

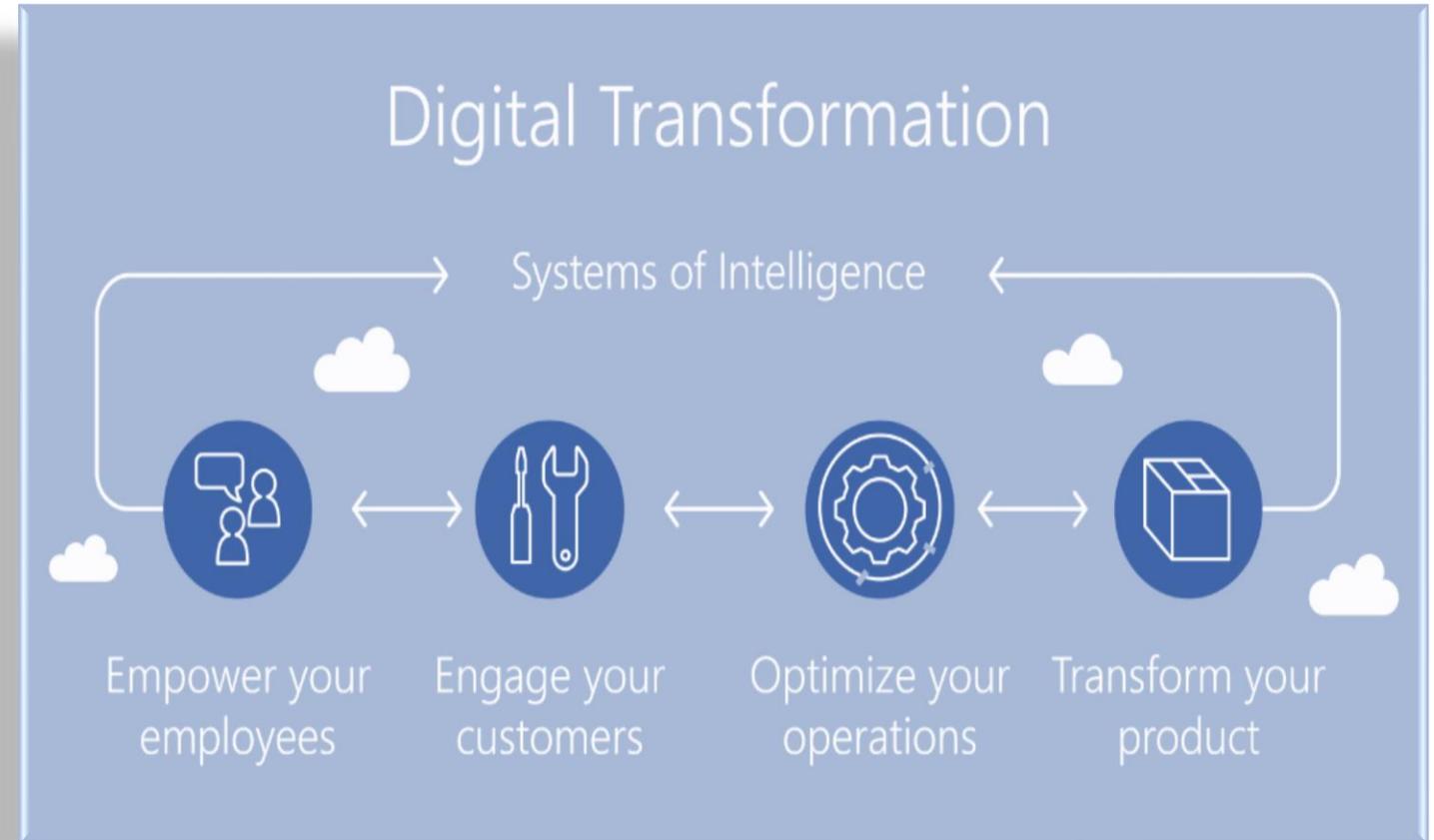
Digital Transformation & Financial Inclusion

Sameh Elshall Assistant Sub Governor - Central Bank of Egypt



Digital Transformation

Digital transformation is a holistic approach to change business and organizational activities, processes, competencies and models to manage and leverage the mix of digital technologies and its impact on customer, operation and the organization.



The four pillars of digital transformation

Digital transformation is the process of using **digital technologies** to create new — or modify existing — business processes, culture, and customer experiences to meet changing business and market requirements.

Today's Generations are more into digitalization

| |  B Baby boomer 1940–59 |  X Gen X 1960–79 |  Y Gen Y (millennial) 1980–94 |  Z Gen Z 1995–2010 |
|-------------|---|---|--|---|
| Context | <ul style="list-style-type: none"> • Postwar • Dictatorship and repression in Brazil | <ul style="list-style-type: none"> • Political transition • Capitalism and meritocracy dominate | <ul style="list-style-type: none"> • Globalization • Economic stability • Emergence of internet | <ul style="list-style-type: none"> • Mobility and multiple realities • Social networks • Digital natives |
| Behavior | <ul style="list-style-type: none"> • Idealism • Revolutionary • Collectivist | <ul style="list-style-type: none"> • Materialistic • Competitive • Individualistic | <ul style="list-style-type: none"> • Globalist • Questioning • Oriented to self | <ul style="list-style-type: none"> • Undefined ID • “Communaholic” • “Dialoguer” • Realistic |
| Consumption | <ul style="list-style-type: none"> • Ideology • Vinyl and movies | <ul style="list-style-type: none"> • Status • Brands and cars • Luxury articles | <ul style="list-style-type: none"> • Experience • Festivals and travel • Flagships | <ul style="list-style-type: none"> • Uniqueness • Unlimited • Ethical |

McKinsey&Company



Digital Transformation

“Transform or Die”

