IT Trends: challenges and opportunities

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Digital world: challenges and opportunities

ICT market spending $T

Bar chart values:
- 2016: 4.31
- 2017: 4.57
- 2018: 4.81
- 2019: 5.06
- 2020: 5.34
- 2021: 5.68
- 2022: 6.06

Technology Spending $M

	2018 Spending	2018 Growth	2019 Spending	2019 Growth
Hardware	$1,033,759	4%	$1,053,959	2%
Software	$512,537	7%	$550,567	7%
Services	$1,009,573	4%	$1,048,654	4%
Telecom	$1,431,128	1%	$1,446,164	1%
Traditional ICT	$3,986,997	3%	$4,099,343	3%
New Technologies	$825,978	16%	$961,763	16%
Total ICT	$4,812,974	5%	$5,061,106	5%

IT Strategy in Azerbaijan: The current situation and expected results

Strategic Roadmap for the Development of Telecommunications and Information Technology in the Republic of Azerbaijan

1. General Status

38
Actions identified in the strategic roadmap

39%
(15 actions)
Actions implemented

42%
(16 actions)
Partially implemented activities

13%
(5 actions)
Actions not implemented

6%
(2 actions)
Will be lunched by 2020

2. MTCHT responsible actions` status

12
Actions have to be implemented by MTCHT

33%
(4 actions)
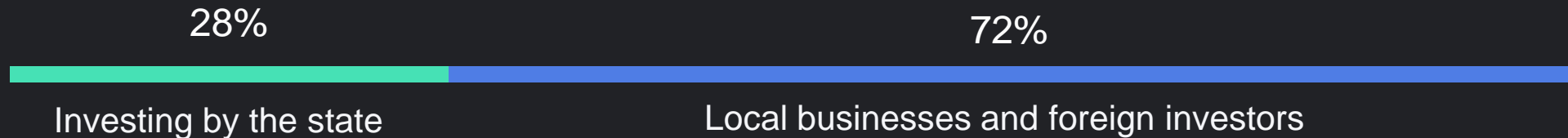Actions implemented

42%
(5 actions)
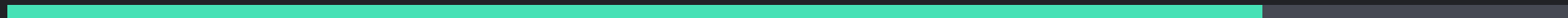Partially implemented activities

25%
(3 actions)
Actions not implemented

Indicators of IT industry in Azerbaijan)

Investment in the sector is approximately 2.5 billion dollars

28%   72%

Investing by the state   Local businesses and foreign investors
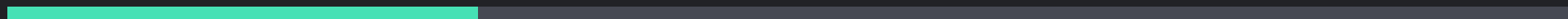
The share of the private sector on IT industry increased to 80% in recent years

According to the International Telecommunication Union, the number of active internet users in Azerbaijan is 80% (7.72 million).

The number of social media users in our country is 3 million.

More than 11 million mobile devices active in the country. About 1 million new mobile devices have been launched in the past year.

Indicators of IT industry in Azerbaijan)

Internet users are 80 (per 100 population, person)

Broadband Internet users are 75 (per 100 population, person)

Active internet users in Azerbaijan

| 59% | | 39% |

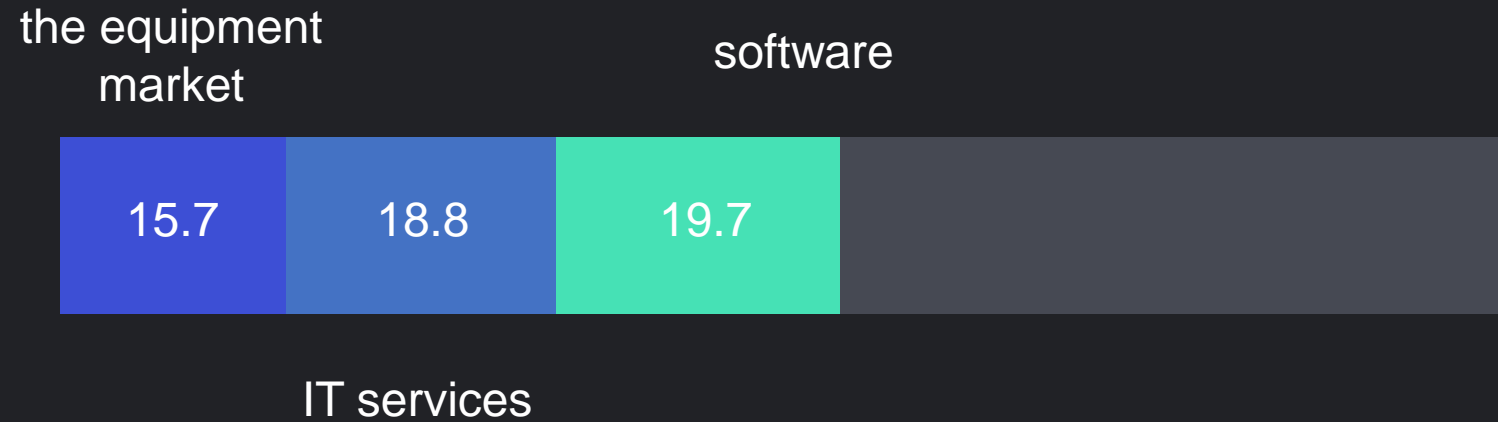📱 mobile phones   📱 tablet and other devices   💻 computers and laptops

Out of 868 public services, 431 services are electronic in the country.

