

WHITEPAPER

Kuwait's Digital Landscape

Seizing Opportunities for
Innovation and Growth



Table of Contents

A. Foreword	3
B. Executive Summary.....	4
C. Kuwait 2035 Vision: Guiding framework for Kuwait’s digital transformation	5
D. Digital Transformation: The Key Enabler for Kuwait’s Vision 2035	7
E. From Local to Global: Kuwait’s Digital Transformation Journey in Rankings.....	10
F. Enabling Digital Transformation in Government: Microsoft’s Framework for Success	12
G. Lessons Learned from Leading Countries: Driving Digital Transformation for Success.....	16
H. Call to Action: Recommendations for Driving Digital Transformation in Kuwait.....	19
I. About Author	23
J. Appendix: Kuwait Digital Landscape: Global Indicators for Digital Transformation	24
K. References.....	31

A Foreword

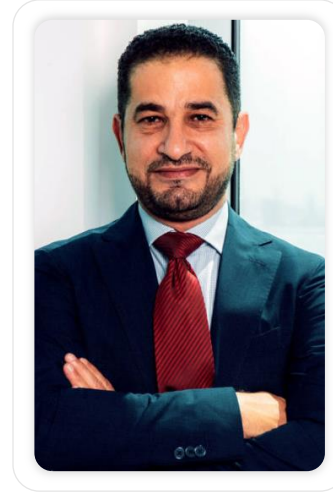


Antonio De Palmas – Vice President Global Market Development, World Wide Public Sector Microsoft

“Together, we aim to expedite Kuwait’s 2035 vision through digital transformation, and bolster its global leadership in a manner that is effective, secure, and responsible.”

The emergence of Generative AI is revolutionizing not only perceptions of breakthrough innovations but also the urgency within governments to digitally overhaul their operations and societies. This transformation is occurring at an unprecedented pace, surpassing all previous factors.

Our strategic alliance with Kuwait epitomizes this shift. By sharing our extensive knowledge, solutions, and global experience, we are poised to seize this pivotal moment of technological innovation.



Alaeddine Alaeddine – Country Manager, Kuwait

“We are deeply committed to Kuwait’s growth, working hand in hand with the Government to accelerate digital transformation and deliver innovative solutions that empower government entities and individuals.”

At the heart of Microsoft’s mission in Kuwait lies a profound commitment to the Kuwait’s advancement and prosperity. Together, we are actively propelling Kuwait into the digital era, where innovation is the catalyst for progress. Through our innovative AI-driven solutions, we aim to empower not only government entities but also individuals throughout the country. Microsoft stands ready to support Kuwait on this journey toward a brighter, digitally-driven future, where AI plays a central role in driving positive change.

B Executive Summary

Technology has been and continues to be a proven pillar of competitiveness and growth for governments worldwide. Countries that are able to harness the power of technology, especially new and emerging technologies like cloud computing and AI stand to increase productivity, foster innovation, and realize cost savings, all whilst better engaging with and supporting their citizens. Commercial organizations have already demonstrated the importance of keeping up with the latest trends, and governments are now following suit to ensure their nations are not left behind in the digital age.



Digital transformation has become a paramount imperative for governments worldwide as they navigate the challenges of this dynamic landscape. In this era of rapid technological advancements, governments should assess their digital maturity, envision their future digital landscape, and develop comprehensive strategies to lead in the digital age.

This paper aims to provide valuable insights and strategic recommendations, customized for Kuwait based on our collaboration with governments and our understanding of global best practices. As a strategic partner, Microsoft is committed to supporting the Kuwaiti government in driving their digital transformation agenda, achieving more with less and positioning Kuwait as a leader in the digital era.



The only wrong move when it comes to digital transformation is not to make any move at all.

– **Didier Bonnet, Professor of Digital Transformation, IMD Business School**

To provide a comprehensive overview, we highlight the “Kuwait 2035 Vision” as the guiding framework for Kuwait’s digital transformation. This vision acts as a north star, guiding the country’s path towards digital advancement. Furthermore, we review Kuwait’s digital profile and global positioning by setting forth key global indicators. By analyzing these indicators, we gain insight into the successful technological advancements in Kuwait to date and highlight key initiatives that contributed to its progress. We are also able to identify areas that should be considered for prioritization in the next stage of its technology journey as it positions itself as a leader in the AI era. Through this collaborative effort, we seek to provide valuable insights, practical strategies, and best practices that will enable the Kuwaiti government to effectively navigate the complexities of digital transformation. By leveraging Microsoft’s expertise and resources, we aim to support Kuwait’s aspirations to become a leading player in the digital era, fostering innovation, efficiency, and citizen-centric services.

