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CURRENT STATE OF ICT DEVELOPMENT IN TUNISIA

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Abstract:

This article provides an overview of the current state of ICT development in Tunisia, examining key components such as the country's broadband and mobile networks, the growing digital economy, and the development of key ICT sectors including e-government, e-education, e-health, and fintech. It also highlights the roles played by both the public and private sectors in driving this progress, as well as the challenges and opportunities that lie ahead.

Keywords: *Information and Communication Technology (ICT); the growing digital economy; economic growth*

Introduction

The Information and Communication Technology (ICT) sector has become a critical driver of economic development in Tunisia, playing a significant role in shaping the country's modernization and global competitiveness. Over the past two decades, Tunisia has made notable progress in expanding its ICT infrastructure, improving broadband connectivity, and fostering innovation across various sectors. With a robust mobile network, increasing internet penetration, and advancements in digital services, Tunisia is positioning itself as a leader in the digital economy in North Africa.

This article provides an overview of the current state of ICT development in Tunisia, examining key components such as the country's broadband and mobile networks, the growing digital economy, and the development of key ICT sectors including e-government, e-education, e-health, and fintech. It also highlights the roles played by both the public and private sectors in driving this progress, as well as the challenges and opportunities that lie ahead.

In examining the state of ICT in Tunisia, this chapter will explore how ICT contributes to economic growth, how Tunisia's infrastructure is evolving, and how the country's regulatory environment and strategic initiatives are supporting the digital transformation of public services and the private sector.

1- ICT Infrastructure in Tunisia

Tunisia has been continuously investing in its ICT infrastructure to support digital transformation and economic growth. The country's ICT infrastructure is robust and has evolved in recent years, encompassing various essential components such as broadband, mobile networks, data centers, and other digital technologies.



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1.1: Broadband Infrastructure

Tunisia's broadband infrastructure is expanding, allowing more citizens and businesses access to high-speed internet. The country is primarily served by fixed broadband services (DSL and fiber optics) and mobile broadband (3G, 4G, and soon 5G). Fixed broadband networks are concentrated in urban areas, but the government has initiated projects to extend coverage to rural regions, promoting digital inclusion.

The fiber-optic network has been growing in recent years, improving the quality and speed of internet connections for homes and businesses. As a result, Tunisia's broadband internet speed has improved, enhancing the ability to engage in cloud-based services, e-commerce, and online education.

1.2: Mobile Networks

Mobile networks in Tunisia are quite advanced, with three major mobile operators: **Tunisie Telecom**, **Ooredoo**, and **Orange Tunisia**. These companies provide extensive coverage for 3G, 4G LTE, and are in the process of rolling out 5G. The mobile penetration rate is high, with a large proportion of the population using smartphones and mobile internet. Mobile services also play a key role in providing access to essential services like digital payments, banking, and social media.

5G technology is particularly promising for Tunisia's future development in sectors such as smart cities, autonomous systems, and the Internet of Things (IoT), which require faster speeds and lower latency for real-time communication.

1.3: Data Centers and Cloud Services

Tunisia's data center infrastructure is growing in importance as demand for digital services increases. Data centers in the country are primarily focused on hosting services, including cloud computing, disaster recovery, and business continuity solutions. Companies across sectors are adopting cloud-based solutions to scale their operations, reduce IT costs, and ensure data security.

To keep pace with global demands, several data centers are being developed to provide scalable cloud infrastructure. The **Tunisia Data Center**, for example, offers colocation and managed services, which are essential for businesses and government institutions looking to store and manage sensitive data in a secure and compliant environment.

1.4: Government Initiatives to Enhance ICT Infrastructure

The Tunisian government has been proactive in enhancing ICT infrastructure as part of its broader strategy to develop a digital economy. Key initiatives include expanding the availability of broadband, supporting the establishment of digital parks, and driving regulatory reforms to encourage private investment in the sector.

The **National Broadband Plan** aims to expand fiber-optic networks across the country, and initiatives like **e-government** and **smart city** programs are pushing the ICT agenda forward, laying the foundation for more advanced digital services and infrastructure.

1.5: International Connectivity

Tunisia benefits from strong international connectivity via submarine cables that link the country to Europe, the Middle East, and sub-Saharan Africa. Tunisia is connected to the **MedNautilus** cable system and other international systems, providing reliable high-speed access for international communication, data exchange, and online services.

