Digital Government in the State of Palestine: Strategies & Recommendations

A report prepared for the UNDP/PAPP

April 6, 2021

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Acknowledgements

I would like to express my sincere gratitude to the following individuals for their invaluable support and guidance throughout the development and drafting of this report:

My Client – UNDP/PAPP
Yvonne Helle, Special Representative of the Administrator
Nader Atta, Program Design & Implementation Analyst
Tala El-Yousef, Head of Experimentation- Accelerator Lab

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I also want to thank all the individuals who generously agreed to be interviewed for this report. I hope that this work can contribute to improving the lives of people in my beloved country Palestine.

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Executive Summary

This report aims to help the UNDP/PAPP develop a strategy to achieve digital government transformation in the State of Palestine at a national and local levels.

THE PROBLEM investigated is the gap between planning and implementation of digital government transformation in the State of Palestine. Even though digital transformation has been a strategic priority for the national government since 2005, there has been very little progress made to improve the citizen's experience while completing transactions with government entities. Additionally, in major municipalities as well as other localities, there seems to be a lack of coordination of efforts to implement digital government transformation. What we see on the ground is that ministries and localities are working in parallel instead of collaborating under a single digital transformation strategy aimed at putting the citizen at the center of service delivery.

THE METHODOLOGY followed in this report included interviews with stakeholders, a literature review of recent developments in the field of digital government, a review of reports written by international organizations on the topic of digital government in the State of Palestine, case studies from Estonia and the UK, and an analysis of the survey results from the most recent Digital Maturity Assessment performed by the Estonia e-Government Academy in 2020.

Following this methodology allowed us to produce a timeline of milestones in the Palestinian journey to achieve digital government transformation. Through this timeline, we were able to identify strengths and gaps in the design and implementation stages. We then considered best practices from external case studies to determine feasible and desirable goals for the ideal Palestinian digital government transformation. These case studies were considered alongside recognition of the uniqueness of the Palestine case, especially around exogenous political challenges.

OUR RECOMMENDATIONS focus on localities and include short-term and long-term options for the UNDP/PAPP to establish a strategy to overcome the barriers that have hindered digital government transformation in the State of Palestine. We provide and discuss the following three main recommendations:

1. Increasing citizen uptake of existing digital services.
2. Improving access to WiFi and mobile networks
3. Establishing a government digital services unit for localities

WE CONCLUDE that the Palestinian government, including ministries and localities, should view digital government transformation as a fundamental shift in thinking about service design and delivery. This shift should prioritize citizen needs, as well as separate progress in information technology (ICT) from the broader goal of making government services digital by design.

Introduction

In 2005, the Palestinian Authority established The Ministerial Committee for E-Government and published its first e-government Strategic Plan. This plan emphasized the role of citizen-centric e-government services in empowering and connecting citizens[1]. Today, Palestine's e-government services lag behind other countries globally and within the Arab region. The most recent Information and Communication Technologies index (ICT-IDI) published by the International Telecommunications Union (ITU) ranks Palestine 123rd globally (among 174 countries) and 14th among the 19 Arab States included in the index[2,3] (Table 1).

Although the State of Palestine has had an e-government strategy for over 15 years, the recent Covid-19 pandemic showed a limited ability for government agencies to serve citizens remotely. In person visits remain the primary form through which citizens interact with the government at all levels (national and local). Navigating external disruptions such as Covid-19 or Israeli restrictions on movement, requires a robust digital government infrastructure that allows citizens to receive government services even at times of uncertainty.

Table 1: Palestine's ranking in the ICT IDI index - 2017

2017 Ranking	The State of Palestine
Global	123rd (out of 176)
Arab States	14th (out of 19)

Previously conducted surveys and interviews with Palestinian government officials suggest an optimistic view of the level of advancement in e-government services. Yet, Palestine's ranking has seen no major improvement in this sphere. This calls for an exploration on why government digital services in Palestine have not advanced to the level necessary to meet citizens needs and improve efficiency and effectiveness of governance at all levels.

In addressing these questions, our report analyzes the historical context, provides insights from interviews with government officials, and builds on the recent digital maturity assessment

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[1] OECD, "Modernising the Public Administration: The Case of E-Government in the Palestinian Auhtority" (OECD Publishing, 2011), https://www.oecd.org/mena/governance/50402812.pdf.

[2] International Telecommunication Union, "Measuring the Information Society Report 2017" (Geneva, Switzerland: International Telecommunication Union, 2017), https://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2017.aspx.

[3] "The IDI is a composite index that combines 11 indicators into one benchmark measure that can be used to monitor and compare developments in ICTs between countries and over time"

completed by the Estonia eGovernment Academy (eGA) in 2020. We introduce a framework that calls for the Palestinian government to make the distinction between ICT, e-government and Digital government. We then develop policy recommendations for how the UNDP Programme of Assistance to the Palestinian People (UNDP/PAPP) may leverage its resources, expertise, and coordination to help Palestine transform an e-government strategy into a digital government strategy that puts citizens at the center.

Defining concepts such as ICT, e-Government, and Digital Government can be challenging especially given how recently they have come into the public administration field. Table 2 shows what each of these concepts means in the report. The ranking in Table 1, for example, relies on ICT. ICT is only one element in the broader conversation around digital governance. However, with the lack of other comprehensive and reliable rankings, it can provide insight into how relevant elements in the Palestinian digital services sector perform compared to other neighboring nations. In this report, we distinguish between three concepts that tend to be used interchangeably when referring to government digital services:

Information and Communications Technology (ICT): refers to all infrastructure, devices, and systems that allow organizations to interact in the digital world[4]. This definition covers not only governments, but also businesses and other organizations. ICT can be thought of as the primary infrastructure needed for any digital development.

e-Government: this concept refers to the use of ICTs for improving the efficiency of government agencies and providing government services online[5]. In the preparation of this report, all individuals interviewed used the term e-government to refer to any digital improvement in government. This included developments at a Government-to-Government G2G level (e.g. increasing the size of IT departments), Government-to-Businesses G2B level (e.g. government interacting with businesses online), or a Government-to-Citizen G2C level (e.g. allowing citizens to complete government transactions online). E-government is often used alongside terms such as: e-commerce, e-municipality, e-health.

Digital government: this is the primary term used in this report. Borrowing Tim O'Reilly's definition of Government 2.0, we refer to digital government as the use of technology to better solve collective problems at a city, state, national, or international levels[6]. This definition expands on the concept of e-government by shifting the focus from simply improving IT departments and putting services online to a more holistic approach that

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[4] Mary K. Pratt, "What Is ICT (Information and Communications Technology)?," SearchCIO, accessed February 13, 2021, https://searchcio.techtarget.com/definition/ICT-information-and-communications-technology-or-technologies.

[5] United Nations, "E-Government," UN E-Government Knowledgebase, accessed February 13, 2021, https://publicadministration.un.org/egovkb/en-us/about/unegovdd-framework.

[6] Tim O'Reilly, "Government as a Platform," *Innovations: Technology, Governance, Globalization* 6, no. 1 (January 1, 2011): 13–40, https://doi.org/10.1162/INOV_a_00056.

favors service delivery. It implies that government services (G2G, G2B, G2C) would become digital by design and embrace: openness, simplicity, and open access to government data and infrastructure.

This broad definition highlights two central concepts: i) technology as a tool to solve collective problems and, ii) putting the citizen at the center of service design and delivery. Chapter 4 in this report provides further explanation of these concepts.

Throughout this report, digital government will be used as the standard term to refer to the envisioned digital transformation. However, Palestinian government documents and officials still refer to this transformation as e-government. For that reason, e-government as a term is still used in context, particularly when describing the existing Palestinian government strategy and plans.

Table 2 Comparing ICT, e-Government, and Digital Government

	ICT	e-Government	Digital Government
Replacing physical data storage with digital databases	✓	✓	✓
Expanding the size and capabilities of IT departments	✓	✓	✓
Utilizing newer computers and digital infrastructure in government	✓	✓	✓
Allow citizens and businesses to view information online	X	✓	✓
Government agencies are connected via an interoperability data exchange framework	X	✓	✓
Government services are digital by design	X	X	✓
Government makes data available online using APIs	X	X	✓
Only-once principle (OOP) is applied: citizen only provides information once	X	X	✓
Government IT departments hire UX designers as part of their core teams	X	X	✓

Methodology

The findings of this report relied on five main data sources:

- **Literature review:** In a fast-developing field like digital government, it was important to understand the most recent developments at the intersection of public administration, product design, and technology. This research helped develop a framework that differentiates e-government from digital government.

- **Case studies**: multiple successful examples of digital government implementation were consulted in order to understand best practices as well as challenges along the way. Specifically, the case of Estonia as a leader in this field motivated the writing of this report, and the case of the UK Government Digital Services (GDS) provided a basis for best practices and standards of digital service units.

- **Reports and maturity assessments:** a review of reports produced by the OECD, the World Bank, and the Estonia e-Government Academy (eGA) allowed us to understand the development process, milestones, and challenges facing Digital government development in Palestine.

- **Online interviews:** building on the above-mentioned resources, it was necessary to conduct interviews with major stakeholders, especially from local governments. These interviews, conducted both in Arabic and in English, helped provide a deeper dimension than the standard maturity assessment and survey responses. A list of these interviews is provided in the Appendix A.

- **Survey results:** the Estonia e-Government Academy generously agreed to give us access to the digital maturity assessment survey that they conducted in 2020 with national government agencies and major municipalities in the State of Palestine. These results were used to guide the interview questions and provide direction in the analysis.

By following this methodology, we were able to combine best practices in digital government from the literature and case studies. We also were able to acknowledge and capture the uniqueness of the Palestine case by conducting interviews directly with major stakeholders. The ability to conduct these interviews in Arabic allowed the interviewees to provide more in-depth opinions on their involvement in the development of digital government strategy.

Situation analysis (timeline)

Since the introduction of 'e-government' as a national strategy in 2005, the State of Palestine has gone through periods of fast progress as well as significant slowdowns. In this section, we explore some of the milestones outlined in Figure 1 to explain Palestine's journey of adopting digital government reforms from 2005 until today.

