



**ARMAMENT STRATEGIES AND DEVELOPMENT OF THE  
KAZAKHSTANI MILITARY-INDUSTRIAL COMPLEX:  
STAKES AND PROSPECTS**

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Since becoming independent, Kazakhstan has never hidden its regional ambitions. These ambitions are above all economic: its considerable mineral resources in oil, gas, and uranium, coupled with important reforms, conferred on Kazakhstan the promise of rapid growth, offsetting the collapse of the socialist bloc and enabling Kazakhstan to establish itself as the region's economic driver. They are also political: on the basis of the country's economic development, Kazakhstani president Nursultan Nazarbayev quickly sought to vie with neighboring Uzbekistan, the region's demographic power, and forged an independent, multivectoral foreign policy free of coercion from Russia, China, and the major Western powers. Lastly, establishing Kazakhstan on the regional scene meant becoming a military power able to meet the challenges of the post-independence era. In theory, Kazakhstan, like its four Central Asian neighbors, does not face any conventional dangers linked to territorial issues. It still has

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some border disputes (mainly with Uzbekistan), but Russia recognized the borders inherited from the USSR, and China signed a treaty to delimit and demilitarize their shared border. The region nonetheless faces great security pressures, mainly tied to non-conventional threats such as drugs and weapons trafficking, the Islamist threat, the risk of civil war, and localized conflicts. Added to the complexity of this picture are energy issues that generate gnawing interstate rivalries.

To address these security challenges, the Kazakhstani president began in the 1990s to roll out programs to modernize his army, a feat made possible thanks to a growth in defense budgets. In the second half of the 1990s, Nazarbayev promoted the military sector as an emblem of the country's political and economic power. He was determined not only to build a modern army but also to expand on the military-industrial complex (MIC) inherited from Soviet times, which was restored, modernized, and developed so as to be able to produce, use, and export its own weaponry. Since then, he has persevered in the effort to develop this sector. In October 2016, a Ministry of Defense and Aerospace Industry was established. It was given functions and powers in the sphere of the defense industry that were formerly the remit of the Kazakhstani Ministry of Defense, and was placed under the leadership of a former governor of South Kazakhstan oblast, Beibut Atamkulov, underscoring Kazakhstani ambitions in this sector.<sup>2</sup>

This paper will examine the ambitions, strategies, and stakes of the development of the Kazakhstan military-industrial complex. The first section analyzes Kazakhstan's views of the risks with which it has to contend and the military doctrine it published in 2011 in response to these risks. The second section examines the development of Kazakhstan's military-industrial complex in light of its ambition to become a regional military leader. The third section goes on to discuss the other prong of Kazakhstani ambition, namely its goals of developing international cooperation in weapons acquisition and its military-industrial complex, and of rebalancing Kazakhstan's relations between its main partner, Russia, and other world military powers, including China, Turkey, and the West. The paper is based on research and interviews conducted during several stays in Kazakhstan between 2012 and 2015. Some of the interviews have been anonymized at the request of interviewees.

### **Perception of risks and military doctrine**

Several essential points structure the nature of Kazakhstan's defense policy. The country has a clearly stated ambition to assert itself in the face of its two great neighbors, Russia and China. From this point of view, it wants to develop its military capabilities in order to thwart possible future threats on its territory, or even on the territories of its neighbors.<sup>3</sup> Kazakhstan indeed considers that the incapacity of Central Asian states to manage their own defense strengthens the positions of Russia and China, which take on the role of drivers of regional security. Thus, Astana wants to consolidate its decision-making autonomy, pursue its so-called multivectoral foreign policy, and avoid geopolitical deadlocks that might excessively curtail its room for maneuver. Adylbek Dzhakymbekov, Kazakh defense minister from June 2009 to April 2014,

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<sup>2</sup> "Ministerstvo oboronnoi i aerokosmicheskoi promyshlennosti obrazovano v Kazakhstane," *Informburo.kz*, October 6, 2016, <https://informburo.kz/novosti/ministerstvo-oboronnoy-i-aerokosmicheskoy-promyshlennosti-obrazovano-v-kazahstane.html>.

<sup>3</sup> Interview with Sanat Kushkumbaev and Bolat Sultanov, Almaty, December 2012.

made this explicit, openly stating that “the only means to protecting national sovereignty was to find a balance in terms of defense policy between the three major players of Moscow, Washington, and Beijing, while developing a strong and capable army backed up by a modern defense industry.”<sup>4</sup>

### ***Risk assessment***

Ten years ago, the Kazakhstani authorities became aware of the need to broaden their concept of security. Advances have most certainly been made in their perception of the threats shaking the Central Asian area: in a period lasting two decades, Kazakhstan had to deal with the Tajik civil war from 1992 to 1997 (a battalion of the Kazakhstani army comprises part of the peace-keeping forces deployed in the country); incursions of the Islamic Movement of Uzbekistan into the mountainous areas of the Tajik and Kyrgyz Ferghana Valley in 1999 and 2000; and risks of destabilization emanating from Kyrgyzstan, its closest neighbor, in the revolutions of 2005 and 2010 (as well as eruptions of violence in the Ferghana Valley in 2010). The Kazakhstani battalions that participate in the Rapid Intervention Forces of the Collective Security Treaty Organization (CSTO) train, for example, to intervene in mountainous regions, and the special troops attached to the force structures do not rule out the possibility of intervening in Kyrgyzstan in case of a major destabilization. Astana thus seeks to demonstrate its ability to ensure the security of its territory and also to undertake interventions outside its borders in a legally authorized framework.

Although it has no common border with Afghanistan, Kazakhstan has been concerned about the failure of the international community to find a solution to the Afghan conflict. Afghanistan supplies Central Asia with drugs – as well as, potentially, Islamist networks – and Kazakhstan is an essential point of passage for drugs headed toward Russia, which, along with Iran, is the world’s largest *per capita* consumer of heroin. Another zone of tensions, the Caspian Sea, is the site of unresolved border disputes with Turkmenistan, Azerbaijan, and Iran, and the risks of piracy and poaching are great. Rear admiral Zhandarbel Zhanzakov, commander in chief of the Kazakhstani naval forces since 2009, has not hidden his dismay at the growing militarization of the bordering countries: in an interview, he singled out two Russian frigates equipped with modern missile systems, *The Tatarstan* and *The Dagestan*, as well as the new generation vessel *Astrakhan*.<sup>5</sup>

### ***Military doctrine***

Accordingly, Kazakhstan’s military doctrine, adopted in 2011, lists the potential threats to which the various army corps ought to be able to respond in the coming years.<sup>6</sup> The foreign threats that it mentions include:

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<sup>4</sup> Peter Dunai, “Interview: Adylbek Dzhaksybekov, Defence Minister of Kazakhstan,” *Jane's Defence Weekly*, February 13, 2012.

<sup>5</sup> Joshua Kucera, “Kazakhstan: We're Building Up Navy to Compete with Neighbors,” *Eurasianet.org*, December 21, 2011, <http://www.eurasianet.org/node/64746>.

<sup>6</sup> Roger McDermott, “Kazakhstan – Russia. Enduring Eurasian Defence Partners,” *DIIS Report*, no. 15, 2012.

1. the sociopolitical instability of the Central Asian region and possible armed confrontations between countries of the region;
2. possible confrontations in the border areas of Kazakhstan;
3. political or technological pressures exerted by foreign states or organizations to intervene in domestic affairs;
4. terrorist activities, including cyber-terrorism and religious extremism;
5. the production by some countries of weapons of mass destruction.<sup>7</sup>

The domestic threats identified include:

1. separatist, nationalist, or extremist movements;
2. illegal armed groups;
3. illegal proliferation of arms.

Between the military doctrines of 2007 and 2011, the number of foreign threats identified went down from 8 to 6, and domestic threats from 4 to 3. Astana lowered the risk level of a terrorist attack but increased the risk level of regional military conflicts, probably due to tensions between Tajikistan and Uzbekistan. The doctrine is premised on the failure of the regional security system and thus anticipates that each state will pursue its own defense policies, despite the importance of crossborder issues such as water or energy. The doctrine also revisits – a novelty – the links between internal and external risks and cybersecurity. Nevertheless, the vagueness of the list reveals the difficulties that the military leadership is having in clearly identifying non-conventional risks.<sup>8</sup>

More recently, the Kazakhstani government announced its intention to purchase more military equipment over a relatively short time frame. Officially, it claims that it has to be able to respond to the new risks confronting Kazakhstan; unofficially, the government is increasingly alarmed about rising opposition across the country, including in remote regions, and wants to deal with it, as we saw in Aktobe in June 2016.<sup>9</sup>

### ***Kazakhstan's defense policies***

The preeminence of non-conventional threats has led local governmental actors to reinterpret the notion of security. Kazakhstan is currently the only country in Central Asia actively rethinking its relation to security in a more global mode, in terms of financial means and human capital alike. President Nursultan Nazarbayev thus sought for the country to become an advanced military power by 2015. If his ambitions were curbed by the 2008 world crisis, the Kyrgyz events in 2010 worked only to firm up Astana's will in this domain. The general political line, as defined by former defense minister Adylbek Dzhaksybekov, is that Kazakhstan's armed forces ought to be mobile, combat ready and able to confront all challenges. The defense ministers who succeeded him – Serik Akhmetov (April–October 22, 2014) and Imangali

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<sup>7</sup> *Voennaia doktrina*, 2011, [http://www.mod.gov.kz/mod-ru/index.php?option=com\\_content&view=article&id=63&Itemid=151](http://www.mod.gov.kz/mod-ru/index.php?option=com_content&view=article&id=63&Itemid=151)

<sup>8</sup> For more details on the 2011 military doctrine, see: Roger McDermott, "Kazakhstan's 2011 Military Doctrine: Reassessing Regional and International Security," Foreign Military Studies Office, 2012.

<sup>9</sup> Joshua Kucera, "In Response to Militant Attacks, Kazakhstan Announces New Military Aircraft Plans," *Eurasianet.com*, June 16, 2016, <http://www.eurasianet.org/node/79266>.

Tasmagambetov (October 2014–October 2016) – maintained the same line. In this connection, Kazakhstan has defined three major axes of modernization of its military sector:

1. modernization of the command-and-control system;
2. prioritizing military education to ensure better combat preparation;
3. enhancing the army's prestige by improving social security and increasing military salaries.

The first line of modernization, which most directly impacts the military-industrial complex, defines four major priorities: improve troop mobility and rapid reaction technologies for crisis situations, including reinforcing C2 (command and control) and new technologies; set up an information warfare system in order to facilitate military operations and improve existing defense capability; modernize the air defense system; and develop the navy and defense infrastructures in the Caspian Sea.

Despite the great difficulties it – much like many other Soviet-legacy armies – encounters in trying to reform and modernize, the strategic aims of the Kazakhstani army have nevertheless evolved. Now reorganized, the land and air forces are less focused on border surveillance and are tasked with protecting new sites both political (such as the new capital, Astana) and economic (such as the major strategic industries, strategic deposits, and pipelines).<sup>10</sup>

The birth of a Caspian Sea naval fleet is part of plans to give the army new missions, including stopping the increase in drug trafficking coming through Iran and Turkmenistan and bound for Russia; stopping the illegal sturgeon trade, which is destroying already depleted stocks; and countering the terrorist risk, which could threaten the growing number of oil tankers crossing the Caspian energy corridors.<sup>11</sup> During the 2000s, the Caspian border guards thus received 16 small 100 Sapsan boats, two 14-ton 11M vessels, a 17-ton 102 Shagall boat, two FC-19-type Nayaza vessels, and three small Karlygash-type vessels.<sup>12</sup> Kazakhstan is pursuing the modernization of its naval forces, and to that end adopted a special government-funded program authorized until 2020.<sup>13</sup> In 2016, Kazakhstan shared its determination to develop its own naval capabilities, which would function independently of Russia. In March 2016, a few

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<sup>10</sup> This reorientation toward the protection of civilian sites was embodied in the appointment, in 2007, of a civilian, former prime minister Danial Akhmetov, to the post of minister of defense.

