

AI MO INNOVATION CONSULTANTS (SMC-PVT) LTD.

“A Boutique Digital Transformation Consultancy”



OVERVIEW OF BIG DATA AND CLOUD COMPUTING LAWS, REGULATIONS AND POLICIES IN CENTRAL ASIA

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OVERVIEW OF BIG DATA AND CLOUD COMPUTING LAWS, REGULATIONS AND POLICIES IN CENTRAL ASIA

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‘Cloud’ is a way of delivering computing resources as a utility service via the internet. Throughout the Central Asia, Clouds are being used to provide computing resources as a utility service through internet. “Cloud Computing” itself is emerging as an innovative area of technology and attracting substantial investments by government and private sector into infrastructure, platforms, and

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applications. Central Asia is demonstrating exponential growth in technological arena and there is a demand for cloud resources which is driven by such developments as the deployment on a vast scale of mobile apps and the rapid emergence of 'Big Data'. However, legal infrastructure is premature to facilitate these new technologies. This paper is an attempt to provide an overview of contemporary laws, regulations and policies related to Cloud Computing and Big Data in Central Asia. This paper also endorses the idea that all of technology laws related to Central Asia are the subject matter of Central Asia Tech Law.

CENTRAL ASIA TECH LAW

Central Asia Tech Law or CAT Law is a branch of jurisprudence which seeks to analyze and contextualize the growing impact of technology such as AI, 5G, Cloud Computing, Big Data, Medical Technologies, Privacy and Digitization on the national laws of the Central Asian countries, especially in relation to the technology ethics, regulations, and policy.

In 2019, Ammar Younas (a legal futurist, medical doctor and lawyer by training) coined the term “Central Asia Tech Law (CAT Law)” and started advocating the idea of a “Generalized AI Policy for Central Asia”. Central Asia Tech Law is also a Consulting and Research Center by “Ai Mo Innovation Consultants (SMC-Private) Limited.”⁵

The subject matter of “Central Asia Tech Law” includes Technology Law and related fields such as Internet Law, IT Law, Digital Law, LegalTech, FinTech in all five countries of the region – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

This branch of law strives to promote globalized legal mechanism to treat technology as per the demands of the region and in line with the international standardization.

⁵ Central Asia Tech Law (CAT Law), What is Central Asia Tech Law?, <https://centralasiatechlaw.com/catlaw>

The Central Asia Tech Law aims at reinforcing the legal principles and rule of law in the countries of Central Asia in accordance with applicable international standards of technology regulations and by correlating with existing laws without compromising the legal sovereignty of Central Asian Law.

Central Asia Tech Law has following goals:

- 1: Facilitating the creation of a common techno- legal space between Central Asian states and increasing the understanding of technology regulations and ethics.
- 2: Promoting Tech Law as a reputable field of Legal Sciences in Central Asia
- 3: Promote efficient digitization of state institutions and public administration services
- 4: Techno- Legal Capacity building of all the stakeholders.

BIG DATA AND CLOUD COMPUTING IN CENTRAL ASIA

All the Central Asian governments are very enthusiastic about their Digital Transformation and a large number of emerging technologies has recently been integrated in the digital infrastructure of these countries. Big Data and Cloud Computing technologies have been adopted due to different factors. Some of the important factors are:

Growing competition among Central Asian Republics,

Opening of new Data Centers in the region,

Struggle for the better bandwidth connectivity

And Influence of Visualization Technologies being used by Financial Institutions.

Some of the contemporary developments in the domains of Cloud Computing and Big Data in each of the Central Asian country are give below.