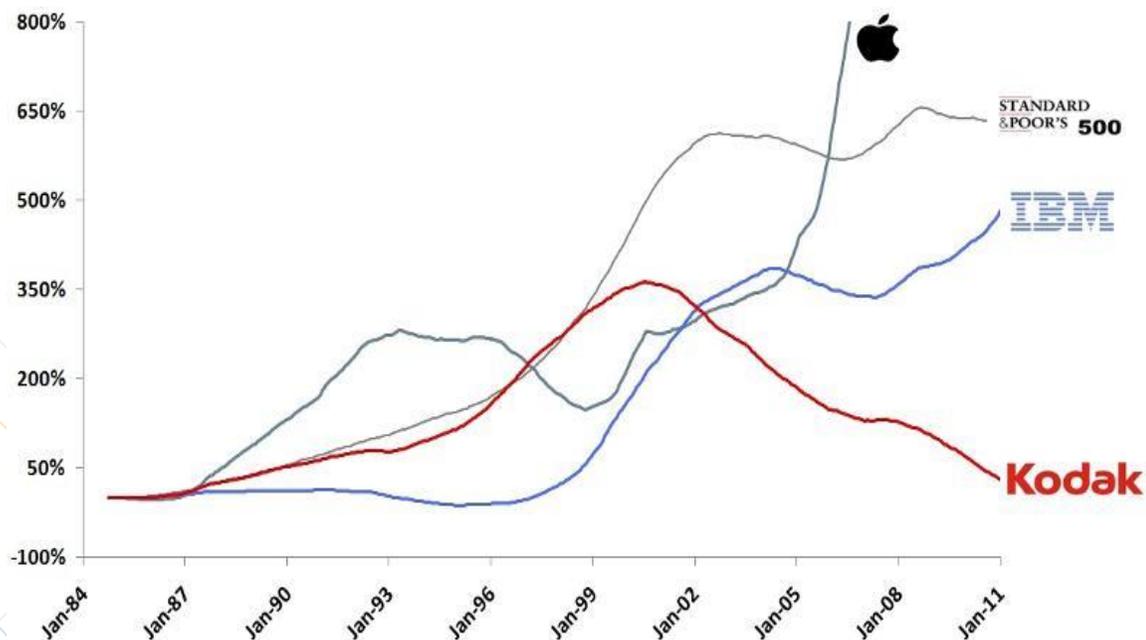
The

DIGITAL

DISRUPTION

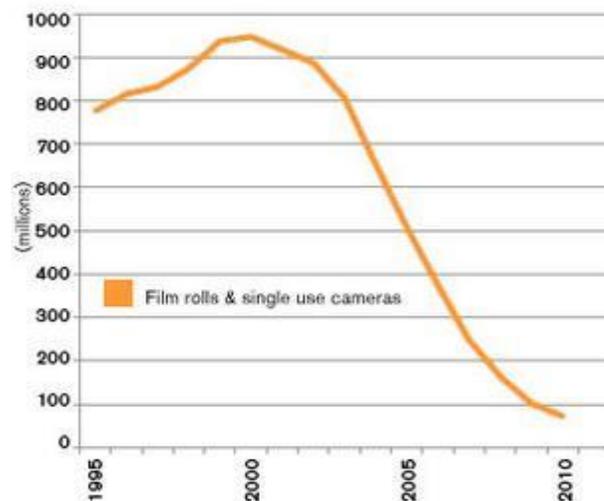
Kodak missed the boat on digital... Going bankrupt

Digital technology changed photography dramatically, and Kodak, a former heavyweight in the analog film business, got left behind.

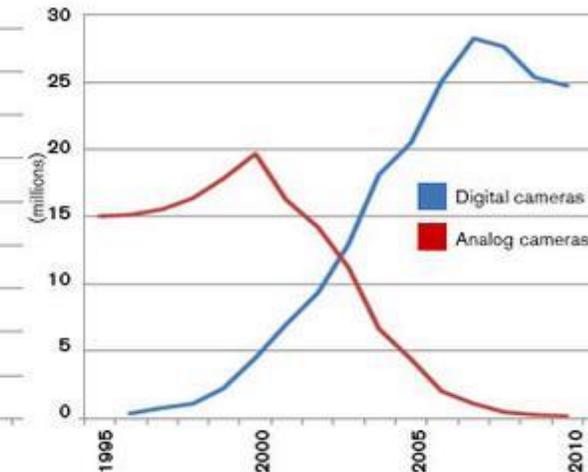


Decline of Film

Film rolls sold



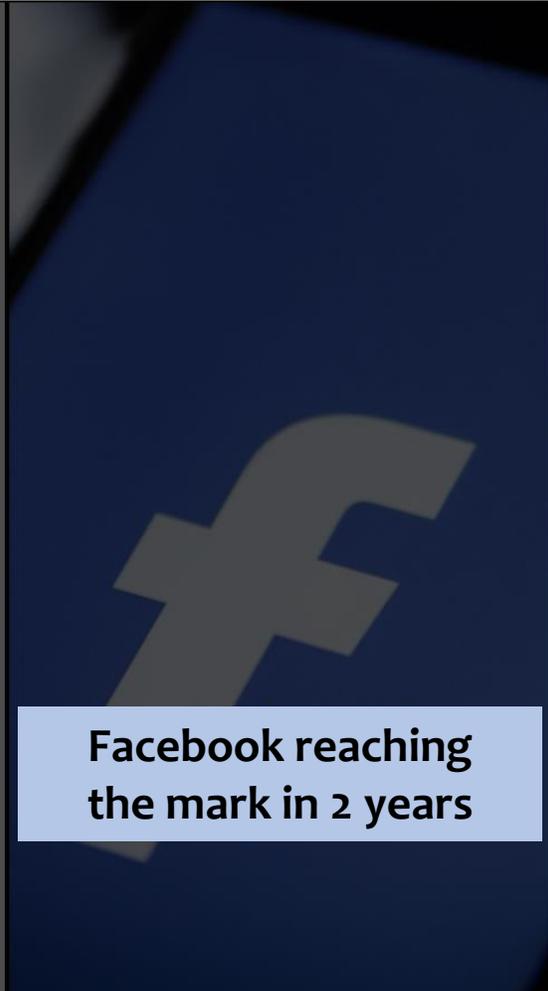
Camera sales



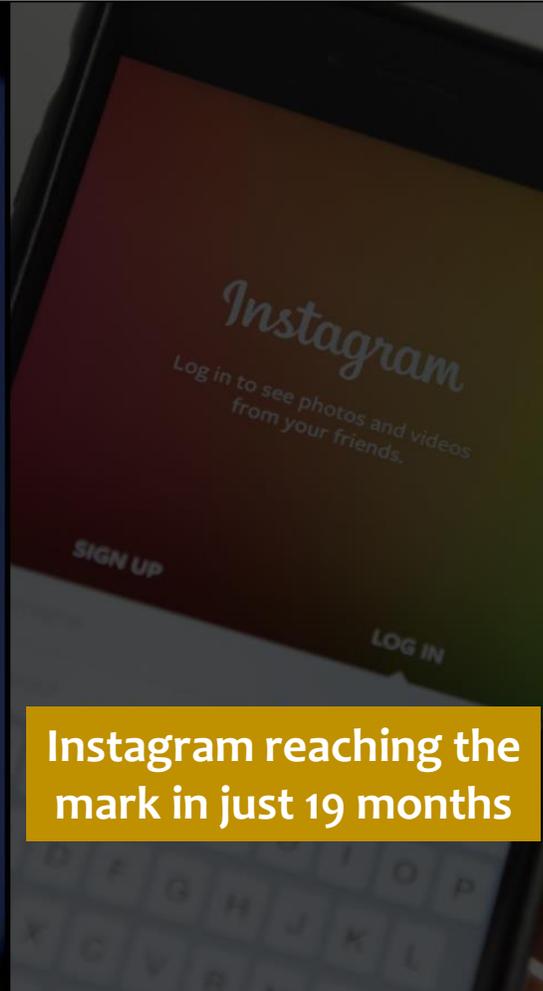
The speed of adoption of new innovations has increased exponentially over the years