<sup>11</sup> The port city of Aktau already hosts the prestigious Naval Military Institute of Kazakhstan. The military fleet will be based in the small deep-sea port of Bautino, north of Aktau. A coastal defense brigade from the KNB (successor to the KGB) border services has also been integrated, and in a few years special battalions will be assigned to protect the offshore sites. The Kazakh navy, which currently has 3,000 troops, is expected to reach a total of 5,000 troops and officers in the years to come. On the militarization of the Caspian Sea, see Marlene Laruelle and Sebastien Peyrouse, "The Militarization of the Caspian Sea: 'Great Games' and 'Small Games' Over the Caspian Fleets," *The China and Eurasia Forum Quarterly* 7, no. 2 (2009), 17–35; Azad Garibov, "Militarization of the Caspian Sea: A Zero-Sum Game?" *Eurasia Daily Monitor* 13, no. 134 (2016).

<sup>12</sup> Mikhail Barabanov, "Pereorientatsiia Kazakhstanskogo OPK," *Voенно-promyshlennij kur'er* (VPK), no. 20, May 23, 2012.

<sup>13</sup> George Voloshin, "Kazakhstan Faces Militarization of the Caspian," *Eurasia Daily Monitor* 13, no. 58 (2016).

days after Russia announced it was acquiring a new marine assault vehicle for its Caspian flotilla, Kazakhstan purchased new naval mines.<sup>14</sup>

The modernization of port infrastructures underway also aims to serve a growing commercial fleet. The dual character of the Caspian ports again signals an evolution in Kazakhstani military conceptions, and an awareness that technologies and infrastructures must fulfill civil as well as military uses to be profitable. The modernization of military port infrastructures is thus also likely to serve an increasingly dynamic commercial fleet.

The government further plans a complete overhaul of aviation and a revamping of the means of counterair defenses. Aviation is considered not only a major component of territorial security, but also a key element of the country's international prestige, a symbol of its ambitions to be a great power able to master cutting-edge technologies.

The development of aviation and the navy, however, is not to proceed at the expense of the army ground forces, whose combat capability remains weak. The ground forces require substantial investment to revamp aging equipment, and the government is working at modernizing the ground forces after a massive renovation of military equipment, with a focus on weapons, tanks, and infrastructure. In particular, it aims at acquiring precision weapons and modern technological and information tools. It gives priority to automated decision-making systems and telecommunications and to increased operational effectiveness through digital information management.

### **The industrial armament policy**

Taking Russia as a model, Kazakhstan intrinsically links the strengthening of its military capacity with its economic capacity. As such, it sees the relaunching of the military-industrial complex as a driver of the national economy and as one of its motors of integration into the globalized economy. The priorities defined by the Ministry of Defense thus open up possibilities in the air-defense sector in the construction of fighter jets, in minesweepers, and in naval communications equipment.

### ***Priorities in armament and technological acquisition***

In March 2007, President Nazarbayev launched a national program for the development of armaments and the military technology of the armed forces, as well as for the development of the republic's military-industrial complex until 2015. The goal was to restore and modernize the armed forces and to purchase new armaments. Whereas, until then, most of Kazakhstan's military technology was produced by the Russian military-industrial complex, the goal now became development of local repair capability, in order to reduce expenditures on equipment purchases from abroad. The 2011 military doctrine does not propose any notable organizational changes to the military forces but instead a transformation of the industrial defense base in order to solve re-equipment-related problems.

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<sup>14</sup> Joshua Kucera, "Kazakhstan Stepping Up Defenses Against Caspian Marine Invasion," *Eurasianet.org*, March 14, 2016, <http://www.eurasianet.org/node/77776>.

In terms of equipment, Kazakhstan seeks to acquire dual technologies, accelerate electronic solutions for aviation and the ground forces, and increase the operational effectiveness of its army by updating systems that permit accrued joint operations. For non-traditional security problems, Astana hopes to acquire equipment for controlling and tracing individuals, both at border posts and on national territory; efficiently protect its infrastructures; fight against cyber-attacks and pandemic risks;<sup>15</sup> and intervene rapidly in case of social unrest, all of which requires massive purchases of multifunctional equipment, light electronic weapons, computerized helmets, software systems, and imagery and message-interception systems.

Kazakhstani purchases are thus guided by several operational goals:

1. Obtain integrated or multifunctional artillery systems, which are deemed more profitable and more efficient and which meet the goal of joint operations (Nyaza, Semser);
2. Become proficient in dual technologies in aeronautics and spacecraft, and revamp the aviation fleet (for example, by purchasing C-295 military transport planes from Airbus, 45 EC145 helicopters from Eurocopter);
3. Computerize security: improve communications systems, in particular naval communications, satellite surveillance, creation of cartographic databases, and support for military or rescue operations (for example, by establishing an assembly, integration and test center in Astana for the building of two earth observation satellites with EADS-Astrium).

The state also began a long-term technological renovation of its security forces. Defense priorities include intelligence and control, electronic warfare, drones, personnel protection equipment, and precision military weapons. In any event, time considerations require that the materiel that Kazakhstan inherited from the former Central Asia Military District be revamped, even if some of it has already been replaced with Russian supplies received in exchange for Russia's "renting" of several military sites in Kazakhstan, including the Baikonur cosmodrome.<sup>16</sup>

The Kazakhstani strategy is thus organized around three major axes:

1. The purchase of Russian equipment and the transfer of technologies from Russia (see part 3);
2. The purchase of technologies outside of Russia (see part 3);
3. The development, as part of Kazakhstan's military-industrial complex, of its own and autonomous production capacity, oriented toward export to other Central Asian countries and Asian or Middle Eastern countries unable to afford the prices set by the major Western companies. In this domain, Kazakhstan therefore positions itself not only as a client of Russia but as its rival. The military-industrial complex does indeed have a certain export potential, in particular to other Central Asian countries.

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<sup>15</sup> Astana is concerned with animal and human pandemics from China, as well as industrial risks associated with Xinjiang's massive industrialization, overuse of the Ili's transboundary waters, and winds carrying nuclear particles from the Lobnor test site.

<sup>16</sup> "Naibol'chii interes – k sistemam PVO," *Voенno-promychlennyyi kur'er*, no. 22 (338), June 11, 2010.

Kazakhstan inherited a relatively important share of the ex-Soviet weapons industry, which produced equipment for the nuclear sector; naval equipment; counterair defense systems; missiles, and aeronautical equipment. But the Kazakhstani authorities observe that the national industry is unable to meet defense needs. The obsolescence of its production equipment, chaotic management, and insufficient state budget support in the 1990s all worked to hinder this section of industry considerably.

To meet Kazakhstan's declared ambition of bolstering national production capability – with the aim of reducing the country's dependence on purchasing foreign weaponry – an effort at rationalization was begun in 2003. The major share of weapons companies were regrouped under one holding, Kazakhstan Engineering (24 subsidiaries, including 17 involved in dual production).<sup>17</sup> Then, in 2009, Kazakhstan Engineering's administrative supervision changed, as the Ministry of Industry ceded control to the Ministry of Defense, which was clearly concerned with bolstering its directive power over the industry. In 2011, Kazakhstan Engineering made 2.2 billion tenge in profits, five times more than the previous year. This was an especially remarkable performance given that, in a number of defense industry sectors, its companies had started out from zero. The group achieved record profits in 2013, with 3.1 billion tenge, but profits collapsed in subsequent years, dropping to a mere 916 million in 2014.<sup>18</sup>

As opacity reigns in the defense industry, analyzing the decision-making processes remains difficult. The Ministry of Defense has no autonomy and is entirely subordinated to the political authorities – executive power – and to the security services. The KNB, legatee of the KGB, supervises all the decisions that the Ministry of Defense makes to engage in contact abroad, and it can veto such decisions without the ministry being able to appeal them. It is the presidential office itself that ultimately decides, with the government playing a merely consultative role. Strategic interests take precedence – the geopolitical symbolism of purchases or partnerships is taken into account, as are the specific needs of the armed forces to complete their missions – but trade stakes are clearly included: the authorities see the defense industries as having strong potential, and as integrated into more overarching processes involved in the country's economic recovery.

Kazakhstan Engineering and Kazspetseksport are in charge of implementing policies but do not enjoy fundamental autonomy. While Kazspetseksport may be based on the model of Rosoboroneksport in Russia, it is far from having the same weight as the latter, and its lobbying capacity is extremely limited. The companies of the military-industrial complex are in turn entirely subordinated to Kazakhstan Engineering, and thus are not their own agents. Their directors are simply public servants appointed to management positions, not decision-makers. No sales or purchases are undertaken at the factory level; everything is centralized at the level of Kazakhstan Engineering, and sometimes even higher up, at the level of the state corporation Samruk-Kazyna or the presidency.

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<sup>17</sup> “Companies of the Military-Industrial Complex of Kazakhstan Signed Several Agreements on Establishment of Joint Ventures for Production of Military Hardware and Armament,” *WPS: Russian Defense Industry Digest*, March 14 2011.

<sup>18</sup> “Dochka' Samruk-Kazyna snizila chistuiu pribyl' bolee chem v tri raza,” *Halyk-Ipo*, June 4, 2015, <http://halyk-ipo.kz/dochka-samruk-kazy-na-snizila-chistuyu-pribyl-bolee-chem-v-tri-raza.html>

The “node” at which decision-making and strategic/commercial stakes play out is to be found in Samruk-Kazyna, not at the level of Kazakhstan Engineering. All the local experts<sup>19</sup> insist that there is a high degree of corruption in the military sector: a considerable part of revenues linked to domestic and international contracts go toward lining the pockets of high-ranking defense officials, security service members, and probably also members of the presidential office.

### ***Overview of Kazakhstani defense industries***

The military industry emerged in Kazakhstan during the Second World War. As the Nazi front advanced into Russia, factories situated in the European part of the country were shifted to Central Asia. Most of them were specialized in the production of torpedoes, mines, and anti-mine systems, and continued to function after the war. During the Soviet decades, the Kazakhstan republic produced a considerable quantity of arms and equipment for the naval forces and tanks, light arms, rocket systems, and components for antimissile defense, all valued at a total of between 1 and 1.5 billion dollars. The share of production earmarked for civil use did not exceed 15–20 percent at the time.

At the time of the USSR’s collapse, Kazakhstan had fifty companies that were integrated into the Soviet defense system, but most of them were peripheral compared with the importance of the military-industrial complex of Russia, Ukraine, or Belarus.<sup>20</sup> Only a handful of factories were considered high-performance:

- the Kirov factory, then the main producer of thermal-engine torpedoes, including the 650mm class 65-76;
- the central experimental mechanical plant Hydromash, based in Alma-Ata, which specialized in the production of anti-submarine APR air missiles and submarine Squall missiles (the factory is now converted);
- the Kuibyshev machine-building plant, the main producer of submarine mines and trawling equipment (now AO Ziksto);
- the Zenit factory, a producer of submarine mines, torpedo components, and launchers, which was the country’s main supplier of naval equipment;
- a branch of the Central Institute of Research of Leningrad Gidropribor, which specialized in submarine weaponry and was based in Uralsk.

Kazakhstan also had eight proving grounds for nuclear tests, which occupied more than 7 percent of its territory. These include the famous Semipalatinsk testing ground, which had several experimentation centers, and Sary Shagan, which was used for air and missile defense tests.

Heavily hit by the fall of the Soviet Union, most of the Kazakhstani military-industrial complex collapsed. Several factories closed their doors only a few months into independence. Diversification of production became the key directive of the sector: those enterprises still in operation were converted to be able to produce dual military equipment or civil equipment for the hydrocarbon sector, railway transport, or chemical and nuclear industries. Today, about half

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<sup>19</sup> Anonymous interview, June 2015.

<sup>20</sup> Barabanov, “Pereorientatsiia Kazakhstanskogo OPK.”

the revenues for enterprises of the Kazakhstani military-industrial complex come from the non-military sector.<sup>21</sup> Several factories were also opened to foreign orders, in particular from India and from China, often as subcontractors for contracts made by the Russian firm Rosoboroneksport.

In the second half of the 2000s, the situation began to improve. An increase in the defense budget permitted a revival of production, whereas for many years Kazakhstani companies had only survived thanks to orders from the Russian Navy. While Kazakhstan had hitherto been closely tied to Russian production, the declared goal from then on included both diversifying the buyers and enhancing national potential, in particular in the sector of repairs (which were considered an onerous expense). Export prospects are another core feature of the Kazakhstani strategy; currently, the largest part of export volume comes from the sector of naval military equipment.<sup>22</sup> During Soviet times, almost all companies that formed part of the Kazakhstani military-industrial complex were dependent upon components supplied by other Soviet republics. The brutal breaking of links between republics not only led to the closure of several factories, but also made maintenance operations difficult since no one factory possessed a complete technological cycle.<sup>23</sup> Consequently, companies like Semmashzavod and Zikstohave aimed to recreate a whole production cycle for the domestic market.