C Kuwait 2035 Vision: Guiding framework for Kuwait's digital transformation



Figure 1: Kuwait 2035 Vision Pillars

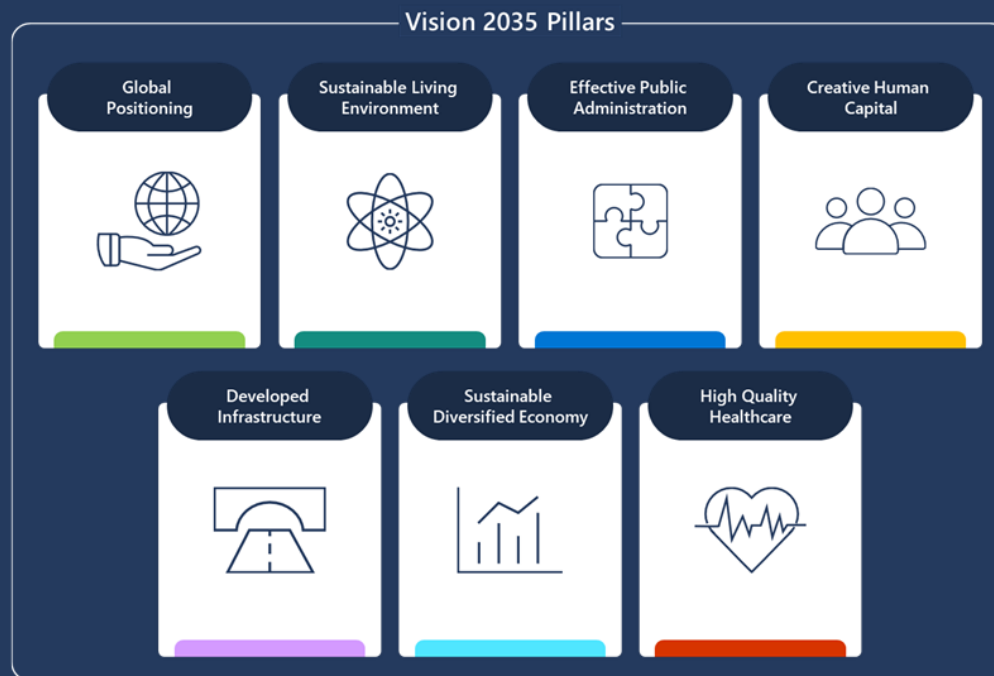
The Kuwait 2035 vision [1] plays a critical role in the digital transformation of Kuwait. This vision aims to transform Kuwait into a world-class financial and commercial hub, and digital transformation is at the heart of this plan. The Kuwait 2035 vision outlines a comprehensive roadmap for Kuwait's digital transformation, which includes investing in digital infrastructure, promoting innovation, and creating a digital ecosystem that supports startups and entrepreneurs. By embracing the latest technologies and fostering a culture of innovation, Kuwait aims to become a leader in the digital economy. The Kuwait 2035 vision also recognizes the importance of digital skills and education, and it outlines a plan to develop a highly skilled digital workforce that can drive the country's digital transformation forward. Overall, the Kuwait 2035 vision sets a clear roadmap for Kuwait's digital future and underscores the country's commitment to remaining competitive in the global digital economy.



**Digital transformation is not about technology,
it's about change."**

– Peter Sondergaard, former Head of Research, Gartner.

D Digital Transformation: The Key Enabler for Kuwait's Vision 2035



DT as a core strategic enabler for Vision 2035 Pillars

Embrace digital technologies to foster innovation and improve global competitiveness.

Advance sustainability priorities by leveraging cloud computing solutions, using technology to streamline processes, and introducing AI and electronic vehicles.

Develop efficient e-Government program through automation and internet services and leveraging proactive technologies and statistical platforms at different levels in Ministries.

Improve education systems, safety and security systems, and care for elderly and enabled persons through the use of new and advanced technologies.

Establish advanced information and communication technology infrastructure, an efficient transportation system and railroad services.

Adapt to evolving market dynamics, attract investments, and build a resilient economy by embracing emerging technologies such as AI, blockchain and cloud computing, paving the way for a sustainable and diversified future.

Recognize health sector transformation drivers, implement plans on digital health and next generation care, and enable e-health progress.

Figure 2: Vision 2035 Pillars



Microsoft is opening up access to new AI tools like ChatGPT, I see these technologies acting as a co-pilot, helping people do more with less."

– Satya Nadella, CEO, Microsoft



Digital transformation is the key enabler to achieve the Kuwait Vision 2035. While embracing digital technologies and unlocking their potential is a significant driver, it's important to note that this effort goes beyond these actions. By doing so, Kuwait can accelerate progress towards the vision's ambitious goals. The Kuwait Vision 2035 outlines seven key pillars that will form the foundation of the country's future growth and development:

Global Positioning



The first pillar can be achieved by positioning Kuwait as a hub for digital innovation and entrepreneurship. By creating a supportive ecosystem for startups and entrepreneurs, Kuwait can attract international investment and talent, and become a leader in the global digital economy.

Sustainable Living Environment



The second pillar can be achieved through the use of smart city technologies and digital solutions that improve the quality of life for citizens. Digital technologies such as sensors, IoT, and data analytics can be used to monitor and manage environmental factors such as air quality, water management, and waste management.

Effective Public Administration



The third pillar can be achieved by leveraging digital technologies to improve service delivery and streamline administrative processes. Digital transformation will enable the government to offer more effective and convenient services to citizens, reducing inefficiencies and enhancing transparency and accountability.

Creative Human Capital



The fourth pillar can be fostered through digital education and skills development programs. By investing in digital skills training and promoting a culture of innovation and entrepreneurship, Kuwait can create a highly skilled workforce that is equipped to drive the country's digital transformation forward.

Developed Infrastructure



The fifth pillar will be essential for supporting digital transformation initiatives. By investing in critical digital infrastructure components such as 5G networks, bolstering cybersecurity resilience, and facilitating the adoption of cloud computing, Kuwait can create a robust foundation for its digital economy.

Sustainable Diversified Economy



The sixth pillar be achieved through the digital transformation of key sectors such as finance, logistics, and healthcare. By investing in digital infrastructure and promoting innovation, Kuwait aims to create new economic opportunities and reduce its reliance on oil revenues.