KAZAKHSTAN

There are many local and international companies who are providing commercial cloud computing services in Kazakhstan. Even Kazakh government has been inviting international companies to provide technological support.⁶

In July 2018, Zerde National Infocommunication Holding, which is the largest Kazakhstani state company was created for the development of modern infocommunication technologies in accordance with a resolution of the Republic of Kazakhstan. It is mentioned on the website of the Zerde, “The Ministry of information and communications of the Republic of Kazakhstan plans to introduce a new technology of storage and processing of large volumes of information. It was also said that the agency has set itself an ambitious task to introduce the latest Big Data technology.”⁷

Kazakhstan law does not introduce/define the term and concept of cloud computing (technologies). Neither Kazakhstan law provides scenario how different types of data (electronic information resources) can be collected, used, stored and transferred in the context of use of cloud services and technologies. At the same time, there are not prohibitions or restrictions under Kazakhstan law to use cloud

⁶ Consultancy.uk, Kazakhstan turns to Google and McKinsey to mine big data, <https://www.consultancy.uk/news/12085/kazakhstan-turns-to-google-and-mckinsey-to-mine-big-data>

⁷ Zerde, Big data, international experience and development trends in Kazakhstan, <https://zerde.gov.kz/en/activity/analysis-and-development-of-ict/methodology/publication/2226/>

services and technologies either in public or private sector. This area of information technologies lacks legal regulation.⁸

Kazakhstan Law “On Informatization” #418-V, dated 24 November 2015 (IT Law) is the main legislation governing the information technologies in Kazakhstan. The IT Law regulates public relations in the field of informatization arising on the territory of Kazakhstan among state bodies, individuals and legal entities in the process of the creation, development and operation of information technologies, and aimed at state support for the development of the information and communication technologies industry. The information technologies sector is also governed by various laws, rules and regulations that were introduced by various state authorities to regulate the broad sphere of use of the information technologies.⁹

Kazakhstan adopted the State Program (Concept) “Informational Kazakhstan-2020” by the Order of the President of Kazakhstan dated 8 January 2013 which indicates the necessity for further development of information technologies in Kazakhstan, including cloud services. Further, the Government of Kazakhstan is currently elaborating the State Program “Digital Kazakhstan”. It can be anticipated that these initiatives will eventually result in the adoption of legislation regulating information technologies and concepts and technologies such as cloud services, 3D printing, e-commerce and mass implementation of online and digital services.¹⁰

⁸ ADM Valner, Information Technologies in Kazakhstan, <https://admvalner.com/4820/>

⁹ Ibid

¹⁰ Ibid

On April 25, 2019, International Kazakhstan Technology Summit 2019 — K-Tech was conducted in Almaty. This was a professional platform for exchange of experience in the field of IT-solutions and technologies. During the event, the head of the Kcell IoT, Ruslan Khamzin stated, “Global trends show that companies working with Big Data and IoT will have new opportunities for revenue growth in the coming years. This will happen largely due to evolution of entire ecosystem. Convenient platforms for device control will appear. Applications will be able to integrate some processes among themselves.”¹¹

¹¹ KCell, Is there a future for IoT and Big Data in Kazakhstan?, <https://www.kcell.kz/en/news/show/3467/2474>

KYRGYZSTAN

January 19th, 2015, Kyrgyzstan's Prime Minister Otorbaev and Vice Prime Minister Valeriy Dill met with IZP group president Luo Feng and his delegation in Bishkek. The both sides intensively discussed Silk Road Station construction scheme for Silk Road Economic Belt, and Prime Minister and Vice Prime Minister highly appreciated and affirmed the scheme and said that Kyrgyzstan government will provide necessary guarantee and full support and guidance to the plan. "Three centers" based on Big data and cloud computing technology will gradually form the trade industry ecosystem. IZP, as the pioneer in the field of Big data research in China and the world, will give necessary and sufficient technical support.

Kyrgyzstan leaders hoped that IZP will make full use of its advantages in resources and technology, accelerate construction of the project and expand the scale of cooperation. The both sides have reached a consensus to the cooperation content and direction.¹²

On 30 May 2017 President of Kyrgyz Republic announced the Information Security Concept during Taza Koom international conference in Bishkek. The goals stated for this concept included, "Creating an open digital society, the driving force of which is data industry (open public data, touch-sensitive technologies and telemetry, internet of things, cloud computing, big data)".¹³

¹² IZP, IZP stepped ahead on implementation of the Silk Road Economic Belt strategy, <http://izptec.com/en/index.php?m=content&c=index&a=lists&catid=2&id=1013&page=10>

¹³ UNIDIR, Cyber Security Policy, <https://cyberpolicyportal.org/en/state-pdf-export/eyJjb3VudHJ5X2dyb3VwX2lkIjoiNzlfifQ>

