

An Analysis of the Council of Arab Economic Unity's *Arab Digital Economy Strategy*

Edited by David Eaves
Lecturer, Harvard Kennedy School of Government

December 2019



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This research paper is one in a series published by the Ash Center for Democratic Governance and Innovation at Harvard University's John F. Kennedy School of Government. The views expressed in the Ash Center Policy Briefs Series are those of the author(s) and do not necessarily reflect those of the John F. Kennedy School of Government or of Harvard University. The papers in this series are intended to elicit feedback and to encourage debate on important public policy challenges.

ACKNOWLEDGEMENTS

Financial support for this paper was provided by the Council of Arab Economic Unity (CAEU) of the League of Arab States. The CAEU was not involved in the research required to prepare this report and had no role in shaping the findings presented.

METHODOLOGY

David Eaves, Lecturer at the Harvard Kennedy School of Government (HKS), was engaged by the Council of Arab Economic Unity (CAEU) of the League of Arab States to conduct a critical review of the CAEU's *Arab Digital Economy Strategy*. Experts from a variety of relevant backgrounds and profiles were selected from across Harvard schools and knowledge centers to participate in the review. Expert feedback was collected between May and July 2019 and compiled by David Eaves, Chair of digitalHKS. Reviewer biographies are available in the final sections of this report.

In addition, interviews were held with representatives from a subset of Arab League countries to better understand the readiness of member countries to adopt programs proposed in the *Arab Digital Economy Strategy*, as well as surface any additional ideas or concerns related to digital and ICT strategic direction.

The report is structured to highlight key strengths and weaknesses of the plan that emerged through expert evaluations of the *Digital Economy Strategy*, including considerations for the CAEU in the areas of technology policy design, economic growth and innovation, human rights, and governance. The report provides the authors of the *Digital Economy Strategy* guidance for where to focus further attention in subsequent rounds of strategic development.

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ANALYSIS OF THE *ARAB DIGITAL ECONOMY STRATEGY*

The Council of Arab Economic Unity should be commended for endeavoring to present a comprehensive digital strategy for the Arab region. While some countries have individually launched digital economy roadmaps in recent years, the *Arab Digital Economy Strategy* offers a new opportunity to consider the benefits and challenges of digital cooperation across countries. Governments of Arab countries should embrace this *Strategy* in several ways. First, as a “menu” of digital initiatives to consider as levers for digital inclusion and economic growth. Second, as a means to seek out opportunities for collaboration and knowledge-sharing between Arab League countries. Third, as an aid in weighing the trade-offs between various digital pursuits, for example between investing in broader internet access versus investing in wider digitization of government services.

To maximize the utility of this feedback report to the CAEU, the following sections will focus on areas of concern, and will explore some potential resolutions to these challenges.

The *Strategy* should more explicitly define the values that guide digital transformations and the introduction of new technologies.

Without a clear acknowledgement of the social, political, and economic values that drive the Arab League’s digital efforts, there is a significant risk that any digital strategy encourages the introduction of *technologies in search of a problem, instead of beginning with a problem and finding the right solution*. In such a nascent field as digital transformations, beginning the strategic process with a definition of driving values or principles will reduce the likelihood of missteps in areas where best practices and appropriate boundaries are yet undefined.

The Arab League or individual national governments should not refrain from this strategic exercise for fear that they will get it “wrong.” As societies learn more about the effects—both positive and negative—of new technologies, values can be adjusted, and strategic priorities amended. In our view, it is better to establish a set of guiding principles early and update them over time than to leave the environment unguided

altogether, allowing either public or private actors to develop new digital approaches and technologies free of any boundaries at all.

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In fact, the *Strategy* does introduce a set of Guiding Principles which apply to each of the pillars in the framework. These principles are well-considered and should be given more prominence in the strategy. We recommend two specific actions be bring these principles to the forefront of the strategic discussion.

1. **Summarize common values that span strategic pillars.** In addition to presenting Guiding Principles for each individual strategy pillar, consider the values that led the Arab League to prioritize these principles in the first place. For example, a common value of “Inclusion in Digital Access and Economic Growth” could summarize the motivation behind principles to expand internet services and improve the quality of life for citizens. A common value of “Supporting Entrepreneurship and Innovation” could summarize the motivation behind principles of making public data open and creating an innovation ecosystem.
2. **Introduce common values earlier in the *Strategy*.** Including a single set of Common Values in Section 2 with the strategic vision, for example, would demonstrate to the outside reader the values that the Arab League is prioritizing with the publication of this strategic framework.

The *Strategy* should include an end goal that spans Arab countries—is the goal *more efficient government, or better government?*

At the pan-Arab regional level, the *Strategy* should define the specific problems the CAEU is trying to solve by promoting increased digital and technology investment by national governments. In the current version, the justification for launching a

broad-based digital transformation within governments of Arab League countries is an assertion that a supported digital economy positively contributes to innovation and growth in countries where digital capabilities are relatively advanced (Section 1).

