

Artificial Intelligence and Democratic Values

Kazakhstan

Overview and National AI Strategy

In recent years, Kazakhstan has taken an active interest in AI and new technologies to reform the country's economy and extend internal security and policing.⁵⁶⁸ Kazakhstan has also expressed interest in Russia's AI development.⁵⁶⁹ Although the precise AI strategy has not yet been defined, the government has set out an AI and other smart technologies agenda. This includes the cultivation and creation of new industries with the use of digital technologies, and productivity growth through the widespread introduction of automation, robotics, AI, and the exchange of big data.⁵⁷⁰ The state program "Digital Kazakhstan" describes the implementation of this agenda through the realization of the following projects in the AI sector:⁵⁷¹

- Creation of an international technopark of IT start-ups (Astana Hub)
- Creation of model factories based on Industry 4.0 technologies
- Development of open platforms (Open API), Big Data, and AI
- Development of telecommunications infrastructure, including broadband internet access
- Development of innovative financial technologies
- Implementation of Smart City components

The country has established several IT and research centers that are planned to be the flagships for the development of AI in Kazakhstan:

⁵⁶⁸ Trend News Agency, *Work is underway in Kazakhstan to introduce the concept of "Data-Driven Government"* (Dec. 4, 2020),

<https://www.trend.az/casia/kazakhstan/3345220.html>

⁵⁶⁹ Tass, *Kazakhstan interested in Russia's experience in AI development* (Dec. 4, 2020) ("President Kassym-Jomart Tokayev pointed out that digitalization of the Eurasian Economic Union (EAEU) should become a top priority for the Eurasian Economic Commission"), <https://tass.com/world/1231509>

⁵⁷⁰ The President of Kazakhstan Nursultan Nazarbayev's Address to the Nation of Kazakhstan. (Jan. 31, 2017), *Third Modernization of Kazakhstan: Global Competitiveness* http://www.akorda.kz/en/addresses/addresses_of_president/the-president-of-kazakhstan-nursultan-nazarbayevs-address-to-the-nation-of-kazakhstan-january-31-2017

⁵⁷¹ On approval of the State Program "Digital Kazakhstan" (Об утверждении Государственной программы "Цифровой Казахстан") <http://adilet.zan.kz/rus/docs/P1700000827>

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Nazarbayev University, Astana International Financial Centre, Astana International Technology Park of IT Startups Despite these aspirations, Kazakhstan has only scored 46.55 out of 100 in the Government AI Readiness Index, with the lowest score in the technology sector.⁵⁷² A dearth of qualified IT specialists⁵⁷³ and low R&D spending (2.70 out of 100)⁵⁷⁴ are two significant barriers to a dynamic and innovative technology sector. According to the prime minister Askar Mamin, Kazakhstan simply does not have financial resources for the development of its own AI technologies.⁵⁷⁵ The country is trying to address this problem with the help of foreign investors⁵⁷⁶ and international partners.⁵⁷⁷

It was announced in 2020 that World Bank will work with Nazarbayev University to create a National Cluster of Artificial Intelligence with its own laboratory, a data processing research center and a science park for the development of artificial intelligence.⁵⁷⁸ Among other plans was establishing active cooperation in developing common standards, rules, and policies in the field of data exchange and integration. In April of the same year, the Kazakh Ministry of Education and Science, along with the World Bank, launched the Fostering Productive Innovation Project (FPIP)⁵⁷⁹ to

⁵⁷² The Government AI Readiness Index 2020, Oxford Insights

<https://www.oxfordinsights.com/government-ai-readiness-index-2020>

⁵⁷³ В будущем «цифровом Казахстане» не хватает IT-специалистов The future, "digital Kazakhstan" lacks IT specialists, Radio Free Europe, <https://rus.azattyq.org/a/programma-cifrovoi-kazakhstan-deficit-it-specialistov/28625463.html>

⁵⁷⁴ Research and development expenditure (% of GDP) – Kazakhstan, The World Bank <https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?locations=KZ&view=map>

⁵⁷⁵ Готов ли Казахстан к технологической гонке? Is Kazakhstan ready for a technology race? https://forbes.kz/process/intellektualnaya_zadacha_1588745463/