### ***Cartography of Kazakhstani industrial players***

Kazakhstan Engineering (KE) figures as a central element of the Kazakhstani strategy. According to its former president, Bolat Smagulov, an essential element of the modernization of the complex resides in the transition to a computerized communications system. KE has thus set to work with a special interest in questions of the computerization of defense systems. In the framework of the state program, each company has to follow a development program financed in part by the Kazakhstan Development Bank or by commercial banks. However, KE faces enormous challenges concerning the modernization of its enterprises. It struggles to invest in human capital; it contends with a lack of specialized engineers to whom the companies of the complex are able to offer sufficiently attractive conditions to prevent their emigration, as well as with a dearth of managerial capability. Moreover, the costs of modernization are often excessive and the production of many Kazakhstani factories fails to be competitive.

KE includes more than twenty military or dual-use factories:

***The Zenit Factory (Uralsk).*** Opened in the west of Kazakhstan during the evacuation of Leningrad's factories in 1941, Zenit has always specialized in naval equipment. Today, it is a driver of Kazakhstan's military-industrial complex, a symbol of Astana's export ambitions. The factory has enjoyed considerable financing from the Kazakhstani state to relaunch the production of ships, in particular 240-ton patrol boats ordered by the country's border guard services; rapid patrol boats; and Sunkar-, Burkit-, and Bars-class vessels. It is also in charge of building polyvalent boats of less than 600 tons: these include floating laboratories; shallow draft tug boats that are used in the ports and along the coasts for docking, entry, and exit operations

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<sup>21</sup> "Companies of the Military Industrial Complex of Kazakhstan Signed Several Agreements."

<sup>22</sup> See *Kazakhstanskii voennyi sait*, [http://military-kz.ucoz.org/index/istorija\\_vpk\\_kazakhstana/0-44](http://military-kz.ucoz.org/index/istorija_vpk_kazakhstana/0-44).

<sup>23</sup> "Companies of the Military Industrial Complex of Kazakhstan Signed Several Agreements."

of ships; and rescue and fire-prevention vessels. In 2010, the factory won a bid to build several 325-ton missile-launching vessels for the 20970 Katran project in partnership with the Russian factory Almaz.<sup>24</sup> The Zenit factory launched a prototype model of a high-speed patrol boat, “Aybar,” designed to ensure the protection of state territorial waters and the continental shelf of Kazakhstan, as well as the fight against trafficking, clandestine fishing, and contraband.<sup>25</sup> In 2016, it was working on the design of a series of small boats intended for the Kazakhstani naval forces.<sup>26</sup> During the first six months of 2016, this factory delivered 23 ships or boats weighing between 13 and 250 tons. The factory is designated for modernization in the years ahead so that it can produce ships of up to 600 tons.<sup>27</sup>

**Heavy Engineering Plant (Petropavlovsk).** Under the Soviet regime, the factory was specialized in the production of missiles and missile launchers. The production of Tor anti-aircraft missiles was planned for the 1980s but did not come about due to the collapse of the USSR. The plant’s production largely crumbled after 1991, leading to a massive conversion to the production of oil, gas, and railway equipment. Today, the plant is a mere shadow of what it was under the Soviet regime and has seven times fewer employees.<sup>28</sup> It still produces military vehicles.

**Naval Instrument Factory Omega (Uralsk).** Built in 1972, the factory once specialized in the production of ship control systems and communications instruments for the navy. Today, it produces civil (railway and agricultural) and dual equipment, in particular radio pieces designed for sea navigation.

**Semei Engineering (Semei).** In Soviet times, this factory specialized in the production of GTT (GT-TB) series all-terrain caterpillar transporters for the protection of Arctic sites. After 1991, production fell away. The enterprise, which had fallen into a permanent crisis, survived thanks to small orders of component parts from the agriculture and oil industries. Thus, Semei Engineering’s production today is essentially civil or dual. It produces caterpillar carriers, which can be adapted to civil or military uses. It maintains the tanks of the Ministry of Defense and plans to produce Russian GAZ-2330 Tiger armored cars.<sup>29</sup> It specializes in repairing BMPs and BTRs (heavy infantry combat vehicles) and in recent years has worked on modernizing the Kazakhstani army’s T-72 tanks, in cooperation with Ukraine. The Kazakhstani authorities aim to make it one of the country’s main maintenance centers and the government finances its program to restore heavy vehicles and produce containers for stocking munitions.<sup>30</sup> A corruption scandal

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<sup>24</sup> “Provedeny pervye strel'by shtatnym vooruzheniem RKA ‘Kazakhstan,’” *Novosti VPK*, August 20, 2012, [http://vpk.name/news/73917\\_provedenyi\\_pervyie\\_strel'by\\_shtatnyim\\_vooruzheniem\\_rka\\_kazakhstan.html](http://vpk.name/news/73917_provedenyi_pervyie_strel'by_shtatnyim_vooruzheniem_rka_kazakhstan.html); Barabanov, “Pereorientatsiia Kazakhstanskogo OPK.”

<sup>25</sup> “‘Aybar’ Patrol Boats to Protect Kazakhstan’s Shelf, Territorial Waters,” *Trend.az*, July 14, 2014, <http://en.trend.az/casia/kazakhstan/2293856.html>.

<sup>26</sup> Voloshin, “Kazakhstan Faces Militarization of the Caspian.”

<sup>27</sup> Azamat Syzdykbaev, “Kazakhstanskii zavod planiruet vypusk vida korablei,” *Kazakhstanskaia Pravda*, February 27, 2016, <http://www.kazpravda.kz/news/tehnologii/kazakhstanskii-zavod-planiruet-vipusk-novogo-vida-korablei/>.

<sup>28</sup> Interview with Rafik Tairov, Astana, December 2012.

<sup>29</sup> Barabanov, “Pereorientatsiia Kazakhstanskogo OPK.”

<sup>30</sup> “Bronia krepka, mashiny nashi bystry. V Semei budut vypuskat' broneavtomobil' povyshennoi prokhozivosti,” *Kazakhstanskaia Pravda*, May 8, 2012.

in 2014 tarnished the plant's reputation, however: its former director, Batykhzhan Seitov, was accused of embezzlement and sentenced to eight months in prison.<sup>31</sup> In 2016, the plant announced that it was seeking to work on contracts with foreign states.<sup>32</sup>

***The Tynys Plant (Kokchetau).*** Founded in 1959, Tynys is the only Kazakhstani enterprise able to produce the aeronautical equipment once made by the Nauka and Mikoyan factories in Moscow and the Zvezda plant in Tomilino. It specializes in the production of radiators; ventilators; fire extinguishers; and towers and sensors for aviation, and targets the domestic and foreign markets. Its products are adaptable to the main post-Soviet planes and helicopters, both civil and military: Antonov, Iliushin, Tupolev, Yak, Mig, Ansat, etc. It exports in particular to Russia and Belarus.<sup>33</sup>

***Kirov Plant (Petropavlovsk).*** Founded in 1942, this plant is the only producer of thermal-engine torpedoes in all the CIS countries. The plant covers the production cycle of these torpedoes from the reception of component parts to assembly and inspection of finished products. Since its establishment, the plant has produced more than 20 types of torpedoes and more than 150 types of hydraulic systems for boats and submarines. The plant also produces for the civil market, making component parts for the railway, mining, and oil and gas industries. It has an office for research and development. In 2016, the plant was given a state order to produce "Karagai" radio stations, "Akterek" tower stations, and the "Ak Zhayik" tropospheric communications station, equipment for shooting ranges, and simulators of T-72b tanks.<sup>34</sup>

***KazIngElectronics (Almaty).*** This former center for radio electronics and communications, founded in 1994 on the basis of the scientific-technical complex of the Sary-Shagan Polygon, produces data-transfer systems; sophisticated telecommunications systems; radio-electronic components; and radar systems. It is intended to play a key role in the modernization of the armed forces, particularly the computerization of their security systems. In recent years, it has updated an artillery Machina-AM automatic firing system and specialized in automatic control systems.

***The S.M. Kirov Machine-Building Plant (Almaty).*** This plant produces equipment for the oil sector and for railway transport, and, in the military sector, instruments for armored vehicles and component parts.

***The Hidropribor Factory (Uralsk).*** The factory produces equipment for the oil sector as well as for research on ships and planes sunk at sea. It also designs fluvial ships, in particular

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<sup>31</sup> "Gendirektor Semei Inzhiniring osuzhden na 8 let," *Kapital*, December 23, 2014, <https://kapital.kz/gosudarstvo/36134/gendirektor-semej-inzhiniring-osuzhden-na-8-let.html>.

<sup>32</sup> "Zavod 'Semei inzhiniring' vykhodit na mezhdunarodnyi rynok," *Bnews.kz*, February 22, 2016, [http://bnews.kz/ru/news/ekonomika/promishlennost/zavod\\_semej\\_inzhiniring\\_vihodit\\_na\\_mezhdu\\_narodnii\\_rinok-2016\\_02\\_22-1258332](http://bnews.kz/ru/news/ekonomika/promishlennost/zavod_semej_inzhiniring_vihodit_na_mezhdu_narodnii_rinok-2016_02_22-1258332)

<sup>33</sup> "AO 'Tynyz' v Kokchetau v 2013 godu eksportirovalo v TS produktsii na 3 mlrd tenge," *BNNNews*, May 30, 2014, [http://bnews.kz/ru/news/tamojennyi\\_soyuz/spetsproekti/tamojennyi\\_soyuz/ao\\_tinis\\_v\\_kokshetau\\_v\\_2013\\_godu\\_eksportirovalo\\_v\\_ts\\_produktsii\\_na\\_3\\_mlrd\\_tenge\\_foto-2014\\_05\\_30-921907](http://bnews.kz/ru/news/tamojennyi_soyuz/spetsproekti/tamojennyi_soyuz/ao_tinis_v_kokshetau_v_2013_godu_eksportirovalo_v_ts_produktsii_na_3_mlrd_tenge_foto-2014_05_30-921907).

<sup>34</sup> Askar Dairbek, "Perspektivy razvitiia voennoi promyshlennosti Kazakhstana," *Sarbaz*, October 14, 2016, [https://sarbaz.kz/ru/analytics/perspektivy-razvitiya-voennoy-promyshlennosti-kazahstana-162871750/?sphrase\\_id=85288](https://sarbaz.kz/ru/analytics/perspektivy-razvitiya-voennoy-promyshlennosti-kazahstana-162871750/?sphrase_id=85288).

the 111 boats used for patrols and the transport of passengers on rivers and lakes and Project 101 MGB attack boats. It has already delivered 18 Sapsan boats, which are used for coastal surveillance of the Caspian Sea.<sup>35</sup> In November 2012, Kazakhstan inaugurated a Sagym class vessel, capable of sailing up to 100 km/h, intended for the border guards in the Caspian Sea. The goal is to produce 10 to 15 of them per year.<sup>36</sup> The factory fulfills the orders of Kazakhstani government institutions, in particular the Ministry of Defense, the KNB, and the Ministry of Emergency Situations.<sup>37</sup> In 2016, the factory signed a cooperation agreement with the French company ECA-Robotics to produce naval robotics.<sup>38</sup>

**The AO 811 Avtoremontny Zavod KI (Ereimentau).** Established in 1976, the factory repaired the military vehicles of the Soviet Defense Ministry assigned to the districts of Turkestan and western Siberia.<sup>39</sup> In 1991, it became one of the country's main repair centers and specialized in conversions; it repairs and modernizes all types of utility vehicles, in particular armored vehicles BTR-70, BTR-60 and BRDM-2, as well as Kamaz engines.<sup>40</sup>

**Unified Management Center of the Armed Forces.** Established in November 2009 at the behest of Kazakhstan Engineering (KE), this enterprise acquires and then modernizes different categories of military equipment. In 2012, KE stated its aim of focusing on cutting-edge technology in order to gain access to foreign markets.