This approach would benefit from the clear definition of the problem that digital technology is meant to solve. Aiming simply for “economic growth” is, in and of itself, not an adequate goal to justify significant investment in government digital transformations. For example, the strategic policy response would differ considerably between a problem of weak innovation versus a problem of government inefficiency. In the first case of weak innovation, the strategic response might center around building a favorable regulatory environment that allows entrepreneurs to experiment, fail, innovate, and scale. In contrast, the strategic response to government inefficiency might prioritize the design of a new performance management model within government to encourage new ideas and approaches to emerge and succeed. Different problems require tailored digital solutions. As it stands, the problem the *Strategy* lays out is broad enough that it risks member countries *investing in digital for the sake of digital* while neglecting to prioritize investments that would tackle the most pressing social and economic problems they face as a country.

On the topic of innovation, it is commonly argued that a lack of innovation stems from people being impeded by challenging or problematic rules. A common policy response is to redesign rules to make these rules more efficient to follow. While beneficial, this response does not deal with the root problem of why some burdensome regulations exist in the first place, nor does it fully eliminate the obstacle they impose on potential innovators in the economy. Such a policy response makes it easier to comply with existing rules, but does not necessarily make innovation itself any easier. Instead, national governments looking to encourage innovative behaviour should look to how to reduce barriers for potential innovators.

Further, the CAEU should consider whether the end goal of the *Strategy* is to create more **efficient** government or **better** government. Technology is a tool that, with the wrong governance structure around it, has the potential to make government more oppressive and restrict peoples’ ability to live meaningful and fulfilling lives. A goal of efficiency, for example, could allow all the negative outcomes of a particular policy to occur more cheaply and more quickly.

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Establishing the right goals is important, and guided by the right values and surrounded by the right governance structure, technology can enrich the lives of citizens. Recognizing trust as a key value guiding digital initiatives is an important step to establishing the conditions for **better** government. Digital and technology initiatives should be evaluated against the likelihood that they will either build or erode trust between citizens and their governments. If users lack trust in the digital tools made available to them or the governance and legal structures in which these tools exist, it is unlikely that a digital transformation will succeed in spurring economic growth and innovation.

The *Strategy* does little to address potential threats to human rights and citizen well-being inherent in new technologies.

The *Strategy* makes many broad claims about the potential economic and social benefits of new technology for Arab countries. It is, in contrast, relatively silent on the risks to individual freedom, self-determination, human rights, nations of public trust, and human security that stem from the introduction of new technologies across both business and government. The potential gains from technology on economic productivity are significant, without a doubt. But the development and introduction of new technologies present serious risks that must also be recognized and addressed.

The *Arab Digital Economy Strategy* does little to acknowledge and address the many threats posed by digital transformation in government and the adoption of new, innovative technological tools. The importance of this discussion is particularly acute today, as governments, businesses, and citizens around the world struggle to find an appropriate balance in which the benefits from technological progress can be embraced without making significant sacrifices to personal privacy. We direct the CAEU's attention to what we believe are the four most significant risks that must be considered before any pan-Arab digital strategy may be finalized.

1. **Social media and hate speech.** The *Strategy* asserts that “social media, in turn, may overcome the traditional barriers to citizen collective action. Many empirical studies showed that cell phones and the use of Twitter and Facebook supported protests during the Arab Spring . . .” (page 17). While true, this statement is remarkable in its isolation—the *Strategy* does not acknowledge the potential for hate speech, fake news, and citizen violence from the use of social media platforms such as Twitter, Facebook, and WhatsApp. One need not look further than [Myanmar](#) or [Sri Lanka](#) for examples of how social media platforms were used to incite violence against minority groups. This represents a complex and emerging challenge to which there are no immediate or obvious solutions. This said, the *Strategy* would be wise to acknowledge this challenge and allocate resources to support research into ways that problems can be limited within the region.
2. **Invasive citizen surveillance.** The *Strategy* introduces eight examples of emerging innovations upon which “the digital economy is based” (page 31). Among these new technologies there is scope for the organization administering the technology—whether a government or private enterprise—to gather large amounts of data on citizens. While the CAEU has acknowledged the potential benefits from this data collection, there are many threats and questions to citizen privacy that emerge as well. The *Strategy* would benefit from an in-depth exploration of these threats, as well as the inclusion of guidance for national governments around how to mitigate against these key threats. Specifically, recommendations for the implementation of a legal framework to protect citizens’ privacy would be a worthwhile addition. We urge the CAEU to adopt an advisory position on behalf of the Arab League member countries to complement the adoption of any emerging technology that poses a threat to citizen privacy.

Regarding the Internet of Things, for example, the *Strategy* asserts: “The IoT can provide rich information regarding individuals’ behaviors; thereby, the resulting data can be used for increased tailoring of products, risk profiling and pricing” (page 31). Without a clear legal framework, this “rich information” could be leveraged for nefarious purposes, such as predatory lending or marketing, location tracking, or surveillance without consent.

Biometric technologies offer another example of how well-intentioned innovations may be used to achieve nefarious goals if introduced without an adequate legal and governance structure to guide use. The *Strategy* notes that “biometric techniques that are now used for verification include fingerprint scanning, voice authentication, face recognition, iris scanning, and gait recognition” (page 32). Any recommendation that the Arab League countries adopt these technologies must be accompanied by a discussion of the associated risks to citizen privacy and, in particular, minority rights. China’s rising use of facial recognition software to monitor the movements of ethnic minorities within the country is one alarming example of how these technologies may be used to abuse human rights.

3. **Workforce disruption.** Appropriately, the *Strategy* recognizes that digitization leads to job destruction through the automation and robotisation of tasks, as well as contributing to “job change” and “job shift” (page 14). While acknowledging that digitization could lead to higher unemployment and income inequality, the report concludes that “digitization has significant positive socio-economic effects” and that “these positive impacts usually outweigh its negative consequences” (page 17).