⁵⁷⁶ Caspian Policy Center, *Kazakhstan — The Buckle in the Belt and Road Initiative Seeks Investment and Growth* (Jan. 31, 2020), <https://www.caspianpolicy.org/kazakhstan-the-buckle-in-the-belt-and-road-initiative-seeks-investment-and-growth/>

⁵⁷⁷ Kazakhstan seeks high-tech, agricultural cooperation with China, says Tokayev during Beijing Business Council meeting, <https://www.euractiv.com/section/central-asia/news/kazakhstan-seeks-high-tech-agricultural-cooperation-with-china-says-tokayev-during-beijing-business-council-meeting/>

⁵⁷⁸ EAEU prime ministers participate in Digital Almaty Forum

<https://primeminister.kz/en/news/premer-ministry-eaes-prinyali-uchastie-v-forume-digital-almaty1>

⁵⁷⁹ Kazakhstan: Fostering Productive Innovation Project

<https://projects.worldbank.org/en/projects-operations/project-detail/P150402>

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support and develop high-quality scientific research on, and the commercialization of new technologies.

AI Core Values

One of Kazakhstan's primary purposes of embracing AI is to spark foreign investment in the country to diversify the economy and reduce its economic dependence on natural resources.⁵⁸⁰ Social governance and welfare is another purpose of developing AI. 2017's AI agenda mentions the threat of terrorism growth and the prevention of religious extremism propaganda on the Internet and social networks.⁵⁸¹

Facial Recognition and Smart Cities

Facial recognition surveillance technology is becoming increasingly widespread in Kazakhstan. In October 2019, facial recognition technologies were first installed on buses.⁵⁸² Notably, President Tokayev had even paid a visit and discussed future cooperation with Hikvision,⁵⁸³ a Chinese state-owned surveillance company under U.S. sanctions⁵⁸⁴ that provided the hardware for Kazakhstan's newly established surveillance system. In the same year, the small city of Akkol was proclaimed the first complete "Smart City" in Kazakhstan. Akkol is digitally monitored by an AI-based facial recognition surveillance system, the functions of which include thermal imaging, searching for a car by number plates, recognizing missing persons, detecting the presence of weapons in schools, hospitals and other public

⁵⁸⁰ Kazakhstan's Ai Aspirations <https://www.rebellionresearch.com/blog/kazakhstan-s-ai-aspirations>

⁵⁸¹ The President of Kazakhstan Nursultan Nazarbayev's Address to the Nation of Kazakhstan *Third Modernization of Kazakhstan: Global Competitiveness* (Jan. 31, 2017), http://www.akorda.kz/en/addresses/addresses_of_president/the-president-of-kazakhstan-nursultan-nazarbayevs-address-to-the-nation-of-kazakhstan-january-31-2017

⁵⁸² The Four Big Issues Central Asia Faced In 2019 (And They're Not Going Away), Radio Free Europe, <https://www.rferl.org/a/central-asia-2019-challenges-security-china-facial-recognition/30356077.html>

⁵⁸³ «Распознает даже людей в масках». Нужны ли Казахстану камеры Hikvision? "It even recognizes people in masks." Does Kazakhstan need Hikvision cameras? Radio Free Europe, <https://rus.azattyq.org/a/kazakhstan-china-surveillance-camera/30210035.html>

⁵⁸⁴ <https://www.bloomberg.com/news/articles/2019-10-07/u-s-blacklists-eight-chinese-companies-including-hikvision-k1gvpq77>

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places.⁵⁸⁵ Similarly, over 4,000 cameras blanket Nur-Sultan, the capital.⁵⁸⁶ In 2020, the authorities announced that Kazakhstan would be spending \$23 million to install facial recognition software in its largest city, Almaty.⁵⁸⁷

While the government insists that the main goal is to maintain public safety, many activists are worried that this will ultimately create a totalitarian surveillance state,⁵⁸⁸ especially since the companies that are behind the surveillance system in Kazakhstan are under U.S. sanctions for unethical use of AI technology.