**Auto Repair Plant 832.** The plant looks after vehicle maintenance and repairs, including military vehicles.

**Aviation Industry of Kazakhstan.** A symbol of the development of the Kazakhstani aeronautical industry, this factory specializes in aeronautical production, maintenance, assembly, and repairs. It is tasked with maintaining the C-295 planes produced by Airbus Military, as part of an agreement signed between Spain and Kazakhstan Engineering in February 2013. In addition, the company concluded an agreement with the Ukrainian import-export company Ukrspetsekспорт for cooperation in aircraft, notably the repair of Antonov AN-2 and AN-2-100 aircraft and the creation of a maintenance center for Antonov planes.<sup>41</sup>

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<sup>35</sup> “Kazakhstan spustil v Kasp’ii noveishii vysokoskorostnoi (100km/chas!) pogrunkater ‘Sagym,’” <http://mil.wms.kg/?p=4749>

<sup>36</sup> Ibid.

<sup>37</sup> Sergei Romanov, “V Ural’ske AO ‘NII’ ‘Gidropribor’ postroilo bolee 30 plavsredstv,” *BNews*, August 21, 2014, [http://bnews.kz/ru/news/industrializatsiia/spetsproekti/industrializatsiia/v\\_uralske\\_ao\\_nii\\_gidropribor\\_postroilo\\_bolee\\_30\\_plavsredstv-2014\\_08\\_21-891011](http://bnews.kz/ru/news/industrializatsiia/spetsproekti/industrializatsiia/v_uralske_ao_nii_gidropribor_postroilo_bolee_30_plavsredstv-2014_08_21-891011).

<sup>38</sup> Sergei Romanov, “V Uralske organizuiut kazakhstansko-frantsuzskoe proizvodstvo morskoi robototekhniki,” *NovostiVPK*, February 16, 2015, [http://vpk.name/news/126594\\_v\\_uralske\\_organizuyut\\_kazahstansko-francuzskoe\\_proizvodstvo\\_morskoi\\_robototekhniki.html](http://vpk.name/news/126594_v_uralske_organizuyut_kazahstansko-francuzskoe_proizvodstvo_morskoi_robototekhniki.html).

<sup>39</sup> *Kazakhstan Inzhiniring-811*, <http://811.kz/about>.

<sup>40</sup> Ibid.; “Vprevye v VS RK byl zapushhen pilotnyi proekt po tekhnicheskomu soprovozhdeniiu avtomobilei,” *BNews*, November 19, 2015, [http://bnews.kz/ru/news/ekonomika\\_i\\_biznes/transport/vpervie\\_v\\_vs\\_rk\\_bil\\_zapushchen\\_pilotnii\\_p\\_roekt\\_po\\_tekhnicheskomu\\_soprovozhdeniu\\_avtomobilei-2015\\_11\\_19-1185653](http://bnews.kz/ru/news/ekonomika_i_biznes/transport/vpervie_v_vs_rk_bil_zapushchen_pilotnii_p_roekt_po_tekhnicheskomu_soprovozhdeniu_avtomobilei-2015_11_19-1185653).

<sup>41</sup> “Astana i Kiev dogovorilis’ o postavkakh produktsii voennogo naznacheniia,” October 14, 2015, <http://newskaz.ru/economy/20151014/9922427.html>; “V Astane zavershaetsia podgotovka aviatsionnogo

**Kamaz Engineering.** Created in 2005 as a joint venture between Kazakhstan Engineering and Kamaz, it quickly became the foremost maker of trucks in Kazakhstan. It has produced more than 11,000 vehicles,<sup>42</sup> many of which the Ministry of Defense has acquired,<sup>43</sup> and also makes special equipment linked with Kamaz.

**The Ziksto Plant.** Located in Petropavlovsk, this plant was established on the model of the Kuibyshev Machinery Plant, which was restructured upon its privatization in 1994. Apart from railway equipment, Ziksto produces different models of mines,<sup>44</sup> warehouse containers, and the naval weaponry transport of MTOR-AT (mobile workshops) designed for technical service and repairing vehicles, all under an order from the Ministry of Defense.<sup>45</sup> This plant has been presented as an element of the Caspian's accelerated militarization.<sup>46</sup>

**Kaz-ST Engineering Bastau.** Created in 2004 and with 51 percent capital investment from Singapore Technologies Engineering Ltd., Kaz-ST Engineering Bastau provides defense- and engineering-related services.<sup>47</sup>

**Kazakhstan Engineering Distribution.** This company repairs and modernizes caterpillar and four-wheel vehicles used in different sectors of the economy. The plant also produces component parts for vehicles, as well as radio and communications equipment.

**Aviation Repair Plant 406 (Almaty).** Established in 1939, the plant's essential activity consists in repairing civil and military planes, mainly AN-2s, Ash-62 engines, Mi-2 helicopters, GTD-350 engines, VR-2 reducers, Yak-18T planes, and M-14P engines. Since 2009, it has begun repairing flight instruments and Mi-2 and Mi-8 helicopter radio equipment.

**Aviation Repair Plant 405 (Aktobe).** The plant organizes the maintenance of Mi-8 and Mi-17 series helicopters and is integrated into several production projects such as the Yak-59, the An-140, the Mi-8 helicopter, and Ansat.

Only one major factory remains outside KE's control for the time being, namely the Metallist Machine-Building Factory, based in Uralsk. During the Soviet period, it was one of the main producers of light weapons (12.7 mm NSV sub-machine guns and 7.62 mm Kalashnikovs). After

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tehnicheskogo tsentra k vystavke KADEX-2016," *Tengrinews*, April 12, 2016, [https://tengrinews.kz/kazakhstan\\_news/astane-zavershaetsya-podgotovka-aviatsionnogo-tehnicheskogo-292547/](https://tengrinews.kz/kazakhstan_news/astane-zavershaetsya-podgotovka-aviatsionnogo-tehnicheskogo-292547/).

<sup>42</sup> Asel Turar, "AO 'Kamaz Inzhiniring' v Kokchetau vypustil bolee 11 tys edinits tekhniki," *Bnews.kz*, October 26, 2016, [http://bnews.kz/ru/news/ekonomika/promishlennost/ao\\_kamaz\\_inzhiniring\\_v\\_kokshetau\\_vipustil\\_bolee\\_11\\_tis\\_edinits\\_tehniki-2016\\_10\\_26-1294583](http://bnews.kz/ru/news/ekonomika/promishlennost/ao_kamaz_inzhiniring_v_kokshetau_vipustil_bolee_11_tis_edinits_tehniki-2016_10_26-1294583).

<sup>43</sup> "Ministerstvo oborony ne soglasilos' s uprekom Nazarbaeva," *asker.kz*, February 15, 2012, [http://asker.kz/blog/army\\_news/124.html](http://asker.kz/blog/army_news/124.html); "Kazakhstanskaia armiiia poluchit na vooruzhenie shtabnye mashiny otechestvennogo proizvodstva," *Voennyi Informator*, March 14, 2016, <http://military-informant.com/army/kazahstanskaya-armiya-poluicht-na-vooruzhenie-shtabnyie-mashinyi-otechestvennogo-proizvodstva.html>.

<sup>44</sup> <http://www.petr.kz/~ziksto/pmk.html>.

<sup>45</sup> *Ibid.*

<sup>46</sup> Joshua Kucera, "Kazakhstan Stepping Up Defenses against Caspian Marine Invasion," *Eurasianet.org*, March 14, 2016, <http://www.eurasianet.org/node/77776>.

<sup>47</sup> [http://www.ke.kz/ru/De\\_tel\\_nost\\_/De\\_tel\\_nost\\_\\_kompanii/plan\\_razvitiya/](http://www.ke.kz/ru/De_tel_nost_/De_tel_nost__kompanii/plan_razvitiya/).

the fall of the USSR, its production almost entirely collapsed, despite some attempts to produce 9mm PP-90 pistols and Kobalt revolvers for the Ministry of Defense.<sup>48</sup> Renamed the **West-Kazakhstan Machine-Building Company (ZKMK)** in 2003,<sup>49</sup> the factory was privatized and specialized in making oil and gas equipment. In the military sector, it continued to produce a small series of hunting rifles. In recent years, it has attempted to revive its military production. The factory aims to work on refurbishing light weaponry and installing weapons on Hammer, Kobra, Sarbaz, and Spartan class armored vehicles. The factory has the capacity to produce up to a thousand 12.7-caliber guns, and a thousand 9-caliber guns per year, and is also involved in munitions production.<sup>50</sup>

In June 2014, **Astana Kazakhstan Paramount Engineering** was founded by two groups: Kazakhstan Engineering Distribution LLP and the Paramount Group company. Kazakhstan Engineering Distribution LLP had been established in 2003 by “NC” Kazakhstan Engineering JSC and “KazPetroMac” LLP, and was tasked with selling the products of subsidiaries of “NC” Kazakhstan Engineering JSC. The Paramount Group, established in South Africa in 1994, is made up of international companies specialized in the defense and domestic security sector. Each factory produces more than 200 armored vehicles per year, as well as planes, and military equipment. The factories also participate in training the armed forces. Today led by Yerbol Imbergenuly Salimov, Kazakhstan Paramount Engineering manages an investment project called “Production of military and civil machinery in the republic of Kazakhstan,” which includes, in particular, the construction of a factory to produce armored vehicles.<sup>51</sup>

### **International positioning and cooperation**

The 2011 military doctrine recognized the weaknesses of the Ministry of Defense in developing and upgrading a supply system able to respond to the needs of the armed forces. The ministry set up a purchasing office to remedy these weaknesses. In 2016, the Kazakh president again insisted that it was necessary to develop the country’s military industry through, among other things, cooperation with foreign military powers.<sup>52</sup> This declared ambition features two complementary strategies. The first consists of attracting, in the short term, a growing number of foreign firms able to supply the country with the equipment it lacks; the second, more long term in nature, envisages gearing production around imported components, and the creation of joint-ventures involving technology transfers. This strategy, however, faces several obstacles, including human-capital-related ones. Occasionally, it is further complicated by Astana’s vacillation over whether to privilege the partnership with Russia or to give preference to other foreign actors.

### ***The major lines of Kazakhstan’s armament strategy***

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<sup>48</sup> “Companies of the Military Industrial Complex of Kazakhstan Signed Several Agreements.”

<sup>49</sup> “V Ural’ske pokazali, kak rabotaiut tsekha ZKMK,” *Ibirzha.kz*, April 28, 2015, <http://ibirzha.kz/v-uralske-pokazali-kak-rabotayut-tseha-zkmk/>.

<sup>50</sup> Dairbek, “Perspektivy razvitiia voennoi promyshlennosti Kazakhstana.”

<sup>51</sup> *Kazakhstan Paramunt Inzhiniring*, <http://kpe.com.kz/en/>.

<sup>52</sup> “Nazarbayev: Kazakhstan nameren usilivat’ potentsial VPK v sotrudnichestve s drugimi stranami,” *Euronews.com*, June 2, 2016, <http://ru.euronews.com/newswires/3202065-ha3apbaeb-ka3axctah-hamepeh-ycnnnbatb-otehunan-bnk-b-cotpyahnuectbe-b-apyrnmn-ctpahamn/>.

By tapping into foreign cooperation, Kazakhstan seeks to increase its production so that it can:

1. free the military-industrial complex from foreign influence. Thus, the strategic plan of the republic of Kazakhstan for 2020 is to produce 80 percent of its military-industrial needs by the end of the decade, a figure that most experts judge too high and unrealistic, but which indicates the intended direction.<sup>53</sup> In October 2016, on the occasion of the appointment of Beibut Atamkulov as Kazakhstan's first minister of defense and aerospace industry, Nazarbayev reiterated the need for the ministry to rely on Kazakhstan's own factories in fulfilling its armament needs.<sup>54</sup>
2. become an important actor in armaments production and business on the international stage, able to rival to major world producers in certain key sectors. Imangali Tasmagambetov, the Kazakh defense minister from October 2014 to October 2016, was especially insistent on this goal.<sup>55</sup> Kazakhstan has already received some orders and has begun to deliver military equipment abroad. According to the United Nations, by 2016, Astana will have exported more than 150 artillery systems to African countries (Angola and Ethiopia).<sup>56</sup> In January 2016, Kazakhstan concluded a contract with Jordan to sell Kazakh-produced Arlan armored vehicles manufactured by Kazakhstan Paramount Engineering,<sup>57</sup> making Jordan that company's biggest client.<sup>58</sup> Moreover, during the 2016 KADEX show, Kazakhstan signed agreements for export sales of munitions to Bulgaria, the United Arab Emirates, and Great Britain,<sup>59</sup> and of thermal vision cameras to Belarus.<sup>60</sup>

In line with this twofold logic, former defense minister Adylbek Dzhaksybekov made clear the intention to favor national enterprises over foreign suppliers. Meanwhile, Kazakhstan has established cooperation with fifteen countries, "with priority given," says Dzhaksybekov, "to

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<sup>53</sup> Barabanov, "Pereorientatsiia Kazakhstanskogo OPK"; Dunai, "Interview: Adylbek Dzhaksybekov, Defence Minister of Kazakhstan."