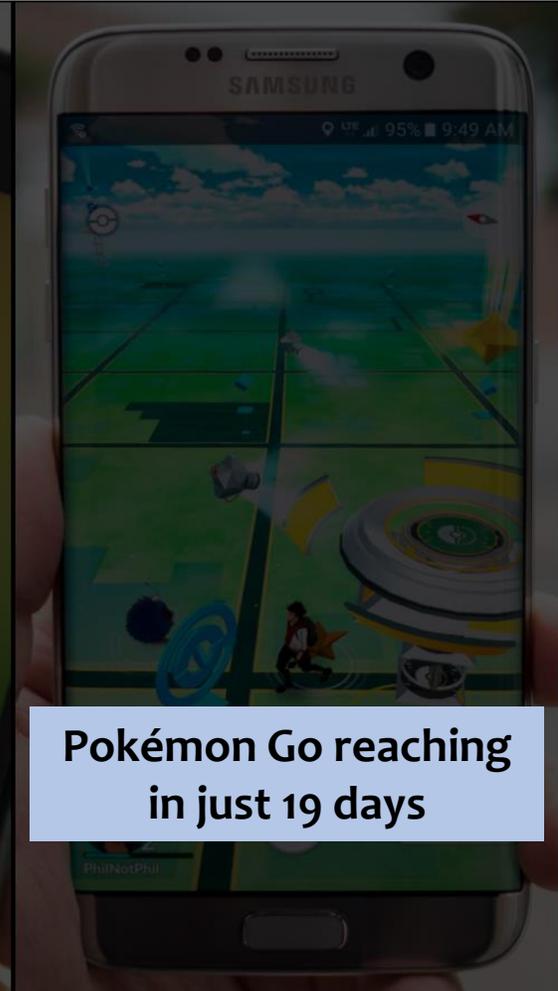
75 years to reach
50 Million users



Facebook reaching
the mark in 2 years



Instagram reaching the
mark in just 19 months



Pokémon Go reaching
in just 19 days



NETFLIX

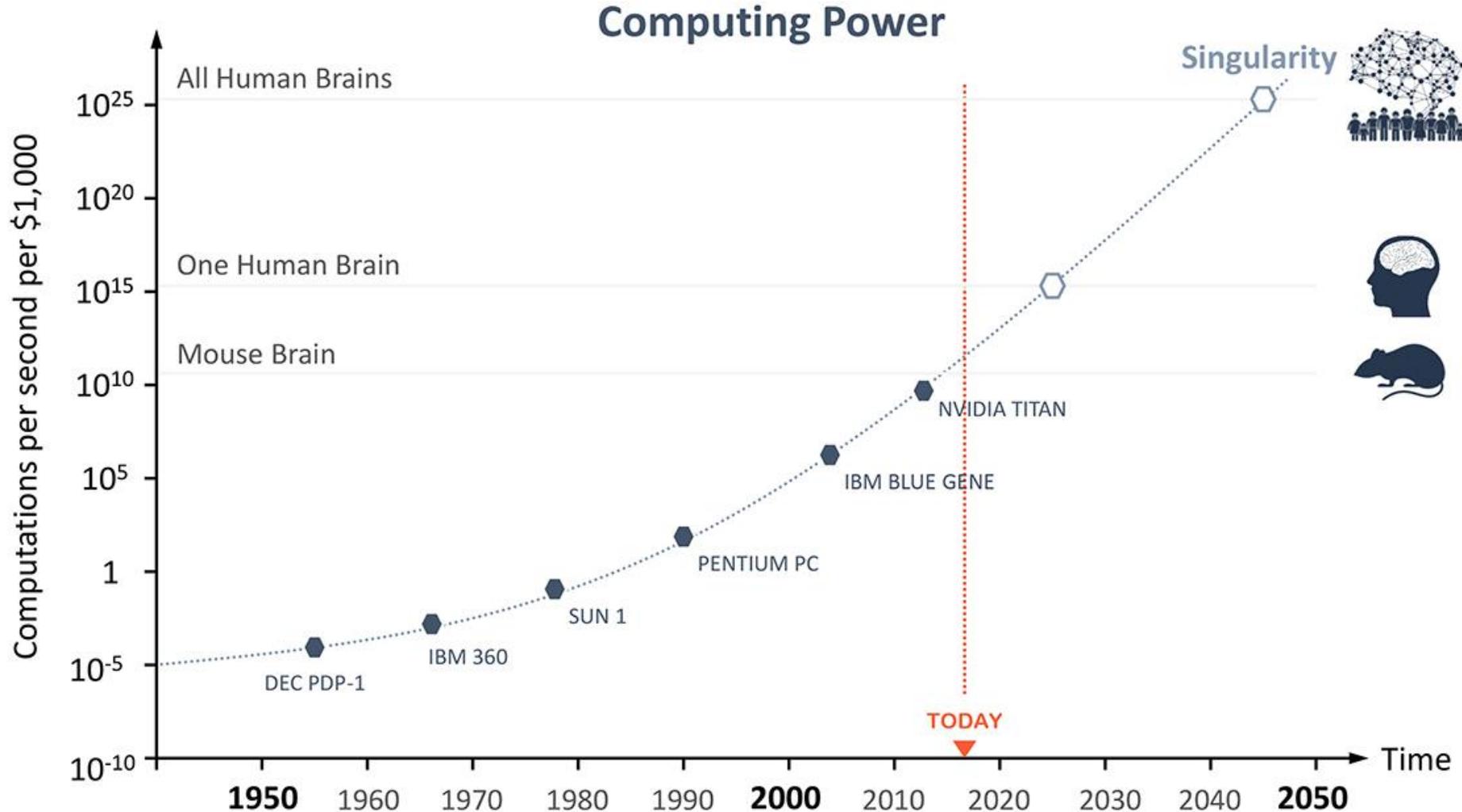
Digital Disruption



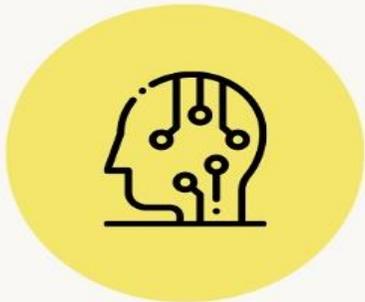
Uber

The digital age has changed the world as we know it and expectations
of how everything is conducted have risen

Affordable computing power will reach human brain capabilities by 2035



Digital transformation key trends in 2019



1 Smarter business systems with AI

Information Age predicts that by 2019, 30% of enterprises will start generating Data-as-a-Service revenue on account of AI, and 75% of commercial enterprise apps will have AI built-in by 2021. Advanced AI assistants, AI-backed talent acquisition tools, virtual agents, conversational chatbots and AI-powered search etc. may boost business success in 2019.