In this regard, International Data Corporation (IDC) estimated the growth forecast for IT sector in Azerbaijan in 2018 at 16.3 percent,

the equipment market

software

| 15.7 | 18.8 | 19.7 | |

IT services

The volume of the market will be $903.8 million.

The Synergy of Public-Private Partnerships on IT sector

In Azerbaijan 82% of revenues come from the private sector on ICT industry.

Large ICT projects in the country are implemented by the local private sector:

01
E-government system

02
Certificate services center

03
State Housing Development Agency

04
State Register of Population

05
Automated Tax Information System

06
Electronic Notary Information System

07
CIS navigation system

08
Citizen's Electronic Health Card System

09
Unified automated system of customs service

10
Database of insured persons in personal accounting system

11
Discounted Housing System

The Synergy of Public-Private Partnerships on IT sector

The Open Data Portal was established in 2015

The number of data sets on the portal has reached 655

About 20 mobile applications till 2019 have been developed

Trends in IT sector

Cloud Computing

- Providing cloud solutions for G-Cloud project
- International airport Pioneers Cloud Computing

Internet of things

- IoT Lab opened with Microsoft for education and commercializing
- IoT applying experimental projects

Big data

- Established Big Data Research Centre by BP
- Processing of Big Data in the Data Center

Artificial Intelligence

- Native speech recognition
- Plant analyzing for agriculture
- Building Research Center for AI

Blockchain technology

- Lenovo and Nutanix have introduced their first "Personal Identification System" blockchain project in 2018
- State Customs Committee joined TradeLens supply chain platform based on the blockchain technology jointly worked out by Maersk and IBM companies. In 2019

Innovation Ecosystem

18
Incubation Centers

5
Acceleration Programs

THE MINISTRY OF TRANSPORT, COMMUNICATIONS AND HIGH TECHNOLOGIES OF THE REPUBLIC OF AZERBAIJAN

Ministry is working with other state bodies and private sector for supporting of development of innovation ecosystem. Ministry is responsible for e-signature; Data Center; Electronic Security Service, and as a result G-cloud project was approved.

Innovation Agency Azerbaijan

Main responsibilities of Innovation Agency is working for development of innovation ecosystem. Bringing all role players together, supporting start-ups with financial, technical and other tools, fostering high technologies.

E-government and e-signature

A legal framework was established by the Decree of the President "On the approval of State Program (E-Azerbaijan) for the development of communication and information technologies in Azerbaijan Republic in 2010-2012" and by the Decree on approval of "Some measures for provision of electronic services by government agencies"

E-government" portal and its e-government gateway are organized on the basis of "single window" principle where e-services are provided and data exchanged by government agencies, applied to organize contacts between citizens and public authorities in a more appropriate way.

After the enactment of the Law "on Electronic Signature and Electronic Document", the Ministry of Transport, Communications and High Technologies was instructed to implement the "electronic signature" as a central executive body.

Data Center

The first Data Center was opened in Azerbaijan and South Caucasus region in 2016. Data Center is TIER III level and certified with ISO 20000 and ISO 27001 standards. The key features of TIER III category are parallel operation of engineering subsystems, backup cooling system, backup power supply system and an alternative telecommunications infrastructure.

The permissible downtime of the Data Centre, which has a reliability level of 99.982%, is only 1.6 hours a year.

Electronic Security Service

Electronic Security Center is established under the Ministry of Transport, Communications and High Technologies in 2012.

Service is a state coordinating body which engages in coordinating the action of information infrastructure subjects, reporting about existing and potential risks at country level, educating public, private and other institutions in the field of cyber security and providing methodological assistance to them.

G-cloud

Overview of the Government Cloud in Azerbaijan is based on international experience. According to Decree of the President in 2019, "Government Cloud" Conception was approved.

The creation of Government cloud will help coordinate activities of government agencies to use information systems, build ICT infrastructure and standards, reduce the costs of creating and maintaining information systems in public administration, and creating a centralized, secure, sustainable infrastructure for government agencies.

Fostering of Innovation

Doing business in Azerbaijan

Innovation Road Map

STRENGHTS

- Strong Executive Branch of Government
- Strong Organizational Capabilities for National Scale Infrastructure Projects
- Ample Capital for Investment in Infrastructure

WEAKNESS

- Competition and Duplication Between Ministries
- Intellectual Property Creation and Protection
- Available Economies of Scale
- Capital Formation in Private Sector
- Language
- Entrenched Educational Establishment

BUILDING A KNOWLEDGE ECONOMY IN AZERBAIJAN

OPPORTUNITIES

- Instability in Price of Oil and Gas
- Depletion of Reserves
- Brain Drain
- Powerful Neighbors;
- Unstable Neighbors

THREATS

- Emergence of Global Industrial Networks
- XaaS Infrastructure and Supercomputing Platform
- Artificial Intelligence
- MOOCs

Thanks for your attention!