The *Strategy* would benefit from more exploration into the costs of workforce disruption from the introduction of new technologies. Any digital strategy proposing the development and adoption of disruptive technologies must also include guidelines to support worker transitions away from industries experiencing job reductions and toward industries experiencing job growth. The CAEU may look to [Canada’s Future Skills Centre](#) or [Singapore’s SkillsFuture Credit](#) for examples of how governments have begun to tackle retraining at a national scale. In the business community, [AT&T’s Future Ready program](#) offers a large-scale example of how companies are transitioning their own workforces to meet emerging talent needs from digitization.

4. **Digital rights for women and resident workers.** There is much focus in the *Strategy* on building digital **skills** among citizens—strategic objective 4 under the Digital Foundations dimension is a key example (page 81). This focus is warranted and should indeed be prioritized to ensure citizens build the literacy required to thrive in an environment of rapid digitization. We recommend that the CAEU devote much

more attention to strengthening digital *rights* as well, in particular among women, minority groups, and where relevant, resident worker populations.

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The report asserts that “everyone, including vulnerable and minority groups, will benefit from a higher standard of living” from the expansion of digital services (page 107). For such broad claims to be credible, they must be accompanied by an assurance that the digital tools and technology being introduced into a society are equally accessible by all groups, including women and minority groups. This responsibility on the part of national governments goes beyond training citizens in ICT skills. The government’s responsibility—as both implementer and regulator of digital services and new technologies—must include the definition of fundamental digital rights for its citizenry. Digital rights might include, at the very least, unrestricted and equal access to communication networks, digital banking, and digital government services, as well as protection against individual privacy infringements.

Supplement anecdotal case studies by using the “impact cycle” to present examples of successful digital initiatives around the globe.

Perhaps especially so in public policy-making, it is difficult to prove a causal relationship between any policy change and its desired outcome. Many of the initiatives proposed in this *Strategy* are yet untried in the Arab region or around the world, and where they have been tried, studies of their causal impact are few and far between.

To make the case for digital transformation without causal evidence of its success, the authors should consider highlighting some natural experiments and case studies from within Arab League countries that demonstrate the potential impacts, economic and otherwise, from ongoing digital initiatives. These case studies can be presented using the “impact cycle” framework common in the field of public policy (see graphic below).



First, outline inputs that contributed to the policy change, for example new hires or financial support. Second, consider activities undertaken to complete the initiative, for example citizen training sessions or new government processes. Third, explore the observed outputs from the initiative, for example the number of citizen training sessions conducted or the efficiency rate of government workers at completing the new process. Fourth, consider outcomes from the initiative, for example increased take-up of a digital service among citizens. Finally, evaluate whether the desired impact of the initiative was achieved.

While this approach would of course not prove causal impact of the highlighted initiative, following the logical impact sequence of an individual initiative would help the reader to understand the importance of the digital proposals presented in the *Strategy*. The addition of these real-life examples of success would strengthen the *Strategy*'s case for “why digital” and “why now.” As it stands, the *Strategy* includes broad statements about the link between technology and economic growth that leave the critical reader wanting more tangible examples of how investment in digital transformation can make life better for citizens and work more efficient for governments.

Because the long-term impacts—both economic and otherwise—of digital transformations are yet unproven, the work of [Simon Wardley](#), a researcher at the Leading Edge Forum, is a useful lens to consider as the CAEU further develops its strategy, and as national governments make important prioritization decisions between the many digital options available. Wardley developed a helpful tool to help us think about how technologies, we well as ideas more broadly, mature over time. A technological practice evolves through stages, beginning as “novel,” developing into an “emerging” practice, then a “good” practice, and finally maturing into a “best” practice. As [Wardley describes it](#),

In any industrial ecosystem, novel and new things constantly appear as a consequence of the desire for companies and individuals to gain an advantage over others. Those things that are useful will be copied. They will spread until the once novel and new becomes commonplace.

The initiatives proposed throughout the *Strategy* can predominantly be categorized as “novel” or “emergent” as successful precedent is limited, even in the most digitally

advanced economies. These ideas therefore carry significant risk, especially for national governments determining where to allocate finite resources among many competing social and economic priorities. The takeaways for governments from the Wardley model are twofold. First, governments should focus investments toward initiatives centered around more mature digital ideas to reduce some of the risk. Second, governments should consider making strategic investments into learning more about ideas that are “novel” or “emergent” before going forward with full-scale implementation. This approach is often referred to as an “agile” approach, in which much attention is devoted to testing an idea at a small scale and continuously iterating to reduce the risk of failure. If these measures are neglected, it could result in the expected positive outcomes failing to materialize or, more worryingly, the materialization of unexpected negative outcomes.

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Comparisons with the EU’s Single Digital Market are well-received and an appropriate benchmark for the Arab League to be using in its consideration of the potential impact of a more integrated Arab digital economy. This comparison can be leveraged further to gain more empirical insights about the impact of the EU’s regional digital investments as learnings for the member countries of the Arab League. Rather than appeal to anecdotal case studies, a collection of metrics from the digital sphere might be educational. For example, how many unicorns (companies valued over \$1 billion) have been created in Europe since the creation of the Single Digital Market? How does this compare to other digital economies around the world, such as the US? Have there been fewer data breaches in Europe since the creation of the Single Digital Market? These types of empirical questions may lead the Arab League toward more refined digital interventions than could be reached from case studies alone.