2- Digital Economy: How ICT contributes to the economy (e-commerce, tech startups, digital services).

ICT has become a cornerstone of Tunisia's digital economy, driving growth and innovation in several sectors:



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2.1. E-Commerce in Tunisia: Development and Growth

The e-commerce sector in Tunisia has experienced significant growth in recent years, driven by both increasing consumer adoption and the expansion of digital infrastructure. More and more Tunisians are turning to online shopping, with a growing number of people utilizing digital payment methods such as mobile wallets, credit cards, and online banking to make purchases. This shift towards e-commerce reflects broader trends in global digitalization, where consumers are increasingly comfortable shopping online for convenience, variety, and competitive prices.

Tunisia's businesses, from small startups to large enterprises, have been quick to embrace e-commerce platforms to expand their market reach both locally and internationally. Many startups are now leveraging e-commerce tools to launch new products and services, while established companies are enhancing their online presence to meet the evolving expectations of consumers. The availability of e-commerce platforms has enabled businesses to tap into new revenue streams, create new job opportunities, and boost Tunisia's digital economy.

Leading players in Tunisia's e-commerce landscape, such as Jumia Tunisia and other local e-commerce websites, have strengthened their position by offering a wide array of products, ranging from electronics and fashion to groceries and household goods. These platforms have simplified the shopping experience, providing users with easy access to various goods and services, while also offering delivery and secure payment options, which further build consumer trust.

To support the growth of the e-commerce sector, the Tunisian government has implemented several policies aimed at fostering a conducive environment for digital commerce. These include tax incentives for businesses engaged in e-commerce, improved digital payment infrastructure, and efforts to streamline logistics, making it easier for businesses to deliver products to customers efficiently. Furthermore, the government has also worked to increase the regulatory framework that addresses consumer protection, creating a safer online shopping experience.

Despite these successes, the e-commerce sector in Tunisia still faces challenges, such as limited internet access in rural areas, a need for more advanced digital payment solutions, and issues related to delivery logistics. However, the continuous development of Tunisia's digital infrastructure, along with supportive government policies, indicates that the e-commerce industry is poised for further growth, potentially transforming the country's retail sector and contributing significantly to its economy.

2.2: Tech Startups

Tunisia has a thriving tech startup ecosystem, with a growing number of companies focused on software development, mobile apps, and digital services. These startups are fostering innovation, particularly in areas like fintech, healthcare, and education. The **Tunisian Startup Act**, passed in 2018, has created a legal and financial framework to support entrepreneurs with tax exemptions, grants, and easy access to funding.

2.3: B2B and B2C startups



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Tunisia has witnessed an increase in both business-to-business (B2B) and business-to-consumer (B2C) digital platforms. These startups are now being supported by a range of incubators, accelerators, and venture capital firms that are helping them scale and access international markets.

2.4: Digital Services

The increasing reliance on ICT has fostered a growing digital services industry. From cloud computing to data analytics and cybersecurity, Tunisia is becoming a hub for digital services, especially for North African and Mediterranean companies looking to digitize operations. The **outsourcing industry** also plays a significant role, with companies offering IT services and software development to international clients.

3- Key ICT Sectors

The growth of ICT infrastructure has fueled the development of various ICT sectors in Tunisia. These sectors play a critical role in the national economy, contributing to innovation, job creation, and digital transformation across industries. Here's a closer look at the most prominent ICT sectors in Tunisia.

3.1: Telecommunications and Mobile Networks

The telecommunications sector remains one of the most significant drivers of Tunisia's ICT landscape. It is dominated by key players such as **Tunisie Telecom, Ooredoo, and Orange Tunisia**. These companies are pivotal in providing mobile services, broadband, and related products across the country.

The sector's growth is closely tied to the increasing demand for mobile data services, driven by smartphone penetration, the expansion of mobile banking, and digital content consumption. The ongoing rollout of 5G networks is expected to further accelerate innovation in sectors like **smart cities, autonomous vehicles, and IoT**.

3.2: Software Development and IT Services

Tunisia has seen the rise of a vibrant software development and IT services sector. Local companies are developing customized software solutions for businesses in finance, healthcare, education, and government. The software development ecosystem is also bolstered by a strong startup culture, with young entrepreneurs creating innovative solutions to address both local and international market needs.