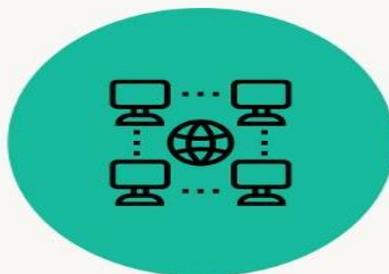
2 Blockchain hype may disappear

2019 is the year to unlock potential of blockchain which goes way beyond cryptocurrencies and incorporates solutions to the trilemma being faced by the industry i.e. imbalance about scalability, decentralization and security. We will witness Blockchain partaking in core business operations; enabling transactional transparency and security.



3 Multi-cloud becomes the norm

RightScale's 2019 State of the Cloud Survey found that 84% of the global enterprises have already adopted a multicloud strategy. Embracing an all-inclusive cloud strategy is the future but data protection appears to be quite challenging in a multicloud environment. Businesses need an approach to privatize data and control how and for whom its data creates value and risk.



4 Edge computing on the rise

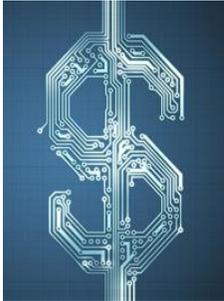
Edge computing is referred to as a key to meeting digital transformation demands. The value of edge computing market is estimated to reach \$3.24 billion (USD) by 2025. Through 2028, Gartner expects a steady increase in the embedding of sensor, storage, compute and advanced AI capabilities in edge devices.



5 The dawn of 5G

Deloitte's TMT Predictions 2019 report claims that almost one million 5G-phones will be shipped this year, out of expected 1.5 billion global smartphone sales. For businesses, the availability of 5G means less latency for communications, faster download speeds and even greater possibilities across borders

Digital Maturity - Globally



Worldwide spending on the technologies and services that enable the digital transformation is forecasted to be more than \$2.2 trillion in 2019, almost 60% higher than it was in 2016 - Source IDC – this level of significant investment need significant Strategic, Digital, and Leadership capacity for transformation.



The top five countries in digital transformation according to IMD World Competitiveness Center rating: USA, Singapore, Sweden, Denmark, and Switzerland



The economic value of DX to almost \$19 trillion, or more than 20% of global GDP- Source IDC .



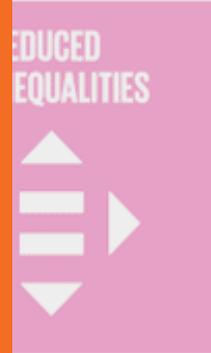
SUSTAINABLE DEVELOPMENT GOALS

| | | | | | |
|--|--|--|--|--|--|
| 1 NO POVERTY | 2 ZERO HUNGER | 3 GOOD HEALTH AND WELL-BEING | 4 QUALITY EDUCATION | 5 GENDER EQUALITY | 6 CLEAN WATER AND SANITATION |
| 7 AFFORDABLE AND CLEAN ENERGY | 8 DECENT WORK AND ECONOMIC GROWTH | 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | 10 REDUCED INEQUALITIES | 11 SUSTAINABLE CITIES AND COMMUNITIES | 12 RESPONSIBLE CONSUMPTION AND PRODUCTION |
| 13 CLIMATE ACTION | 14 LIFE BELOW WATER | 15 LIFE ON LAND | 16 PEACE, JUSTICE AND STRONG INSTITUTIONS | 17 PARTNERSHIPS FOR THE GOALS | SUSTAINABLE DEVELOPMENT GOALS |



SUSTAINABLE GOALS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE





SUSTAINABLE GOALS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

TARGET 9.3



INCREASE ACCESS TO FINANCIAL SERVICES AND MARKETS

Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.