Finally, as opposed to using only international examples, it would lend more regional credibility to the *Strategy* to highlight success stories from within Arab League countries. For example, Morocco’s digital ID initiative, or Bahrain’s burgeoning fintech industry offer ample opportunity for case studies.

Country clusters fall short of highlighting other important axes that differentiate countries and determine the appropriate digital response.

Clustering countries into three groups based on their “digital readiness” is an effective and necessary way to tailor the *Strategy* across different countries. This approach has the benefit of clearly marking the path forward for countries at lower levels of digital readiness. Cluster 1 countries have the advantage of longer-range visibility into which digital programs will gain importance as they make more digital progress. This is a good thing. Similarly, Cluster 3 countries already have experience undertaking many of the digital initiatives laid out in the *Strategy*, and are well-positioned to support Cluster 1 and 2 countries as they implement these same programs in their own countries. There is significant value to be captured in encouraging these collaborations across clusters.

This said, the clustering approach over-simplifies the differences between Arab countries in some areas. In an ideal world, a country-level digital diagnostic would be conducted for each Arab League country to establish the “embedded base” for each country. Then, a tailored suite of digital initiatives could be recommended for each individual country based on an understanding of each country’s digital starting point. We may expect that each national government will do this work for their own country once the *Strategy* is released, and adopt the initiatives that suit their particular situation.

Without conducting a digital diagnostic for each individual country, there is work that the CAEU can do to make the *Strategy* more useful across axes other than “digital readiness.” For example, digital access is a much greater concern for countries with a larger share of their population residing in rural areas (e.g., Morocco) than for more urban countries (e.g., Bahrain). As a result, appropriate recommendations for network infrastructure development will differ for urban versus rural countries. We recommend that the *Strategy* consider three additional axes and make recommendations for the types of programs that should be prioritized in each case.

1. **Urban versus rural.** What challenges are unique to countries with a larger share of their population residing in rural areas? How does a regional plan account for significant varying levels of smartphone ownership and access to the internet? What kind of digital programs should be prioritized to resolve these challenges?

2. **Gender equality.** In what types of digital access is the gender gap particularly wide (e.g., internet or mobile, e-banking, government services)? What specific recommendations and initiatives should be adopted by countries to reduce this gender gap?
3. **Innovation environment.** What challenges are faced by countries with a stagnant business sector? What specific recommendations should be adopted by countries to make their business environment more conducive to innovation? How do these differ for countries with an already-strong innovation landscape?

The *Strategy* would benefit from more consideration of the actions required by national governments to successfully spur innovation as a lever of economic growth. It is certainly true that innovation is a lever for economic growth, and that environments that encourage entrepreneurship and healthy competition have demonstrated attractive levels of new business creation, new product introductions, and economic growth. This said, it must be recognized that an economy is unlikely to reach its entrepreneurial potential if “innovation” is centrally directed or “disruption” is planned. More emphasis is needed in the *Strategy* on providing the enabling platforms that allow innovation to occur undirected, as a natural output from private industry’s efforts to remain competitive, as well as from the public sector’s efforts to remain efficient and deliver a superior citizen experience. These enabling platforms include the legal, regulatory, and political foundations for open inquiry and research, business creation, and new product development and commercialization. The CAEU does mention the need for these foundations in the *Strategy*:

It requires a guiding innovation agency or organization and flexible approaches that deliberately understand and set policies and programmes fostering digital innovation and entrepreneurship. (page 88)

The suggestion of a “guiding innovation agency” is well-received. However, digitization is by nature less centralization, not more. The more new bottlenecks are created, the less innovation will be spurred. It will be important to ensure that any regional agency created does not try to direct the occurrence of innovation (thereby creating

new requirements for innovators to meet) but is rather available as a resource to help innovating businesses and organizations navigate the legal and regulatory process within their home country and across the region overall.

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In addition, the *Strategy* would benefit from a recognition of the potential issues that arise in an economy centered around intense entrepreneurial activity and innovation. Particularly pertinent on this topic are the writings of [Carlota Perez](#), a scholar specializing in technology and economic history. In her influential book, *Technological Revolutions and Financial Capital: the Dynamics of Bubbles and Golden Ages*, Perez maps the evolution of new technological developments. She notes that as a new technology becomes “mature,” the inventors are able to accrue large financial benefits from the innovation as the technology claims a central place in the daily lives of citizens. Eventually, with mass adoption, the new technology disrupts the way that society operates, and the government steps in to regulate the new technology. At this point, the benefits accrued to the inventor become more widely distributed. Capital is slowly diverted elsewhere, the technology is relegated to the periphery as new innovations take hold, and the cycle begins anew.

Fostering a startup culture leads to many benefits to society, as the *Strategy* points out. However, any national government keen to encourage entrepreneurship and innovation must acknowledge the risk that more startup activity could lead to the increased concentration of wealth as inventors reap the benefits of society’s accumulated innovation, as opposed to these benefits being broadly distributed.