Figure 1: **Timeline of digital government development in the State of Palestine 2005 – present**
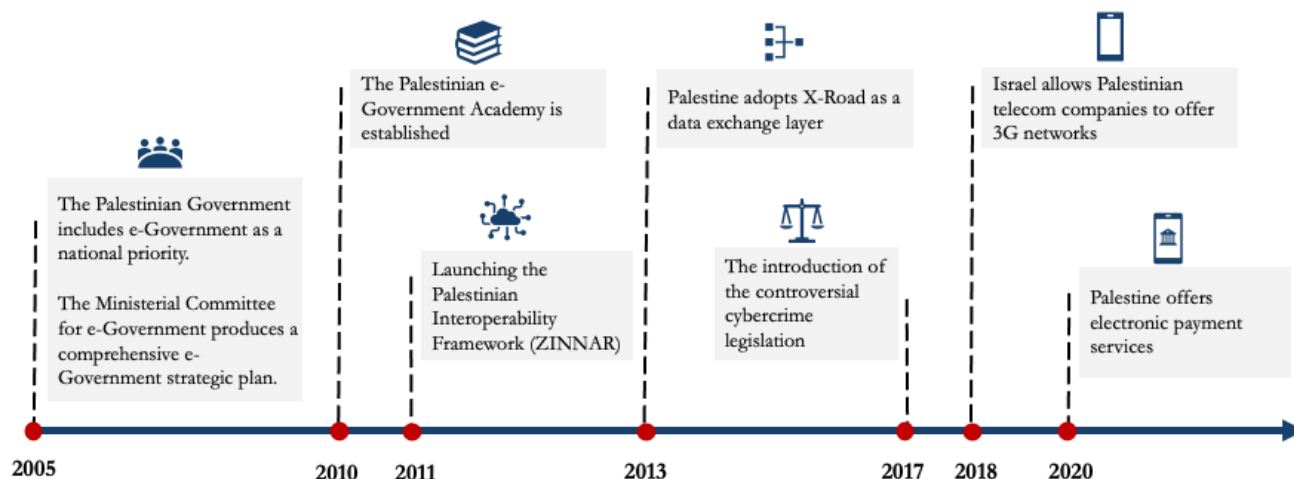
Digital government as a national priority (2005)

The State of Palestine was early, compared to its neighboring countries, to view digital government as a necessary transition to "provide a better life for citizens." This approach matched the recommendations of the OECD. Multiple documents and strategic plans published by Palestinian ministries highlighted the role of digital government in improving the efficiency and effectiveness of the public sector.[7] However, these strategies did not specify concrete steps, milestones, or end goals that the government was hoping to achieve.

Implementing digital government as a national strategy in Palestine faced challenges from two main sources:

i) **Constant change in government structure**: one of the major events that has happened since 2005 was the divide between the West Bank and Gaza Strip. This created two different governing bodies in Palestine, each with varying motivations on issues considered marginal, like digital government reform.

[7] OECD, "The Case of E-Government in the Palestinian Authority."

This disruption was followed by a period of financial and political instability caused by consistent Israeli attacks in the West Bank and Gaza, which targeted essential components of Palestine's state building strategy. These external threats from Israel, combined with internal political conflict, made the adoption of digital government even more difficult. Since 2006, Palestine had at least four governments with their own political agenda that would focus on state building. Even though digital government was viewed as a tool that could advance government efficiency and effectiveness, it was never considered as the main reform necessary to improve government services and citizens' experience.

When asked about the level of centralization in planning digital government transformation, a senior official from the Ministry of Telecommunication and Information Technology (MTIT) e-Government General Directory mentioned that each ministry is responsible for developing and managing its own digital strategy. This fragmented structure and lack of a centralized core vision makes efforts for digital government transformation in Palestine vulnerable to changes in the political structure.

ii) **Gap between planning and implementation**: digital government has appeared in multiple strategic plans since its initial inclusion as a national priority in 2005. One of the goals listed in the Palestinian 2017-2022 National Policy Agenda is to "develop and implement an e-government strategy." However, despite this goal, Palestine is yet to establish a clear implementation plan.

One possible explanation for this gap is the limitations of the main entity responsible for e-government planning and implementation across different agencies in Palestine: the E-Government General Directory under the MTIT. The E-Government General Directory is one of 9 directories at the MTIT. Its multidimensional mission includes strategic planning, standard setting, and support and consultancy (Figure 2).

Figure 2 Structure of the General Directory of E-Government within MTIT
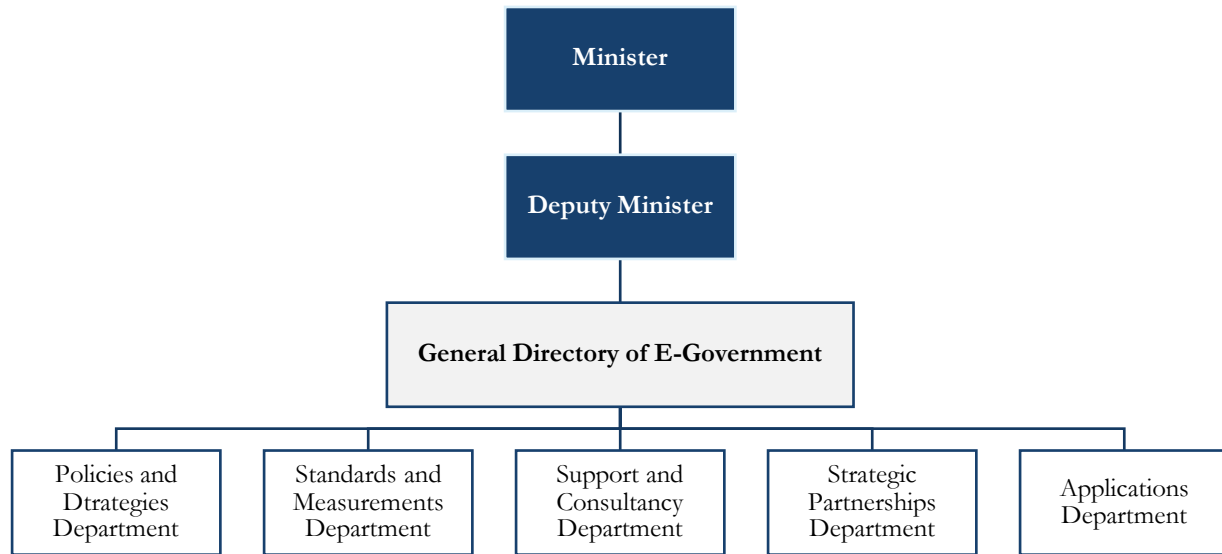
During an interview with a MTIT employee, they stated that the responsibility of implementing e-government improvements falls on each ministry. This contradicts the overall strategy stated by the E-Government General Directory which includes five main layers that define the work of the Directory[8]:

- National strategies and policies
- Legal
- Infrastructure
- Cybersecurity
- Interoperability

These ambitious goals require one department within the MTIT to serve the role of regulator as well as implementor of complex government transformation. The five strategic layers mentioned above require a high level of coordination between government agencies, including the legislative branch, executive branch, and judicial branch.

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[8] "وزارة الاتصالات-الإدارة العامة للحكومة الإلكترونية'' Government website, State of Palestine | Ministry of Telecom & Information Technology, accessed February 14, 2021, https://www.mtit.pna.ps/Site/Departments.

Palestine's e-Government Academy (2010)

One of the outcomes of the 2005 e-government strategy was the establishment of the Palestinian e-Government Academy in 2010. This was a step that brought together actors from the public sector, private sector, and academia in order to develop the infrastructure and knowledge needed for the e-government transformation. This Academy, based out of Birzeit University, organized multiple conferences to share best practices over the period of 2010 – 2014.

One of the individuals involved with the Academy from its early stages mentioned that the Palestine e-government Academy provided over 300 hours of training for 60 government employees in middle management and IT positions. The same individual saw that the Palestine e-Government Academy began the process with clear steps but was not able to achieve its goals. While it was capable of filling the knowledge gap, the Academy's ability to lead an overall transformation of government agencies often faced political resistance. This was related to both elements mentioned above: consistent changes in government and a gap between implementation and planning.

The Facebook page of the Palestine e-Government Academy was last active in 2014, and it appears that its status is currently inactive. However, the desire to bring together private sector, public sector, and academia is still present.

An official at the MTIT informed us that there is a core group of government employees, private sector representatives, and academics as part of a committee to discuss and advice on e-government efforts. It is not clear, however, how these efforts are different from the 2010 e-Government Academy work or how it may build on what the Academy previously achieved.

X-Road and ZINNAR adoption (2011, 2013)
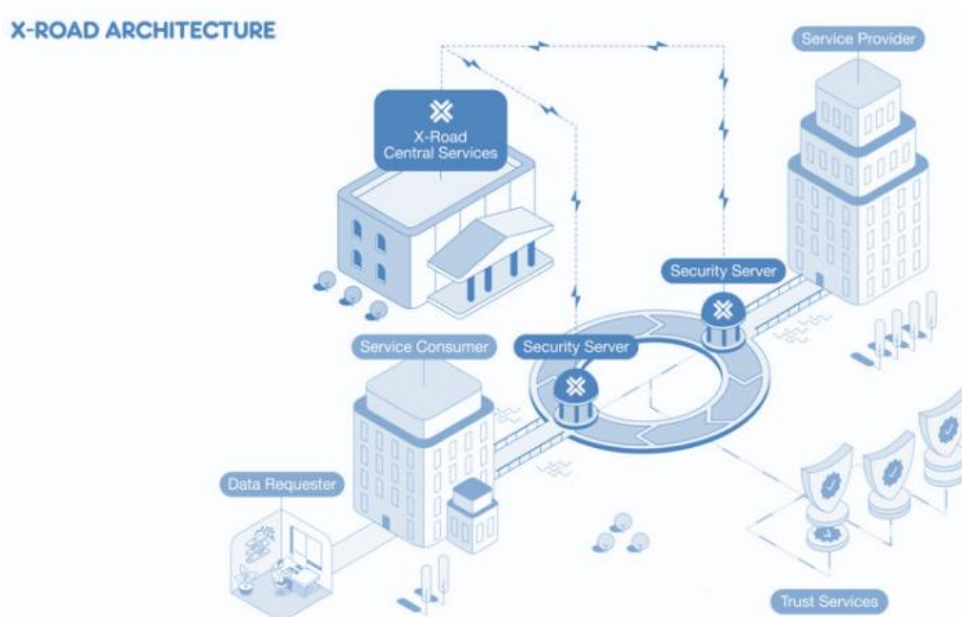
The introduction of X-Road and ZINNAR was a major step forward for e-government in the State of Palestine. With Estonia's help, Palestine implemented both a ZINNAR (as an interoperability framework) and X-Road infrastructure.

X-Road is an ecosystem that provides secure data exchange layers between organizations[9]. It was first developed and implemented in Estonia in 2001 and since then multiple countries have adopted its open-source code and structure. X-Road allows organizations (G2G, G2B, G2C) to access and exchange data securely through access points.