In addition to traditional software development, Tunisia has become a hub for **outsourcing services**, offering competitive rates for IT services such as application development, software testing, and customer support. Tunisia's skilled workforce and favorable time zone for European clients make it a highly attractive destination for **nearshoring**.

3.3: Cybersecurity

With the increasing digitalization of services and the growing reliance on online platforms, **cybersecurity** has become a crucial focus for both the private and public sectors in Tunisia. Cyberattacks are becoming more sophisticated, and Tunisia is investing in robust cybersecurity measures to protect its national infrastructure.

The country has developed initiatives to bolster its cybersecurity workforce and institutions. In addition to establishing **cybersecurity awareness programs** and **security operations centers**



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(SOCs), Tunisia is working to implement cybersecurity standards for critical sectors such as finance, healthcare, and energy.

3.4: FinTech (Financial Technology)

Tunisia’s **FinTech** sector is growing rapidly, driven by the increasing demand for digital payment solutions, mobile banking, and e-commerce. The government’s adoption of digital banking regulations has paved the way for innovative financial solutions, including **mobile wallets**, **peer-to-peer lending**, and **blockchain-based systems**.

Startups in the FinTech space are leveraging technologies like **digital currencies**, **contactless payments**, and **online lending platforms** to transform the financial services industry. The use of FinTech solutions has also helped promote financial inclusion, allowing underbanked populations to access financial services remotely.

3.5: Cloud Computing and Data Management

As businesses in Tunisia continue to embrace digital transformation, the demand for **cloud computing** and **data management solutions** is increasing. Tunisian companies are leveraging the cloud for data storage, **enterprise resource planning (ERP)** systems, and other services, reducing the need for expensive, on-site infrastructure.

The growth of **public cloud** providers and **data centers** is creating a competitive environment for cloud services, encouraging innovation and the adoption of **Software-as-a-Service (SaaS)** products. Local startups are also offering customized cloud services, particularly for SMEs (small and medium-sized enterprises).

3.6: Artificial Intelligence (AI) and Big Data

Tunisia is positioning itself as a player in the emerging fields of **Artificial Intelligence (AI)** and **Big Data** analytics. The country is investing in the development of **AI-powered** solutions, especially in sectors such as **healthcare**, **education**, **finance**, and **agriculture**.

AI and machine learning technologies are being integrated into solutions that help businesses optimize operations, improve customer experiences, and make data-driven decisions. **Big data** analytics is helping industries unlock valuable insights from vast amounts of data, which is crucial for sectors like retail, logistics, and manufacturing.

3.7: Smart Cities and IoT (Internet of Things)

Tunisia is actively exploring **smart city** solutions to improve urban life, optimize resource management, and promote sustainability. **IoT technologies** are central to the development of smart city infrastructures such as **smart traffic systems**, **energy-efficient buildings**, and **waste management systems**.

Tunis and other major cities are implementing pilot projects to monitor air quality, manage traffic flow, and improve public safety through IoT devices. The government is collaborating with international partners to build smart city ecosystems, which will lay the foundation for future urban planning.

3.8: E-Health

The **e-health** sector is growing rapidly, fueled by the need to modernize healthcare services in Tunisia. The development of **telemedicine** platforms, **electronic health records (EHR)** systems, and **mobile health applications** is revolutionizing the way healthcare services are delivered, particularly in remote areas.

E-health startups are innovating with AI-driven diagnostic tools and remote monitoring solutions, helping to improve the accessibility and efficiency of healthcare services across the country. The government’s support for digital health initiatives is also encouraging investments in health technology.



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4 - Public vs Private Sector : Roles in Driving the ICT Agenda. Government and Private Sector Collaboration

The ICT development in Tunisia has been driven through a combination of government initiatives and private sector investments. Both sectors play crucial roles in shaping the future of ICT in the country.

4-1: Government Role

The Tunisian government has been at the forefront of developing ICT infrastructure and promoting the digital economy. With policies such as the **Tunisia Digital 2020** initiative, the government aims to make Tunisia a regional hub for ICT, emphasizing the importance of modernizing public administration, promoting entrepreneurship, and improving ICT infrastructure.

4.2: Public Sector Funding and Support

Through public investments in ICT infrastructure, such as expanding broadband access and building data centers, the government has laid the foundation for a growing digital economy. The government also offers **subsidies, tax incentives, and grants** to ICT startups and companies.