FEEDBACK ON SPECIFIC SECTIONS OF THE *ARAB DIGITAL ECONOMY STRATEGY*

Section 4.1 Digital Foundations

- **Strategic Objective 1:** The digital network of the 21st century will be a wireless network provided by ubiquitous spectrum-based connectivity. The *Strategy* would benefit from devoting more attention to the essential nature of spectrum and the importance of spectrum harmonization and policy coordination. Enhancing regional fixed broadband access is essential to the *Strategy's* vision of ubiquitous wireless connectivity. As 5G comes online it will require the densification of antennas that will make such connectivity event more essential.
- **Program 5:** While the plan to develop a group of cybersecurity experts to provide support to all countries, the *Strategy* should include an acknowledgement that there is a global shortage of cybersecurity professionals. In the United States, for example, there is a cyber security jobs gap in the hundreds of thousands. The next version of this plan may want to address how CAUE will plan to adequately meet the skills gap for the Arab region.
- **Program 6:** Once Arab League countries have established “regulatory bodies to monitor and facilitate the establishment of service providers essential for digital economy,” the challenge becomes how those bodies should operate. Critical to the integration of government strategies at all levels include principles such as: Transparency (Decisions must be based on a public record), Independence (those charged with the responsibility should have independent decision-making authority rather than derivative authority or authority to only recommend), and Regulatory Authority (most regulation is based on industrial era rules based bureaucracies. The digital revolution has changed that and the pace of change requires the introduction of agile regulatory authority; the distributed networks that enable agile corporate management should also be harnessed for agile governance).
- **Program 8:** This program needs to be in two parts: (1) the rights of those whose information is collected to meaningfully control that collection, and (2) the responsibility of those collecting data to limit its collection to that which

is necessary to provide a service, its use to consumer-approved applications, and the protection of the data from breach and disclosure.

- **Additional—Accessibility on the Networks:** The *Strategy* seems to focus on access to digital capabilities (which is obviously essential), but not to address access on those capabilities, especially networks. This is the Net Neutrality debate. Western common law is predicated on a “duty to deal” in which the providers of important services must be non-discriminatory in their provision of services. That concept appears to be absent from the *Strategy*.
- **Additional—Costs:** The section references “adequate investment in digital infrastructure.” This section does not discuss who makes that investment – private, public, hybrid?—and the timeline and revenue sources as divided amongst the region.

Section 4.2 Digital Innovation

- **Principle 2:** It is unclear how innovation will, itself, enable sustainable economic growth and catalyze entrepreneurship. The CAEU should consider whether innovation is an end goal itself, in which case the focus should be on establishing the legal and regulatory foundations to encourage innovation in both business and government. If sustainable economic growth is the end goal, however, then the focus might shift to setting parameters that ensure that businesses reinvest the gains from innovation back into research and development such that growth spurs more growth.

Section 4.3 Digital Government

- **Principle 1:** Consider e-Government as a tool that can help citizens benefit from and uphold their *human rights* as opposed to their *civil rights*. Because civil rights differ from country to country depending on legacy legal structures in place in each country, it is more appropriate for a regional strategy to acknowledge a set of rights that are consistent regardless of the individual country in question. Further, where civil rights are poorly defined, it is worthwhile to have a secondary goal to guide the objective of digital programs.

- **Strategic Objective 1:** There is no guarantee that a single contact point results in increased efficiency in government operations. In addition, a single contact point across government departments and functions can create a confusing experience for the citizen. For example, a citizen should be aware when they are interacting with the court system as opposed to with the tax system. A single contact point could blur the lines between “good” and “bad” reasons to interact with the public service. It is also desirable for citizens to be able to differentiate between national and local governments, so that they are aware of which level of government is accountable for the service they are accessing at any given time.
- **Program 2:** It is commendable that the *Strategy* does not recommend that e-IDs be adopted in Clusters 1 and 2, where governance tends to be weakest. However, there remain many questions that need to be thought through before any country adopts e-IDs as a form of citizen verification and data management. Governments of Arab League country may look to Israel and India for examples of where e-IDs have been implemented: Israel as an example of where the government effectively built public support for the technology, and India as an example of how failing to lay down the regulatory framework and establish public buy-in has led to contentious court challenges and tense public policy conversation. It is worth noting, as well, that efforts to implement e-IDs have failed to garner sufficient political buy-in in both Canada and the United Kingdom in recent years.

Section 4.4 Digital Business

- **Strategic Objective 2:** While increasing employment in digital industries is a commendable goal, this objective should acknowledge the risks to lower-skilled jobs that accompanies an embrace of digitization and automation. The CAEU should consider how the *Strategy* could address a re-training effort for those workers in industries that will be disrupted by the adoption of new technologies and ICT.
- **Program 2:** There is much excitement and appetite for Islamic-compliant fintech products that needs to be matched with a flexible regulatory authority.

One particular example of a FinTech Regulatory Sandbox that the *Strategy* should consider is the ability of financial firms to use the data they have collected on their consumers as a barrier to competitive offerings and a way to lock consumers in to whatever the firms choose to offer. The U.K.'s Open Banking Rules, in that regard, are informative. The largest U.K. banks were required to establish a procedure to open their customer data to third parties (with customer permission). The result has been the application of 200 third parties to provide new and innovative services to consumers that were previously limited to whatever the financial institution wanted to provide.