In Palestine, this ecosystem has been mostly used by different government departments to access data and services from other departments (G2G). The ideal form of use of the X-Road would also allow non-governmental organizations, such as businesses or service developers, to sign access agreements with the main operator managing the system, which is a government agency (e.g. MTIT). However, this has not been the primary use of the service in Palestine.

An MTIT employee interviewed for this report mentioned that X-Road is widely used to connect different ministries. In its eGA survey response, MTIT also stated that upgrading X-Road to the latest version is a priority. This infrastructure has proven to be effective in avoiding

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[9] Nordic Institute for Interoperability Solutions, "X-Road® Data Exchange Layer," X-Road Data Exchange Layer, accessed February 14, 2021, https://x-road.global.

replication of databases between ministries. However, a more comprehensive use of X-Road should allow access to non-government service providers facilitating the creation of innovative solutions in service delivery to citizens, something we did not see as a priority for MTIT or other government agencies.

Another important step was the development of ZINNAR as an interoperability framework in 2014. This infrastructure was important to standardize datasets between government agencies. It can be thought of as a step towards achieving better utilization of the X-Road since it forces databases to be standardized before being accessed via X-Road. It is also an essential stage for any future digital government infrastructure.

The current status of ZINNAR highlights one of the main issues with digital government in Palestine. The website of the initiative was last updated in 2014 and it is currently outdated with multiple broken links. According to the recent eGA report, ZINNAR has not been a priority for any ministry, including the MTIT. There are plans to reestablish interest in the development of the framework, but it does not seem to be a priority for any specific government agency.

This story shows how multiple initiative within digital governance end up being ignored and, in some cases, replicated. The reasons why ZINNAR is no longer being developed are unclear. However, this could tie into what one of the developers of the framework mentioned in terms of political influence and lack of interest as government agencies change.

It is important to note here that both X-Road and ZINNAR infrastructures were referenced in the interviews as internal government (G2G) tools. The end goal would be to facilitate data sharing and enable digital transactions for citizens (G2C and G2B). However, citizen needs were not highlighted in our interview with the MTIT employee, which suggests a lack of clear end goals that puts the citizen at the center.

Recent events (2014 – 2020)

The Palestinian government has managed to deliver some digital services within government and to citizens and businesses despite the political instability and resource limitations. For example, the MTIT response to the eGA survey stated that most ministries and major government agencies currently have ICT managers. The response also stated that there is a government portal where citizens can access e-services, and that the MTIT is currently working on developing a single sign on system accessible through a website and mobile app.

The MTIT listed 15 digital services currently provided to citizens and businesses. These services include:

- renewing driver's license
- postal tracking
- medical transfer transactions inquiry
- taxpayer deduction dashboard
- Covid-19 test results platform

The official we interviewed from the MTIT was not able to provide data on the frequency of use of these services by citizens. They mentioned that there are plans to put more services online. The lack of a digital signature legal structure as well as an e-payment system makes it difficult to put many of these services online.

The Palestinian Monetary Authority announced in 2020 that it will begin providing electronic payment services to citizens[10]. This step would significantly increase the number of governmental and non-governmental digital service offerings. Until 2020, there was no established mechanism through which financial transactions could be performed fully online. Such limitation made it impossible in some case for government agencies and businesses to offer fully digital transactions. The development and rollout of Palestine's e-payment infrastructure also showed the great potential of public-private partnerships (PPP).

Browsing government websites, including the e-services portal, reveals a less optimistic picture than the one communicated in the survey responses and external reports. For example, even though the MTIT listed renewing driver's license as a service offered online, when we attempted

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[10] Palestine Monetary Authority, "Palestine Monetary Authority: Starting to Provide Electronic Payment Services in Palestine This Will Enable Citizens to Complete Their Financial Transactions without Using Cash," Government Website, Palestine Monetary Authority, April 28, 2008, https://www.pma.ps/en/Media/Press-Releases/palestine-monetary-authority-starting-to-provide-electronic-payment-services-in-palestine-this-will-enable-citizens-to-complete-their-financial-transactions-without-using-cash.

to complete the process ourselves, we faced multiple hurdles along the way. The following steps represent the journey of a citizen attempting to utilize that government service:

> ### Step-by-step example for attempting to renew driver's license online
>
> 1) The citizen would most likely use Google search (in either Arabic or English) to find information about the process.
>
> 2) Searching for "تجديد رخصة القيادة في فلسطين" (renew driver's license Palestine) shows the most relevant result as a government website titled: "PalestineCabinet.Gov."
>
> 3) After navigating to this search result, the citizen enters the Palestinian Cabinet website that lists all services provided by each ministry (digital and non-digital services). Most links in this website are broken.
>
> 4) After navigating to the section about renewing driver's license, the citizen would land in a page showing the process and documentation required to renew a driver's license.
>
> 5) At this stage, the citizen would find out that this page is only informational and not transactional. Meaning, the citizen can download the forms and learn about the process, but they have to go in-person to a postal office or the Ministry of Transportation offices in order to submit the paperwork and receive their license.

The example of renewing a driver's license applies to other services that were mentioned in government surveys as being offered as e-services. It is worth noting that the MTIT official we interviewed stated that some services are available only at a "view / informational" level and they are in the process of turning them into transaction level services. Two components were cited as a barrier to this transformation: i) lack of a digital signature system, and ii) lack of an e-payment infrastructure. Both of these components are under major development right now, with e-payments being rolled out as mentioned above.

The digital presence of the Palestinian government would make it difficult for the citizen to access any digital service, even if it was offered at the transaction level. For example, any Google search for a Palestinian ministry's website yields two different sites with an identical title: one for the West Bank ministry (with the domain *.pna.ps*) and another for the Gaza Strip ministry (with the domain *.gov.ps*). This inconsistent digital presence creates confusion for any citizen attempting to access information from a specific ministry. It also makes it difficult for the citizen to trust which website is the actual government website, leading them to avoid completing a digital service even if it was offered.

Even though a unified digital services portal was mentioned in the MTIT's response to the eGA survey, we were not able to locate that website nor access it. When we attempted to test the Single Sing On (SSO) system that is under development, we were taken to a webpage that asks for personal information such as the citizen's ID number. After multiple attempts, the website

kept returning an "invalid information" error. Given that the domain of that website was "*.gov.ps*", we believe this website probably belongs to the Gaza Strip ministry.

This inconsistent digital presence forms a long-term threat to digital service delivery where citizens lose trust in performing online transactions with government agencies. What exacerbates this problem is that Palestine has not conducted an overview of its legislation to identify its preparedness for digital government transformation[11]. Such an overview would cover laws such as data privacy, data protection, cybersecurity, and digital identity.

The existing legal structure could further decrease citizen's trust in government digital services. In June 2017, President Mahmoud Abbas issued *The Law on Electronic Crime* by executive decree and without paper consultation. Amnesty International, Human Rights Watch, and other legal advocacy groups argued that this law would "allow disproportionate and arbitrary restrictions on the rights to freedom of expression, privacy, and protection of data."[12] After multiple attempts, the Palestinian government made minor amendments to the law but kept many aspects that were received as problematic by the Palestinian public as well as international legal advocacy groups.

The Palestinian public is becoming more cautious about data privacy and cybersecurity. A review of the legal system is therefore needed to foster an environment where the citizen feels safe while performing digital transactions. In addition to the Palestinian government's outdated and invasive laws on digital activities, there is an already existing threat from the Israeli Defense Forces that causes Palestinians to be worried about their safety while completing services online.

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[11] e-Governance Academy (eGA), "[DRAFT] Assessment Report: Digital Maturity Assessment of the State of Palestine," December 15, 2020.

[12] "Palestine: Reform Restrictive Cybercrime Law," Human Rights Watch, December 20, 2017, https://www.hrw.org/news/2017/12/20/palestine-reform-restrictive-cybercrime-law.
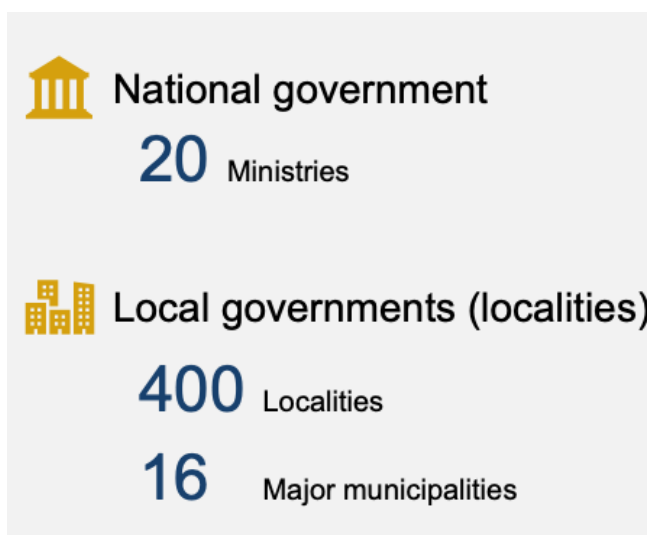
Efforts in local governments (2005 – 2020)

The focus on digital government service delivery also extends to localities. There are around 420 localities in Palestine. This includes major municipalities in cities and other smaller localities such as village councils. These entities play a major role in service delivery. Citizens interact with localities on a more regular basis than national government agencies. Services offered by localities include building and property permits requests, pest and animal control requests, urban planning and GIS mapping, and fees and utility bills payments.

Like the national government, localities have also set digital government transformation as an area they would like to make progress in. As a result, over the past 15 years, localities have worked towards making services available online, establishing a better digital presence on websites and social media, and improving internet connectivity and infrastructure. However, such progress at the local level faces similar challenges to those faced by the national government. Most clear is the lack of strategic implementable plans as well as the lack of focus on putting the

Figure 3 Government structure in the State of Palestine

🏛 **National government**
20 Ministries

🏢 **Local governments (localities)**
400 Localities
16 Major municipalities

citizen at the center. Putting the citizen at the center for localities would mean prioritizing service digitalization based on citizen needs and not only government planning. It would also mean an agile development process where citizens feedback is a core part of the service delivery process.

The wide range of services offered by localities makes them an integral part in any digital government development. Based on our interview with the MTIT General Directory of e-Government, we noticed a lack of planning and coordination between digital development at a national and local level. The MTIT official told us that technically the Ministry of Local Governance (MOLG) is the government body that is supposed to handle coordination with all localities. However, our interviews with three municipalities showed that digital government development is not a central part of this coordination effort.