High Quality Healthcare



The seventh pillar can be improved through the use of digital technologies such as telemedicine, electronic health records, and AI-powered diagnostics. Digital transformation can enhance access to healthcare services, improve the quality of care, and reduce costs.



E

From Local to Global: Kuwait's Digital Transformation Journey in Rankings

Improving the digital landscape is critical for countries to compete on a global scale. Embracing digital transformation and adopting cutting-edge technologies is key for governments to improve efficiency, agility, and customer experience. It's not just about keeping up with the latest trends, but also about anticipating future challenges and opportunities. In the digital era, countries must invest in key areas such as digital infrastructure, adoption of emerging technologies, skills development, and innovation to position themselves as leaders and drive sustainable economic growth.

Digital transformation and the adoption of the latest technologies can play a critical role in improving Kuwait's position in the global rankings. By embracing digital technologies, Kuwait can unlock new value for its citizens, businesses, and stakeholders, improving its position in global rankings related to factors such as business competitiveness, ease of doing business, and technological innovation.



Kuwait has been making notable progress in enhancing its digital profile on the global stage. The country has been actively investing in digital infrastructure and technology adoption to improve connectivity and promote digital innovation. Kuwait's global positioning in the digital realm has been steadily advancing, with the government's focus on creating a supportive ecosystem for startups and entrepreneurs. Additionally, Kuwait has been actively developing its e-commerce sector, facilitating online transactions and boosting the digital economy. With its growing digital prowess, Kuwait is poised to leverage technology for economic diversification and increased competitiveness in the global marketplace. Moving forward, we will explore Microsoft's Framework for Success, exploring its key pillars for digital transformation and how Kuwait can effectively leverage each one to accelerate its own digital journey.

The following highlights the fundamental global indicators for digital transformation that define a country's digital landscape and its global positioning. For further information on the global indicators offering insights into Kuwait's digital landscape, please refer to [Appendix](#):

Business Environment and Citizen Services	Data and Intelligence
<ol style="list-style-type: none"> 1. Ease of Doing Business Index (EDBI) – The World Bank 2. Government Effectiveness Index (GEI) – The World Bank 3. E-government Development Index (EDGI) – United Nations 4. Electronic Participation Index (EPI) – United Nations 5. Digital Government Index (DGI) – Organization for Economic Co-operation and Development (OECD) 	<ol style="list-style-type: none"> 1. AI Index – Stanford Institute for Human-Centered Artificial Intelligence (HAI) 2. Open Data Inventory (ODIN) – Open Data Watch
Cybersecurity	Innovation and Digital Skills
<ol style="list-style-type: none"> 1. The Global Cybersecurity Index (GCI) – The International Telecommunication Union (ITU) 	<ol style="list-style-type: none"> 1. Global Knowledge Index (GKI) – United Nations 2. Global Innovation Index (GII) – United Nations/Cornell University/INSEAD 3. Digital Skills Gap Index (DSGI) – The International Telecommunication Union (ITU)
Digital Infrastructure	Sustainability and Environment
<ol style="list-style-type: none"> 1. Network Readiness Index (NRI) – Portulans Institute 2. Government Electronic and Mobile Services (GEMS) – ESCWA 	<ol style="list-style-type: none"> 1. Environmental Performance Index (EPI) – Yale University

F Enabling Digital Transformation in Government: Microsoft's Framework for Success

Microsoft developed the Seven Pillars of Digital Transformation in Government, a framework designed to enable government agencies to digitally transform and modernize their operations:

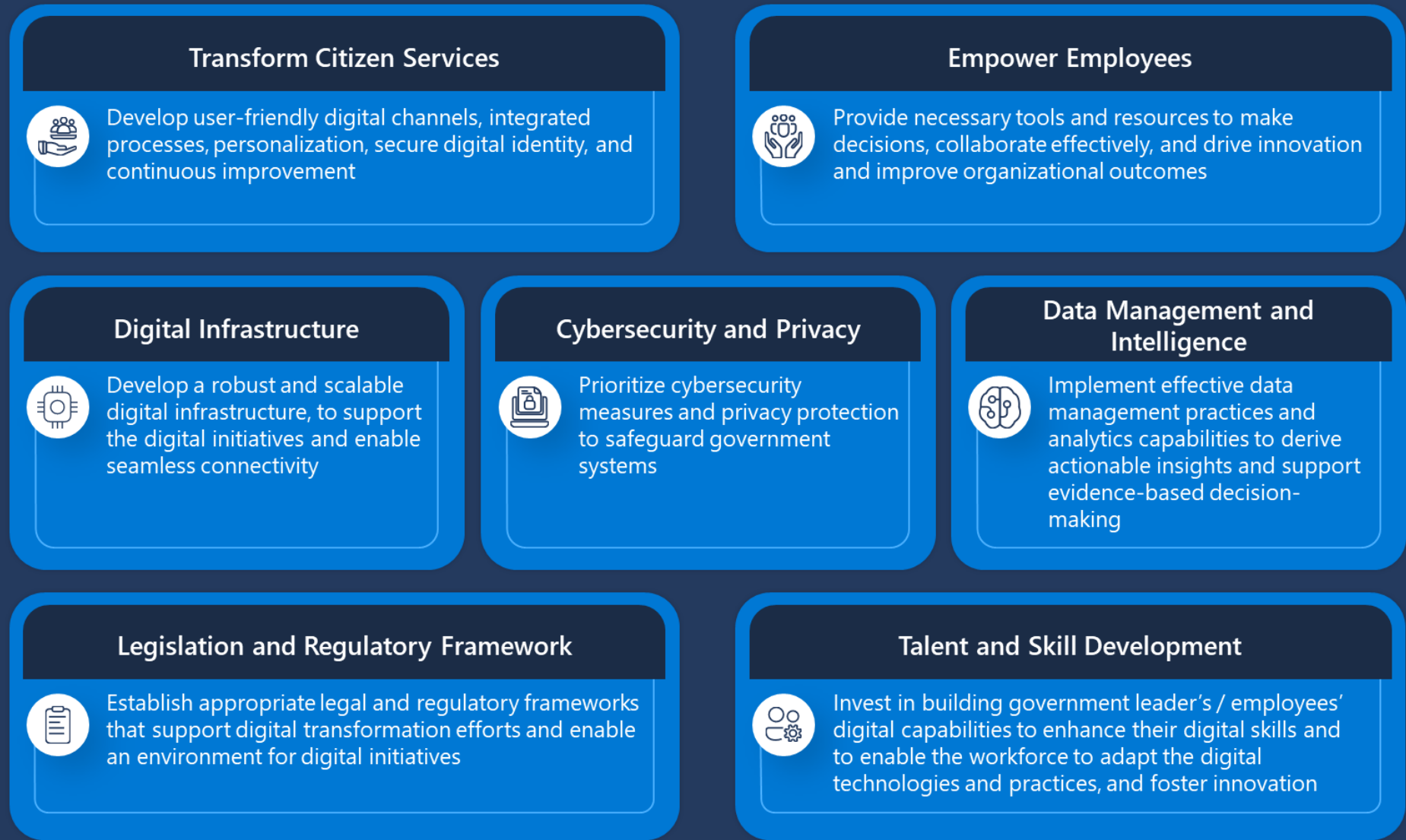


Figure 3: The Seven Pillars of Digital Transformation

The Kuwaiti government can leverage the seven pillars of digital transformation outlined by Microsoft to advance their digital transformation journey in several ways:



Transform Citizen Services

Kuwait has already made positive progress by introducing online platforms, such as the e.gov portal and mobile applications like [Sahel App](#), to enhance digital service delivery to citizens and businesses. Data management is often complex in these types of programs where data is distributed among various departments or agencies and governments often find it challenging to ensure data accuracy and maintain a consistent and wholistic view of the data landscape. To overcome these challenges, an effective solution is often establishing a centralized data warehouse and prioritizing data-driven decision-making. By adopting AI and modern analytics tools and platforms, the government can collect, analyse, and act on real-time data. This data-driven approach will lead to improved efficiency and effectiveness of service delivery across government entities, and ultimately enhance the overall citizen experience.



Empower Employees

While the COVID-19 pandemic has led to an increase in productivity in recent years, initiatives such as the Center of Excellence for Digital Productivity, the Zero Trust Program, and the training programs established in collaboration with Microsoft by the Central Agency for Information Technology (CAIT) have played a pivotal role in driving this improvement. It should continue to be a priority to accelerate adoption and empower the workforce in Kuwait to work effectively and efficiently. Based on our study, the current average productivity score for Microsoft productivity tools within the Kuwait government is at [15%](#), suggesting that there is still a room for improvement in the adoption of collaboration and productivity tools across government entities. This underscores the need to invest in providing leaders and employees with the necessary digital tools and skills to enhance productivity and streamline workflows. Leveraging AI tools, which are revolutionizing the way we work, could further enhance the capabilities of Kuwait's workforce.



Digital Infrastructure

Kuwait has a strong foundation in terms of its advanced internet infrastructure as it holds an impressive [6th](#) position worldwide for offering one of the fastest mobile internet speeds (Mbps) as of 2021 [2] and the innovative mobile-based Digital ID system. However, the reliance on in-house development for approximately 50% of applications presents both advantages and challenges. It is crucial for the government to carefully weigh the costs, timelines, and scalability associated with in-house development and consider leveraging external expertise and pre-built solutions where appropriate. Moreover, government is unable to harness the full spectrum of benefits offered by cloud technologies without increased and more pervasive adoption of cloud by the government sector. By fully embracing cloud solutions, the government can achieve cost savings, scalability, and increased flexibility. A balanced approach that combines in-house development with external collaboration and cloud adoption will propel Kuwait's digital transformation, improve operational efficiency, and enable the government to better adapt to changing business needs and enhance its digital infrastructure.



Cybersecurity and Privacy

Kuwait has been proactive in addressing cybersecurity challenges by establishing a national cybersecurity center since December 2022. However, there's still a pressing need for more comprehensive measures to protect critical government data and infrastructure from cyber threats. The digital landscape of Kuwait poses considerable cybersecurity challenges, notably being identified as the third most attacked country [3] by ransomware in the GCC region, contributing significantly to the overall attacks. Moreover, there's been a notable surge in phishing attempts [4], resulting in a substantial number of attacks [5] in recent quarters, and these have inflicted significant financial losses [6]. In this context, it's imperative for Kuwait to continue its efforts in fortifying its cybersecurity framework to ensure the safety of critical assets and sensitive data.



Legislation and Regulatory Framework

The Communication and Information Technology Regulatory Authority (CITRA)'s issuance of the cyber security framework in 2018 [7] and the cloud first policy [8] and data classification in 2021 [9] reflect the government's commitment to enhancing cybersecurity and promoting the adoption of cloud technologies. Despite these initiatives, adoption of cloud in the government sector has not accelerated as quickly as expected. To facilitate the adoption of cloud technologies and drive digital transformation, we encourage the government to consider enhancement of the regulatory environment to create a comprehensive cloud-enabling framework. This includes enacting laws on various aspects of digital transformation, such as cloud strategy, data classification, and digital identity, as depicted in the whitepaper "[Policy and Procurement: Building Blocks for a Successful Digital Transformation Strategy \[10\]](#)". This will create a secure and enabling environment for digital initiatives, foster trust, and provide clear guidelines for organizations and individuals operating in the digital space.



