provided additional context to Chadaev’s argument about the inability of the volunteer community to cooperate, arguing that they must be brought together into a large organization and be given orders to manufacture what they are best at, instead of competing with multiple finished products of uncertain quality: “...such Kulibins are essentially a crowd of designers, and they should work under the chief designer who can then direct various volunteers to make engines, or communication equipment, or other technology, so that together they can make a good finished product”.¹⁸ However, “the situation is aggravated by the extremely low expertise of many Russian volunteer efforts and meagre entry control, with the military requesting deliveries of certain tactical systems without realising that they may already be outdated; what the military eventually gets is often clumsy, useless crap made by these disparate volunteer efforts that continue to exist and promote themselves”.¹⁹

Other Russian commentators agree that current military acquisition mechanisms are not set up to procure products and technologies from the volunteers. The MOD is still geared towards dealing with established enterprises with products that pass official certification. The volunteers, in turn, do not always have an understanding of what exactly the military needs. As a result, soldiers and officers seeking to plug a capability gap sometimes purchase “what is readily available, which can turn out to be different from what is needed [in terms of technical specs and requirements]”.²⁰

15 Telegram post, June 28, 2025, <https://t.me/chadayevru/3917>.

16 Sergey Bondarenko, “Garage Revolution: How Russian Drones Have Evolved (Гаражная революция: как эволюционировали российские беспилотники),” *DP*, Dec. 30, 2024, <https://www.dp.ru/a/2024/12/30/garazhnaja-revoljucija-kak-jevoljucionirovali>.

17 Sergey Bondarenko, “Garage Revolution: How Russian Drones Have Evolved (Гаражная революция: как эволюционировали российские беспилотники),” *DP*, Dec. 30, 2024, <https://www.dp.ru/a/2024/12/30/garazhnaja-revoljucija-kak-jevoljucionirovali>.

18 Telegram post, June 28, 2025, <https://t.me/UAVDEV/8596>.

19 Telegram post, June 28, 2025, <https://t.me/UAVDEV/8596>.

20 Stanislav Shemelov, Maksim Kirillov, “What can you do with your salary? Buy one drone. And you need thousands of them («Что ты на свою зарплату можешь сделать? Один дрон купить. А их нужно тысячи»),” *Business-Gazeta*, Nov. 16, 2024, <https://www.business-gazeta.ru/article/654432>.

As indicated above, the Russian defence industry is currently being encouraged by the Russian government to cooperate with the People's VPK, and is taking major steps to regain its major development and manufacturing role. In June 2025, Ushkuynik signed a strategic agreement to establish a joint venture with Kalashnikov, the maker of military systems and UAVs.²¹ Kalashnikov described the reasoning behind this joint venture: "Today, the military requires modern solutions for offensive and defensive operations that have a short development and implementation cycle. Many such technologies are tested on the line of contact or in close proximity to the front. Therefore, from the point of view of optimal reduction in the "development-production-use" chain, partnership with Ushkuynik has obvious advantages".²²

This partnership is likely to serve as a template for similar arrangements between the domestic defence industry and innovative technical start-ups. In August 2025, Kalashnikov signed an agreement with Project Archangel, one of the largest volunteer efforts that trains drone operators for the military. Under this agreement, Kalashnikov will accept UAV and related technologies selected by Project Archangel for eventual mass production. Similar agreements between Russian defence-industrial corporations and key voluntary efforts are likely to follow.

Government initiatives on the People's VPK also overlap with a general feeling of fatigue among many domestic voluntary initiatives following years of fundraising, as time commitments take a heavy toll on the regular Russians and their families who initially enthusiastically supported the military, probably in the hope that the conflict would not last long.

21 Telegram post, June 21, 2025, <https://t.me/projectArchangel/7823>.

22 Telegram post, June 21, 2025, <https://t.me/projectArchangel/7823>.

The war in Ukraine and its impact on Russian doctrine, operations and tactics

Konrad Muzyka

Since the full-scale invasion of Ukraine in 2022, Russia's military conduct has presented a complex and often contradictory picture. On the one hand, it is still deeply shaped by Soviet-era structures, mindsets and command systems. On the other hand, it has selectively embraced modernisation by integrating precision-strike capabilities, electronic warfare and unmanned systems, although often in ways that reflect adaptation under duress rather than coherent transformation. The result is hybrid military practice that blends inherited doctrine with improvised battlefield responses and periodic attempts at doctrinal revision.

Understanding this interplay is critical to anticipating how Russia might evolve in the coming years: whether it learns from its operational failures and adapts its force structure and doctrine accordingly; or whether it becomes more entrenched in outdated models, reinforced by political inertia and institutional conservatism. The war in Ukraine has not only exposed the Russian military's weaknesses – it has also revealed its capacity for tactical learning and systemic recalibration, albeit within limits shaped by legacy thinking.