There are 16 major municipalities that cover the majority of the population and offer a wide range of services to citizens. We approached these major municipalities hoping to use them as a representative group that covers a large portion of the population. These municipalities also have access to financial and operational resources that would allow them to implement digital service strategies.
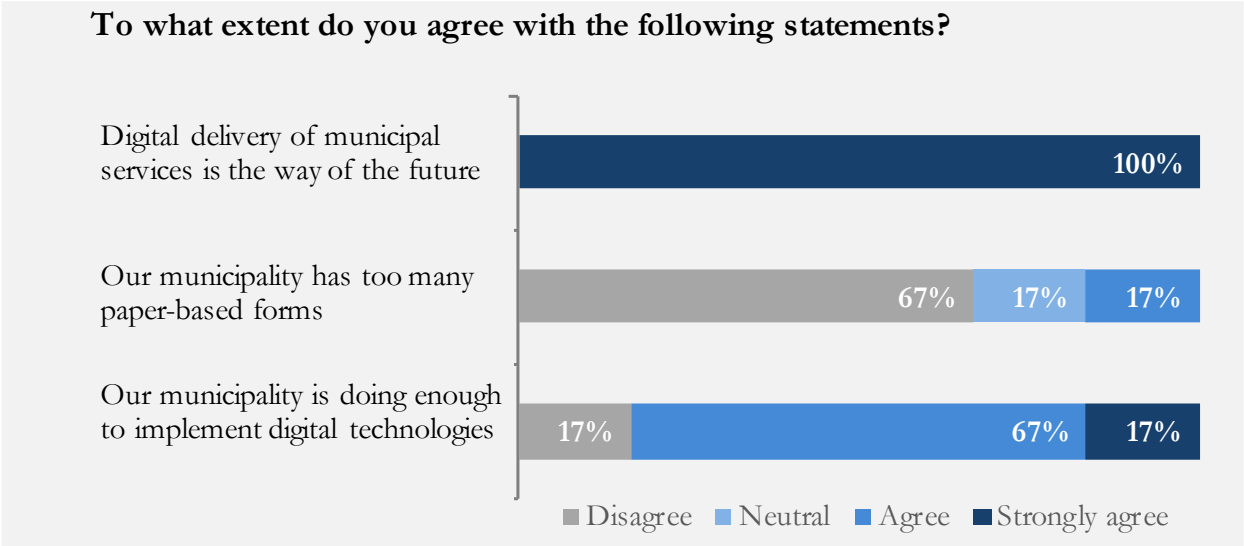
Three out of the 16 municipalities responded to our interview requests (Ramallah, Jericho, and Deir El Balah). These municipalities we interviewed, in addition to the municipalities that responded to the eGA survey, mentioned that they have their own plans on developing digital government services.

All the municipalities that responded to the eGA survey also stated that they see digital delivery of municipal services as the way of the future (Figure 4). These encouraging results do not match the level of implementation on the ground. Among the municipalities in the survey, 67% disagreed with the statement that their municipality has too many paper-based forms and 84% of them believed that they are doing enough to implement digital technologies.

The positive sentiment about digital government progress at a local level does not reflect the reality on the ground for localities in Palestine for two reasons. First, there was a self-selection bias in the municipalities that chose to respond to the survey. The eGA sent this digital maturity assessment survey to 16 major municipalities and only six of them responded. It is very likely that those who responded were the ones more familiar with such concept and willing to share their progress. Second, the respondents' ideal image of digital service offerings does not match the idea of digital government transformation used in this report that puts the citizen at the center.

Figure 4 Municipalities self-perception of progress in digital government (number of respondents = 6)

To what extent do you agree with the following statements?

Digital delivery of municipal services is the way of the future — 100%

Our municipality has too many paper-based forms — 67% / 17% / 17%

Our municipality is doing enough to implement digital technologies — 17% / 67% / 17%

■ Disagree ■ Neutral ■ Agree ■ Strongly agree

While 100% of municipalities viewed digital delivery as the way of the future, the current state reflects a very different reality. Among the six municipalities that responded to the survey, 83% ranked "in-person" as the most used channel by citizens to interact with the municipality (Figure 5). Electronic interaction was ranked as the third most used channel by majority of the survey respondents, following in-person and phone interactions.

Figure 5 Ranking of channels used by citizens to interact with municipalities (number of respondents = 6)
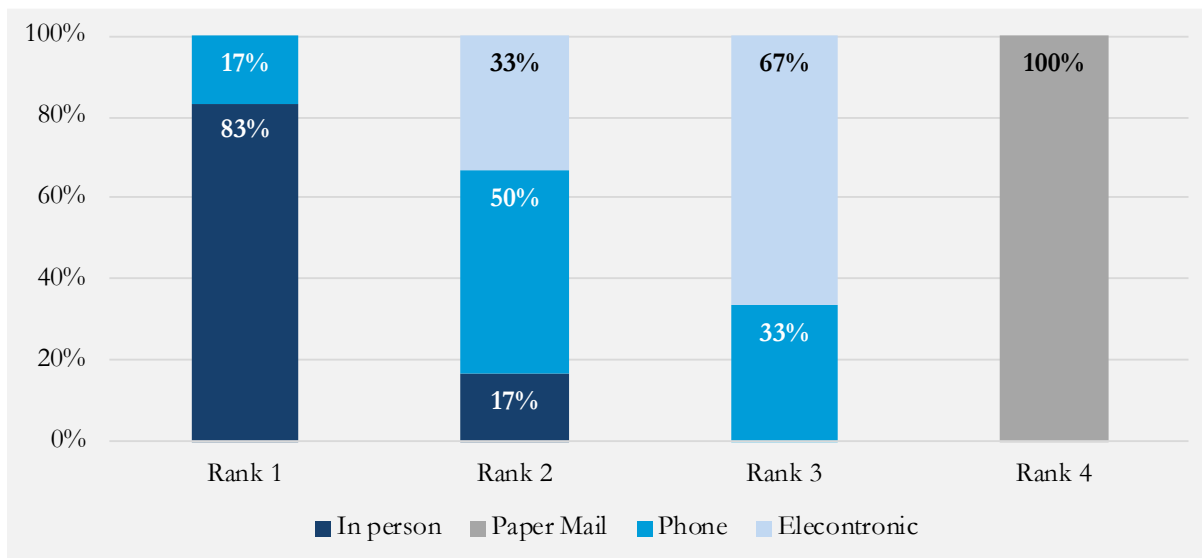
These results highlight an important aspect of digital government development in the State of Palestine. The results show a gap between national and local governments' own perception of digital government transformation, and the user-centered ideal of digital government transformation. If government digital services were available online at a transactional and simple to use level, then we would see higher utilization of such channels, especially given that citizens have a preference for digital services and interactions with government [13].

Digital services offerings are also not consistent among localities. For example, our interview with an official at the citizen's services section at Ramallah Municipality showed that almost 100% of services are offered online. The rest of services that are not offered digitally were in progress awaiting necessary government infrastructure such as e-payment and digital signature frameworks. At the same time, during an interview with an official at the IT department at Jericho Municipality, we realized that citizens can only complete one or two services online.

This gap in the level of digital service offerings between municipalities makes it difficult to make electronic channels the most used channels by citizens. It is likely that a citizen owns property or needs to complete transactions in multiple cities, or that a business has operations over multiple localities. The inconsistency in digital service offerings can lead to confusion and lack of trust in digital government as a primary channel.

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[13] Bjarne Corydon, Vidhya Ganesan, and Martin Lundqvist, "Digital by Default: A Guide to Transforming Government" (Mckinsey Center for Government, November 2016), https://www.mckinsey.com/~/media/mckinsey/industries/public%20and%20social%20sector/our%20insig hts/transforming%20government%20through%20digitization/digital-by-default-a-guide-to-transforming-government-final.pdf.

Envisioning the ideal state

Given the timeline of digital government development at a national and local level presented in section 3, we considered what an ideal application of digital government transformation would look like in the State of Palestine.

This section highlights two relevant case studies that provide unique lessons and success stories: Estonia and the UK. In exploring these case studies, we were mindful of the uniqueness of the Palestine case, recognizing that a success story in Estonia or the UK is not easily applicable the State of Palestine. We dedicate an entire subsection to explaining how certain elements present unique challenges and opportunities in Palestine's journey to adopting a digital government transformation.

Relevant case studies

Estonia

Estonia, a country with a population of 1.3 million, has been a central example in e-government development and adoption[14]. The UN E-government Development Index (EGDI) has placed Estonia among the top 20 countries since the index was first published in 2003 (Figure 6)[15]. Following the fall of the Soviet Union, Estonia reestablished itself as an independent state in the 1990s. The country's investments in high technology, together with the close cooperation between private and public interests, led to the adoption of e-government at a wide scale[16]. Parallels can be drawn between Estonia and Palestine's case especially given the independence and state building process that the two countries needed to undergo.

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[14] *Estonia uses the term 'e-government' to refer to digital government development and for that reason, this section will sometimes use the same term.*

[15] United Nations, "E-Government Development Index," UN E-Government Knowledgebase, 2020, https://publicadministration.un.org/egovkb/en-us/Data-Center.

[16] Fredrika Björklund, "E-Government and Moral Citizenship: The Case of Estonia," *Citizenship Studies* 20, no. 6–7 (October 2, 2016): 914–31, https://doi.org/10.1080/13621025.2016.1213222.

Figure 6 UN EGDI ranking of Estonia and a group of similar countries (2003 - 2020)
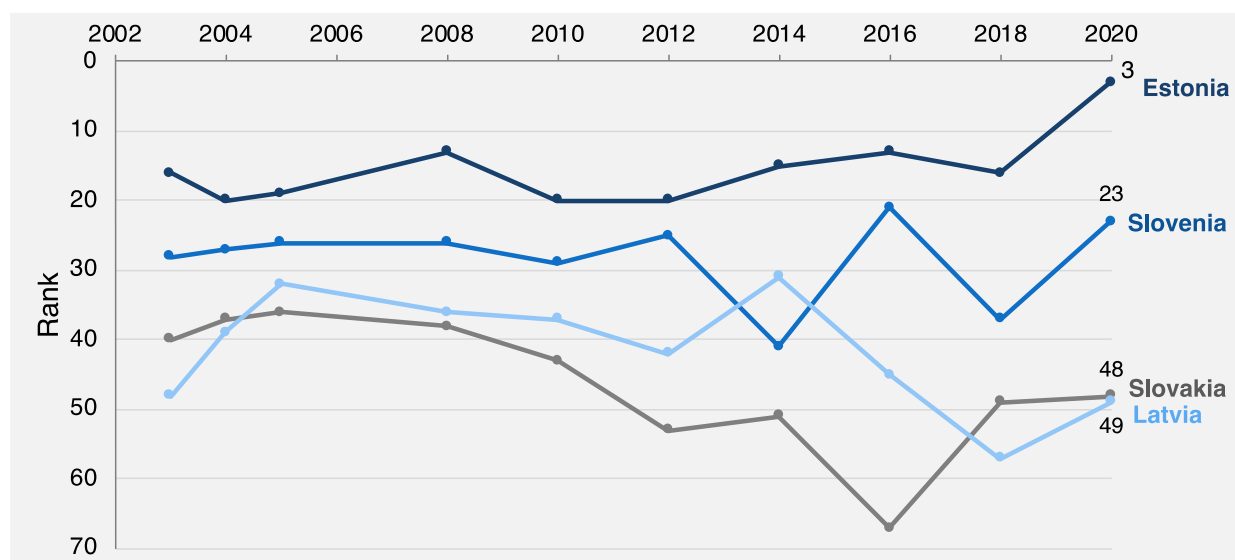
E-government in Estonia was developed through collaborative efforts between the public and private sector to create a "minimal and efficient state". In 1993, a network of government officials, IT specialists, and scientists published a strategy paper establishing principles for the management of modern, well-functioning state information systems[17]. As a result of these efforts, a central IT department was formed, and government IT procurement was unified. In addition to these government level efforts, the public sector supported the launch of the Tiger's Leap program to provide IT to primary and secondary schools.