<sup>54</sup> "Meeting with the Minister of Defense and Aerospace Industry Beibut Atamkulov," *Akorda.kz*, October 18, 2016, [http://www.akorda.kz/en/events/akorda\\_news/meetings\\_and\\_receptions/meeting-with-the-minister-of-defense-and-aerospace-industry-beibut-atamkulov](http://www.akorda.kz/en/events/akorda_news/meetings_and_receptions/meeting-with-the-minister-of-defense-and-aerospace-industry-beibut-atamkulov); see also: "Ministr oborony proinformiroval Prezidenta RK ob osnashhenii kazakhstanskoi armii," *Kazakhstan 2050*, December 29, 2015, <https://strategy2050.kz/ru/news/16739>.

<sup>55</sup> "Tasmagambetov prizval razvivat' eksport voenno-oboronnoi produktsii," *Astinfo.kz*, April 16, 2015, <http://astinfo.kz/news/tasmagambetov-prizval-razvivat-eksport-voenno-oboronnoy-produktsii/>.

<sup>56</sup> See the "Global Reported Arms Trade," <http://www.un-register.org/HeavyWeapons/Index.aspx?CoI=KZ&type=1&year=0&#lnkreg>.

<sup>57</sup> "Bronemashina 'Arlan': Kazakhstan kak zerkalo rossiiskogo voennogo eksporta," *Ekonomika segodnia*, January 29, 2016, <http://rueconomics.ru/152016-bronemashina-arlan-kazahstan-kak-zerkalo-rossiyskogo-voennogo-eksporta>.

<sup>58</sup> Catherine Putz, "Kazakhstan to Sell Armored Vehicles to Jordan," *The Diplomat*, January 27, 2016, <http://thediplomat.com/2016/01/kazakhstan-to-sell-armored-vehicles-to-jordan/>

<sup>59</sup> "During the KADEX-2016 Exhibition Signed Export Agreements on Procurement of Kazakhstan Ammunition Plant," June 3, 2016, <http://defence-blog.com/army/during-the-kadex-2016-exhibition-signed-export-agreements-on-procurement-of-kazakhstan-ammunition-plant.html>.

<sup>60</sup> *Kadex*, June 2, 2016,

<http://kadex.kz/new/%D0%B2%D1%8B%D1%81%D1%82%D0%B0%D0%B2%D0%BA%D0%B0-kadex-2016/?lang=en>.

partners with sophisticated technology and a modern industry, with a complete production cycle, and who are able to transfer advanced technologies.”<sup>61</sup> Bolat Smagulov also broadly insisted on the intrinsic link between foreign partnerships and the technological re-equipment of the armed forces. The state-run company Kazspetsekспорт, a key element of Kazakhstan’s foreign relations, was created by presidential decree in 2005. The company controls imports of military equipment and has hence become an essential intermediary for foreign firms seeking a foothold in the country. It has established many partnerships, contributed through its negotiations with producers to reducing purchase prices, and cooperates with Kazakhstan Engineering on the import of new technologies.<sup>62</sup> In addition, the company has been increasingly present at international military shows, at which it promotes Kazakhstani output. Astana hopes to attract some 80 million dollars of foreign investment to its military and dual sector by the end of the decade.

### ***The Russian–Kazakhstani partnership***

The purchase of equipment and technology transfers from Russia still comprise the core of the modernization strategies pursued by the Kazakhstani military-industrial complex. Astana strongly supports the security partnership between the two countries and hopes that the CSTO will increase coordination between the two armies. Russia and Kazakhstan are linked by sixty agreements on military and military-industrial cooperation. This fact can be explained as much by their strategic alliance as by their shared Soviet heritage, which has rendered the two military-industrial complexes readily compatible.<sup>63</sup> As a case in point, the air-defense systems of both countries are intrinsically linked. In January 2013, Moscow and Astana confirmed the implementation of a unified regional system of anti-aircraft defense, similar to the one that Russia and Belarus already have.<sup>64</sup> In the spirit of this cooperation, in June 2016, Russia provided Kazakhstan with S-300PS anti-aircraft systems free of charge.<sup>65</sup>

Two other elements reinforce the intertwining of the Russian and Kazakhstani military industries: Kazakhstan is guaranteed the purchase of Russian-made weapons at domestic market prices – a privilege afforded by the CSTO – and the vast majority of its defense and security services officers were trained in Russia and have close relations with their Russian counterparts.

Astana has asked Moscow to help it prioritize its technological modernization in several sectors, including: maintenance of the anti-aircraft defense forces; modernization of its land, naval, and air forces; maintenance and repairing of helicopters; acquisition of advanced technology linked to the C4ISR concept (although Russia itself is behind in a certain number of domains

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<sup>61</sup> Barabanov, “Pereorientatsiia Kazakhstanskogo OPK.”

<sup>62</sup> Andrei Shatskikh, “Myslit' i deistvovat' po-novomu,” *Krasnaia Zvezda*, no. 172, 2012, 3.

<sup>63</sup> Il’ia Kedrov, “Kadex-2010: Tochka otcheta,” *VPK. Voенno-promyshlennyi kur’er*, no. 22, June 9, 2010.

<sup>64</sup> “Kazakhstan i Rossiia podpisali soglashenie o edinoi regional'noi sisteme PVO,” *Tengrinews.kz*, January 30, 2013, [http://tengrinews.kz/kazakhstan\\_news/kazakhstan-i-rossiya-podpisali-soglashenie-o-edinoi-regionalnoy-sisteme-pvo-227558/](http://tengrinews.kz/kazakhstan_news/kazakhstan-i-rossiya-podpisali-soglashenie-o-edinoi-regionalnoy-sisteme-pvo-227558/); Interview with Georgii Dubovtsev, Astana, December 2012.

<sup>65</sup> “Russia Has Delivered S-300PS Surface-to-Air Defense Missile System to Kazakhstan,” June 8, 2016, [http://www.armyrecognition.com/june\\_2016\\_global\\_defense\\_security\\_news\\_industry/russia\\_has\\_delivered\\_s-300ps\\_surface-to-air\\_defense\\_missile\\_system\\_to\\_kazakhstan\\_tass\\_10806162.html](http://www.armyrecognition.com/june_2016_global_defense_security_news_industry/russia_has_delivered_s-300ps_surface-to-air_defense_missile_system_to_kazakhstan_tass_10806162.html).

pertaining to this concept); re-equipment of the brigades participating in the CSTO's Rapid Reaction Forces; and research and development on special-use military vehicles.

Russia shows no restraint when pressuring Kazakhstan to stock mostly Russian materiel, on the pretext that it belongs to the CSTO and must therefore have Russian-compatible technologies. Three essential axes make up this Russian–Kazakhstani military-industrial partnership:

**1. The purchase of Russian equipment.** Weapons exports from Rosoboroneksport to Kazakhstan increased seventyfold between 2010 and 2012.<sup>66</sup> Between 2003 and 2008, the Russian firm delivered BTR-82A transporters as well as thirty BTR-82. Close to 70 more were reportedly delivered in 2012,<sup>67</sup> and an order for an additional 90 vehicles was to have been completed in 2013 (the financial conditions of this new contract have not been revealed).<sup>68</sup> Astana also received BMPT tank combat-support vehicles (made at the Uralvagonzavod factory in Nizhnyi Tagil) and the latest version of the TOS-1 220mm rocket-launcher. In 2016, KE signed an agreement with Russian company Defense Systems, the terms of which stipulate that the Russian company is to supply electronic warfare systems for fighting with Repellent small unmanned aerial vehicles and Avtobaza-M overground electronic surveillance systems.<sup>69</sup>

Concerning the modernization of Kazakhstan's naval forces, in 2016 the St. Petersburg naval boatyard was completing preparations for a new minesweeper, as part of a contract to promote bilateral military cooperation and technology transfer under the auspices of the CSTO. Signed in 2013, this agreement foresees the building of several other vessels.<sup>70</sup>

Kazakhstan orders the vast majority of its aviation technology from Russia; its armed forces, police, and rescue services all operate the main models of helicopter produced by Russian Helicopters. Astana bought a dozen MI-17 helicopters, some MiG-31, MiG-29 and Su-25, as well as air-defense systems, and now also is negotiating for training equipment such as simulators. Kazakhstan also acquired ten Irkout-10 drones and has stated its interest in the purchase of several Irkout-3 and Irkout-1A drones.<sup>71</sup> In late 2016, Russia delivered the first Mi-35M combat helicopter,<sup>72</sup> but the total number ordered has not been revealed.<sup>73</sup>

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<sup>66</sup> "S 2010 goda postavki voennoi tekhniki iz Rossii v Kazakhstan vyrosli v 70 raz," *Voенно-politicheskoe obozrenie*, 30 avril 2012, <http://www.belvpo.com/ru/10373.html>

<sup>67</sup> "RF to supply 90 armored personnel carriers BTR-82 to Kazakhstan," ITAR-TASS World Service, April 17, 2012.

<sup>68</sup> Interview Svetlana Kozhirova, December 2012 ; "Kazakhstan signs for 90 new BTR-82's, Indonesia for 37 more BMP-3F's," April 18, 2012,

<http://www.network54.com/Forum/211833/thread/1334765627/last-1334765627/Kazakhstan+signs+for+90+new+BTR-82's,+Indonesia+for+37+more+BMP-3F's>

<sup>69</sup> "KADEX-2016: JSC Kazakhstan Engineering Signed Deals Worth KZT 45 bln," *Kazinform*, June 5, 2016, [http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos\\_a2911067](http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos_a2911067).

<sup>70</sup> Voloshin, "Kazakhstan Faces Militarization of the Caspian."

<sup>71</sup> "Kazakhstan kupit partiiu rossiiskikh bespilotnikov," *Lenta.ru*, September 28, 2012; interview with Georgii Dubovtsev, Astana, December 2012.

<sup>72</sup> "Kazakhstan Receives First Mi-35M Attack Helicopters from Russia," *Russian Aviation*, December 13, 2016, <http://www.ruaviation.com/news/2016/12/13/7668/>.

<sup>73</sup> Catherine Putz, "Kazakhstan to Get New Helicopters in 2016," *The Diplomat*, June 2, 2016, <http://thediplomat.com/2016/06/kazakhstan-to-get-new-helicopters-in-2016/>.

In May 2012, Nazarbayev stated his interest in the Mig-35 after it was demonstrated at the Kadex show in 2012.<sup>74</sup> During this exhibition, KE and Russian company Splav agreed to work on extending the range of the Grad MRLS from 20 to 40 km.<sup>75</sup> These purchases respond to national needs but are also part of joint strategies for the export of equipment to China and India. On the other hand, the Kazakhstani deputy minister of Defense announced the country's will to acquire a version of the S-400 Russian anti-aircraft defense system, adding that he was also negotiating with Indra Sistemas, EADS, and the Belarusian maker Agat for the production under license of a battlefield management system.