4.3: Regulatory Framework

The government has introduced policies and regulations to ensure the development of a secure digital environment, including **data protection laws, cybersecurity regulations**, and guidelines for the use of emerging technologies such as blockchain and AI.

4.4: Private Sector Role

Private companies have been instrumental in expanding Tunisia’s ICT infrastructure, particularly in telecommunications and tech startups. Companies like **Tunisie Telecom, Ooredoo Tunisia**, and **Orange Tunisia** have played a key role in improving connectivity, particularly through mobile networks and broadband services.

4.5: Tech Startups

Tunisia has a high internet penetration rate, with over 80% of its population having access to the internet as of 2023. Tunisia has become a hub for tech startups, with more than 500 registered companies in the ICT sector. Additionally, the government has been actively promoting digital transformation through initiatives such as the "Digital Tunisia 2020" strategy, which aims to increase the digital economy's contribution to GDP by 10%. The country is also home to a growing pool of tech talent, with over 10,000 graduates in engineering and computer science fields each year. Tunisia’s ICT export revenues reached approximately \$1.5 billion in 2022, showing the sector's growing importance in the global market.

4.6: Collaboration with International Tech Giants

Tunisia is attracting foreign investment from multinational companies like **Microsoft, Google**, and **IBM**, which are establishing partnerships and innovation hubs. This collaboration brings not only financial investment but also access to global technology and expertise, boosting the country’s ICT capabilities.

5. Perspective of ICT in Tunisia

The perspective of ICT in Tunisia is exceptionally bright, driven by advancements in **5G** technology, **AI**, and **IoT**, which will revolutionize sectors like healthcare, agriculture, and finance. The government's commitment to digital transformation through e-government initiatives and robust cybersecurity measures will ensure a secure and efficient digital ecosystem. Financial inclusion will be accelerated by digital payment solutions and mobile banking, providing greater access to underserved populations. The growing tech startup ecosystem and investment in digital education will nurture a skilled workforce, fueling innovation. Tunisia’s focus on sustainability will see **ICT**



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driving green technologies, smart cities, and energy-efficient solutions. With these strategic developments, Tunisia is set to emerge as a leading digital economy **hub in North Africa**, poised for a tech-driven, inclusive, and sustainable future.

ANNEX :

ICT: A Statistical Analysis

The population of Tunisia stood at 12.51 million in January 2024		
Indicator	Value	Source
Internet Penetration Rate	76.6% (estimated)	International Telecommunication Union (ITU)
Mobile Phone Penetration	120% (more mobile subscriptions than the population)	National Institute of Statistics (INS)
Fixed Broadband Subscription	1.3 million subscribers	National Regulatory Authority for Telecommunications (INPT)
Mobile Broadband (4G) Subscribers	9.96million	National Telecommunications Regulatory Authority (INT)
Number of Internet Users	8 million	National Telecommunications Regulatory Authority (INT)
E-Government Services	Over 300 public services available online	National Telecommunications Regulatory Authority (INT)
ICT Contribution to GDP	5.8% of total GDP	World Bank, ITU Report
ICT Startups	Over 1,000 active startups	Ministry of Communication Technologies
Fiber Optic Coverage	~35% of total population covered	Tunisian Telecom
Cybersecurity Incidents	1,200+ cyberattacks reported annually	CERT Tunisia (Tunisian Computer Emergency Response Team)



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References:

- Research elaborated by the student **Amine HICHRI** (National School of Administration of Tunisia): Knowledge economy and its role in expanding the economic base: Targeting valuation of human resources as an alternative.

Webography

- Website: Asian Development Bank, Moving Toward Knowledge-Based Economies: Asian Experiences, 2007.
- Website: ATIC, Les statistiques d'activité des investisseurs en capital membre de l'ATIC en 2018, 2023
- Website: Tunisie Diagnostic Systématique Pays Réhabiliter la confiance et répondre aux aspirations des citoyens
- Website: International Telecommunication Union (ITU).
- Website: National Institute of Statistics (INS).
- Website: National Telecommunications Regulatory Authority (INT).
 - [https://| INS](https://INS)
 - Tunisia | Economic Indicators, Historic Data & Forecasts | CEIC
- <https://www.worldbank.org/en/publication/digital-progress-and-trends-report>-Ministry of Communication Technologies
- Tunisian Telecom
- CERT Tunisia (Tunisian Computer Emergency Response Team)
- <https://www.google.com/search?q=-Tunisian+Telecom&oq=->