Since the early 1990s, Estonia has passed multiple laws to facilitate the digital government transformation process. Such legislation included[18]:

- Data protection legislation (1996),
- Strategy for information society (1998),
- e-Signature and e-document legislation (2000),
- Access to public information legislation (2001)

Internet banking was introduced in 1996 mostly through private sector efforts. This service became one of the primary uses of the internet in the country[19]. It contributed to creating a culture of trust in digital transactions. The internet banking infrastructure was a core element in the introduction of electronic tax filing in 2000. The combined developments from both the

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[17] Meelis Kitsing, "Success Without Strategy: E-Government Development in Estonia," *Policy & Internet* 3, no. 1 (2011): 1–21, https://doi.org/10.2202/1944-2866.1095.

[18] Kitsing.

[19] Kitsing.

public and the private sector in the digital services area led to an improved citizen experience, allowing them to complete essential financial transactions online.

Digital government has also empowered democratic public engagement in Estonia. For example, in 2005, Estonia became the first country to hold nation-wide elections using online voting (i-Voting)[20]. Likewise, by 2007, the government was able to offer a digital platform through which citizens were able to express their opinion and vote on certain public policy topics[21]. This major step was possible because of the country's electronic identification system. Today, over 44% of Estonians use i-Voting allowing the country to save 11,000 working days per election. These opportunities for citizen participation contribute to establishing a more democratic and accessible system.

Through digital government, Estonia has managed to place itself among the most technologically advanced governments in the world. Estonia implemented its digital government transformation out of a need to create a minimal and efficient state after its independence from the Soviet Union. Through public and private sector collaborations, the country created a culture where digital services allow citizens to perform transactions in simpler and more efficient ways. In addition to convenience as well as time and cost savings, Estonia created a system that could facilitate citizen participation in the democratic process through i-Voting and digital identification.

The Palestinian government could achieve similar participation and cost-saving gains by following a similarly systematic process in digital government development that would entail infrastructure development, as well as updating its legislative framework. Digital government can also help Palestine navigate challenges that were not present in the Estonia case. For example, it can expand citizen participation in the democratic process to include Palestinians in the diaspora and in refugee camps worldwide. A more robust digital financial transactions system can also facilitate the inflow of remittances and investments from foreigners and Palestinians living abroad.

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[20] "I-Voting," e-Estonia, accessed March 7, 2021, https://e-estonia.com/solutions/e-governance/i-voting/.

[21] Kitsing, "Success Without Strategy."

United Kingdom (UK)

The UN EGDI placed the UK in the top 10 countries in terms of digital government development since 2003. The UK digital government services (GDS) presents an example of an iterative development process for digital service delivery. In 2004, the UK launched Directgov as a central website for government services. Despite the high volume of traffic on the website, an assessment published in 2010 showed that "aging technology, excessive bureaucracy, ineffective governance structures and a lack of authority have hampered Directgov's ability to keep up with the pace of change in the external environment." [22]

This assessment led to an overhaul in the way that the UK thought of digital service delivery. This case study provides insights for the Palestinian government into what practices caused the failure of the first iteration of digital government development in the UK. It also shows the steps taken to transform the UK GDS into a global leading example in digital government.

Following the 2010 assessment, the UK launched its new platform GOV.UK. The main shift in strategy was to "put user needs above all."[23] The new platform prioritized transparency, participation, and simplicity. It managed to put the needs of the citizen above the traditional government inclination to present services based on departments' needs. One of the major enablers for GDS' success was its position in the UK's Cabinet Office and the trust granted to this unit to transform and rethink service delivery. The relevant highlights from the UK GDS experience include:

- **Starting with user needs**: this concept is crucial at the initial stages of service design and delivery. The process begins by understanding how citizens will be using the service. Although this concept seems trivial, it challenges how government often thinks about digital transformation. In many cases, digital government is mistakenly seen as a process of moving paperwork into websites. Citizens, as the primary users of the service, are rarely consulted or included at the development stage of digital services. What is central here is the understanding that citizens interactions with government are different in the digital sphere as compared to the traditional approach.

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[22] Martha Lane Fox, "Directgov Strategic Review | Executive Summary" (London, England: Transform Innovation Ltd, September 29, 2010), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/60995/Directgov_20Executive_20Sum_20FINAL.pdf.

[23] Mike Bracken, "Why GOV.UK Matters: A Platform for a Digital Government - Government Digital Service," Government Website, GOV.UK, October 17, 2012, https://gds.blog.gov.uk/2012/10/17/why-gov-uk-matters/.

In the UK, this was identified as a primary flaw in the old approach of Directgov. The new GDS team developed GOV.UK with that idea in mind. As a result, while designing a digital service, GDS employees were asked to "always learn about the people" who will use the service[24]. Services designed with this mindset are: more likely to be used, help more people get the right outcome, and cost less to operate.

This topic is relevant when thinking about digital transformation in Palestine. When we interviewed an official at the MTIT General Directory of E-Government, they stated their prioritized next steps to be the digitization of birth certificates, driving licenses, and property tax payments. We asked whether these were the services that citizens request the most or whether it was an internal decision within the MTIT. The MTIT official told us that the ministry came up with this list without necessarily identifying citizens' needs. Aware of this tendency of government departments, UK GDS put identifying and researching citizen needs at the center of the new GOV.UK transformation.

- **Agile:** this concept challenges many aspects of what government stands for. Governments are known for a structured and linear policy implementation process. The idea of agile comes from the software development world and pushes the government to follow a more iterative process.

When thinking about providing government digital services, agile means the "use [of] an incremental, fast-paced style of software development to reduce the risk of failure."[25] As the government is undergoing the process of transforming services digitally, it should aim to get the newly proposed product into the citizens' hands. By receiving feedback and monitoring the citizen's interaction with the service, the government should be ready to reiterate and incorporate the live feedback it has received in order to develop a service that is best suited for its end users.

Our interview with an official at the IT department in Jericho Municipality highlighted how agile can improve service delivery. The existing government linear process means that the product is only assessed upon its deployment after serval months/years of development. These services are purchased from private vendors in many cases. Without following an agile process, it is difficult to understand how the citizen might interact with the service. Therefore, what we realized in Jericho is that the Municipality was stuck with products that were not necessarily widely utilized by the citizens. This was only discovered after the entire project was completed, leaving little room or possibility for iteration and improvement.

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[24] "Learning about Users and Their Needs," GOV.UK, accessed March 14, 2021, https://www.gov.uk/service-manual/user-research/start-by-learning-user-needs.

[25] U.S. Digital Service, "The Digital Services Playbook," Digital Services Playbook, accessed March 14, 2021, https://playbook.cio.gov/#play4.

- **Establishing a set of design principles**: recognizing the wide range of government agencies involved in the digital transformation process, the UK GDS set a list of 10 principles that would guide the design of any service provided digitally by the government. This list ensures that the citizen is always at the center. It also forces the government to shift away from its linear process approach into a more startup-like approach. Following the 10 UK GDS design principles allowed the UK to provide usable, cheap, and more inclusive services to its citizens.

  In Palestine, establishing and following a similar set of principles can help the government standardize its approach to digital transformation within the different layers (national vs local, ministries vs sub-departments).

At times when transformation happens at a fast pace and a large scale, the government risks facing a situation where services are disconnected and confusing to citizens. The COVID-19 pandemic presented an example where a digital service (website) for COVID-19 test results needed to be developed urgently within weeks. Having a set of design principles would allow such service to feel familiar to citizens and be integrated easily into the remaining services provided by the Ministry of Health, for example.

UK Government Design Principles

1) Start with user needs
2) Do less
3) Design with data
4) Do the hard work to make it simple
5) Iterate. Then iterate again
6) This is for everyone
7) Understand context
8) Build digital services, not websites
9) Be consistent, not uniform
10) Make things open: it makes things better

The UK GDS story can help the Palestinian government anticipate some of the challenges that face the process of digital government transformation. The failure of the first iteration of the UK GDS has allowed it to follow a more systematic approach. This led to the creation of the UK GDS unit as a central government agency overseeing the digital transformation process. Such model was also seen in other countries such as Canada and the US.

The uniqueness of the Palestine case

The case studies in the previous section provide helpful lessons for government digital transformation. It is important, however, to recognize that Palestine as a state has its own unique political, economic, and social circumstances. These circumstances can form both challenges and opportunities for digital government transformation in the country.

The Israeli occupation:

The Palestinian government faces a set of unique challenges caused by the Israeli occupation. Within the area of digital government, these challenges are present in mobile network coverage, cybersecurity, and attempts to limit the type of services provided to citizens in remote areas.

Up until January 2015, Israel banned Palestine's access to local high speed mobile networks (3G)[26]. Israel's approval is also required if the Palestinian government is to get permits for importing and deploying telecommunications infrastructure and equipment, or to simply access international connectivity. These restrictions placed Palestine among the bottom performers when compared to other MENA region countries in terms of mobile penetration and mobile network providers. In 2015, Palestine was one of the last countries in the world to offer 3G connectivity to its citizens. Digital government development depends highly on a strong telecommunication infrastructure. This unique challenge that Palestine faces must be considered as we discuss recommendation for digital government transformation[27].