Data Management and Intelligence

Kuwait's law regarding open data represents a positive step towards enhancing transparency and accessibility of government data. A challenge lies in the fragmented nature of data across government entities, resulting in slower decision-making processes. To address this issue, effective data management and intelligence should be prioritized. One useful reference for guiding this process is the [UK Data Maturity Model \[11\]](#), which provides a framework for assessing and improving data management capabilities within organizations. By implementing robust data governance frameworks that clearly define data ownership, quality standards, and security protocols, Kuwait can ensure consistent and reliable data management practices. Investing in data analytics capabilities and establishing data management practices will enable the government to extract valuable insights from the data it possesses. This data-driven decision-making approach can lead to improved service delivery, evidence-based policymaking, and increased efficiency, transparency, and innovation throughout the public sector. By leveraging data effectively, Kuwait can make more informed decisions and drive accelerated transformation across various government functions.



Talent and Skills Development



Kuwait recognizes the importance of digital skills in today's workforce and is committed to bridging the skills gap among its government employees. Despite facing challenges, such as limited scale of skilling initiatives compared to the overall workforce, Kuwait has made substantial efforts to address the skills gap challenge. CAIT has played a key role in bridging this gap by organizing digital transformation workshops for **76** government leaders and providing AI business school training to **47** government leaders. A significant achievement is the establishment of the Digital Leader Academy, offering four tracks covering Digital Transformation, change management, AI, and cybersecurity training. These efforts showcase Kuwait's dedication to upskilling its workforce and equipping government leaders with the necessary digital competencies for the digital era. Further investments, advancements to the regulatory framework, and alignment with Kuwaitization efforts provide additional opportunity to effectively bridge the skills gap. By doing so, Kuwait can empower its workforce, and enhance its digital transformation journey.

By harnessing the power of the Seven Pillars of Digital Transformation in Government, the Kuwaiti government can propel its digital transformation journey to new heights. This strategic approach will enable the government to not only provide enhanced and streamlined services to its citizens but also achieve significant improvements in operational efficiency and effectiveness. By embracing digital technologies, data-driven decision-making, agile methodologies, citizen-centric design, robust cybersecurity measures, collaboration across entities, and continuous innovation, Kuwait can truly revolutionize its governance and create a future-ready nation.

G Lessons Learned from Leading Countries: Driving Digital Transformation for Success

Denmark, Estonia, Singapore, and the UK have emerged as leaders in digital maturity, offering valuable lessons for other countries. One key lesson is the importance of strong government commitment and leadership in driving digital transformation. These countries have demonstrated a clear vision and strategy, supported by dedicated initiatives and policies that prioritize digital innovation. They have also fostered collaboration between the public and private sectors, academia, and civil society, enabling the co-creation of digital solutions. Another lesson is the focus on building robust digital infrastructure and enabling seamless connectivity, which has facilitated the delivery of efficient and citizen-centric digital services. Additionally, these countries have emphasized the significance of data privacy and security, implementing robust frameworks to protect citizens' information while fostering data-driven decision-making. The success of these leading countries serves as an inspiration for others, highlighting the need for comprehensive digital strategies, collaborative ecosystems, and a citizen-centric approach to drive digital maturity and reap the benefits of a digitally transformed society.

	People and Culture	Governance and rules	Technology and data
 Denmark	<ul style="list-style-type: none"> The 'Agency for Digitalization' was created in 2011 and leads cross-government projects and delivers the Digital Strategy Cross-party political support for driving digital adoption Training and support provided for residents with digital services became mandatory Focuses for digital action in government: <ul style="list-style-type: none"> Trust and transparency Coherence across digital services Large scale application of new technology 	<ul style="list-style-type: none"> Use of online services has been mandatory for citizens since 2014, unless an exemption is applied for and granted All government messages and 'mail' is sent via Digital post A team of lawyers forms the Digital Ready Legislation group who review all new legislation to ensure it allows for digital service delivery Ongoing process for updating existing legislation to allow data sharing provisions for better service delivery, consistent with privacy requirements The 'World class Digital Services Strategy' focuses on joining up service delivery across delivery across departments 	<ul style="list-style-type: none"> Single digital identity, authentication and signature solution used across public and private sector The 'Basic Data Programme', started in 2011 has created registries of both personal data and open data which are brought together through a 'Data Distributor' Testing use of AI in service delivery, with a focus on 'responsible AI' Developing a 'My Overview' page to provide residents with all information held by any government department on them, in one place.