- **Program 6:** The creation of an Arab Telework platform might be done with the highest quality and efficiency by the private sector, since the development and maintenance of a platform of this kind is not an area of traditional public sector expertise. If such a platform is a priority for the Arab League, we would recommend that this be left to private enterprise to develop and manage. National governments could then partner with the developers of this platform for use with their own employees, and the service would be available for businesses and other organizations as well. Lastly, if the end goal is to provide more flexibility to workers in the form of remote work, the establishment of incentives for businesses to offer this flexibility to their employees will be important as well.
- **Additional—Regulatory Frameworks for Businesses:** A new regulatory concept would embrace two digital era innovations: development agility and distributed activity. Today, software is never completed and constantly being updated because of the constantly changing environment in which it must exist. Likewise, regulatory policy should be based around the establishment of basic principles and the application of those principles to the ever-changing realities of the market and technology. The evolution from centralized networks to distributed networks should also be reflected in the nature of regulation. In the U.S. the best example of this is the Consumer Financial Protection Bureau (CFPB) that uses online input from consumers to target where it needs to be focusing its regulatory activities.

DIGITAL STRATEGY THROUGH A GENDER EQUITY LENS

As the Arab League articulates an overarching digital strategy, it is important to acknowledge that the digital sphere does not exist in isolation from the physical sphere. Indeed the digital sphere in each region imbibes the area's dominant existing socio-economic and cultural inequalities, including gender inequity. While the existing strategy does acknowledge the importance of pursuing SDG 2, to create meaningful change in the area of gender equity we believe that this question deserves to be broadened out and tackled separately. Keeping this in mind, we believe that the current draft of the *Digital Strategy* has a crucial gap in the form of a missing "digital gender equity" strategy.

The MENA region is presently one of the poorest performing regions in the world across gender indicators as per aggregated indices. With regards to the digital gender gap in particular, MENA is the second worst performing region in the world, second only to the South Asia region. Not only is gendered access to mobile internet poor with less than half of women in the MENA region having access to mobile internet, the gender gap is also significant with women being 20% less likely than men to have mobile internet access.¹

What such numbers show us is that gender inequality, particularly in the digital sphere is likely to continue, and possibly even exacerbate in the absence of an intentional gendered digital strategy. Given the significant role that women can play in the economy and well-being of their countries and families at both the macro and micro level when properly integrated into the system, the current gender oversight marks a significant oversight for policymakers. Existing barriers to female digital inclusion include:

- **Cultural, structural (e.g. literacy), and regulatory barriers:** Barriers toward digital access and engagement for Arab women (relative to men) in their roles as digital consumers, producers and regulators are likely to continue unless consciously targeted through both supply and demand side interventions.
- **The role of artificial intelligence (AI), machine learning, and big data:** In the absence of mindful intervention algorithms that are fed gender-skewed data as input, may unwittingly perpetuate gendered exclusion.

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¹ GSMA Mobile Gender Gap Report 2019.

- **Future of jobs across industries:** As the very nature of jobs change the World Economic Forum predicts that men will face a gain of one job for every three jobs lost, whereas women will face more than five jobs lost for every job gained.²

Lack of conscious effort to combat present and future “digital gender gaps” is a missed economic and social opportunity for the Arab League to use the digital sphere to leapfrog or improve on present low levels of gender parity.

Questions to consider while drafting a gendered digital strategy

It is important to acknowledge both the unique constraints that women face when it comes to digital access while also recognizing that women may access the digital realm for different reasons and in different ways that men do. As such, two guiding questions that policymakers should keep in mind when drafting a gender digital strategy are:

1. What are the economic, legal, social, physical, cultural and educational barriers women face toward equal participation in different initiatives of the digital strategy?
2. When women do engage with the digital realm are their patterns of behaviour and needs different from those of men?

Keeping these guiding questions in mind, and strategy should include careful consideration of three main action areas:

1. Enhancing the ease with which women can access the digital realm, and the depth with which they engage with digital services
2. Improving the appropriateness of existing and future digital products and services so that they better meet women’s needs
3. Making all planned initiatives more gender aware and friendly

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² <http://reports.weforum.org/future-of-jobs-2016/women-and-work-in-the-fourth-industrial-revolution/>.

We have laid out some more specific questions for each action area in the table below.

| Action Area | Questions for Exploration |
|---|---|
| 1. Ease and depth of digital access for women | <ul style="list-style-type: none"> • Do women have equal access to digital devices and the internet as men? • Are there measures to create an accessible and safe online environment for women? • Are women being appropriately equipped with technological skills to prepare them for the digital age in general, and the future of work in particular? |
| 2. Appropriateness of digital products and services for women | <ul style="list-style-type: none"> • Are there gaps in the digital products and services being offered, compared to the contextual needs of women in the Arab League? • Do women have meaningful participation and engagement in the digital sphere? • Are women adequately and meaningfully represented on boards of governance of major government projects and private technology companies shaping the digital sphere? |
| 3. Making all digital initiatives gender friendly | <ul style="list-style-type: none"> • Are there accessible and robust channels for feedback and grievance redressal for various initiatives of the Arab League <i>Digital Strategy</i>? |