EGYPT

DIGITAL Transformation

&

FINANCIAL Inclusion

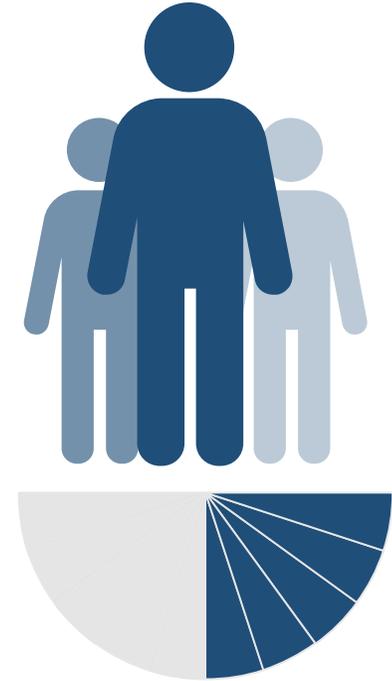
Egypt - Demography



49%



99 Million Citizens

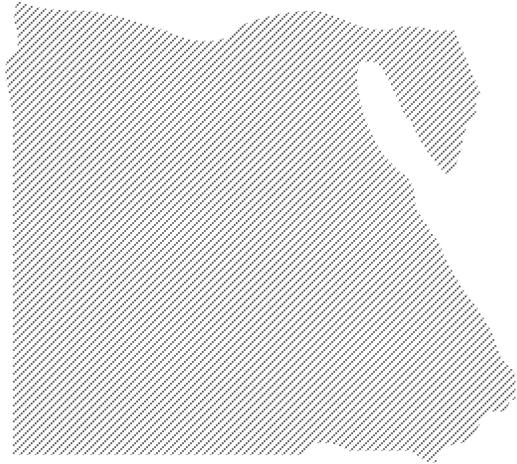


51%

Source : <https://www.capmas.gov.eg/>

Egypt - Demography

Population: 99 million citizen



Median age



23.6
years



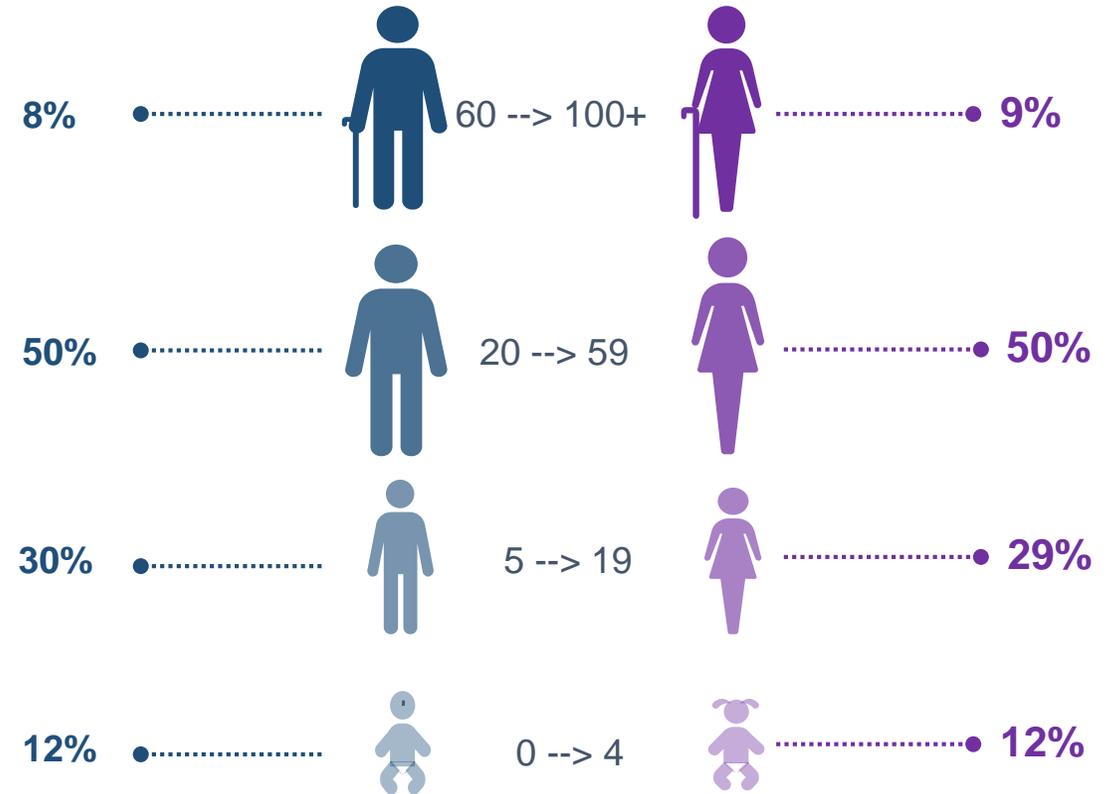
24.2
years

Growth Rate



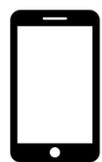
2.45%

Age structure



Source <https://www.populationpyramid.net/egypt/2019/>

Highly connected & Young population



36.5

Million

Mobile Internet Users



41

Million

Internet users, 48% pen. rate

341,413

Egypt Mobile Payments
Ecosystem Agents

50%

Smart Phone penetration rate

95%

Mobile penetration rate



41.3%

of the population between
15-39 years old

Egypt - Demography

Emerging Population

- 41% of the population bet 15-39 years old
- MI users 46M
- Internet Users 49.23M
- Mobile penetration 112%
- Smart Phone penetration 50%

Emerging Ecosystems

Non traditional players entering financial territory:

- Agents Mobile Banking
- Mobile Operators
- Incubators, accelerators and start-ups

Emerging Economy

- Electronic Payments doesn't exceed 3%
- Every 10% increase in Electronic payments leads to:
 - USD 1.4 Billion increase in Egyptian GDP (200K employment opportunity)

Emerging Fintech

Mobile Payment

- Started in June 2013
- Bank led Model
- Interoperable through National Switch
- 11 Licenses issued to operate in Egypt
- MNOs as an agents

Source : <https://www.capmas.gov.eg/>





Digital Maturity - Egypt

- Egyptian organizations at large are lagging behind in digital transformation
- Some organizations are ignoring the risk of digital disruption, and others, lack the capacity for transformation
- This expose organizations (Banks, Telecom, Retail, Education, etc.) , and consequently the economy at large to a **great risk of becoming obsolete in as little as 3 to 5 years.**
- **Egypt Vision 2030** targets digital transformation as a strategic objective to achieve development goals and **enhance Egypt's position in the global economy**, where digital economy is considered one of the most important components.



Digital Maturity - Egypt

Objectives of Digital Transformation in Egypt

Efficiency & Improvement
in the level of service,
Speed of access,
Simplification of
procedures, and indirect
cost reduction

Enhance achievement of
Sustainable Development
Goals

Achieve Governance
Objectives, especially
combating corruption and
promoting transparency,
integrity and accountability

Develop Consumer-
Centered business model

Supporting Financial
Inclusion targets through
optimizing distribution and
diversifying the channels.

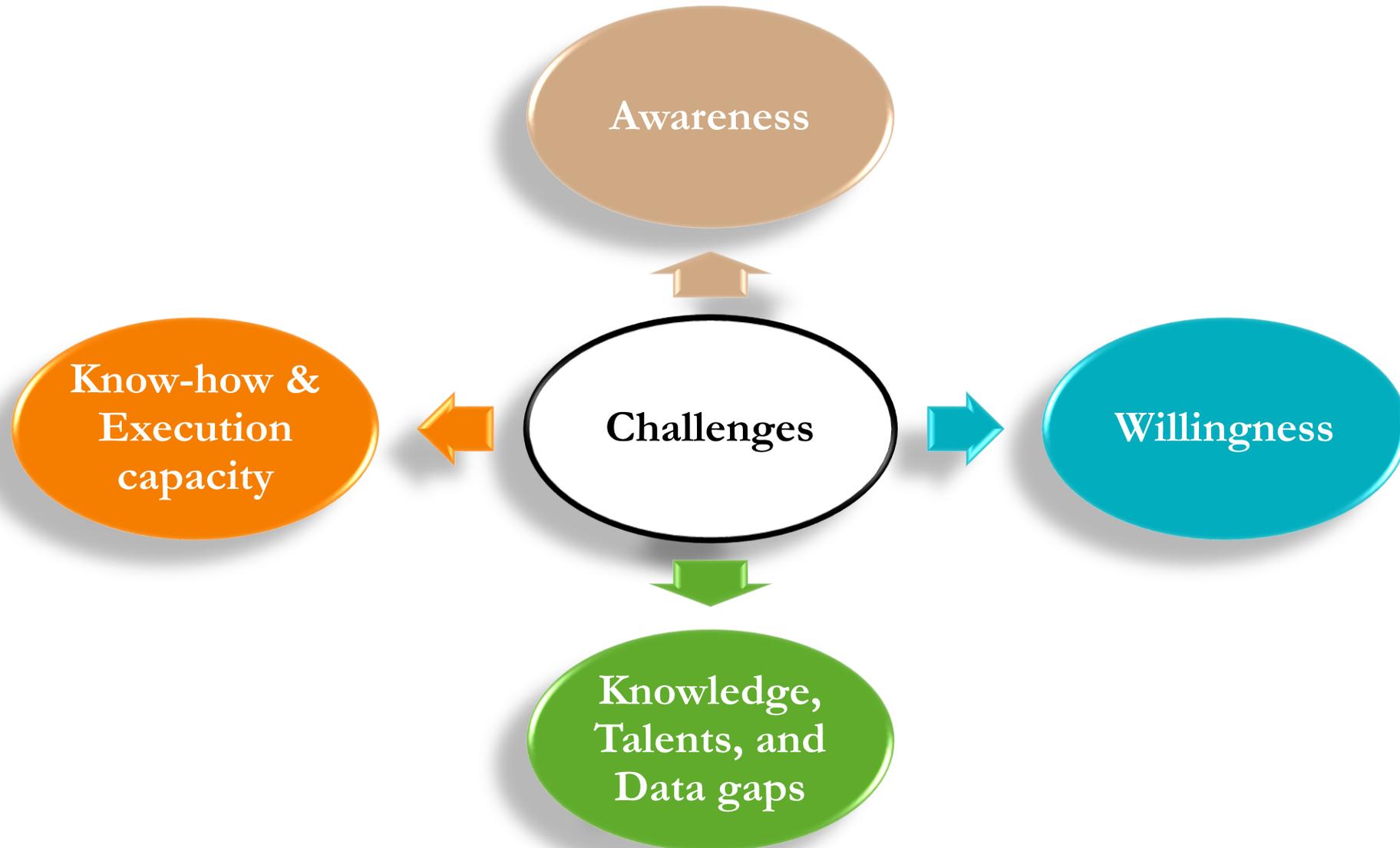
Utilizing Technological and
digital innovation

