



# WORLD BANK JORDAN

DIGITALIZATION  
OPPORTUNITIES FOR  
JORDANIAN BUSINESSES

**2019**  
JULY

# GENERAL OVERVIEW

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Over the past two decades, a growing body of research substantiates the pivotal role that digitization can play in boosting economic growth, both through the development of ICT as a standalone economic sector, and through the role technology can play in strengthening other economic sectors. In recognition of this enormous potential, the World Bank/Jordan is supporting a broad-reaching program in Jordan designed to catalyze technology and innovation across Jordan. In June 2019, Souktel was engaged to support the World Bank by identifying gaps, constraints, bottlenecks, and opportunities to develop the Jordanian ICT and IT Enabled Services (ITES) sector, with an initial focus on three (3) branches of economic activity: Health, Tourism, and Financial Services. In support of this mission, Souktel's dedicated advisory team undertook an in-country scoping mission from June 16-20, 2019 for consultations and key informant interviews with a range of stakeholders, including:

- ICT sector specialists (private companies, product developers);
- Domain specialists in the selected focus sectors, including representatives of the Health, Financial Services, and Tourism industries;
- Leaders and managers of ICT incubators, accelerators, and investment groups;
- Donor organization technical specialists;
- Sector consumers.

With information gathered through the scoping mission, Souktel will support the World Bank by identifying potential interventions, innovative and entrepreneurial approaches and digital solutions that can be integrated at an organizational level as part of the design and/or implementation of the World Bank future programming in selected service sectors. This overview is intended to highlight Souktel's initial recommendations, which have been derived by comparing in-country findings against regional and global models for firm-level digitization.

This is intended to be a list of short-term activities with the potential for quick impact, based on two main parameters: (1) they address company or organization level (rather than systemic) challenges; and (2) they are interventions that foster potential business cases and have the capability to create job opportunities in the Jordanian market.

# HEALTHCARE





# HEALTHCARE OVERVIEW

Globally, the digital health sector is skyrocketing: in 2018, there was a reported \$5+ billion in new investment capital in digital health applications, while more than 3 million consumer mobile health applications were available in iOS and Android application stores. The market for enterprise solutions – which for years lagged behind the consumer market – is finally taking off as health facilities and service providers are increasingly making large investments in solutions that reduce medical costs, promote healthy lifestyles, help manage chronic conditions, and much more.

At the health facility- and service provider-level, many digital health strategies are rooted in the “Quadruple Aim” framework, which guides health care practitioners towards applications that support four core outcomes, as outlined in the following table:

Improved Health Outcomes	Improved Patient Experience	Reduced Costs	Increased Provider Satisfaction
<p><i>Selected Examples:</i></p> <ul style="list-style-type: none"> <li>-Physician-led apps to support chronic care management, eg. for patients with diabetes, high blood pressure, etc.</li> <li>-Data aggregation/analysis platforms for insights on population health and provider treatment patterns</li> <li>-Electronic prescription and doctor referral platforms</li> <li>-Wearables, ie body-mounted sensors</li> </ul>	<p><i>Selected Examples:</i></p> <ul style="list-style-type: none"> <li>-Applications that promote access to care, eg. telemedicine</li> <li>-Point-of-care technologies that improve patient insight and comfort while allowing clinicians to deliver faster, safer and more efficient patient care</li> <li>-Patient feedback systems</li> </ul>	<p><i>Selected Examples:</i></p> <ul style="list-style-type: none"> <li>-Applications that expedite insurance reimbursements</li> <li>-Automated billing and ePayment systems that reduce paper-based billing</li> <li>-Mobile Bar Code Medication Administration (BCMA) software</li> </ul>	<p><i>Selected Examples:</i></p> <ul style="list-style-type: none"> <li>-Bedside tablet applications that streamline reporting burdens and workflows (eg. patient intake, updating patient charts, sharing data with patients)</li> <li>-Technology-based training/staff professional development</li> <li>-ICT-enabled feedback loops between patients, providers, and health care administrators</li> </ul>



Generally, countries were pushed to focus on: (1) developing a consistent ehealth vision aligned with the country's resources and needs; (2) developing an action plan that goes in line with the vision; and (3) create the framework to monitor implementation.<sup>1</sup>