Action Recommendations

1. Incorporate an explicit objective around gender equity in digital access and participation.
2. Make the pillar of **digital citizen** (that includes digital equity) as foundational to all other pillars rather than a separate silo. The pillars of digital government, etc. should be developed in consideration toward being accessible to all citizens, and each of these should have inbuilt strategies for fulfilling gender equity in a culturally conscious manner.
3. Ensure that all initiatives have a gender specific component. This could take the form of the following:
 - a. Setting gender targets in access, usage and production of tech
 - b. Tracking and disseminating data on a continuous basis
 - c. Autonomy in demanding access and participation in ICT
 - d. Adequate gender representation in policy and tech boards
 - e. Commitment to safe and inclusive online communities that protect privacy expectations
 - f. Robust redressal mechanisms for discrimination/inequity
 - g. Special infrastructure for women (e.g., female agents in key digital services, women-friendly service centers)
 - h. Design choices (removing explicit gender markers of sellers in online marketplaces and gig-economy transactions)
 - i. Investing in building female talent pipeline in STEM fields for jobs of the future
4. Make “enhancing gender equity” an impact area across which all proposed initiatives are weighed.
5. Examine the Report of the Office of the United Nations High Commissioner for Human Rights on ways to bridge the gender digital divide from a human rights perspective.³

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³ <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G17/111/81/PDF/G1711181.pdf?OpenElement> and <https://www.ohchr.org/EN/Issues/Women/WRGS/Pages/WaystoBridgetheGenderDigital.aspx>.

INSIGHTS FROM ICT LEADERS ACROSS ARAB LEAGUE COUNTRIES

To supplement feedback collected from faculty experts at Harvard University, this report's writing team conducted interviews with ICT leaders from a sample of the Arab League member countries. The objective of these interviews was to evaluate the digital readiness of member countries in the context of the CAEU's *Arab Digital Economy Strategy*. Three important insights emerged from this exercise.

First, the impactfulness of the *Arab Digital Economy Strategy* could be limited as a result of the lack of involvement of national representation in the strategy construction process. In our conversations, it was clear that senior ICT leaders were learning about elements of the *Strategy* for the first time, and that they had not been meaningfully engaged throughout the strategy development process. In some cases, ICT leaders were only learning of the existence of the CAEU's work through our conversations.

While understandable that inclusion in the strategy development process was limited given the scale of the Arab League regional partnership, the likelihood of successful implementation could be improved by soliciting and incorporating feedback from ICT departments across Arab League member countries. Country ICT teams will be equipped with the context required to evaluate the unique implementation challenges (as well as the expected benefits) that accompany each of the CAEU's proposed digital programs and initiatives.

Second, leaders from our sample of Arab League countries confirmed that securing adequate funding to support the implementation of the CAEU's proposed strategy will be critical. It was broadly acknowledged that the amount of funding devoted to the digital realm has increased in recent years as many national governments have focused substantial resources toward investment in digital infrastructure and expanded digital service delivery. However, ICT leaders cautioned that tackling the full suite of initiatives set out in the *Digital Economy Strategy* would require new funding to be secured from outside of current national budgets. That is, unless national governments decide to divert substantial funds away from other priorities and toward the development of a digital economy, current government budgets in most of the Arab League nations will be insufficient to cover the investment required to implement the programs outlined in the *Strategy*.

Third, there was widespread enthusiasm among national ICT teams for more knowledge and best-practice sharing across Arab League countries. For example, leaders lauded the efforts of the Gulf Cooperation Council (GCC) to share selected code bases across countries, noting that these partnerships reduce the cost burden for individual countries by making a single “product” available for use by many countries. In-country teams expressed a desire to see this type of partnership replicated at a larger scale (e.g., for the Arab League overall as opposed to only the GCC) and across more products and services (e.g., platform services to enable more resource-constrained member countries to build their digital government services on a platform built by another country).

EXPERT REVIEWERS

John Haigh

John Haigh is Co-Director of the Mossavar-Rahmani Center for Business and Government and Lecturer in Public Policy at the Harvard Kennedy School. He focuses on teaching general management skills along with addressing issues of competition, technology, innovation and regulation. From 2005 through 2017 he served as the Executive Dean of the Kennedy School, engaging in strategic decisions and overseeing the operating and financial activities of the school.

Prior to joining the Harvard Kennedy School, Mr. Haigh served as Senior Vice President of AT&T Wireless's emerging initiatives efforts developing new wireless services. Prior to joining AT&T he was at Mercer Management Consulting for 13 years, where he was a partner. His work focused on strategy issues in multiple industries including telecommunications, transportation, energy, and the environment. Haigh holds a BA from Grinnell College, where he was Phi Beta Kappa and the President's Medalist, and an MPP from the John F. Kennedy School of Government.

Jessica Dheere

As co-founder and executive director of the Beirut-based digital rights research and advocacy organization SMEX (smex.org), she has launched the CYRILLA Collaborative (cyrilla.org), a global initiative that facilitates mapping and comparative analysis of the evolution and impact of legal frameworks in digital environments by aggregating, organizing, and visualizing distributed legal data through open research methodologies, data models, taxonomies, and databases.

Jessica has written and presented on a wide range of internet policy issues pertinent to the Middle East North Africa region, including "Misguiding Multistakeholderism: A Nongovernmental Perspective on the Arab IGF" in the 2017 edition of GISWatch on national and regional internet governance initiatives. She is a member of the inaugural Freedom Online Coalition Advisory Network, has served as a high-level facilitator at the WSIS Forum, and in 2014 was a Kathryn Davis Fellow for Peace. She has a master's degree in media studies from the New School in New York City and a bachelor's degree from Princeton University.