Stimulate relevant
electronic industries

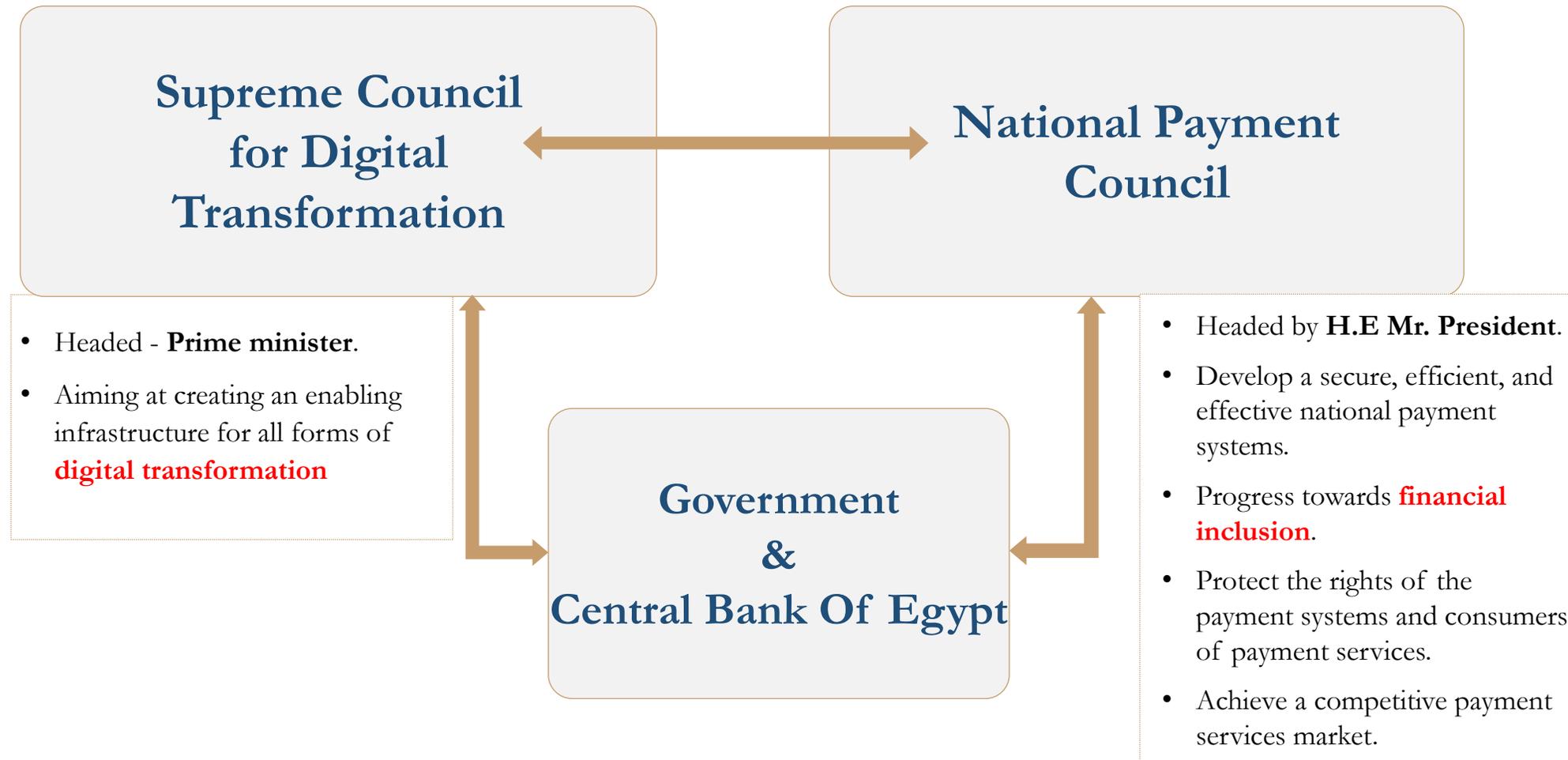
Improve Egypt state
Locally and internationally