**2. The joint production of equipment on Kazakhstan territory.** Russian–Kazakhstani joint production in Kazakhstan was relaunched in the 2000s in several sectors:

- Production of dual-use trucks and military vehicles. KE established its first joint-venture with Kamaz in the Kokchetau Tynys plant in 2005, but the venture is progressing with difficulty. Close to 2,500 vehicles were produced in 2007, but the financial crisis slowed the plant's production, which dropped to 200 vehicles in 2009 and 900 in 2011. Kazakhstan is also negotiating with Russian Machines and Uralvagonzavod to build an assembly line of Ural and Tiger vehicles on its national territory.<sup>76</sup>
- Production of minor materiel: torpedoes (joint-venture between Russia, Kazakhstan, and Kyrgyzstan) and mines and artillery equipment (Aybat system with a 120mm mortar; Semser system; and shooting materiel for the Grad and Uragan rockets). An agreement between Alma DK JSC, in charge of munitions for the Kazakhstani armed forces, and the Kazan State Gunpowder Factory<sup>77</sup> stipulates that the country also has to produce its own powder.
- Navy: Building ships designed for the Caspian fleet (destroyers and minesweepers).<sup>78</sup> Kazakhstani firms have a privileged collaborative relationship with the Ulyanovsk factory in Tatarstan.<sup>79</sup>
- Aviation: Together with Russia, Kazakhstan has launched a program to produce Sunkar drones as part of the Yak Alakon joint-venture.<sup>80</sup> In 2012, the Vertolety Rossii holding announced its intention to cooperate with KE,<sup>81</sup> and in particular to produce partly on

<sup>74</sup> "Nazarbaev zainteresoval'sia novym rossiiskim istrebitelem MiG-35," Aker.kz, May 5, 2012, [http://asker.kz/blog/army\\_news/232.html](http://asker.kz/blog/army_news/232.html).

<sup>75</sup> "Kazakhstan Engineering Signs \$1.8 Billion Worth of Contracts at KADEX-2012," *Kazakhstan Newswire*, June 4, 2012.

<sup>76</sup> "Kazakhstan Engineering Plans to Create a Number of JV's Together with Russia's Defense Industry Enterprises," *Interfax: Kazakhstan General Newswire*, November 10, 2011.

<sup>77</sup> "Kazakhstan Engineering Signs \$1.8 Billion Worth of Contracts at KADEX-2012."

<sup>78</sup> For example, Ural'skii zavod Zenit will build 325-ton missile launchers based on a project by TsMKB Almaz (Katran). On the other hand, for the armament of these ships, Russian companies are competing with South Korean and Israeli proposals. Russia made an offer to provide the Kazakh navy with larger tonnage (600 tons) ships, competing with South Korea (Kedrov, "KADEX-2010: tochka otcheta").

<sup>79</sup> "Naibol'chii interes – k sistemam PVO."

<sup>80</sup> "Kazakhstan Will Check Out Russian Irkut-3 Unmanned Aerial Vehicle," *Tengrinews*, January 22, 2013, <http://en.tengrinews.kz/military/Kazakhstan-will-check-out-Russian-Irkut-3-unmanned-aerial-vehicle-16197/>.

<sup>81</sup> "Kazakhstan inzhiniring' i 'Vertolety Rossii' rasshiriaut sotrudnichestvo," March 5, 2012, <http://www.inform.kz/kaz/article/2461327>.

Kazakhstan's territory.<sup>82</sup> Its declarations of intention, renewed in 2016,<sup>83</sup> did not bear out, however. Lastly, ZKMK signed an agreement with Saluit in 2012 to establish a joint repair plant for plane engines (Su-24, Su-27).

**3. Support and maintenance.** The upkeep of military equipment is an important element of the collaboration between the two countries. Relations here owe much to the Soviet legacy and are very profitable for Russia, since such clients are captive. Several Soviet-built items (including planes, armored vehicles, anti-aircraft systems) can only be modernized in Russia. Such is the case, for example, with the MiG-31 and Su-27.<sup>84</sup> However, Kazakhstan is trying to free itself from this Russian domination by taking more control over the maintenance of acquired equipment. Thus, in May 2012, following a meeting between the first deputy minister of defense, Saken Zhasuzakov; the deputy minister of defense, Talgat Zhanzhumenov; the management of Kazspetseksport; and representatives of Rosoboroneksport, a decision was made to open ten maintenance and weapons repair centers for Russian equipment, as Moscow conceded to technology transfers. The first center to open will be devoted to modernizing planes, while future centers will be specialized in tanks, armored vehicles, and artillery. In 2016, KE and the Russian company Defense Systems signed some JSC joint projects lasting until 2020, the main aim of which is to develop after-sales support for Russian-made helicopters.<sup>85</sup>

In late 2011, KE and Uralvagonzavod came to an agreement to establish a service center to maintain heavy civil and military equipment.<sup>86</sup> In 2016, KazEngineering and Uralvagonzavod signed an agreement to modernize several dozens of T-72 tanks belonging to the Kazakhstani army.<sup>87</sup> At the same time, Kazakhstani companies are supplying large amounts of component and spare parts to Russian companies, including fifty articles (small component parts, mainly machinery) to Russian aeronautical factories.<sup>88</sup>

### **Former members of the socialist bloc**

Former Eastern bloc allies that still have armament industries on their soil – chiefly Ukraine and Belarus, but also the Czech Republic and Slovakia – are also partners of choice for Astana.

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<sup>82</sup> “Kazakhstan predlozhl OAO ‘Vertolety Rossii’ otkryt’ SP,” May 4, 2012, <http://oko-planet.su/finances/financesnews/115400-kazakhstan-predlozhl-oao-vertolety-rossii-otkryt-sp.html>

<sup>83</sup> E. Idrisov, “Kazakhstan inzhiniring’ i ‘Vertolëty Rossii’ podpishut dorozhnuu kartu po realizatsii sovместnykh proektov,” June 1, 2016, [http://bnews.kz/ru/news/ekonomika/kazakhstan\\_inzhiniring\\_i\\_vertoleti\\_rossii\\_podpishut\\_dorozhnuu\\_kartu\\_po\\_realizatsii\\_sovместnih\\_proektov\\_\\_eidrisov-2016\\_06\\_01-1274192](http://bnews.kz/ru/news/ekonomika/kazakhstan_inzhiniring_i_vertoleti_rossii_podpishut_dorozhnuu_kartu_po_realizatsii_sovместnih_proektov__eidrisov-2016_06_01-1274192).

<sup>84</sup> However, their implementation was greatly delayed by the crisis (“Naibol’chii interes – k sistemam PVO”).

<sup>85</sup> “KADEX-2016: JSC Kazakhstan Engineering Signed Deals Worth KZT 45 bln,” *Kazinform*, June 5, 2016, [http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos\\_a2911067](http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos_a2911067).

<sup>86</sup> “Kazakh, Russian Firms Discuss JV for Armored Vehicle Production,” *Jane’s Defence Industry*, September 11, 2012.

<sup>87</sup> “Kazakhstan inzhiniring i ‘Uralvagonzavod’ planiruiut sovместno modernizirovat’ tanki dlja RK,” *Tatel.kz*, June 4, 2016, [http://ratel.kz/kaz/kazakhstan\\_inzhiniring\\_i\\_uralvagonzavod\\_planirujut\\_sovместno\\_modernizirovat\\_t\\_anki\\_dlja\\_rk](http://ratel.kz/kaz/kazakhstan_inzhiniring_i_uralvagonzavod_planirujut_sovместno_modernizirovat_t_anki_dlja_rk).

<sup>88</sup> “OPK Kazakhstana orientiruetsia na Rossiiu,” *Voенno-promyshlennyi kur’er*, no. 22 (338), June 11, 2010.

This enables Kazakhstan to avoid allowing Russia to have a stranglehold over its military-industrial complex while offering materiel that is compatible – insofar as it is inherited from the Soviet regime – with what it already has.

Kazakh–Ukrainian cooperation centers on the joint production of munitions and the overhauling of armored vehicles.<sup>89</sup> In 2012, KE signed a treaty with Ukrspetseksport for the joint production of the BTR-4.<sup>90</sup> In October 2015, the two countries signed contracts stipulating that Kazakhstan will modernize Ukrainian military transport planes and, in cooperation with Ukraine, develop new drones.<sup>91</sup> Lastly, in 2016, Ukraine’s Motor Sich and LLP Kazakhstan Aviation Industry concluded a deal for the transfer of technologies for modernizing MI-2 and MI-8 helicopters.<sup>92</sup>

The establishment of the Customs Union and subsequently the Eurasian Economic Union (EEU) linking Belarus, Kazakhstan, and Russia has had the advantage of facilitating Kazakh–Belarusian trade, which has grown rapidly, particularly in the military sector. KE cooperates, for example, with Beltecheksport, Midivisana, and Peleng. Minsk is a prominent actor in the domain of automated control systems, in particular anti-aircraft missiles. KE thus collaborates with AGAT Control Systems (A-CS), which manages a Geoinformation Control Systems Holding and produces radar surveillance systems and computerized tools for air control defense.<sup>93</sup> In 2011, Kazakhstan signed a contract with Belarus for the upkeep and modernization of its Mig29.<sup>94</sup> In April 2016, Kazakhstan launched its new patrol vessels, called the Sarbaz, equipped with a Belarusian turret, and destined for the National Security Committee’s Border Service.<sup>95</sup> Astana also signed a contract with Belarusian Aircraft Repair Plant 558 for the overhaul and modernization of SU-25s.

Among the Czech firms, Tatra is positioning itself in the Kazakhstani market with the aim of providing alternatives to the Russian Kamaz. Other East European countries, including Slovakia and Serbia, are interested in selling the small weapons and body armor they produce to Kazakhstan (these items are currently being studied by Kazakhstani specialists). Lastly, in 2012, Kazspetseksport signed an agreement with the Bulgarian firm Arsenal AD, a large producer of military equipment for Eastern Europe.<sup>96</sup>

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<sup>89</sup> Interview with Irina Chernykh, Almaty, December 2012; Dunai, “Interview: Adylbek Dzhaksybekov, Defence Minister of Kazakhstan.”

<sup>90</sup> “Kazakhstan Engineering Signs \$1.8 Billion Worth of Contracts at KADEX-2012.”

<sup>91</sup> “Ukraine and Kazakhstan Improve Cooperation in the Field of Military Aviation,” *Eurasianews*, October 16, 2015, <http://eurasianews.de/en/ukraine-and-kazakhstan-improve-cooperation-in-the-field-of-military-aviation/>.

<sup>92</sup> “KADEX-2016: JSC Kazakhstan Engineering Signed Deals Worth KZT 45 bln,” *Kazinform*, June 5, 2016, [http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos\\_a2911067](http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos_a2911067).

<sup>93</sup> “Kazakhstan Engineering Broadens Belarus Teamings,” *Jane’s Defence Industry*, May 18, 2012.

<sup>94</sup> Zhulduz Baizakova, “Kazakhstan’s Military-Industrial Complex: ‘Its Own’ or ‘Someone Else’s,’” Foreign Military Studies Office (FMSO) at Fort Leavenworth, Kansas.

<sup>95</sup> Derek Bisaccio, “Kazakhstan Launches New Patrol Vessel Equipped with Belarusian Turret,” May 11, 2016, <http://www.conflict-news.com/articles/kazakhstan-vessel-belarusian-turret>.

<sup>96</sup> Shatskikh, “Myslit’ i deistvovat’ po-novomu.”

### ***Western and Asian partners***

The Russian military industry is low-performing in most high-tech sectors. Accordingly, in these sectors Kazakhstan has sought new partners from outside the former socialist bloc, turning to NATO member countries – European Union countries, Turkey, and the United States – as well as to Israel and South Korea. The Kazakhstani authorities do not hide their final goal: all partnerships with foreign countries must involve technology transfers and be organized on a parity basis.<sup>97</sup>

**Europe.** Partnerships with European firms picked up in 2010 and contributed to the explosion of EU–Kazakhstan trade. Astana is especially interested in the aeronautics sector, in which Russian products are not cutting-edge.

In 2010, Kazakhstan signed with Eurocopter an agreement for the acquisition of 45 EC-145 helicopters, intended for the ministries of Defense and Emergency Situations. A Eurocopter–KazEngineering joint-venture was set up with an annual production capacity of 12 machines.<sup>98</sup> The factory, located in the airport area of Astana, is equipped with a machinery services workshop, which repairs electronic equipment, engines, and hydraulic equipment. Its main activities include the assembly and sales of – and technical assistance with – EC-145 helicopters, as well as personnel training. The first six helicopters delivered at the end of 2011 were the very first ones to be assembled in Kazakhstan.<sup>99</sup> This joint venture is the only factory in the entire CIS able to assemble and maintain EC-145s, and able to produce individual components for helicopters.<sup>100</sup> The EC-145s sold by the joint venture are the same quality as those imported from Europe, but assembling them on Kazakhstan's territory affords tax exemptions. One of Eurocopter's aims is to enter the Russian market via Kazakhstan thanks to the latter's membership of the EEU. The negotiation of 45 helicopters was nonetheless tarnished by a corruption scandal: EADS (European Aeronautic Defence and Space Company –Airbus Group since 2014) is under prosecution in France, where it stands accused of having been ready, in 2010, to transfer a secret commission of 12 million euros intended for the Kazakhstani prime minister in order to facilitate the sales of machines.