In August 2019, the Government of the Kyrgyz Republic approved the Cyber Security Strategy for 2019-2023 and the Action Plan for its implementation which also included the ambitions for digital transformation of the national economy.¹⁴

¹⁴ Kabar, Government approves Cyber Security Strategy for 2019-2023, <http://en.kabar.kg/news/government-approves-cyber-security-strategy-for-2019-2023/>

TAJIKISTAN

The promotion and use of AI, cloud computing, and big data in Tajikistan has been discussed by number of private companies at different forums.^{15, 16}

In May 2018, Tajikistan issued a joint statement along with other participants in the XIII meeting of presidents and chief justices of the supreme courts of the SCO member states. It was decided that the supreme courts of the SCO member states will exchange experience, including the establishment of a working expert group on introducing in-court activities for a number of information technologies such as big data, cloud computing, Internet of Things, and artificial intelligence in order to keep abreast of global digitalization trends and to raise the informatization level of court activities.¹⁷

¹⁵ Today News, Artificial intelligence and the latest developments of Dahua on guard of the Tajik law and order, <http://today.tj/obschestvo/29744-iskusstvennyy-intellekt-i-noveyshie-razrabotki-dahua-na-strazhe-tadzhikskogo-pravoporyadka.html>

¹⁶ Canon, What makes a great digital leader? <https://www.canon.tj/business-insights/what-makes-a-great-digital-leader/>

¹⁷ SCO, Joint Statement by participants in the XIII Meeting of Presidents and Chief Justices of the Supreme Courts of the SCO Member States, <http://eng.sectSCO.org/news/20180525/435019.html>

TURKMENISTAN

Besides AI, Turkmenistan has very well-developed set of laws which spread their tentacles on almost all the areas of new innovation technologies.¹⁸

A number of international tech giants such as Huawei and IBM are involved in constructing digital infrastructure of the Turkistan by utilizing Big Data and Cloud Computing technologies.¹⁹²⁰ Whereas different state bodies and educational institutes regularly organize conferences and seminars for promoting new innovation technologies including Big Data and Cloud Computing.²¹

In 2019, Orazmukhammet Ashirov, deputy head of the department for strategic and sustainable development of the ministry of finance and economy of Turkmenistan gave an interview to the newspaper, “Neutral Turkmenistan” in which he elaborated the Turkmen concept of Smart Cities. He said, “Smart city” is an innovative management concept that involves the active use of new generation information technologies, such as the Internet of Things, cloud computing and

¹⁸ State Science and Technology Policy, Laws and Regulations, <http://www.science.gov.tm/policy/laws/>

¹⁹ Huawei, Huawei Wins Fifth Turkmenistan Contract, https://e.huawei.com/ca/publications/global/ict_insights/201512291113/Success/201512301601

²⁰ IBM, Turkmenistan, <https://www.ibm.com/planetwide/tm/>

²¹ Turkmenportal, A scientific forum dedicated to the upcoming Day of Science was held at the Center of Public Organizations of Turkmenistan, <https://turkmenportal.com/blog/19602/v-centre-obshchestvennyh-organizacii-turkmenistana-sostoyalsya-nauchnyi-forum-posvyashchennyi-predstoyashchemu-dnyu-nauki>

technologies, big data and geographic information integration in order to simplify the planning, construction and management of the urban environment.”²²

²² State Science and Technology Policy, Newspaper "Neutral Turkmenistan", Digitalization And The "Smart City" Concept, <http://www.science.gov.tm/news/20190906news-2019-09-05-1/>

UZBEKISTAN

On 10 November 2016 Huawei Tech Investment Tashkent LLC Foreign Enterprise organized the International Uzbekistan Cloud Summit. It has brought together top specialists, analysts, and potential users to exchange information, experience and opinions about the most popular trend in ICT — Cloud Computing. The participants discussed how cloud technologies can help promote the efficiency, productivity and innovation in Uzbekistan. Cloud computing, which included telecommunications, private, and public cloud systems, are seen as revolutionary technologies capable of shaping business telecommunications, the internet, and most of industry markets.²³