Israel's control over the Palestinian telecommunications sector makes it difficult for Palestinians to trust digital services. Israeli Defense Forces (IDF) is known to track Palestinians' activities online. In some cases, Facebook posts and online activities have been used to target Palestinians. As a result, convincing Palestinians to adopt digital services must be accompanied by strong emphasis on cybersecurity. This focus on cybersecurity and data protection is rising everywhere in the world but Palestine remains with a unique challenge to consider. The scope of this report does not cover cybersecurity, but it remains a topic for further analysis.

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[26] Ali Sawafta, "Palestinians Get 3G Mobile Services in West Bank," *Reuters*, January 24, 2018, https://www.reuters.com/article/israel-palestinians-telecom-idUSL8N1PJ3FW.

[27] Rossotto Maria Carlo et al., "The Telecommunication Sector in the Palestinian Territories : A Missed Opportunity for Economic Development," PDF (Washington, D.C., January 2, 2016), https://documents.worldbank.org/en/publication/documents-reports/documentdetail/993031473856114803/The-telecommunication-sector-in-the-Palestinian-territories-a-missed-opportunity-for-economic-development.

Globally dispersed population:

Another unique feature of Palestine is its globally dispersed population. Palestinians live abroad as refugees or as expats. Table 3, for example, shows that the number of registered Palestinian refugees in Jordan, Lebanon, and Syria is significant compared to the Palestinian population residing in the West Bank and Gaza.

Table 3 The Palestinian population globally, 2017 (Palestinian Central Bureau of Statistics)

Location	Population
West Bank and Gaza Strip	**4,733,357**
Registered refugees abroad	**3,418,566**
Jordan	2,286,643
Lebanon	513,795
Syria	618,128

Digital government can transform this feature form a disadvantage into an opportunity. Many Palestinians living abroad have financial and social ties with their larger families at home. A digital government infrastructure and a reliable digital identity can strengthen the connection that Palestinians abroad have with Palestine. Additionally, it could facilitate and allow different types of transactions:

- **Financial**: simplifying land ownership and management from abroad, allowing property tax payments on lands owned by Palestinians in the diaspora, opening bank accounts and transferring funds and remittances into Palestine.
- **Social:** reestablishing family ties, providing opportunities for Palestinians abroad to take part in community service
- **Entrepreneurial:** registering businesses in Palestine, allowing collaborations between Palestinians abroad and within Palestine.

Financial and operational support from the international community:

International development organizations such as the United Nations, the World Bank, and other smaller NGOs have played a role in developing different aspects of Palestine's infrastructure. Recognizing the challenges causes by the occupation on a developing nation, these organizations have often provided financial resources and operational capacity to build roads, extend water infrastructure, conduct employment training programs, and assist in the digital government development efforts.

As Palestine addresses the question of digital government, it has access to international partners. These partners can minimize the initial planning and financial cost that the Palestinian government would undertake in its plan to adopt a digital government transformation. This area will be further explored in a later section of the report with a specific focus on the role that the UNDP/PAPP can play in assisting digital transformation in Palestine.

Elements of a successful Palestinian adoption

In this section, we envision certain elements of a successful implementation of digital government transformation in the State of Palestine. These elements are present in other countries and have attributed to improving the quality of government services delivered to citizens.

Once only principle (OOP)

The OOP has become a central element in digital government. Some version of it has been implemented in Estonia, the UK, Canada, Australia, and the Netherlands. The EU established an initiative to adopt OOP in Europe starting in 2023[28].

Under OOP, citizens and businesses have to "provide their data only one time when in contact with public administrations". Afterwards, different government departments can internally transfer and share data in a secure way to ease citizens' experience while performing transactions[29]. For example, in order to pay property tax, a citizen should only visit one government department (or complete the process fully online). This would be instead of what currently takes place where the citizen in some cases must physically visit a local municipality to issue an ownership paper, and then carry this paper to a government department to pay the tax. The main idea is that the citizen no longer needs to provide the same information multiple times to different government agencies.

OOP provides opportunities and challenges. The most apparent opportunity is minimizing administrative burdens on citizens and government. This implies saving costs through reducing paperwork required on the government side. It also means reducing the time cost for citizens who often end up waiting in long lines to collect different components in order to receive the service. Another major opportunity is the convenience OOP provides to citizens and businesses by turning a multiple-step process into a simplified clear one step process.

The challenges presented by OOP are related to data sharing and privacy. While sharing citizen's data across different departments could improve the citizen's experience, it could also present threats to their data privacy. For example, a citizen trying to issue a birth certificate for their newborn might not want the government employee to have access to other irrelevant private

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[28] CEF Digital, "Once Only Principle (OOP) | Reduce Administrative Burdens on Citizens and Businesses," EU Website, CEF Digital, accessed March 24, 2021, https://ec.europa.eu/cefdigital/wiki/cefdigital/wiki/display/CEFDIGITAL/Once+Only+Principle.

[29] Naeha Rashid and David Eaves, "Deploying the Once-Only Policy: A Privacy-Enhancing Guide for Policymakers and Civil Society Actors," Policy Briefs Series (Cambridge, MA: Harvard Kennedy School Ash Center for Democratic Governance and Innovation, November 2020), https://ash.harvard.edu/files/ash/files/deploying-once-only-policy.pdf?m=1605912398.

information such as tax payment history. This also can raise ethical concerns on how the government uses all the information it has on its citizens in its decision to offer them services. This challenge can be addressed through clear data sharing protocols and guidelines on citizen data usage[30].

User-centered design

This element requires government to fundamentally rethink its service offerings. Citizens have been rapidly adopting and using non-governmental digital services. This fast adoption can be thought of as a result of the convenience and positive experience provided to citizens. Many actors in the private sector have acknowledged this advantage of digital service offerings.

The adoption of digital service delivery from the private sector can be much easier than it is for the government. Major private sector digital services have been developed in recent years and the ones we are familiar with now are only the successful ones. Government does not have the flexibility that the private sector has in terms of openness to failure and fast-paced change. However, government can still adopt certain aspects from the success of the private sector.

Digital government transformation offers and opportunity for government to adopt user-centered design. The UK case study in the previous section shows a successful example of government adoption. User-centered thinking means that government digital transformation should not be thought of simply as moving paper-forms into a website. Instead, it means rethinking how citizens interact with government and optimizing the approach to meeting their needs.

In order to adopt a user-centered design, government agencies need to make sure that "users can access, understand, and use the information provided. It also means that users can accomplish their tasks, give input, and know that their feedback is taken into consideration and acted upon."[31] This would include testing services before widely rolling them out while monitoring how citizens interact with the service. It also requires collecting user feedback and being open to adjusting services accordingly (agile process). The baseline is that government should not think of digital transformation simply as a move from paperwork to website forms; it is also a transformation in how services are delivered in a world where mobile phones and computers have become one of the most common tools for citizens.

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[30] Naeha Rashid and David Eaves.

[31] "Creating a User-Centered Approach in Government," Usability.gov Improving the User Experience (Department of Health and Human Services, February 26, 2015), https://www.usability.gov/what-and-why/user-centered-government.html#:~:text=Users%20of%20government%20systems%20include,and%20use%20the%20information%20provided.

Public-private partnerships (PPP)

Government should not see digital government transformation as a task completed in isolation. The private sector can offer multiple lessons and expertise in digital service offerings. For that reason, government should adopt an entrepreneurial mindset and benefit from the private-sector experience in this field. Currently, government agencies procure certain services from private vendors. This relationship can be transformed into a partnership where the private sector is not only selling products to government but is rather partnering with government to help it create and run its own digital services.

Recommendations

Our assessment of the current state of digital government in Palestine leads us to recommend the following three action options. These three recommendations are targeted towards the UNDP/PAPP to help develop a strategy to support digital government transformation in the State of Palestine. These recommendations can be implemented in combination or separately since they each address a certain existing gap. Before elaborating on each recommendation, we first provide insight into the relevant stakeholders and their interests and considerations. We also provide the criteria used to assess each recommendation and conclude by highlighting challenges that must be taken into account as the UNDP/PAPP assists in digital government transformation.

Recommendation #1	Increase citizen uptake of existing government digital services
Recommendation #2	Improve access to WiFi and mobile networks
Recommendation #3	Establish a government digital services unit for localities

Stakeholders

In developing the recommendation, we must first highlight the interests, considerations, and concerns of each major stakeholder involved in the process (Table 4):

Table 4 Stakeholder analysis

Stakeholder	Interests	Concerns / considerations
Citizens	• Accessible government services. • Clear directions and instructions on how to complete services. • Minimize the time, effort, and money spent on government transactions.	• Sudden and fast change in service delivery platforms. • Varying levels of competency with, and access to, digital tools. • Inconsistent network and internet coverage.
International supporters	• Improve functionality of democratic governance • Accelerating structural transformation for sustainable development (as part of UN SDGs). • Make government services more economically and socially inclusive. • Pioneer a successful digitalization strategy in the region • Maintain relationships with government entities	• Duplicating efforts already taken by national government or localities. • Developing a functionally and operationally unsustainable strategy. • Secure funding for any proposed strategy
National Government	• Achieve the e-Government strategy goals set since 2005 • Minimize cost of government operations. • Achieve citizen's satisfaction. • Implement an inclusive and accessible digital strategy.	• Speed at which citizens are willing to transform their transactions with the government. • Large upfront Cost of digital transformation infrastructure. • Losing citizens' trust in digital services • Ensuring security of digital databases.
Localities	• Achieve the e-Government strategy goals set since 2005. • Minimize cost of local government operations. • Achieve citizen's satisfaction. • Implement an inclusive and accessible digital strategy. • Maintain face-to-face interaction with citizens	• Duplication of effort between localities and national governments • Securing access to national government databases. • Speed at which citizens are willing to transform their transactions with the government. • Large upfront cost of digital transformation infrastructure. • Losing citizens' trust in digital services.
Private sector	• Accessible and easy-to-complete government services. • Clear directions and instructions on how to complete services. • Minimize the time, effort, and money spent on government transactions. • Take part in digital transformation	• Sudden and fast change in service delivery platforms. • Loss in revenue from government projects. • Data protection and cybersecurity on business data stored in government database.

The role of the UNDP/PAPP

Coordination	Operational support
Programme of Assistance to the Palestinian People (UNDP)	
Strategic planning	Financial assistance

The UNDP/PAPP views digital technologies as a way to "enhance productivity, grow economies, and improve the overall quality of life for populations". Recognizing the unique situation of the State of Palestine, the UNDP/PAPP sees a great potential in accelerating digital government transformation to overcome physical restrictions and financial challenges in the country. Digital government transformation can be thought of as a strategic approach through which the UNDP/PAPP hopes to help the State of Palestine meet the SDGs. It can assist in improving democratic governance, providing services to citizens (within Palestine and abroad), and stimulate economic growth through cost saving and enabling the financial ecosystem.