Increase country resources

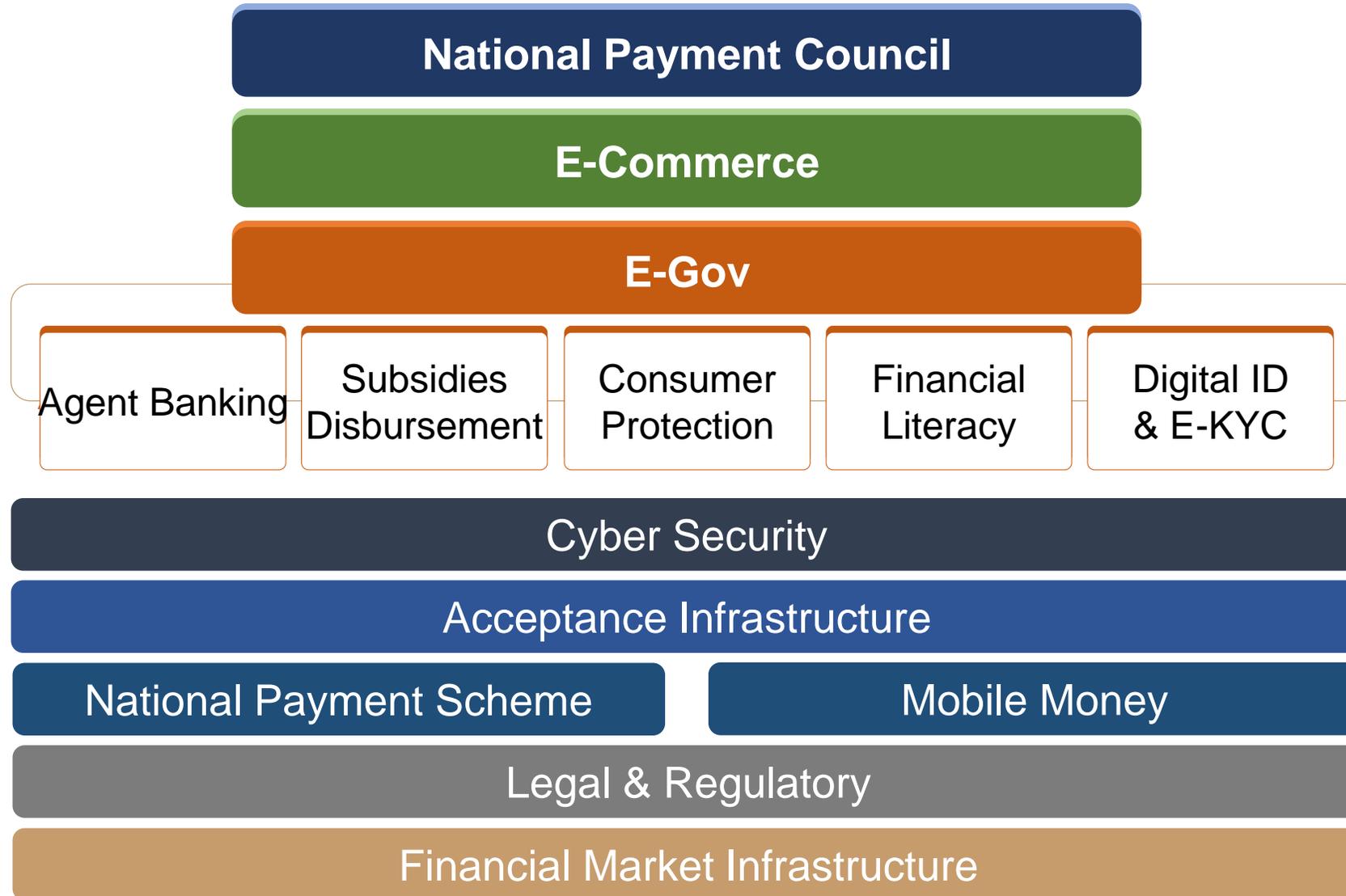
Digital Transformation: Challenges



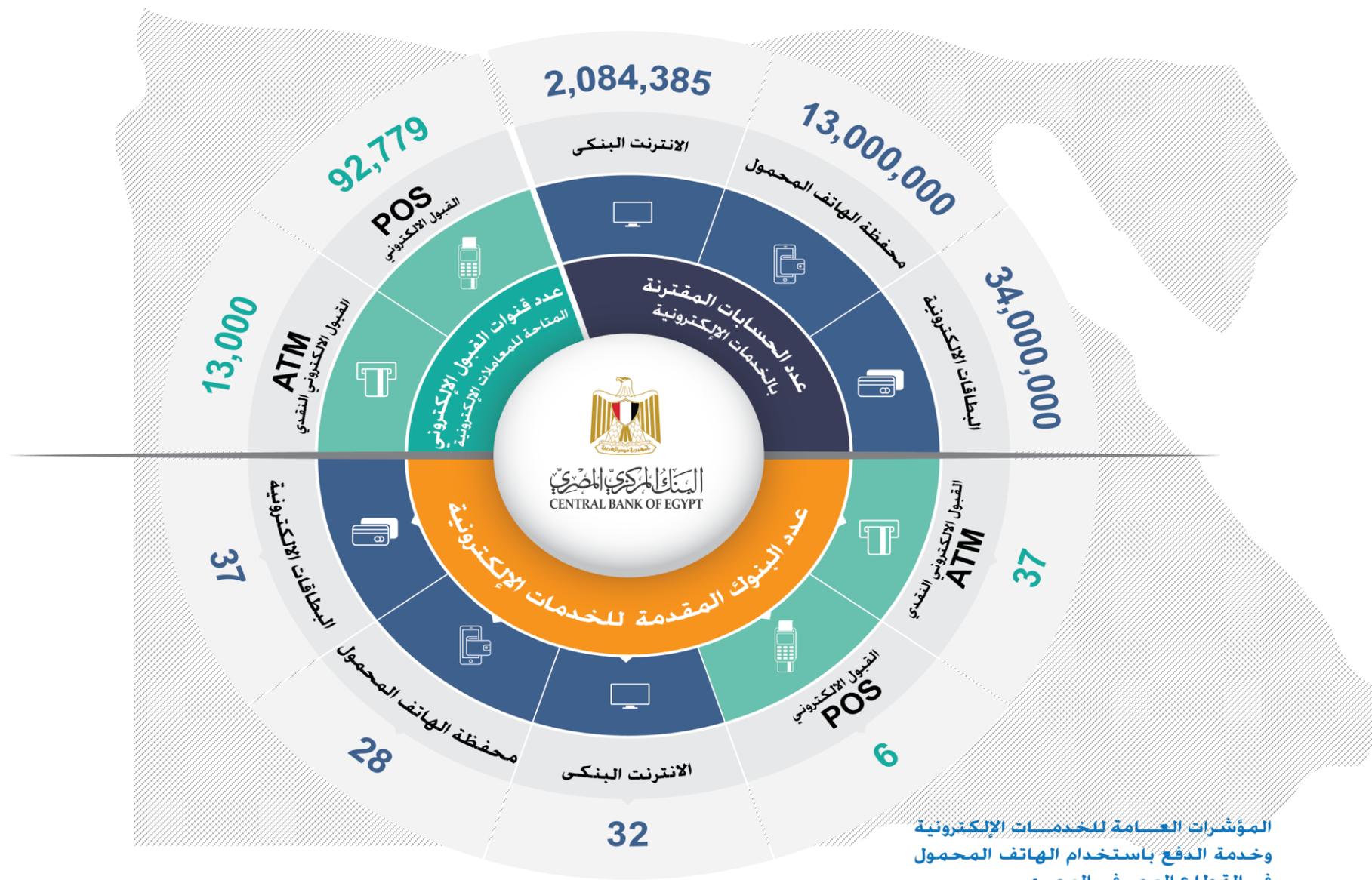
Digital Transformation & Financial Inclusion Governance



Less-Cash Transformation Framework



General Indicators of Digital Financial Services in the Egyptian Banking Sector



Legal & Regulatory Pillars

- **Amendments on the Banking Sector Law No. 88 of 2003**
- **Less Cash Transformation Law**
- **Anti-Cyber and Information Technology Crimes Law**
- **Personal data Protection Law to protect fully or partially electronically treated personal data.**
- **Mobile Payment & QR Regulations**