On June 19, 2018 Tashkent hosted "Big Data and Cloud Computing" seminar. The seminar was organized by the ITU and the Ministry for the Development of Information Technologies and Communications of the Republic of Uzbekistan. ICT experts from Azerbaijan, Afghanistan, Bangladesh, Iran, Kazakhstan, China, Kyrgyzstan, Russia, national statistical services, telecommunications operators, telecom equipment manufacturers, representatives of scientific and design institutes, software developers, media and others participated in discussion. The two-day seminar was divided into 4 sessions:

- Big Data: definition and examples of application;
- Cloud computing and data analysis:

²³UzDaily, Huawei sets the trend for cloud technologies in Uzbekistan, <https://www.uzdaily.uz/en/post/37521>

- Technology, standardization and applications;
- Data protection and security: organizational and technical methods

Important topics such as -"Digital Transformation of Society - a Strategic Task for ICT"

-"Big Data - ITU Initiatives"

-"Cognitive Analytics for Obtaining Information About the User and Network, How to Increase Productivity and Reduce Costs in the Networks of the Future"

-"Big Data - Technology that Will Change the World"

-"The Role of Cloud Computing in Two-dimensional Signal Processing"

-"Cloud Computing, Big Data and IoT: Current State in Uzbekistan"

-"Government Role in Ensuring and Regulating Cybersecurity"

- "Perspective Development of Big Data and Cloud Computing in E-government Structure" were covered during the seminar.²⁴

In March 2019, the first school of BI analysts ASPEX BI SCHOOL had been opened at Inha University in Tashkent. Students can undergo three-month training to learn how to work with data sets of companies and create analytical reports.²⁵ In the same month, a framework of cooperation between the National Agency for Project Management (NAPU) and the Ministry of Public Administration and

²⁴ MITC, Tashkent Hosts "Big Data and Cloud Computing" Seminar, <https://mitc.uz/en/news/600>

²⁵ Spot, The first school of BI analysts opens in Uzbekistan, <https://www.spot.uz/ru/2019/03/04/bi-analys/>

Security of South Korea was developed. The aim was to combine information systems and resources of national importance into a single platform.

As part of the e-Government development, NAPU also planned to introduce the following disciplines into the educational system:

Big Data processing

Artificial Intelligence,

Blockchain.²⁶

On 5 June 2020, a resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 359 “On additional measures for the widespread introduction of modern information and communication technologies in tax administration” was adopted. The resolution defines the Strategy for the Development of Information and Communication Technologies of the State Tax Committee. It envisages such tasks as the modernization of the data center and telecommunication applications, the acquisition of servers and software, the transfer of the complex of information systems to a single platform, the improvement of the quality of electronic government services, the operational processing of big data. The implementation of Business Intelligence and Big Data technologies has been introduced as one of the main objectives of the strategy.²⁷

²⁶ Spot, Data processing center to be built in Uzbekistan based on Korean experience, <https://www.spot.uz/ru/2019/03/19/data-center/>

²⁷ UzDaily, The Strategy of the digital future of the tax system of Uzbekistan adopted, <https://www.uzdaily.uz/en/post/57589>

Huawei Tech Investment Tashkent LLC Foreign Enterprise organized the International Uzbekistan Cloud Summit 2016 on 10 November 2016²⁸ and recently, Huawei launched a cloud platform to help Uzbekistan fight COVID-19.²⁹ Some private local and international companies are also providing Big Data and Cloud Computing solutions in Uzbekistan.^{30 31 32 33}

²⁸ UzDaily, Huawei sets the trend for cloud technologies in Uzbekistan, <https://www.uzdaily.uz/en/post/37521>

²⁹ Huawei, Huawei launched a cloud platform to help Uzbekistan fight COVID-19, <https://e.huawei.com/za/news/ebg/2020/huawei-cloud-platform-help-uzbekistan>

³⁰ Softline, <http://amcham.uz/fe-soft-line-international-llc/>

³¹ SAS, https://www.sas.com/ru_ru/company-information/leadership.html

³² ProtekPark, <http://protekpark.uz/what-we-do/big-data/#whatwedo>

³³ Unicorn.Uz, <http://unicon.uz/>

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