The partnership with EADS does not stop there, however. In 2012, Kazakhstan also ordered 20 multifunction EC-725 helicopters that are to be built in the Astana factory.<sup>101</sup> EADS received solid orders for two C-295 airbus military transport planes as part of a memorandum of understanding over the purchase of eight planes of this class.<sup>102</sup> The first two were delivered to Kazakhstan in January 2013, while the remaining six are due for delivery at the end of 2018.<sup>103</sup> According to this contract, EADS will also supervise airplane maintenance and will transfer the

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<sup>97</sup> “OPK Kazakhstana orientiruetsia na Rossiuu.”

<sup>98</sup> “Kazakh Helicopter Manufacturer Entering Mongolia,” *Kazakhstan Newswire*, September 11, 2012.

<sup>99</sup> “Kazakhstan to Start Manufacturing Eurocopter-145 Helicopters in August,” *Interfax: Central Asia General Newswire*, June 27, 2012.

<sup>100</sup> “KADEX 2012 Is Being Held in Astana from May 3 to 6,” *Trend News Agency*, May 30, 2012.

<sup>101</sup> “The Kazakhstan Government to Acquire 20 Multi-Role Eurocopter EC725 Helicopters,” *ENP Newswire*, May 11, 2012.

<sup>102</sup> “Eurocopter's Kazakhstan JV Receives First EC145 Kits,” *Aviation Week*, September 27, 2012.

<sup>103</sup> Interview with Georgii Dubovtsev, Astana, December 2012; “Airbus Signs Contract with Kazakhstan for Two C295 Military Aircraft,” *Interfax: Kazakhstan General Newswire*, February 29, 2012.

technological know-how in this domain to Kazakhstan, enabling the Ministry of Defense to be able to manage this service by itself in the long run.

The Spanish company Indra Sistemas CA has also entered the Kazakhstani market. The Indra–Kazakhstan Engineering joint-venture created in June 2011 by KE (49 percent of the shares) and Indra (51 percent) produces, and looks after technical assistance for, radio-electronic systems intended for the defense sector. Through this joint venture, the Kazakhstani authorities aim to secure the country’s maritime borders by developing a coastal observation system able to ensure continuous monitoring of Kazakhstan's territorial waters. In the first instance, the joint venture will produce and install a mobile observation and communications station; communications systems on mobile chassis; coastal observation stations; and hydroacoustic submarine observation systems. In the medium term, the joint venture is to produce RLS Lanza and Lanza-MMR, REB and CICADA-R systems, as well as communications and observations stations for the Caspian sector, and to train local specialists.<sup>104</sup>

In 2009, Samruk-Kazyna and Thalès created a joint-venture specialized in the production of third- and fourth-generation VHF and UHF radio systems.<sup>105</sup> A joint production site was established in Almaty. In 2012, a KE delegation visited several European countries and instigated discussions with German firms Abeking & Rasmussen and Rheinmetall Defense Electronics. An agreement was concluded in May 2015 to set up a joint-venture between Rheinmetall and Kazakhstan Engineering for the production of defense equipment for the Kazakhstani army.<sup>106</sup> Kazakhstan signed a memorandum of cooperation with the Polish company Bumar to produce armored vehicles and personal protection vehicles.<sup>107</sup> According to some sources, the two countries are planning to produce Rosomaks, the Polish version of the Patria modular armored vehicle.<sup>108</sup> Lastly, Thalès has signed a contract for the production of twenty GM-400 radars for the Kazakhstani airforce, radars to be built under the auspices of a joint venture Granit Thales Electronics, established in 2012. The first radar was delivered in 2013.<sup>109</sup>

**The United States.** The United States is not very active on the Kazakhstani market, mainly because Astana does not want to arouse Russian suspicion, but also because American companies are hesitant about getting involved in a market seen as unreliable and so have ceded ground to European companies. The United States has provided targeted assistance for, and had relative success in, establishing a Kazakhstani navy in the Caspian Sea. Today, it is aiming to

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<sup>104</sup> “Kazakhstan Engineering Signs \$1.8 Billion Worth of Contracts at KADEX-2012.”

<sup>105</sup> “Thales inaugure son usine kazakhe,” *Boursier.com*, September 15, 2011, <http://www.boursier.com/actions/actualites/news/thales-inaugure-son-usine-kazakhe-450317.html>.

<sup>106</sup> “Rheinmetall Eastern Markets GmbH to Form Joint Venture with Joint Stock Company Kazakhstan Engineering National Company,” *Bloomberg*, May 21, 2015, <http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=29603011>

<sup>107</sup> “Kazakh Defense Enterprise Discusses Prospects of Cooperation with Germany and Poland,” *Trend News Agency*, October 19, 2012.

<sup>108</sup> “Polish, Kazakh Firms Establish JV for Armoured Vehicles, Individual Protective Equipment,” *Jane’s Defence Industry*, September 19, 2012.

<sup>109</sup> “Les radars Ground Master 400 de ThalesRaytheonSystems choisis pour renforcer les capacités de défense aérienne du Kazakhstan,” *ThalesRaytheonSystems*, May 23, 2014, <http://www.thalesraytheon.com/fr/presse-media/communiqués-de-presse/detail/article/les-radars-ground-master-400-d.html>.

diversify its field of action. Kazakhstan, for its part, has shown interest in purchasing six C-130J Hercules tactical transport planes built by Lockheed Martin, but the sale has yet to be cemented,<sup>110</sup> and many pundits have questioned the wisdom of buying such a dated model.<sup>111</sup> The country has nonetheless purchased four Bell UH-1H-II "Huey II" utility helicopters: the fourth one was delivered in January 2017.<sup>112</sup> Bilateral cooperation looked likely to intensify around 2012, as Washington declared its desire to get involved in the Central Asian security scene, particularly after its withdrawal from Afghanistan, but this declaration has not given rise to any notable projects.

**Turkey.** Turkish Aerospace Industries, Aselsan, and Yuksel Savunma Sistemleri have all signed memorandums of understanding with Kazakhstani partners. Turkey is a priority partner for Kazakhstan since, apart from trade links, Ankara can trade on its status as a NATO member country able to sell equipment compatible with NATO standards. Aselsan has become the main Turkish partner for Kazakhstan. In recent years, Astana has developed genuine cooperation with Turkey, leading, in 2011, to a first joint venture with an estimated value of 30 million dollars. KE owns 50% of it, Aselsan, 49 %, and the Committee of Defense Industries of Turkey, 1%. The JV has started producing electronic optical equipment, in particular day and night vision instruments, thermic imagers for armored vehicles, sights, and it trains military personnel in how to use them.<sup>113</sup> KE and Aselsan plan to diversify their partnership by modernizing armored vehicles and helicopters, and by inaugurating the production of military radio-stations and communications systems, with a view to exporting them to CIS countries.<sup>114</sup> In 2012, an agreement was concluded with Otokar, a Turkish company that produces component parts for Cobra 4x4 armored vehicles, which are to be produced on Kazakhstan territory. KE will supply the site, Otokar the technology and the components necessary for production.<sup>115</sup> KE is also conducting negotiations with Turkish companies specialized in naval equipment, such as RMK Marin and Daersan. Lastly, in 2015, Kazakhstan Engineering negotiated an agreement with Turkish MRAP manufacturer BMC to set up an assembly line for BMC's EFE and 235-16 4x4 tactical transports; 380-26 P 6x6 tactical transport vehicles; and the mine-resistant, ambush-protected BMC 350<sup>116</sup> 16 Z Kirpi 4x4 and BMC 250-10 Z Vuran multipurpose armored vehicles.

**Israel.** Tel Aviv views Kazakhstan as an open market, and has thus instigated a lively rivalry with Russia. Military relations between Israel and Kazakhstan are focused on upgrades of

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<sup>110</sup> "Kazakhstan Mulls Buying Six U.S. C-130J Military Transport Aircraft," *Interfax Kazakhstan*, [http://www.interfax.kz/?lang=eng&int\\_id=10&news\\_id=3829](http://www.interfax.kz/?lang=eng&int_id=10&news_id=3829).

<sup>111</sup> Interview with Rustam Burnashev, Almaty, December 2012; "Airbus Signs Contract with Kazakhstan for Two C295 Military Aircraft."

<sup>112</sup> "Kazakh Defense Minister, US Ambassador Discuss Military Cooperation," *Sputnik*, January 31, 2017, <https://sputniknews.com/asia/201701311050186597-kazakhstan-us-military-cooperation/>

<sup>113</sup> "Turkey's Aselsan to Build Plant in Kazakhstan," *TR Defence*, April 18, 2011, <http://www.trdefence.com>.

<sup>114</sup> "Kazakhstan rasshiriaet voenno-tehnicheskoe sotrudnichestvo s Turtsiei," *Voennoe obozrenie*, October 22, 2012.

<sup>115</sup> Ibid.; "Turkish Otokar to Launch Production in Kazakhstan," *Defense News*, October 18, 2012.

<sup>116</sup> "Turkey to Launch Armoured Vehicle Production in Kazakhstan," *Pakistan Defence*, June 11, 2015, <http://defence.pk/threads/turkey-to-launch-armoured-vehicle-production-in-kazakhstan.380391/#ixzz4PW0JmwE4>.

Soviet-era equipment, purchases of advanced weaponry, and joint production of military equipment.<sup>117</sup>

In 2008, Astana reached an agreement with two Israeli companies, Soltam and Elbit, to develop new artillery systems with an integrated command-and-control system, which Kazakhstani companies are able to produce thanks to a technology transfer. Soltam is thus in charge of the mortar system Semser 122 and Aibat 120 mm,<sup>118</sup> while Taas (Israel Military Industries, IMI) helps produce Nayza, a version of its Lynx multifunctional rocket system, which is mounted on Kamaz and equipped with modular containers with 122 mm Grad rocket-launching systems and 220 mm Uragan-type missile systems. Astana's demands for technology transfers are thus systematic and real. In 2010, two contracts were signed, in particular for the production of WAVE 300 machine guns –Tolkyn – which are co-produced by the Kazakhstani firm ZKMK and a consortium of Israeli military industries. The company T&TT Ltd is also involved in security systems, while the RBtec company equips several Kazakhstani strategic and industrial sites with security systems. Israel Aerospace Industries (IAI) has also established itself on the Kazakhstani market. Under Israeli license, Kazakhstan is currently producing Aibat 120-mm self-propelled mortars, Naiza multiple rocket launch system (MLRS), and Semser 122-mm howitzers.<sup>119</sup> In January 2014, the two countries signed a security cooperation agreement that formalizes their military and defense industry ties. They agreed to cooperate on unmanned systems, command-and-control capabilities, and satellite communications.<sup>120</sup> Lastly, in 2016, Kazakhstan stated it was capable of producing drones based on Israeli technology (the Kazakh defense minister had previously purchased Skylark and Hermes drones). At the end of 2016, Kazakhstan negotiated with Elbit Systems about the assembly and maintenance of its drones in Kazakhstan; the Kazakhstani government hopes to be able to sign a contract in 2017.<sup>121</sup>

Relations between the two countries are nonetheless not without tensions. In April 2009, the KNB declared that the Ministry of Defense had in full awareness bought defective artillery and defense systems from Israeli armaments factories, provoking a scandal in the Kazakhstani political milieu and leading to the arrest of the deputy defense minister, Kajimurat Maermanov. The Israeli businessman representing the Israeli firms, Boris Sheinkman, was also arrested. Both men were sentenced to eleven years in prison, as was Edyl Jartynov, the commander of Kazakhstan's armed artillery troops. This episode took its toll on military cooperation between the countries: in the aftermath, the representatives of the two main defense companies cooperating with Kazakhstan, Elbit and Israel Aerospace Industries, proved reluctant to relaunch cooperation, though the Kazakhstani authorities eventually managed to convince them to do so.