However, it is important to note that while the evidence base is increasingly demonstrating that the integration of technologies can lead to positive health outcomes, research also suggests that many medical facilities and health service providers are facing persistent challenges in establishing sustainable and effective digitization strategies. In one infamous example, a network of hospitals in Denmark lost more than two years and close to a half billion dollars trying to import a US-designed hospital management system that is not meeting the needs of its end users and is only very reluctantly being used by the hospitals that commissioned the system. More generally, there are still comparatively few large- scale digital health models in the region because of the complex and contextual nature of national healthcare systems; differences in language and coding protocols; varying levels of digitization to date and types of existing systems; and so on. In the case of the US, the pressure to automate originated from government mandates, such as the 2014 US HITECH Act, the EMR mandate, and HIPPA regulations requiring health care facilities and practitioners to go paperless and create digital flow systems in the rendering of patient care; however, even with compulsory governmental mandates, implementation of national e-health systems have proved difficult and most challenging globally. Similarly, at the facility level, there are often multiple systems used at various points on the healthcare continuum and obtained at varying times, and in most cases, the systems are typically not integrated nor interoperable.<sup>2</sup>

1 WHO. Global Strategy on Digital Health 2020-2024. 2019, Global Strategy on Digital Health 2020-2024, [extranet.who.int/dataform/upload/surveys/183439/files/Draft%20Global%20Strategy%20on%20Digital%20Health.pdf](https://extranet.who.int/dataform/upload/surveys/183439/files/Draft%20Global%20Strategy%20on%20Digital%20Health.pdf)

2 Lost in translation: Epic goes to Denmark, Arthur Allen, June 6, 2019 Politico (report on integration problems and interoperability challenges when Denmark engaged one of the leading US HIS companies – Epic – to automate Denmark's Healthcare system).

Drawing on the lessons of health sector digitization use cases around the world, Souktel has reviewed and evaluated a number of facility- and provider-level frameworks, though will focus on recommendations that we consider appropriate within the Jordanian context. For the remainder of this chapter, we will discuss the Jordan-specific findings of the in-country scoping exercise, including current gaps and potential opportunities. This report will concentrate on recommendations for interventions that have the potential for short-term, financially viable interventions, which may have the potential to open job opportunities.



# HEALTHCARE FINDINGS

## SCOPING

During the in-country scoping exercise, Souktel met with a range of health sector practitioners, including the Chairman of the Private Hospitals Association (PHA), and The Specialty Hospital management and IT teams, NatHealth CEO, Certacure founders, along with the international development agencies including UNICEF and Mercy Corps. Based on these informant interviews, Souktel identified the following common gaps at the facility and service-provider levels:

- Lack of a proven comprehensive digital health model, driven, in large part, by various privacy concerns, not the least is patient information confidentiality;
- Many Jordanian private hospitals use CAREWare software as a stand-alone solution, which is not a comprehensive nor an integrated e-health solution;
- Public health facilities, and some private clinics, generally rely on the solutions offered by Electronic Health Solutions (EHS) through its Hakeem program. Hakeem has widely adopted the VistA system, an enterprise-wide information system used throughout the United States Department of Veterans Affairs (VA) medical system.<sup>3</sup> Despite the ubiquity of the Hakeem/VistA platform, informants cited major recurring challenges with the system:
  - Health care providers report that the EMR functionality is quite good, but it lacks back office features and workflow structures that align to actual processes in Jordanian hospitals;
- Services across hospital departments are not integrated; rather, each unit functions as a separate component in the system (for example, radiology may have one set of records, while cardiology and the pharmacy may have separate sets of records): radiology, cardiology, pharmaceutical services, etc.
- Data and analytics functionalities are under-utilized; many of the services at the Specialty Hospital are currently done manually, which is limiting the efficient utilization of data for analysis and reporting purposes

<sup>3</sup> It should be noted that even in the US – the market for which VistA was designed – major investments have been needed to increase integration and operability including adding contractors to manage and in some cases redesign the system.