Medical AI

Since mid-March 2020, Kazakhstan's government has been fighting the novel coronavirus. The Kazakhstani Ministries of Health and Internal Affairs ultimately turned to AI technological solutions to confront the coronavirus outbreak. The range of technologies being reoriented to enforce quarantine and curfews include traffic cameras, facial recognition technologies, and smartphone apps.⁵⁸⁹ The ministry has required the 8,000 or so Kazakhstani citizens currently under quarantine to use the SmartAstana tracking app allowing officials to guarantee these individuals remain in isolation and monitored citizens through facial recognition video surveillance technology to find violators of the quarantine regime in Almaty. By the end of the country's two-month state of emergency on May 11, 2,424 people had been charged with violating quarantine in Almaty and 3,347 in Nur-Sultan.⁵⁹⁰ According to experts, the pandemic

⁵⁸⁵ Видеонаблюдение, безопасность и комфорт. Как живет самый умный город Казахстана - Smart Aqkol Video surveillance, security and comfort. How the smartest city of Kazakhstan lives - Smart Aqkol, Tengrinews, <https://tengrinews.kz/article/videonablyudenie-bezopasnost-komfort-jivet-samyiy-umnyiy-1353/>

⁵⁸⁶ Как работает проект "Сергек". Репортаж Informburo.kz How the Sergek project works. Informburo.kz report <https://informburo.kz/stati/kak-rabotaet-proekt-sergek-reportazh-informburokz.html>

⁵⁸⁷ На камеры с распознаванием лиц в Алма-Ате выделили \$23 млн (Alma-Ata allocated \$ 23 million for cameras with face recognition), (Feb. 8, 2019), <http://fergana.agency/news/105020/>

⁵⁸⁸ Kazakhstan embraces facial recognition, civil society recoils, Eurasianet, <https://eurasianet.org/kazakhstan-embraces-facial-recognition-civil-society-recoils>

⁵⁸⁹ Technology and Policing a Pandemic in Central Asia <https://thediplomat.com/2020/05/technology-and-policing-a-pandemic-in-central-asia/>

⁵⁹⁰ World Politics Review, *Police States Expand Under the Cover of COVID-19* (July 14, 2020), <https://www.worldpoliticsreview.com/articles/28910/across-central-asia-police-states-expand-under-the-cover-of-covid-19>

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exacerbated the existing arbitrary and uneven policing practices as surveillance is augmented by national and municipal authorities without public oversight.⁵⁹¹

AI Ethics

Kazakhstan has not yet adopted OECD AI Principles, nor did it define ethical norms and standards for AI. Nevertheless, the country's major AI research center, Institute of Smart Systems and Artificial Intelligence at Nazarbayev University,⁵⁹² states that it operates in accordance with the following ethical principles:

- Societal Well-being
- Human Centered Values
- Transparency
- Technical Resilience and Robustness
- Accountability

Data Protection

In 2019, the country experienced a wave of major data breaches from the databases of the CEC and the Prosecutor General's Office.⁵⁹³ Soon after that, the personal information of 11 million people were published online and could be accessed by anyone through a published database.⁵⁹⁴

These incidents led to the amendment of the existing data protection law, which was revised to mostly align with the GDPR.⁵⁹⁵ Amendments to the regulation of digital technologies and to the Personal Data Law entered

⁵⁹¹ The Diplomat, *Technology and Policing a Pandemic in Central Asia* (May 13, 2020), <https://thediplomat.com/2020/05/technology-and-policing-a-pandemic-in-central-asia/>

⁵⁹² Nazarbayev University, Institute of Smart Systems and Artificial Intelligence, <https://issai.nu.edu.kz/about/>

⁵⁹³ Catalin Cimpanu, *Extensive Hacking Operation Discovered in Kazakhstan*, ZDNet, (Nov. 23, 2019), <https://www.zdnet.com/article/extensive-hacking-operation-discovered-in-kazakhstan/>.