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<sup>117</sup> John K. Daly, "Kazakhstan, Israel Deepen Military Ties," *Eurasia Daily Monitor* 11, no. 19 (January 30, 2014).

<sup>118</sup> Barabanov, "Pereorientatsiia Kazakhstanskogo OPK."

<sup>119</sup> John K. Daly, "Kazakhstan, Israel Deepen Military Ties," *Eurasia Daily Monitor* 11, no. 19 (January 30, 2014).

<sup>120</sup> Erik Blackwell, "Kazakhstan, Israel Strengthen Military Cooperation," *Astana Times*, January 22, 2014, <http://astanatimes.com/2014/01/kazakhstan-israel-strengthen-military-cooperation/>.

<sup>121</sup> "Kazakhstan Is Going to Produce Military UAV," September 21, 2016, <https://drone-expo.ru/en/article/kazahstan-gotovitsya-vipuskat-voennie-bpla-55905>.

**Asia.** Kazakhstan has also looked to Asian countries. Two joint-ventures have been established for the production of electronic and communications instruments: KazNur Tel with the Chinese corporation ZTE, and KazST Engineering Bastau with Singaporean company STE. Talks have been conducted with South Korea concerning cooperation in the naval military domain.<sup>122</sup> During Kadex 2012, KE signed a memorandum of understanding with Korean company STX Offshore & Shipbuilding Co. for the joint production of ships and specialized equipment for mining sites. The South Korean company Poongsan also signed a contract for munitions production.<sup>123</sup> Lastly, as part of its commitment to having diverse partners, Kazakhstan is seeking to develop its cooperation with the Indian military. In 2016, the S.M. Kirov Plant signed a memorandum of cooperation with Indian Elcom Innovations.<sup>124</sup>

## Conclusion and Prospects

Kazakhstan's political and economic ambitions are big: the country projects itself as a regional power in Central Asia, with a European standard of living and high international visibility on the Eurasian, Asian, and European stages. While many of its ambitions are legitimate and grounded in genuine prospects for economic development, the country's transformation into a military-industrial powerhouse is more tenuous. The armament market is constantly evolving and highly competitive. The Soviet heritage in itself is not an easy one to manage: Soviet military industries, especially in the peripheral republics, were not the highest performing. Although Kazakhstan is the most richly endowed Central Asian country in industrial defense infrastructures, its future in this sector is by no means guaranteed.

Some Kazakhstani ambitions appear unrealistic: the country cannot hope to be able to produce 80 percent of its industrial defense needs by the end of the decade, as President Nazarbayev has proclaimed it will,<sup>125</sup> since most of its needs in new technologies cannot be met locally. The country is today very dependent on imports, which represent between 60 and 70 percent of its needs in armaments and equipment.<sup>126</sup>

Even an elaborate system of joint ventures, such as the one the authorities are in the process of building, will not be enough: European countries, the United States, and Israel all have cutting-edge research and development sectors, which ensures they stay years in advance, and all can rely on a human and technological capital that Kazakhstan has so far been unable to match. In the short to medium terms, Astana has few prospects of being able to innovate in new

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<sup>122</sup> "Predstaviteli VS Kazakhstana i Iuzhnoi Korei obsudili sotrudnichestvo v voenno-morskoi sfere," *Kazinform*, November 9, 2015, [http://www.inform.kz/ru/predstaviteli-vs-kazahstana-i-yuzhnoy-korei-obsudili-sotrudnichestvo-v-voenno-morskoy-sfere-foto\\_a2837347](http://www.inform.kz/ru/predstaviteli-vs-kazahstana-i-yuzhnoy-korei-obsudili-sotrudnichestvo-v-voenno-morskoy-sfere-foto_a2837347)

<sup>123</sup> "Iuzhnokoreiskaia korporatsiia 'Poongan' budet proizvodit' boeprpasy dlia Kazakhstana," *CA-News.org*, May 28, 2010, <http://ca-news.org/news:391911/>

<sup>124</sup> "KADEX-2016: JSC Kazakhstan Engineering signed deals worth KZT 45 bln," *Kazinform*, June 5, 2016, [http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bl-photos\\_a2911067](http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bl-photos_a2911067)

<sup>125</sup> "VTS Rossii i Kazakhstana vyhodit na uroven' strategicheskogo partnerstva," *Novosti VPK*, June 3, 2016, [http://vpk.name/news/156660\\_vts\\_rossii\\_i\\_kazahstana\\_vyihodit\\_na\\_uroven\\_strategicheskogo\\_partnerstva.html](http://vpk.name/news/156660_vts_rossii_i_kazahstana_vyihodit_na_uroven_strategicheskogo_partnerstva.html)

<sup>126</sup> "Companies of the Military Industrial Complex of Kazakhstan Signed Several Agreements on Establishment of Joint Ventures for Production of Military Hardware and Armament,"

technologies such as nanotechnologies, biotechnologies, or cutting-edge computerization. The “Made in Kazakhstan” tag that the authorities are trying to promote is often misleading, since all the component parts are imported; at best, the assembly is carried out locally.<sup>127</sup>

Indeed, the country’s main problem is one not of *hardware* but of *software*. It certainly has the political will and the finances to modernize its aging infrastructure, set up new industries on its territory, and attract foreign investors. But it is slow to gauge its difficulties with respect to (1) the fight against corruption, which is crucial in the defense and security sectors, and which seems to have impeded several plans to reform the armed forces and the military-industrial complex;<sup>128</sup> and (2) its lack of human capital, especially in the domains of applied and industrial engineering (as a result of the emigration of the Russian-speaking minorities, the retirement of the former Soviet generations, and these professions’ lack of appeal for the young), which means that its defense industries are suffering a veritable “brain drain.”

But some Kazakhstani ambitions are more realistic. The country definitely has some niches in which it is competitive and can establish itself: basic artillery, munitions and powder; dual-use Kamaz vehicles and some armored vehicles; aviation in partnership with Western firms; and maintenance and repair of the regional automobile and aeronautical fleet. Kazakhstan Engineering’s exports have grown in the last several years, a sign of the success of its chosen strategy and of potential that could be exploited.<sup>129</sup> The total value of contracts signed by Kazakhstan Engineering on the occasion of the successive Kadex exhibitions (2012, 2014, and 2016) has risen to several billions of dollars.<sup>130</sup>

Four regional and sectoral niches are taking shape:

1. Kazakhstan can hope to become a supplier to its Central Asian neighbors in the aforementioned sectors, since its neighbors have far fewer industrial resources. However, for essentially political reasons, the other Central Asian countries are seeking to buy from partners from further afield. In the first half of the 2010s, Central Asia represented only 5 percent of the exports of the Kazakhstan's military-industrial complex.<sup>131</sup> This situation could change in the years to come with the change of generations in power. The country can also position itself as a financial and technological investor: Technoeksport Kazakhstan and Kyrgyzvooruzhenie have

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<sup>127</sup> Barabanov, “Pereorientatsiia Kazakhstanskogo OPK.”

<sup>128</sup> Dosym Satpaev, “Chto nam zhdat' ot ministerstva oboronnoi i aerokosmicheskoi promyshlennosti,” *Ratel.kz*, October 11, 2016, [http://ratel.kz/outlook/chto\\_nam\\_zhdat\\_ot\\_ministerstva\\_oboronnoj\\_i\\_aerokosmicheskoi\\_promyshlennosti](http://ratel.kz/outlook/chto_nam_zhdat_ot_ministerstva_oboronnoj_i_aerokosmicheskoi_promyshlennosti)

<sup>129</sup> “Companies of the Military Industrial Complex of Kazakhstan Signed Several Agreements on Establishment of Joint Ventures.”

<sup>130</sup> “Kazakhstan Engineering Signs \$1.8 Billion Worth of Contracts at KADEX-2012,” *Kazakhstan Newslines*, June 4, 2012; “KADEX-2016: JSC Kazakhstan Engineering Signed Deals Worth KZT 45 bln,” *Kazinform*, June 5, 2016, [http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos\\_a2911067](http://www.inform.kz/en/kadex-2016-jsc-kazakhstan-engineering-signed-deals-worth-kzt-45-bln-photos_a2911067).

<sup>131</sup> Interview with Rustam Burnashev, Astana, December 2012.

- created a joint-venture called Kyrgyztechnoeksport, located in Balykchy, in order to modernize the equipment and weaponry of the Kyrgyz armed forces.<sup>132</sup>
2. Kazakhstan can target a larger regional market that encompasses Mongolia, Afghanistan, Ukraine, and the Caucasus, as it offers products that, while not cutting-edge, are priced competitively. Eurocopter Kazakhstan Engineering has, for example, signed a memo with Ulanbaatar for the upkeep of EC-145 helicopters bought by Mongolia and for training crews.<sup>133</sup>
  3. Kazakhstan can become the “loyal deputy” of the Russian military-industrial complex by obtaining technology transfers and establishing joint ventures that reinforce its integration into Russian production, as per the Soviet regime, in which production was distributed across many different factories. To this day, a majority of Kazakhstan Engineering’s exports go to Russia.
  4. Kazakhstan can become an intermediary for European, Asian, and Russian companies that target the Central Asian market, as well as for India and China, in other domains, such as the aviation sector – and potentially the naval sector, too, provided it develops further. Kazakhstan already exports plane component parts to China and Vietnam, and ship components to India. In one of the largest contracts of the 2016 Kadex exhibition, JSC Semey Engineering agreed with MCM Pty Ltd that it would deliver conversion vehicles to Myanmar.<sup>134</sup>

Kazakhstan is banking on its median geographic position on the old continent, and on its successful multivectoral policy, to help the country position itself as an intermediary between the “north” and the “south,” the “west” and the “east,” in political and economic domains alike. It seeks to apply this same strategy to the defense industries sector, and probably has reasonable chances of success in certain niches. Another problem nonetheless awaits it, a problem of a geopolitical scope: its increasingly advanced integration into the Russian defense system has not only political but also industrial consequences, a tendency reinforced by the EEU. The country is indeed pushed to maintain a “post-Soviet” industrial specialization that is detrimental to the diversification of its economic potential and its interoperability with NATO. Partnerships with European companies like EADS are important, but they partly stem from an illusion: these partnerships concern cutting-edge projects with an essentially commercial aim, whereas the daily reality of the Kazakhstani defense industries rests upon aging infrastructures, a lack of competent personnel, and an intrinsic dependence on Moscow. This risk of marginalization from the global defense industries landscape is nonetheless attenuated by the transformation of the Russian military-industrial complex itself, which is in the process of modernizing and integrating into more international strategies that are liable to draw its Kazakhstani counterpart into them as well. The ambiguity of Kazakhstan's defense policy – giving priority to integration with Russia, but forging cooperation in Europe and in Asia – might one day oblige the country to make some tough choices.

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<sup>132</sup> “Kirgizsko-kazakhskoe predpriatie zaimetsia remontom bronetankovoi tekhniki Kirgizii,” *Regnum.ru*, April 15, 2011, <https://regnum.ru/news/1395182.html>

<sup>133</sup> “Kazakh helicopter manufacturer entering Mongolia,” *Kazakhstan Newslines*, September 11, 2012.

<sup>134</sup> “KADEX-2016: JSC Kazakhstan Engineering Signed Deals Worth KZT 45 bln.”

The authorities must also succeed in carrying the modernization strategies through to completion. They must, for example, discuss more openly the extreme concentration of defense industries under the control of Kazakhstan Engineering. If the centralization of exports and imports by Kazspetseksport makes sense in terms of commercial profitability and international visibility,<sup>135</sup> the industrial strategies of each company nevertheless ought probably to be given more autonomy. However, such autonomy would be predicated on more competent management and leadership structures, and on waging a real fight against corruption and mafia practices.

Kazakhstan is in the process of rethinking its definition of security and focusing on non-conventional challenges. This refocusing is pushing it to lend growing importance to new defense tools: a less overmanned but more professional army that is better equipped and better trained; deployment of satellite communication, precision weapons, and drones, as well as geostrategic and economic intelligence; the automation of information and decisions; and greater cooperation between the country's armed forces. The challenges are equally human and technological in nature. In this respect, a divergence exists between the modernization of Kazakhstan's armed forces – a modernization that is probably more a reform in modes of functioning than of industrial requirements – and the future of the local military-industrial complex, whose goals are essentially commercial.

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<sup>135</sup> Shatskikh, "Myslit' i deistvovat' po-novomu."