	People and Culture	Governance and rules	Technology and data
 Estonia	<ul style="list-style-type: none"> • e-Estonia and digital government central to the Estonian national brand • Digital training embedded in school curriculums • Proactive international leadership through OECD e-leaders group, Digital Nations, Estonians e-academy 	<ul style="list-style-type: none"> • ‘Tell us once’ requirement in legislation, meaning that government departments must re-use data already held • AI task Force created in 2019 to accelerate uptake of AI across public and private sectors • Legislation allows all government services to be fully completed online (with the exception of marriage and house purchase) 	<ul style="list-style-type: none"> • Cross-government data sharing platform at the heart of integrated service delivery • Single digital identity allocated at birth and used across public and private sectors • 80 projects using AI to improve delivery of services for citizens and businesses • Large investment and international co-operation in cyber security (ranked third in world) • Piloted ‘data embassy’ approach to secure Estonian citizens data outside of national borders
 Singapore	<ul style="list-style-type: none"> • GovTech Agency created in 2016 to upskill public service and lead technology development for government • Established the Digital Academy to provide tech focused training for the public service. Developed in partnership with industry players including Microsoft and includes data science, apps development, product management 	<ul style="list-style-type: none"> • The GovTech Agency led innovative partnership models for procurement including opportunities for vendors to co-develop solutions with the government and hosting an open innovation platform to lower the barriers to entry • 95% of service transactions with the Singapore government are digital from end to end. Goal for almost 100% of transactions to be carried out digitally by 2023 	<ul style="list-style-type: none"> • As part of the 2018 Smart Nation strategy, set KPIs migrate at least 70% of eligible government systems to the commercial cloud by 2023 • Collaborating with private sector on creation of data exchanges. In 2020 launched the Singapore Financial Data Exchange with seven banks, to allow a person to consolidate their financial from various banks and the government and view this on single platform • New ‘National Digital Identity’ introduced in 2017 brings together previously separate identity and authentication apps across public and private sectors, and is now used by 97% of the population


	People and Culture	Governance and rules	Technology and data
 UK	<ul style="list-style-type: none"> • Digital champions at most senior level in each department • Digital Academy established to train government employees with digital skills • 'Exemplar services' identified in each department to showcase transformation and embed new ways of working • Recruited external talent to supplement and lead civil service change 	<ul style="list-style-type: none"> • 'Digital Service Standard' applied to new government services and enforced through control of Gov.UK • All government departments mandated to close down existing websites and transition all content to Gov.in • Government Digital Service given power to approve department IT spend • Data classification reviewed to simplify structure and allow 90% of government material to use public cloud • Introduction of consolidated and simplified procurement processes through 'Digital Marketplace' 	<ul style="list-style-type: none"> • Central 'Government Digital Service' created with powers to direct change and develop and run GOV.UK • Cloud First policy set in 2013 and applied to all government tech spending • 'Technology Code of Practice' set and applied to all government IT spend. Includes requirements to: <ul style="list-style-type: none"> – Share, reuse and collaborate – Make better use of data – Make privacy integral – Use cloud first

Table 1: Lessons Learned from Leading Countries



Call to Action: Recommendations for Driving Digital Transformation in Kuwait

To continue to advance its technology goals and global positioning, it is important for Kuwait to maintain its prioritization of and investment in digital transformation initiatives. This includes adopting the latest technologies, such as AI, cloud computing, and big data analytics, and integrating them across all aspects of government and business operations. Additionally, it should continue to foster a digital-first mindset, where all decisions and actions are made with technology in mind. This can be achieved by investing in developing human capital, partnering with technology companies and startups, and creating a supportive regulatory environment for digital innovation. Improvement of digital infrastructure remains important, including expanding high-speed internet access and improving cybersecurity measures to ensure the safety and security of digital data. By leveraging digital transformation and technology, Kuwait can better position itself as a leader in the region and on the global stage, attracting investment, talent, and strategic partnerships.

Success in the digital age requires a sense of urgency and the willingness to act now. We must be proactive, adaptable, and embrace change to stay relevant and ready for the future. The time to innovate, invest in new technologies, and upskill our workforce is now. By taking decisive action today, the governments will be positioned to lead in the digital era.

01

Continue to promote executive commitment

To ensure the success of digital transformation, it should continue to be prioritized on the national agenda and executive commitment from top-level executives should continue to be fostered and promoted. It is also important to continue to grant executives the necessary authority and resources to make informed and actionable decisions and drive transformative initiatives forward.

02

Designate and empower a dedicated entity

Empowering a dedicated entity to drive the digital transformation journey of the government will allow for a unified and structured approach that will enable more impactful outcomes. This entity should have the authority to coordinate and align digital transformation initiatives across various government entities and develop a comprehensive roadmap with well-defined timelines, budgets, and targets to guide Kuwait's digital transformation goals. By taking ownership of the digital strategy, this entity will be able to foster collaboration, streamline efforts, and ensure a cohesive approach to digital transformation. There is also an opportunity for it to prioritize the incubation of startups and innovation by creating an ecosystem that supports their growth and development. By nurturing startups, Kuwait can harness their innovative potential and leverage their solutions to drive digital transformation in various sectors.

Setting clear objectives and establishing a roadmap will enable the government to effectively track progress, allocate resources, ensure accountability in driving the digital transformation agenda, as well as, identify areas for improvement to make necessary adjustments and remain relevant and competitive in the rapidly changing global landscape.

03

Continue to develop an enabling regulatory framework and economic environment

An enabling regulatory framework and economic environment is important to facilitate digital transformation, including in the following areas:

- a. **Budget Allocation and Procurement:** Embrace a flexible approach to budget allocation and procurement in the public sector, aligning with industry practices and ensuring optimal resource allocation.
- b. **Workforce Reskilling and Roles Update:** Incentivize workforce reskilling and upskilling programs in the public sector. This will ensure that employees have the necessary skills to adapt to the digital era. Additionally, updating roles within the public sector to align with emerging technologies and digital processes will enhance efficiency and effectiveness.
- c. **Innovation and Sustainability in Procurement:** Incorporate new principles in laws and regulations that recognize and facilitate innovation and sustainability in government procurement processes. This will promote the adoption of innovative solutions and sustainable practices, driving digital transformation in the procurement domain.
- d. **Data Classification and Cloud-First Strategy:** Establish clear data classification guidelines aligned with a cloud-first strategy. This will ensure data security and leverage the advantages of cloud infrastructure.