Doctrinal Ambition vs Battlefield Reality

Russian military doctrine remains fundamentally rooted in Soviet operational art. Enduring assumptions shape both planning and execution. At its core lies the belief that war is inherently strategic rather than merely tactical – an instrument of political will that demands large-scale mobilisation, depth and sustained operations. Victory is conceived not through manoeuvre alone, but through attrition, massed firing and dominance across the entire battlespace. The battlefield itself is understood as non-linear and layered, where depth – both geographic and operational – matters profoundly. This involves the integration of kinetic, cyber and informational domains, reflecting Russia's long-standing emphasis on multi-domain warfare.

Crucially, Russian doctrine embeds political warfare into its operational logic. Information operations, strategic messaging and deterrence are not supplementary activities – they are structurally embedded in planning, often blurring the line between peace and war. At the theoretical level, modern Russian doctrine aspires to implement the "Reconnaissance-Strike Complex" – a networked system that fuses Intelligence, Surveillance and Reconnaissance (ISR) platforms such as UAVs, satellites and electronic warfare with long-range precision strike capabilities. The aim is to close the sensor-to-shooter loop and enable rapid, coordinated destruction of enemy targets across the depth of the theatre.

However, the war in Ukraine has exposed deep fissures between this doctrinal ambition and operational reality. Despite conceptual advances, Russia's military continues to suffer from rigid command hierarchies that inhibit tactical initiative and decentralised decision making. The Reconnaissance-Strike model has demonstrated limited effectiveness – functioning only sporadically in sectors where Ukrainian air defences are degraded or absent. Even then, the preference is to engage static targets, as Russian ISR assets struggle to track and strike dynamic ones, especially where Ukrainian operational security is robust.

To compensate, Russia has increasingly turned to Shahed-type loitering munitions for dual-use purposes – serving both as long-range reconnaissance platforms and strike assets. Nonetheless, joint operations between ground forces, the air force and naval units are underdeveloped and disjointed. The persistent failure to integrate effects across domains continues to hamper the realisation of Russia's doctrinal vision, revealing a military apparatus caught between legacy thinking and uneven modernisation.

Operational-Level Capabilities: Attrition Over Manoeuvre

At the operational level, the war in Ukraine has shown that Russia continues to favour mass-based, attritional warfare over manoeuvre-centric approaches. Rather than achieving breakthroughs through mobility or rapid envelopment, Russian forces have relied overwhelmingly on firepower, manpower saturation and positional grinding.

Artillery remains the undisputed centre of gravity in Russian operational planning. From the outset of the war, Russian forces have consistently outgunned Ukrainian units, maintaining a quantitative advantage in tube artillery, multiple-launch rocket systems and, increasingly, precision-guided glide bombs. The central aim has been to exert relentless pressure on Ukrainian defences through sustained bombardment, gradually degrading combat effectiveness and morale.

Manpower is treated as a strategic buffer against losses. Since 2023, Russia has transitioned into a rotational attrition model, deploying successive waves of assault troops – many of them minimally trained – to attack fortified Ukrainian positions. These waves are often composed of Storm-Z units, penal battalions or freshly mobilised troops, indicating a systemic willingness to trade lives for tactical gains.

The nature of the battlefield has also shifted. Persistent surveillance by UAVs, satellites and electronic sensors has made the front increasingly transparent. As a result, armour no longer leads offensive manoeuvres. Following catastrophic early losses, Russian tanks are now frequently employed as indirect fire platforms, positioned behind cover to support infantry with suppressive fire rather than acting as breakthrough tools.

Despite these limitations, Russia has demonstrated a consistent – albeit rudimentary – ability to regenerate combat power. The continued offensive operations around Avdiivka, Chasiv Yar and elsewhere reflect not logistical finesse, but the brute force application of several key advantages: the exploitation of extensive Soviet-era war stocks; a repair-and-refit ecosystem that returns damaged equipment to the front at scale; a near-continuous influx of new personnel; and a political leadership able to absorb extreme losses without domestic consequences.

It is also worth noting that Russian forces consistently perform better in defence than in offence. When afforded time to entrench and prepare, they demonstrate a greater capacity for cohesion, and effective use of ISR assets and layered kill zones – making offensive operations far costlier for Ukraine than for Russia.

Tactical-Level Adaptation: Innovation Within Constraints

At the tactical level, the war in Ukraine has compelled the Russian Armed Forces to adapt under pressure by incorporating new technologies and methods to offset battlefield disadvantages. These adaptations coexist with enduring structural weaknesses, however, revealing a force that is both innovative and constrained.

Russian tactical operations remain anchored in firepower dominance. Most assaults are preceded by deliberate shaping actions: intense artillery barrages, precision-guided bombs strikes and reconnaissance or harassment attacks by loitering munitions and drones. This preparatory phase aims to suppress Ukrainian positions, disorient defenders and degrade command-and-control nodes before ground forces advance.