Legal & Regulatory Pillars

- Amendments on the Banking Sector Law No. 88 of 2003
- Less Cash Transformation Law

The **Less Cash Initiative**, aims to reduce the use of banknotes and support digital financial services

Legal & Regulatory Pillars

● Amendments on the Banking Sector Law No. 88 of 2003

● Less Cash Transformation Law



Benefits on Individuals

- Convenience
- Safety
- Expenditure Tracking & Control



Benefits on Economy

- 10% increase in E-payment equals EGP 1.5 Billion in GDP and 200,000 job opportunities
- Help curb inflation rates



Decrease cost of printing and circulating banknotes

Legal & Regulatory Pillars

- Amendments on the Banking Sector Law No. 88 of 2003

- Less Cash Transformation Law

- **Anti-Cyber and Information Technology Crimes Law**

- **Personal data Protection Law to protect fully or partially electronically treated personal data.**

- **Mobile Payment & QR Regulations**

Financial inclusion: National Payment Scheme & Digital Acceptance



meeza
مِيزَة

National Payment Card

Egypt's National Payment Scheme is expected to accelerate the financial inclusion by reaching the untapped segments in the society.

Mobile Merchant Payments (QR Code)



CBE has issued electronic acceptance criteria for payments through QR Code - unified standards-which will apply to all banks licensed to accept payments electronically in Egypt.

Cyber Security

CSIRC

Central Bank is building a Financial Computing Security Incident Response Center (CSIRC) aiming at preventing cyber-attacks.

Capacity Building

Providing, 2 years developing program to 100 Employees.



Financial Technology “FinTech”

A key pillar of Less Cash Initiative –the innovative use of technology in financial services

Innovation

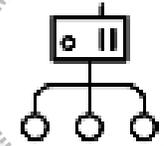
Fintech Strategy

Innovation Fund

Fintech Hub



1Bn

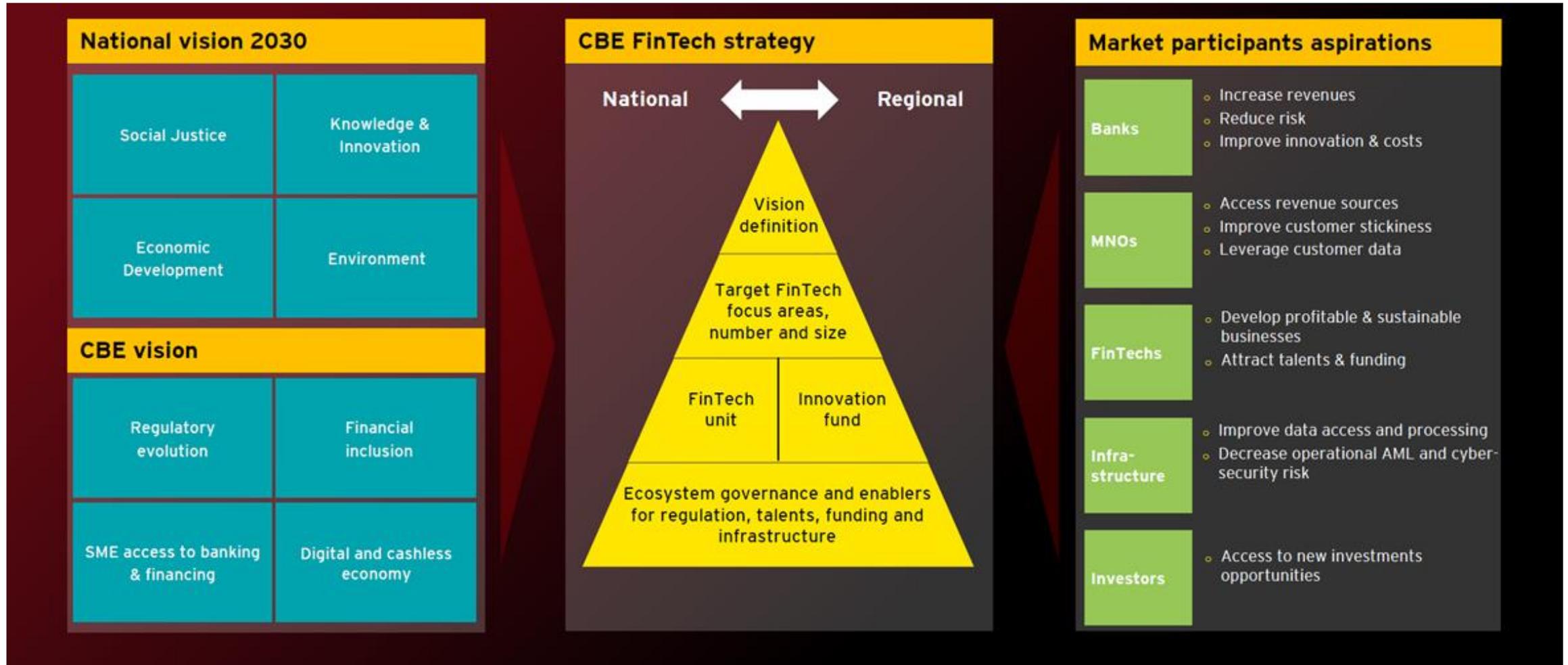


Central Bank of Egypt will establish a 1Bn EGP FinTech fund & is establishing Egypt Fintech Hub

- Dedicated to fuel ecosystem growth
- Encourage Fintech start-ups
- Invest in Youth talents
- Fund the necessary infrastructure

collaboration across the ecosystem, especially between regulators and governments is a key success factor

Egypt Fintech & Innovation Strategy



Egypt's Fintech and innovation strategy brings both the national 2030 vision and the Central bank's vision to life, through focusing on economic development and innovation

Egypt Fintech & Innovation: FinTech Sandbox



Implementation of Fintech in Egypt will help pave the way into a digital future and a prosperous economy



1 EGP invested in Fintech generates 2 EGP to GDP and each job created in Fintech support 6 other jobs



Facilitating new employment opportunities



Focus on addressing needs of underserved segments and solving national challenges



Preparing youth for the jobs of the future



Helping them develop an entrepreneurial mindset



Regulatory Sandbox, which is a controlled testing environment that balances innovation and risk

E-KYC & Digital Identity - Egyptian Block chain Taskforce



- **E-KYC and digital Identity** are the top priorities of CBE, we are currently examining e-KYC and Digital ID rules, These rules are a major challenge that faces the expansion of FinTech services.
- We established CBE Task-force to study the ability of utilizing blockchain technology in applying shared e-KYC.



البنك المركزي المصري
CENTRAL BANK OF EGYPT

Thank You

قطاع نظم الدفع وتكنولوجيا المعلومات
Payment Systems & Business Technology Sector