The UNDP/PAPP has been involved in helping the Palestinian government achieve structural transformation in different areas. It has partnered with Palestinian institutions, civil society organizations, and donors to help advance the Palestinian national priorities such as rule of law, national unity, local governance, and public administration reform[32].

Digital government transformation falls at the heart of the strategic collaboration between the UNDP/PAPP and the Palestinian government in trying to improve the lives of Palestinians. The UNDP/PAPP views such transformation as a way to "contribute to the State of Palestine's agility to realize SDG16 by providing all Palestinians with equal access to e-services, opportunities, and information to assist them in their daily lives; and thereby a system for improved service delivery."

This alignment between the strategic goals of the Palestinian government, the UNDP/PAPP, and the broader UN SDGs creates a unique opportunity for collaboration that can lead to a fast

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[32] "About Us | UNDP in Programme of Assistance to the Palestinian People," UNDP, accessed March 28, 2021, https://www.ps.undp.org/content/papp/en/home/about-us.html.

and sustainable digital government transformation in Palestine. The UNDP/PAPP has the following to offer to the Palestinian government in this transformation journey:

- ***Coordination***: ability to coordinate between national government, localities, private sector players, and international donor organizations.

- ***Operational support***: access to global expertise and a set of successful implementations of digital government transformation in other countries. This can include technical expertise, implementation experience, and administrative knowledge in the field of digitalization.

- ***Financial assistance***: recognizing the resources needed to implement such a major government transformation, the UNDP/PAPP can help the Palestinian government secure funding for the initial needed fixed cost.

- ***Long-term strategic planning***: previous efforts in digital government transformation in the State of Palestine have often faced challenges due the constantly changing political environment in the area. Changes in governments and external pressure have deviated the focus away from implementing a full digital transformation. For that reason, the UNDP/PAPP can help create a sustainable strategy that has the potential of progressing despite governing party changes (e.g. the aftermath of the 2006 elections) or external shocks caused by political turmoil or major crises (e.g. the Covid-19 pandemic).

Criteria

The following criteria can serve as a framework to assess our recommendations. They were developed to ensure that citizens remain the focus of digital government transformation, while also acknowledging both the needs of the Palestinian government and the capabilities and interests of the UNDP/PAPP. The goal is to provide implementable recommendations that can successfully lead to a sustainable and inclusive digital government transformation. Therefore, a successful strategy must address each of the following elements explained in Table 5:

Table 5 Criteria used to assess recommendations

Effectiveness		
	Goal	Offer national and local government services digitally to citizen.
	Measures of success	Number of government services offered to be completed fully digitally (transactional level). Number of citizens familiar with digital services availability.
Political acceptability		
	Goal	Establish a unified and realistic digital government transformation strategy accepted by all stakeholders involved.
	Measures of success	Number of ministries, municipalities, localities, and private sector institutions on board with the developed strategy.
Operational capacity		
	Goal	Develop a digital transformation strategy that can be implemented within existing governmental structure.
	Measures of success	The extent to which the proposed strategy can be implemented with the current operational capacity of the Palestinian government.
Long-term sustainability		
	Goal	Implement a sustainable digital transformation strategy that would survive political changes and external threats.
	Measures of success	The extent to which the proposed strategy relies on existing short-term government strategy. The degree to which a change in the surrounding environment can threat the implementation of the strategy.
Financial feasibility		
	Goal	Propose a strategy that can generate net positive financial gains in the long-run (through cost savings and revenue generation).
	Measures of success	The long-term financial cost/return of the proposed strategy.
Inclusivity		
	Goal	Improve access to government services that would cater to citizens' special needs and circumstances (including geographic, financial, and social barriers).
	Measures of success	The share of population capable of performing transactions with the government digitally.

The following recommendations aim to provide a strategic approach to digital government transformation in the State of Palestine. These recommendations build on, and address gaps in, the existing efforts of the Palestinian government to implement digital transformation. Following the interviews conducted with different stakeholders, the literature reviewed on past digital government efforts, the UK and Estonia case studies, and the eGA survey results, we believe the following recommendations could lead to an effective, acceptable, operationally feasible, sustainable, and inclusive digital government transformation in the State of Palestine.

Recommended options

Recommendation 1: Increase citizen uptake of existing government digital services

Our interviews with municipalities and the MTIT showed that there is a number of digital services currently offered to citizens. For example, an official at the citizen's services section at Ramallah Municipality told us that almost every municipal service in the city can be completed online. The Ramallah Municipality website includes a digital services section where citizens can view and complete many (but not all) digital transactions. However, the same official stated that these services are not being used. They proposed two reasons on why that might have been the case: first, citizens are not familiar with the digital offerings and second, the municipality still prefers to interact with its constituents in person. Similarly, all the municipalities that responded to our survey mentioned that they have some form of digital service offerings (Figure 7).

Figure 7 Digital services offered by municipalities (in response to eGA survey)

Municipaility	Social media (Facebook, Twitter)	Website	Mobile apps
Beit Jala	✓	✓	✗
Hebron	✓	✓	✓
Al-bireh	✓	✓	✓
Khan Younis	✓	✓	✓
Ramallah	✓	✓	✓
Gaza	✓	✓	✓

While all municipalities offer multiple forms of digital services, the primary channel that citizens use to complete digital services remains to be "in person" (Figure 5). This fact highlights the gap between service offering and service uptake. This points to poor design of digital services that does not put citizen needs at the center. It also shows that citizens, in many situations, are not aware of the existence of digital services. This issue also exists at a national level, even though the MTIT was not able to provide us with statistics on use of certain digital services they offer.

Our first recommendation focuses on building up on the existing efforts and calls for increasing citizen uptake. Addressing this issue involved the following key stakeholders:

- **Citizens**: they need to be made aware that services exist and they should also provide their feedback to help make these services meet their needs.

- **Municipalities and national government:** government agencies can address this issue by fundamentally rethinking the design and delivery of digital services. These efforts can benefit from the case studies mentioned above especially the UK GDS with their citizen centered design approach.

- **The UNDP/PAPP:** through the administrative capacity and knowledge collection, the UNDP/PAPP can work on unifying efforts among municipalities and ministries to develop user-centered design for digital services. Additionally, it can play a coordination role that would bring these stakeholders together while also leveraging successful approaches from other countries and from the private sector.

Recommendation 2: Improve access to WiFi and mobile networks

This recommendation highlights the interdependency between infrastructure and digital government services. It addresses a common foundational factor for ICT, e-Government, and digital government development. It also shows that planning should be performed with citizen needs in mind.

Today, only 33% of Palestinian households own a computer, 86% of families own at least one smartphone, and 80% of families have internet access[33]. In thinking about digital government transformation, it is important to keep in mind that these basic tools are fundamental for the delivery stage in order to ensure the inclusivity of services.

Figure 8: Palestinian household adoption of technology (Palestinian Central Bureau of Statistics, 2019)

33% of households own a computer

86% of families own at least one smartphone

80% of families have internet access

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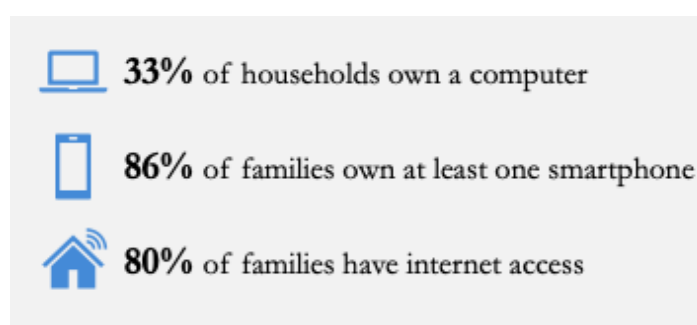
[33] Palestinian Central Bureau of Statistics (PCBS), "Main Selected Indicators for Information and Communications Technology in Palestine," PCBS State of Palestine, March 16, 2020, http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/ICT_main_indic_2019.html.

Digital government services rely heavily on WiFi and mobile network access. To achieve the ideal state where citizens can complete most government services (including voting and tax filing) online, then the issue of WiFi and mobile network accessibility must be addressed.

This constraint should not be seen as a barrier to implementing digital services. The existing Palestinian infrastructure represents a strong starting point while efforts to improve infrastructure are underway. Municipalities have been able to develop and offer services digitally. This recommendation is aimed at citizens to increase their ability to access these services.

Addressing major infrastructure area like WiFi and mobile networks requires the collaboration of the following stakeholders:

- **MTIT and national government**: to secure and grant permits to extend telecommunication infrastructure wherever it is lacking.

- **Private sector**: telecommunication is one of the major industries in Palestine and it is dominated by a small number of players (PalTel, Jawwal, Oredoo). Their involvement is necessary in order to expanding coverage and focusing on remote areas.

- **UNDP/PAPP:** the UNDP has expertise in assisting GIS mapping and infrastructure development in Palestine[34]. This experience can be leveraged to cover WiFi access and mobile networks.

Recommendation 3: Establish a government digital services unit for localities

The two case studies provided in this report both show how digital government was planned and executed through a national strategy. During our interviews, the MTIT (the ministry that includes the General Directory of E-Government) and different municipalities stated that there was no official method of collaboration between these two layers of government. As a result, the MTIT was implementing its digital government development at a national level but without including the municipalities as a partner for designing and delivering these services. At the same time, for municipalities, digital services were developed in isolation of what was happening at a national level and in other cities.

The disintegrated development of government digital transformation leads to inefficiency, unsustainable progress, unclear strategy, and makes it more difficult for citizens to utilize digital services. Therefore, it is important to consider the creation of an entity that could oversee digital

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[34] UNDP/PAPP, "OFID Signs Agreements with UNDP in Support of East Jerusalem and Gaza Strip Projects," UNDP in Programme of Assistance to the Palestinian People, December 15, 2015, https://www.ps.undp.org/content/papp/en/home/presscenter/pressreleases/2015/12/16/ofid-signs-agreements-with-undp-in-support-of-east-jerusalem-and-gaza-strip-projects.html.

government transformation at a municipal level. This unit does not replace the MTIT's General Directory of E-Government. It rather complements its work at localities level, allowing the MTIT to focus its development on major national and interdepartmental digital development.

A simple example of the role of the digital services unit can be the development of a single mobile application that can be customized for each locality. The development of this application through a central unit for all localities would lead to time and cost savings since each locality is no longer responsible for developing, maintaining, and constantly updating its application. It can also allow smaller localities to offer such service to citizens.