The dominant assault model is attritional. Russian units frequently employ wave tactics, wherein assault groups – often penal battalions or newly mobilised personnel – are sent forward to probe, absorb fire and deplete Ukrainian defenders. These initial waves are rarely expected to succeed; their primary function is to exhaust opposing forces. Once a breach is identified, more capable or elite units are committed to exploit the gap.

Tactically, one of the most significant changes has been the exponential proliferation of drones. Russian forces now employ thousands of first-person view (FPV) drones across the front line, using them to disable Ukrainian armour, conduct real-time reconnaissance or drop munitions with increasing precision. In response to Ukraine's own drone capabilities, Russian troops have fielded countermeasures such as electronic warfare jammers, mesh netting and improvised defences around command posts and key equipment.

The introduction of glide bombs in 2023 marked another notable tactical shift. These inexpensive, GPS-guided munitions allow aircraft to launch from standoff distances – minimising exposure to Ukrainian air defences – while delivering significant explosive payloads to fixed or semi-static targets near the front.

Engineering adaptation has also accelerated. Russian forces have developed increasingly sophisticated field fortifications, such as tunnel networks, decoy firing positions and hardened command bunkers. These measures aim to mitigate Ukraine's deep-strike capabilities and sustain tactical coherence under fire.

However, all of these developments are layered over a deeply hierarchical tactical culture. Initiative at the junior level is rare and decentralised command is largely absent. Most tactical leaders operate under close supervision from higher headquarters, with limited autonomy to adjust plans in response to unfolding battlefield conditions. This rigidity hampers responsiveness and increases vulnerability to disruption.

Moreover, Russian precision remains inconsistent. While glide bombs and FPV drones have improved lethality in some areas, the overall accuracy of KAB strikes often falls short of expectations. As a result, Russian forces tend to compensate with quantity – deploying excess munitions or personnel to ensure effects are achieved through redundancy rather than precision. This is a reflection of a force that has modernised its tools but not yet its mindset.

Future Trajectories: Doctrinal Evolution or Entrenchment?

Looking ahead, Russia's military trajectory could take one of three plausible doctrinal and operational paths. Each reflects a different balance between continuity and adaptation – and each is constrained or enabled by political context and institutional inertia.

1. Doctrinal Entrenchment

The most likely short-term scenario is doctrinal entrenchment. In this model, Russia doubles down on what has worked in Ukraine: mass-based attrition, sustained fire superiority and incremental territorial gains. The core lessons drawn would probably affirm that firepower and manpower – rather than agility or manoeuvrability – remain decisive in high-intensity warfare. The belief would persist that wars are won through depth, endurance, operational saturation and, ultimately, cumulative attrition rather than speed or surprise. Technology, in this worldview, plays a supporting role. Drones and electronic warfare are deemed useful but not revolutionary.

This approach aligns closely with the nature of the Russian state: centralised, hierarchical and steeped in traditions of state militarism. It is scalable within Russia's demographic and industrial limits and, importantly, it preserves control from the top down.

2. Selective Modernisation

A second, more ambitious – but still regime-compatible – path involves selective modernisation. Here, Russia expands its use of drones, improves its ISR capabilities and introduces new command-and-control technologies without fundamentally altering its underlying structure. In this model, loitering munitions proliferate further, tactical automation is introduced to reduce manpower burdens and ISR integration deepens – but all within the confines of rigid command hierarchies.

This hybrid approach probably represents Russia's medium-term trajectory. It reflects a growing recognition of the utility of unmanned systems and real-time surveillance, but without the institutional reforms needed to fully capitalise on them. The tools of modern warfare are layered atop an older operational culture.

3. Structural Reform

The least likely – but most transformative – scenario would be a systemic doctrinal shift towards manoeuvre warfare, joint operations and network-centric command. Achieving this would require a cultural overhaul within the officer corps, the institutional empowerment of NCOs, digitalised communications networks and a genuine commitment to tactical autonomy.

Such a shift would be nearly impossible under the current political leadership. It would demand not only military reform, but a reconfiguration of the relationship between the armed forces and the state. However, it is a possible long-term outcome – perhaps in the 2030s – should a new generation of leadership emerge that draws more critical lessons from the war in Ukraine.

Conclusion: Tactical Innovation, Strategic Conservatism

The war in Ukraine has revealed a Russian military that is at the same time adaptive and constrained. It has innovated tactically – particularly in the realm of drones and electronic warfare – and demonstrated a resilient capacity to regenerate combat power under fire; but it has done so without challenging the deeper structures that define its doctrine and operations.

Russian military thought remains pragmatic but conservative. Adaptation occurs under duress, and almost always within the parameters of a doctrinal system shaped by Soviet inheritance, institutional rigidity and political centralisation. Operational art continues to prioritise mass firepower and control over speed, initiative or joint manoeuvre.

Could this change? Technically, yes. Russia has the industrial and human capital to modernise more fully. Doctrinally and institutionally, however, transformation would require a broader political and cultural shift – one that extends far beyond the military and into the fabric of the Russian state itself.



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