04

Continue to invest in establishing a robust digital infrastructure

Potential areas of prioritization include:

- a. Development of a comprehensive plan that addresses the modernization of legacy core systems and goes beyond the Sahel App. This plan should prioritize the adoption of technologies beyond in-house developed systems to drive the modernization and streamlining of government operations.
- b. Prioritization of cybersecurity by implementing robust security measures, conducting regular risk assessments, and adopting industry best practices to safeguard government assets and sensitive data. Preserving citizen trust by protecting personal information and privacy is crucial.
- c. Implementation of robust data governance frameworks and data management practices to ensure effective collection, storage, and utilization of data. A positive step forward will be to establish data-sharing agreements and promote data interoperability across government entities to facilitate better decision-making, evidence-based policies, and improved service delivery. Investment in data analytics capabilities to derive valuable insights and foster innovation is also important.

05

Harness the potential of AI

Embrace the transformative potential of artificial intelligence (AI) as we stand at the precipice of a new technological revolution. AI offers the means to revolutionize efficiency, agility, and value across all sectors. Leveraging the advanced AI solutions is paramount in leading this technological revolution. These AI-driven solutions, encompassing automation, predictive analytics, and personalized services, hold the power to optimize processes, elevate decision-making, and deliver tailored experiences to citizens. It's imperative to prioritize AI ethics and transparency for responsible and accountable deployments of AI technologies [12].

Discover how Microsoft's AI Solutions can empower you to spearhead this transformative journey, ensuring cutting-edge, responsible, and impactful solutions [Artificial Intelligence Solutions | Microsoft AI](#). Additionally, explore the unparalleled capabilities of Microsoft's Cloud Solutions, providing the most trusted AI platform to revolutionize and elevate your business to new heights through integrated cloud technology [Integrated Cloud Platform for Cloud Solutions | Microsoft Cloud](#).

06

Invest in change management and training

Given the pace at which technology is developing and the immense opportunity it creates, governments' ability to embrace change and leverage technology for its advancement will be a key differentiator. Investment in and development of a comprehensive change management strategy will help enable the transition to the digital era. This strategy may include clear communication, stakeholder engagement, and robust training programs to equip government employees with the necessary skills and knowledge to effectively utilize modernized systems. For further support, it will be helpful to foster a culture of continuous learning and provide ongoing support to ensure a smooth adoption and integration of digital technologies. By investing in change management and training, the government can enhance employee readiness, minimize resistance to change, and maximize the benefits of the digital transformation journey.

In the AI era, digital transformation is a critical necessity in the global economy, and Kuwait is actively embracing this paradigm shift. With the ambitious Kuwait Vision 2035 and Microsoft's Seven Pillars of Digital Transformation as guiding principles, Kuwait is well-positioned to capitalize on the latest technologies and enhance its global competitiveness. Through the seamless integration of digital technologies across all sectors, Kuwait can unlock higher levels of operational efficiency, agility, and create additional value for its citizens. While challenges lie ahead, Kuwait has the potential to establish itself as a frontrunner by embracing the opportunities presented by digital transformation, thus ensuring its continued success in the digital age.

SPOTLIGHT

“There has been a rise in countries adopting cloud-first policies and strategies to develop and implement digital transformation within government departments and broader public sector organizations. In our paper, [Building Blocks for Successful Digital Transformation Strategy \[22\]](#), we observe the importance of a principles-based digital strategy and policy approach in bringing about, as a starting point, meaningful and measurable digital transformation. In the paper, we set out eight building blocks for developing and implementing a successful digital strategy, a key element to such success being how governments procure technologies such as cloud computing. The migration to cloud technology is an opportunity for public sector organizations to enjoy the benefits of digitalization such as streamlining processes, improving how data is managed and kept secure and enabling the public sector to innovate through procuring the latest in technology—all of which may lead to the improved delivery of public services.”

About Author



Yasmine Rifai

Chief Technology Officer – Public Sector

Microsoft

Yasmine is Microsoft’s Chief Technology Officer for the Public Sector in Kuwait, leveraging the extensive background of her experience of over 13 years in the technology sector, and near a decade in the Kuwaiti public sector to the forefront. Her journey began as a Software Engineer and Quality Assurance lead, where she gained hands-on expertise in technology. Following this foundational experience, she transitioned into consulting, honing her skills in understanding client needs, identifying strategic solutions, and facilitating digital transformation. Today, in her capacity as CTO for the public sector, she drives innovation and lead digital transformation within the public sector. Working closely with government executives, CIOs and business leaders, Yasmine develops strategies and aligns technology solutions to address unique challenges and goals, empowering government entities to do more with less and to better serve their citizens. Yasmine is also an author, speaker, diversity and inclusion advocate, Co-Chair for Women at Microsoft in the Middle East and a proponent of sustainability and accessibility.

