



Here is How the Russian Military Is Organizing to Develop AI

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The Russian Ministry of Defense is pursuing artificial intelligence with an urgency that has only grown since Vladimir Putin's "rule the world" speech in September. But after several years of watching American and Chinese researchers accumulate breakthroughs and funding, while Russia continues to lack a relevant high-tech culture, Ministry leaders have decided that if they can't outspend their global competitors, perhaps they can out-organize them.

So in March, the MOD — along with the Ministry of Education and Science of the Russian Federation, or MES; and the Russian Academy of Sciences — gathered domestic and international developers and users at a conference intended to take stock of the world's AI prowess, and develop plans to focus Russia's academic, scientific, and commercial communities to compete.

Afterwards, Ministry officials released an ambitious 10-point plan. It outlines key public-private partnerships and calls attention to key research and development steps needed to make this happen. The plan is also a useful overview of various agencies and departments that will be engaged in this type of work for the coming years. The points include:

1. **Form an AI and Big Data consortium.** The Russian Academy of Sciences, in conjunction with the MOD, MES, and the Ministry of Industry and Trade of Russia, should consider the proposal from Moscow State University and the Academy's Informatics and Development Federal Research Center to create a consortium to work on the problems of big data analysis and AI, with the aim of combining the efforts of leading scientific, educational and industrial organizations to create and implement AI technologies.
2. **Gain automation expertise.** The Academy, in conjunction with the MOD, the MES, and the Ministry of Industry and Trade should intensify efforts to establish a Fund for Analytical Algorithms and Programs to provide expertise on automated systems.
3. **Create a state system for AI training and education.** The MES, together with the Academy and the MOD should prepare proposals to create a state system for training and retraining of AI specialists — an effort that should also provide a second education for specialists in other areas of the economy. This is an important recognition that while there is a nascent AI development market in the country, more support from the state is needed to launch educational efforts in this fast-paced field.
4. **Build an AI lab at the Era technopolis.** The MOD, with the Federal Agency for Scientific Organizations, Moscow State University, and the Informatics and Development research center should create a laboratory for AI advanced software and technical solutions at the Era science and technology and research and development campus, where the military and the private sector can work together on breakthrough technologies such as AI, robotics, automation and other fields. This particular directive is already getting implemented: the MOD is building the campus at the Black Sea coastal city of Anapa. Slated to open officially this September and to be completed by 2020, Russian military is already sending soldiers from its science and technology detachments to start work there.
5. **Establish a National Center for Artificial Intelligence.** The Academy and the Foundation for Advanced Studies — roughly, Russia's DARPA — should prepare proposals for the creation of the National Center for Artificial Intelligence, which will "assist in the creation of a scientific reserve, the development of an AI innovative infrastructure, and the implementation of theoretical research and promising projects in the field of artificial intelligence and IT technologies." This echoes the U.S. military's effort to combine its various AI efforts in one Joint AI Center (JAIC); the Chinese government and military are striving for the same kind of streamlined approach.

The six-year-old Foundation, which operates under the auspices of the Russian Military–Industrial Commission that reports directly to the Russian President, aims to “promote the implementation of scientific research and development in the interests of national defense and state security for achieving qualitatively new results in the military-technical, technological and socio-economic spheres.” Among its planned projects are creating AI prototypes in image recognition, training and imitating the human thought process, complex data analysis, and assimilation of new knowledge. It will be interesting to watch and compare JAIC and its Russian equivalent.

6. **Monitor global AI development.** The MOD, MES, and Academy should organize research on the development of artificial intelligence, in order to monitor long-term and medium-term AI trends, as well as to observe AI R&D in other countries. Interestingly, this particular directive included understanding the “social sciences” impact of AI.
7. **Hold AI wargames.** The MOD should organize a series of military games on a wide range of scenarios that will determine the impact of artificial intelligence models on the changing nature of military operations at the tactical, operational and strategic levels.
8. **Check for AI compliance.** The Foundation for Advanced Studies, in conjunction with the Russian Academy of Sciences, the Ministry of Education and Science of Russian Federation and the Federal Agency of Scientific Organizations, should prepare proposals for the establishment of a system to assess the compliance of “intellectual technologies” with given requirements.
9. **Discuss AI proposals at domestic military forums.** All these proposals should be considered by all “interested federal executive bodies” during the “Army-2018” and the “National Security Week” international forums this August.
10. **Hold an annual AI conference.** The MOD, MES, and Academy should hold a conference on Artificial Intelligence on an annual basis.

While this plan isn’t yet an official roadmap, its recommendations spell out the prospective development of artificial intelligence in the country’s federal and academic bodies. These steps answer Defense Minister Shoigu’s call for greater public-private cooperation to develop AI, although they still suggest that the various government bodies will take the lead. Absent so far are concrete proposals to involve private-sector development and expertise, although some of that may be read between the lines in proposal for greater training, education and research and development at the Era campus. Perhaps these proposals are aiming for a more comfortable footing for the Russian governing structures in the rapidly-evolving artificial intelligence field. Nonetheless, these ten recommendations are major steps in streamlining domestic S&T and R&D work, with the Ministry of Defense as the eventual benefactor and end-user of this technology.

It’s an open question how quickly and how successfully these proposals will be implemented—but the very fact that the MOD is already spelling out its next steps in AI development deserves attention.

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