Bruce Schneier

Bruce Schneier is an internationally renowned security technologist, called a “security guru” by The Economist. He is the author of 14 books—including the New York Times best-seller *Data and Goliath: The Hidden Battles to Collect Your Data and Control Your World*—as well as hundreds of articles, essays, and academic papers. His influential newsletter “Crypto-Gram” and blog “Schneier on Security” are read by over 250,000 people. Schneier is a fellow at the Berkman Center for Internet and Society at Harvard University, a fellow at the Belfer Center at Harvard’s Kennedy School of Government, and a board member of the Electronic Frontier Foundation. He is also a special advisor to IBM Security and the Chief Technology Officer of Resilient.

Mathias Risse

Mathias Risse is Lucius N. Littauer Professor of Philosophy and Public Administration and Director of the Carr Center for Human Rights Policy at the John F. Kennedy School of Government at Harvard University. His work primarily addresses questions of global justice ranging from human rights, inequality, taxation, trade and immigration to climate change, obligations to future generations and the future of technology. He has also worked on questions in ethics, decision theory and 19th century German philosophy, especially Nietzsche. In addition to the Harvard Kennedy School, he teaches in Harvard College and the Harvard Extension School, and he is affiliated with the Harvard philosophy department. He has also been involved with executive education both at Harvard and in collaboration with international organizations. Risse is the author of *On Global Justice and Global Political Philosophy*. Risse received his PhD from Princeton in 2000 and taught in the Department of Philosophy at Yale before coming to Harvard in 2002.

Tom Wheeler

Tom Wheeler served as the Chairman of the FCC from 2013 to 2017 under President Obama. For more than three decades, Wheeler has been involved with new telecommunications networks and services, experiencing the revolution in telecommunications as a policy expert, advocate, and businessman. As an entrepreneur, he started or helped start multiple companies offering cable, wireless, and video communications services. He is currently the Walter Shorenstein Media and Democracy Fellow for the 2017–18 academic year. While at the Shorenstein Center, Wheeler will conduct research and teach study groups on the intersection of public policy and transformational technology.

Anushka Siddiqui

Anushka Siddiqui is a graduate of the Harvard Kennedy School, where she completed her Masters in Public Policy as a John F. Kennedy Fellow. Her studies at HKS spanned themes of digital government, gender equity, and behavioral science; and her master's thesis analyzed the problem of the Digital Gender Gap in India. Anushka previously worked across the Indian public and private sector as a consultant with McKinsey & Company. She will return to consulting with a focus on the nonprofit and philanthropic sectors and will split her time between the Boston and Mumbai offices of The Bridgespan Group.

Naeha Rashid

Naeha Rashid works at the intersection of financial inclusion, social entrepreneurship and technology. She is passionate about leveraging technology solutions to improve the quality and character of people's lives. She is a graduate of the Master's in Public Policy program at the Harvard Kennedy School (HKS) where she won the Jane Mansbridge Research Award for her senior thesis "Doing Digital Right: Addressing the Growing Financial Inclusion Gender Gap in Pakistan." Naeha has worked for CGAP—a member of the World Bank Group—leading her team's work in Pakistan to catalyze innovation and scaling of digital financial services. She was also a core member of the startup team for Karandaaz Pakistan (an organization funded by the Bill and Melinda Gates Foundation) from 2014–16, and was a 2018 Summer Associate with Ashoka's Global Social Financial Services team.

WRITING TEAM

David Eaves

David Eaves is a public policy entrepreneur and expert in information technology and government. In 2009, as an adviser to the Office of the Mayor of Vancouver, David proposed and helped draft the Open Motion which created one of the first open data portals in Canada and the world. He subsequently advised the Canadian government on its open data strategy where his parliamentary committee testimony laid out the core policy structure that has guided multiple governments' approach to the issue. He has gone on to work with numerous local, state, and national governments advising on technology and policy issues, including sitting on Ontario's Open Government Engagement Team in 2014–2015.

In addition to working with government officials, David served as the first Director of Education for Code for America—training each cohort of fellows for their work with cities. David has also worked with 18F and the Presidential Innovation Fellows at the White House providing training and support. In 2018, he was named one of 20 most influential on Apolitical's "World's 100 Most Influential People in Digital Government."

Katie Ragan

Katie is currently pursuing a joint MBA and MPP from Harvard Business School and the Harvard Kennedy School of Government. Prior to starting at HKS, Katie was an Engagement Manager with McKinsey & Company, where she focused on customer experience design for large retail companies. Before McKinsey, Katie worked in a junior economist role for the Bank of Canada, Canada's central bank. Katie's work has centered around bringing experience design innovations from the private sector to governments and public organizations so that citizens can interact seamlessly and painlessly with their governments, as they now do with their favourite companies.

Phil Pollman

Phil is currently pursuing a Master in Public Policy degree from Harvard Kennedy School where he has focused on public-sector innovation, technology policy, and

social justice. Before coming to HKS, Phil was a management consultant with Accenture's Digital Government practice in Washington, D.C., focusing on improving some of the most difficult citizen services of the federal government. Before consulting, Phil worked as a program analyst in the Office of Public Private Partnerships at the U.S. Agency for International Development on an entrepreneurship and impact investing portfolio. He is a 2013 graduate of Virginia Tech, where he studied Political Science and Philosophy and played water polo.



A publication of the

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