⁵⁹⁴ Злоумышленники выложили в сеть данных миллионов казахстанцев Attackers have posted data of millions of Kazakhstanis to the network <https://kursiv.kz/news/obschestvo/2019-07/zloumyshlenniki-vylozhili-v-set-dannye-millionov-kazakhstancev>

⁵⁹⁵ The Law of the Republic of Kazakhstan No. 94-V dated May 21, 2013 “On Personal Data and Their Protection” (hereinafter, the “Personal Data Law”).

into force on July 7, 2020.⁵⁹⁶ The new regulations establish a data protection agency, create rules for the collection and processing of personal data and introduce the concept of “personal data safety protection service.” The Personal Data Law includes a requirement that the content and amount of personal data collected strictly correspond to the specific, previously declared and legal purposes of their processing. Nevertheless, the GDPR requires “the appropriate data protection training to personnel having permanent or regular access to personal data” whereas Kazakhstan’s amendments do not require data protection training. Training is important because human error is one of the major causes of data breaches across the world.

Algorithmic Transparency

Although Kazakhstan is not directly subject to the GDPR, the Personal Data Law reflects modern concepts of transparency and data subject access. Kazakhstan is also eligible to ratify the Council of Europe Modernized Convention on Privacy.⁵⁹⁷

Human Rights

According to the Freedom House, Kazakhstan rates poorly for political rights and civil liberties. Freedom House reports “Parliamentary and presidential elections are neither free nor fair, and major parties exhibit continued political loyalty to the government. The authorities have consistently marginalized or imprisoned genuine opposition figures. The dominant media outlets are either in state hands or owned by government-friendly businessmen. Freedoms of speech and assembly remain restricted, and corruption is endemic.”⁵⁹⁸ On transparency, Freedom House states “The government and legislature offer little transparency on their decision-making processes, budgetary matters, and other operations. The media and civil society do not have a meaningful opportunity to provide independent commentary and input on pending laws and policies. A law on public access

⁵⁹⁶ Dentons, *Amendments on Personal Data Protection Issues in Kazakhstan* (July 14, 2020), <https://www.dentons.com/en/insights/articles/2020/july/14/amendments-on-personal-data-protection-issues-in-kazakhstan>

⁵⁹⁷ Council of Europe, Chart of signatures and ratifications of Treaty 108 (Status as of Nov. 11, 2019), https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/108/signatures?p_auth=UMypWMxn

⁵⁹⁸ Freedom House, *Freedom in the World 2020 – Kazakhstan* (2020), <https://freedomhouse.org/country/kazakhstan/freedom-world/2020>

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to government information was adopted in 2015, but it is poorly implemented in practice.”

Still, there are indications that political reform is underway in Kazakhstan. The abrupt resignation of the past President in 2019, who had held power for almost 30 years, gave way to an election and a new Presidency. Parliamentary elections are now scheduled for January 2021.⁵⁹⁹

Kazakhstan is eligible for admission to the Council of Europe. In recent years, Kazakhstan has increased cooperation with the Council of Europe. A previous agreement was limited to criminal justice. The Neighbourhood Co-operation Priorities for Kazakhstan 2019-2022 introduces new areas of co-operation, including the fight against economic crime, promoting a common legal space and human rights standards, and assistance in the electoral field. The document was adopted by the Committee of Ministers in April 2019. Kazakhstan participates in the Central Asia Rule of Law Programme, launched in 2020, which has the goal of “Improving the lives of citizens by reinforcing human rights, democracy and rule of law.”⁶⁰⁰

Evaluation

Kazakhstan has set an ambitious goal of embracing new technologies and boosting productivity. As Kazakhstan rushed into the digital future by quickly importing and implementing AI surveillance technologies, it failed to implement oversight legislation, responsible use of AI ethics standards and principles and allow broad public discussion of what constitutes public safety and privacy. While AI can provide security and prosperity, advanced surveillance technologies and deep troves of identifying data can pose a threat to citizens if oversight mechanisms and ethical standards are not properly established.

⁵⁹⁹ Georgi Gotev, *Kazakhstan to hold parliamentary elections in January* (Oct. 21, 2020), <https://www.euractiv.com/section/central-asia/news/kazakhstan-to-hold-parliamentary-elections-in-january/>

⁶⁰⁰ Council of Europe / European Union, *Central Asia Rule of Law Programme*, <https://pjp-eu.coe.int/en/web/central-asia>