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Digitalization and Emerging Technologies in Kazakhstan

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Digitalization Initiatives in Kazakhstan



1.Digital Kazakhstan Program

Digital transformation across various sectors, including education, healthcare, government services, and infrastructure.

2. E-Government Development

Streamline administrative processes, improve transparency, and enhance citizen engagement.

3. Tech Start-up Support

Funding initiatives, incubators, and accelerators. Programs like the Astana Hub and the AIFC Tech Hub provide support, mentorship, and networking opportunities to tech startups, fostering innovation and entrepreneurship in the country.

Examples: National Digital Identification System, Smart Cities Initiatives, Digital Healthcare Solutions



Emerging Technologies Landscape



Artificial Intelligence (AI), Blockchain, and Internet of Things (IoT) are revolutionizing industries across Kazakhstan and the region. These innovations are reshaping business processes, enhancing decision-making capabilities, and fueling economic growth and development.

- 1. Finance and Banking: Al-powered chatbots for customer service, blockchain-based digital currencies, and loT-enabled payment systems.
- 2. Healthcare: Al-driven diagnostics, blockchain-based medical records management, and loT-enabled remote patient monitoring.
- **3. Manufacturing:** Al-powered predictive maintenance, blockchain-enabled supply chain traceability, and IoT-driven smart factories.
- **4. Agriculture:** Al-based crop monitoring and optimization, blockchain-enabled supply chain transparency, and loT-enabled precision farming.



Examples: Smart Traffic Management, Blockchain in Supply Chain, loT in Energy Management

Unlocking Investment Potential in Kazakhstan's Tech Ecosystem



- 1.Investment Potential:
 - 1. Digitalization Initiatives
 - 2. Technology Startups
- 2. Supportive Government Policies:
 - 1. Regulatory Framework
 - 2. Funding Support (Digital Kazakhstan Program and the Astana Hub)
- 3. Testimonials and Success Stories:
 - 1. Existing Investors
 - 2. Startup Success Stories













Driving Innovation through Collaboration



AIFC plays a pivotal role in facilitating partnerships to promote knowledge exchange, technology transfer, and ecosystem development

- 1.Importance of Collaboration
- 2. Examples of Successful Partnerships:
 - Industry-Academia Collaboration (joint research projects, talent development programs, and technology transfer *initiatives*)
 - Public-Private Partnerships (PPPs) (joint ventures between government agencies and private companies to develop smart city projects, digital infrastructure, and public service delivery platforms)
 - International Collaboration (technology transfer, market access, and investment opportunities for stakeholders in Kazakhstan)

3. Opportunities for Stakeholders

- Engagement in collaborative initiatives
- Access funding, expertise, and networking opportunities
- Access to platforms, forums, and support services to facilitate matchmaking, partnership building, and collaboration management

International partners



















AIFC Tech Hub Vision





In accordance with the Constitutional Law "On the AIFC", the following task is defined:

"Development of insurance, banking services, Islamic finance, financial technologies, digital assets, e-commerce and innovative projects in the Republic of Kazakhstan;"













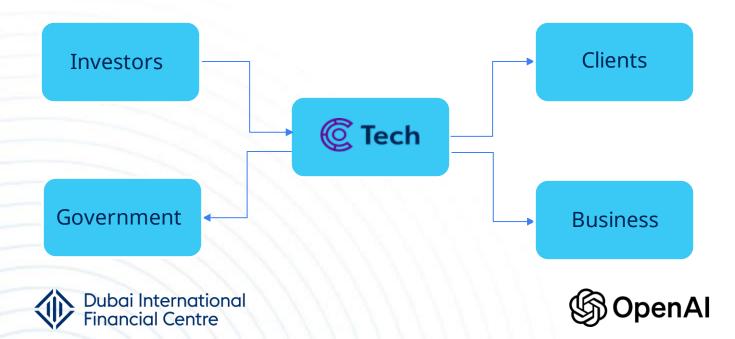




AIFC Initiatives in 2024

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- 1. Al based technologies implementation
- 2. Enhance SME Risk Scoring
- 3. Development of learning management system (Improving Financial Literacy)
- 4. Foster corporate innovations





Al in Finance



«It is extremely important to continue the digitalization of the economy and ensure the widespread use of artificial intelligence technologies.»

K. Tokayev

The first aspect is to improve the quality of customer service through personalized recommendations, quick decision–making and instant access to information

The second aspect of the implementation will be the optimization of internal business processes, including automation of routine operations and improvement of risk management.



Al in Finance (best practice)



Goldman Sachs

Automation of decision-making processes:

Goldman Sachs uses machine learning algorithms to analyze large amounts of data and make investment decisions.

WELLS FARGO

Development of personalized financial products:

Wells Fargo uses AI to analyze customer data and provide personalized investment and budget management recommendations.



Robotization of customer service processes:

JPMorgan Chase successfully uses bots to robotize responses to customer requests.



Fraud prevention and security:

Mastercard uses AI to analyze transactions and identify anomalies, which helps to combat fraud and ensure the security of financial transactions.

Risk Scoring for SMEs





Innovative risk-scoring methods, based on comprehensive databases, will be applied to SMEs. This approach ensures a more accurate assessment of their creditworthiness, reducing financial risks and stimulating the development of small businesses.

Implementing data-driven credit assessment to reduce lending risks, modeled on European fintech best practices.

Financial Literacy Through eLearning



«But new systemic measures are required to radically correct the situation. At the same time, it is extremely important to improve the financial literacy of the citizens themselves.»

Introducing innovative educational programs supported by technology. These programs will play a key role in enhancing financial literacy by providing accessible and interactive learning experiences, empowering individuals to make more informed financial decisions.

Incorporating methods from successful global eLearning platforms to boost financial education.





Corporate Innovations



Cultivating a thriving environment for corporate growth and innovation

Example AI in HR: ChatGPT in Recruiting and sourcing



- 1) Development and analysis of job vacancies using ChatGPT
- 2) Creation and optimization of a recruiter profile on social networks
- 3) Resume analysis
- 4) Sourcing
- 5) Communicating with candidates

- 6) Organization of the workflow and task management
- 7) Conducting interviews
- 8) Employer branding and HR marketing
- 9) Integrating ChatGPT with other recruiting tools
- 10) Measuring success and defining KPIs in recruiting







Thank you for your attention!