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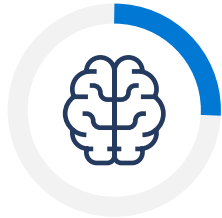


Who to Contact from Microsoft

The team in Kuwait that can empower your organization to achieve more: KuwaitPS@microsoft.com

Appendix: Kuwait Digital Landscape: Global Indicators for Digital Transformation

Global Knowledge Index (GKI) United Nations



47/132

Rating 2022

- Pre-university education (15%)
- Technical education and vocational training (15%)
- Higher education (15%)
- Research, development and innovation (15%)
- ICT (15%)
- Economy (15%)
- General enabling environments (10%)

Index 1: Global Knowledge Index 2022 [13]

E-government Development Index (EDGI) United Nations



61/193

Rating 2022

The EDGI is a weighted average of three normalized scores on three most important dimensions of e-government:

- Scope and quality of online services (Online Service Index, OSI)
- Development status of telecommunication infrastructure (Telecommunication Infrastructure Index, TII)

Inherent human capital (Human Capital Index, HCI)

Index 2: E-government Development Index (EDGI) 2022 [14]

Electronic Participation Index (EPI)
United Nations

Global Innovation Index (GII)
United Nations/Cornell University/INSEAD



18/193

Rating 2020

- **First: Sharing electronic information**
- **Second: Electronic consultation**
- **Third: Electronic decision-making**

Index 3: Electronic Participation Index (EPI) Report 2020 [15]



72/132

Rating 2021

- **Institutions.**
- **Human capital and research.**
- **Infrastructure.**
- **The evolution of the market.**
- **The evolution of the business environment.**
- **Knowledge and technical outputs.**
- **Creative outputs.**

Index 4: Global Innovation Index (GII) 2021 [16]

Government Effectiveness Index (GEI) The World Bank



91/192

Rating 2021

The average for 2020 based on 192 countries was -0.03 points. The highest value was in Singapore: 2.34 points and the lowest value was in Yemen: -2.31 points. The indicator is available from 1996 to 2020.

Kuwait Score: -0.16

-2.5 weak

2.5 strong

Index 5: Government Effectiveness Index (GEI) Report 2021 [17]

Ease of Doing Business Index (EDBI) The World Bank



83/190

Rating 2019

The Ease of Doing Business Index (EDBI) assesses the regulatory environment and ease of doing business in different countries. It measures various factors such as the ease of starting a business, obtaining permits, accessing credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency.

Index 6: EDBI Report 2019 [18]

The Digital Skills Gap Index (DSGI)
International Telecommunication Union (ITU)

Digital Government Index (DGI)
Organization for Economic
Co-operation and Development (OECD)



67/134

Rating 2021



N/A

Rating 2019

The DSGI 2021 reveals that most economies are failing to bridge the digital skills divide, the gap between the demand for digital skills—for a given level of industrial development—and the capacity of economies' policymakers to respond to the talent deficit, and education institutions and corporate trainers to deliver the needed skills.

- Digital design
- Data and information are the mainstay
- Integrated and interconnected platforms based on approved standards
- Making information available to everyone
- Based on user needs
- Outlook for service availability

Index 7: Overall DSGI Global Rankings Report 2021 [19]

Index 8: OECD Report 2019 [20]

Government Electronic and Mobile Services (GEMS)
ESCWA

Network Readiness Index (NRI)
Portulans Institute

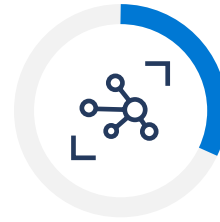


6/15

Rating 2020

- **First: Service availability and development (40%)**
- **Second: Use and satisfaction of the service (40%)**
- **Third: Public access (20%)**

Index 9: ESCWA GEMS 2020 [21]



63/131

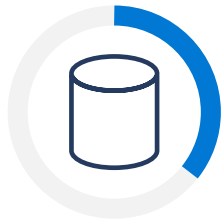
Rating 2022

- **First: Technology "Access, Content, Future Technologies"**
- **Second: People "Individuals, Businesses, Governments"**
- **Third: Governance "Trust, Organization, Inclusiveness"**
- **Fourth: Impact "Economy, Quality of Life, Contribution of the Sustainable Development Goals"**

Index 10: Network Readiness Index (NRI) 2022 [22]

Open Data Inventory (ODIN)
Open Data Watch

Global Cybersecurity Index (GCI)
International Telecommunication Union (ITU)



106/187

Rating 2020



65/194

Rating 2020

The Open Data Inventory (ODIN) measures how complete a country's statistical offerings are and whether their data meet international standards of openness.

Develop a measurement through which innovation in internet-based technology and activities can continue safely and securely.

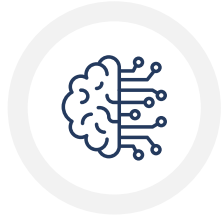
- Legal measures
- Technical measures
- Organizational measures
- Capacity building
- Cooperation measures

Index 11: Open Data Inventory (ODIN) Rankings [23]

Index 12: Global Cybersecurity Index (GCI) Report 2020 [24]

AI Index

Stanford Institute for Human-Centered
Artificial Intelligence (HAI)



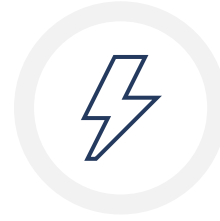
Rating 2023

- **Research:** Interdisciplinary work is key to solving society's most complex problems.
- **Policy:** AI governance and appropriate uses
- **Education:** Programs for current and future leaders

Index 13: AI Index Report 2023 – Artificial Intelligence Index (stanford.edu) [25]

Environmental Performance Index (EPI)

Yale University



87/180

Rating 2020

- **Climate Change**
- **Air Quality**
- **Sanitation & Drinking Water**
- **Heavy Metals**
- **Waste Management**
- **Biodiversity & Habitat**
- **Ecosystem Services**
- **Fisheries**
- **Acid Rain**
- **Agriculture**
- **Water Resources**

Index 14: The 2022 Environmental Performance Index (EPI) [26]

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