More generally, the centralization of localities' digital service development can lead to the following advantages:

- Allowing localities to build on each other's existing infrastructure (mobile applications, digital systems, design ideas). This can lead to cost savings in service development while also making it possible for smaller localities to offer similar services to major municipalities

- Reducing the procurement cost when purchasing services from private vendors. Having multiple localities in contracts with private sector vendors allows these localities to be at a better position to negotiate service features, maintenance contracts, and timeframe for delivery and service provision. An official at the Jericho Municipality mentioned that one of the biggest limitations in developing new services is that the municipality is stuck in long-term expensive contracts with the private sector. These contracts force the municipality to be dependent on a single vendor over a long time-period because of the maintenance costs. It also means that the municipality can only enter one of these contracts whenever some of the previous ones are completed, leading to a gap in service needs and offerings.

- For the citizen, a uniform method of service delivery creates familiarity with government digital services. On daily basis, it is more likely that citizens would perform a transaction with a locality than with the national government. Having digital services as a reliable option across different localities creates familiarity with this type of delivery. Such familiarity can help further utilization of existing services while improving the citizens' trust in completing transactions digitally.

- A centralized digital services unit for localities can also streamline the digital government transformation efforts between localities (represented by a single unit), the national government, the private sector, and the academics.

This digital services unit can also serve as a flagship for the government's transformation strategy. Following the example of the UK, a digital services unit can adopt a startup-like approach that would attract talent from university graduates and the private sector. It will create a platform for designers and passionate computer scientists to take part in improving

government services to match the needs of future generations. Such environment can help foster a fundamental change in how professionals view government services and how government thinks about service delivery.

The creation of a digital services unit that represents all localities can face resistance and challenges that must be acknowledged and addressed. The closest existing example of this unit is the MTIT General Directory of E-Government. Multiple municipalities interviewed expressed concerns about the overlap between the MTIT and the localities in terms of oversight and responsibilities. This issue leads to duplicated efforts in digital service delivery, and it also creates a list of services that the MTIT and the localities both do not believe to be responsible for delivering. An official at the MTIT told us that they see the Ministry of Local Government (MOLG) as the coordination entity between localities in helping them navigate digital transformation. However, this sentiment was not shared by the localities themselves. The localities saw themselves alone in their efforts to implement digital government transformation.

Another challenge facing this recommendation relates to the degree to which localities are willing to see the digital services unit as a partner and not as a competitor. Currently, digital services in localities are developed mostly by the local IT departments. Creating a digital services unit as a hub for service design and delivery can be seen as taking work away from the local IT departments. This would be especially exaggerated if the unit operates with a fundamentally different style than that followed by the classic government approach. In addressing this challenge, it would be important to highlight the advantages to local governments in terms of efficiency, cost savings, and improved services to citizens. It is also important to clarify that ICT is the technical area of expertise for IT departments, while digital government involves a broader and a more fundamental transformation that relates to citizens' experience and the approach to service design.

The structure of the digital services unit would build on existing efforts in local governments. It can include representatives from existing IT departments, but it would also include user experience (UX) designers and entrepreneurs who would work on identifying problems and proposing solutions. This division will be beneficial for the IT departments in localities. Given that many of the IT departments consist of 1-2 employees in smaller localities, the digital services unit would allow these employees to focus their limited availability to ICT and technical support.

Multiple stakeholders would need to be involved in the creation of such unit:

- **Localities**: this unit would capitalize on existing developments and would create new capabilities for localities. This can help them deliver better services to their constituents while also achieving improved efficiency and cost savings.

- **MTIT:** through its Directory of E-Government, the MTIT can collaborate with the digital services unit and coordinate service delivery to citizens between national and local levels. The MTIT can serve as an enabler for the unit by granting it the needed access to national government services, data, and resources.

- **Private sector:** this unit is not expected to be fully self-sustaining when it comes to service procurement. For that reason, the tech industry would be involved in order to establish an approach towards purchase agreements and service development that would fit the different localities included.

- **Association of Palestinian Local Authorities (APLA):** the role of APLA is explained in more details in the sub-section below.

- **UNDP/PAPP:** there is a unique value added for the UNDP/PAPP and other international organizations in creating a digital services unit for localities. This step requires significant coordination between different localities and among government ministries. Additionally, the UNDP/PAPP can technically, and financially, support the creation of the unit to ensure that it functions in a fundamentally different and more entrepreneurial approach than the existing government methods.

Association of Palestinian Local Authorities (APLA)

Multiple localities mentioned APLA as a coordination entity between localities. APLA, as a coordination entity, is different than MOLG or MTIT; While localities see conflicting interests with the national government (represented by MOLG and MTIT), they view APLA as an entity that can represent their interests. This gives APLA a unique role in the creation of a digital services unit for localities.

We conducted an interview with one of the leading officials of APLA who emphasized on the coordination capability that APLA can play between localities. The official stated that APLA already has experience in conducting training programs for employees from different localities. The association also has experience in collaborating with other municipalities internationally, which can provide an opportunity for transferring knowledge and expertise. Finally, APLA has the potential to grow and play a more significant role. Creating the government digital services unit under APLA would allow the unit to build on the association's leverage while also helping it transform localities service delivery approach.

Implementation

The three recommendations provided in this report can be implemented in two stages:

Short term: recommendations that can be started within the next 0-3 years. The implementation of these recommendations can be mostly done by the UNDP/PAPP and it does not require the immediate recruitment of other stakeholders.

Long term: recommendations that can be implemented within the next 10 years. These recommendations require the involvement and collaboration of stakeholders other than the UNDP/PAPP since they address infrastructure and government reform.

Short term

Recommendation #1	Increase citizen uptake of existing government digital services

Long term

Recommendation #2	Improve access to WiFi and mobile networks
Recommendation #3	Establish a government digital services unit for localities

Risks and considerations

Introducing a significant reform to how government delivers services to citizens can face multiple risks and challenges. In this section, we categorize risk into three groups: political, logistical, and financial. These risks should not be viewed as reasons for why digital government transformation cannot happen. It is rather important to acknowledge these challenges and plan to address them in the planning and implementation stages when deploying a strategy.

Political risks:

- **The internal Palestinian political system**: in 2021, the State of Palestine is expected to have parliamentary and presidential elections that can shape the political agenda for the future years. A digital government transformation strategy should not be vulnerable to such political changes. Regardless of which political party comes to power, digital government should become a priority that is implementable at a national and local levels.

- **Relationships with Israel**: there have been incidents where Israel has targeted efforts to improve Palestinian infrastructure and make it inclusive, especially for Palestinians living in remote villages and communities. For this reason, it will be essential to secure international support for the planned digital government transformation strategy. Recruiting international allies is an area where the UNDP/PAPP can have unique value added.

Logistical risks:

- **Perception of digital government**: transforming the channel of interaction between government agencies and citizens requires a cultural shift. It needs to be clear to citizens that completing transactions digitally improves their experience by introducing efficiency, transparency, and accessibility. The UNDP/PAPP can contribute to this cultural shift by implementing creative techniques that would nudge citizens to change their behavior around completing government transactions online.

- **The need for legal reform to create an enabling environment**: changing citizens behavior to accept digital channels as a primary method of interacting with government requires providing guarantees for data protection and cybersecurity. The existing legal structure in Palestine would need to be updated to reflect the transition into the digital world.

- **Navigating the resistance to change**: this concern focuses on current national and local governments employees. Digital government transformation fundamentally challenges the way government delivers services. Some of the recommendations we

provide can be perceived as attempts to replace IT departments or challenge the way customer service takes place. It is therefore important to emphasize the ways in which digital government transformation goes beyond changing mechanisms of service delivery and extends to rethinking what services governments can provide and how they can provide them in a way that puts citizens at the center. IT departments, for example, are still needed to cover the ICT component of government operations. Adding user experience designers to service design teams would allow ministries and municipalities to expand their service offerings and improve the citizen's experience in a minimal and efficient way.

Financial risks:

- **Sustainability**: our recommendations can entail a major upfront financial cost for achieving the desired digital transformation. However, digital government is more efficient for both citizens and governments. The upfront costs should be perceived as an investment into a transition towards service delivery that is cheaper and more effective. The simplest way to think about the cost-saving impact of digital services is to calculate the number of working hours (from employees and citizens) saved through the digital transformation. This would include thinking about government employees and citizens spending time at national and local government entities to complete transactions.

Conclusion

Digital government transformation has been identified as a national priority in the State of Palestine since 2005. Even though major steps to achieve this transformation have been taken at national and local levels, the progress made did not produce a holistic transformation that would improve the citizen's experience and make service delivery robust against external challenges. Through interviews with stakeholders, literature review, and an analysis of two case studies, we were able to identify the problem as a gap between planning and implementation of digital government services.

A shift from the current e-government approach to a digital government transformation that puts the citizen at the center requires collaboration between different government entities, the private sector, and international organizations. The UNDP/PAPP can play a significant role in this shift by coordinating between stakeholders, consolidating knowledge from other successful examples of digital government transformation, and securing financial and operational resources needed during the initial stage of the transformation.

This report provides three recommendations for the UNDP/PAPP to help the State of Palestine achieve digital government transformation. The recommendations were considered because of their potential of being effective, sustainable, inclusive, politically acceptable, and operationally feasible. We recommend that the UNDP/PAPP assists digital government transformation in the State of Palestine through: i) increasing citizen uptake of existing government digital services, ii) improving access to WiFi and mobile networks, and iii) establishing a government digital services unit for localities

Digital government transformation can fundamentally challenge the way government entities provide services. For that reason, it is important to consider political, logistical, and financial risks that our recommendations could face. These risks can be navigated by involving the relevant stakeholders throughout the transformation process. Citizens, private sector players, government IT employees, and international partners are some of the primary stakeholders that can help make digital government transformation possible in the State of Palestine.

Appendix A: Interviews

Stakeholders interviewed

The Ministry of Telecommunication and Information Technology (MTIT)
Official at the General Directory of E-Government

Ramallah Municipality
Official at the Citizen's Services Center

Jericho Municipality
Official at the IT Department

Der El Balah Municipality
Executive official

Association of Palestinian Local Authorities
Executive official

Sample interview questions

- Who is the department responsible for implementing e-government developments in your organization?
- What digital government progress does your organization plan to achieve in the next 5-10 years?
- Does your team have a strategic plan in place for developing digital government services?
- Do you coordinate with other similar entities (localities, ministries) on digital transformation efforts?
- What has worked well in the past in developing digital services for your organization?
- How would you describe the interaction between your organization and the citizens?
- What barriers do you face in achieving a full digital government transformation?
- Do you collect statistics on user usage?
- What system do you have in place to gauge user satisfaction with your organization's services?