- Lack of Electronic Medical Records (EMRs) at the hospital level is considered a major challenge: despite some hospitals having state-of-the-art diagnostic or other clinical equipment, a lot of medical recordkeeping is still done manually, contrary to international best practices which recognize EMRs as critical to safe and efficient patient care and accurate medical recordkeeping.
- Many functions that could be automated and integrated (insurance payments, pharmacy interactions, etc.) are still completed with labor-intensive manual processes that add cost, potentiality for errors, and time to payments and insurance reimbursements.
- Introducing new technologies and the adoption of digital tools by practitioners can be a major challenge and may take time; without proper preparation of users- including “buy in” by staff and staff leaders, there will be push back and reluctance to use the system to its greatest efficiency;
- The inability to identify the right health information system model which can be implemented at the facility level. The gaps and challenges identified by the key informants include but not limited to: system language barrier, lack of local expertise to provide technical support , ability to integrate the system and migrate it with current data and select a system which is easily iterated and capable of add on apps without spending exorbitant funds to update

# HEALTHCARE

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# RECOMMENDATIONS

The following roadmap suggests action steps for a digital health success based on Asia eHealth Information Network recommendations of National eHealth Capacity Roadmap, which adopted the WHO and ITU National eHealth Strategy Toolkit published in 2012. The national strategy is divided into three main parts: (1) National ehealth vision; (2) National eHealth action plan per country’s priority; and (3) Monitoring and evaluation framework. In order to work towards a successful Digital Health, ICT alone is insufficient, and other factors should be clear and identified including scalability, replicability, interoperability, security and accessibility.<sup>4</sup>

4 WHO. Global Strategy on Digital Health 2020-2024. 2019, Global Strategy on Digital Health 2020-2024, [extranet.who.int/dataform/upload/surveys/183439/files/Draft%20Global%20Strategy%20on%20Digital%20Health.pdf](https://extranet.who.int/dataform/upload/surveys/183439/files/Draft%20Global%20Strategy%20on%20Digital%20Health.pdf).



*Credit: Asia eHealth Information Network*

Under this assignment, Souktel identified recommendations and interventions to fill in gaps at the private service providers and facility levels which fall under the action plans that can be taken to support health sector digitization and may have the potential for short-term, financially viable interventions, increased revenue and have the potential to open job opportunities.

The following table outlines Souktel's suggested priority activities for the World Bank to support "quick wins" in health sector digitization aligned with the recommended road map. In other words, they are strategies that – in Souktel's estimation – can be successfully implemented:

- In a short time frame;
- With a modest investment;
- Towards the solution of common problems within the sector, in a way that can save time and money and improve safety and efficiency.

Recommendation	Description	Key Implementation Component
<b>Design and architectural review of the Hakeem system (VistA) and King Abdullah University Hospital (KAUH) Information System implemented by DXC</b>	Undertake an in-depth review of the functionality and usability of the Hakeem platform used by most public sector service providers, and King Abdullah University Hospital Information System, and evaluate opportunities to invest or implement in one or upgrade the systems.	<p>The assessment team's belief is that the VistA system cannot be ignored with the realization of the general complexities, given the strong government backing behind the system and its prevalence in the public health system. Souktel also identifies the King Abdullah University HIS as an opportunity to be assessed, which can be implemented and piloted in one of the large private hospitals. This effort will support in upgrading the hospital's system, and also open up new job opportunities for technology and subject matter experts.</p> <p>However, in Souktel's estimation, there is room for a thorough design and system architecture review of the system (similar to what is currently being done on VistA in the US) to identify a blueprint for overall improvement in system functionality. Added to the Hakeem review, and as a comparison/contrast evaluation should be a thorough review of the KAUH Information System.</p> <p>Key steps of this activity would include:</p> <ul style="list-style-type: none"> <li>• Identification of design review team (including both health systems ICT specialists and domain specialists);</li> <li>• Identification of key systems' stakeholders and users, including government and private sector representatives, implementers, and public sector medical professionals and administrators;</li> <li>• Convene a thorough review of VistA and KAUH Information System, including workflow mapping, UI/UX testing, storyboarding, integration planning, informant interviews/focus groups, etc.;</li> <li>• Select a system to pilot, seek recommendations on modifications, upgrades, enhancements, etc.;</li> <li>• Finalize TOR for an upgrade plan, then contract a firm to execute ;</li> <li>• Design a rigorous testing framework for the solution to document time and cost savings and other KPIs;</li> <li>• Roll out enhanced platform through training delivery and marketing/branding plan.</li> </ul>
<b>Pilot an Electronic Medical Records (EMR) platform</b>	Pilot an EMR system <sup>5</sup> within the selected health care facility -	In Souktel's evaluation, the pilot should be run by a third-party organization that works in close collaboration with the selected pilot facility. The role of the third-party advisor will be to assist the selected medical center in designing, implementing, and evaluating optimal solutions. Proposed steps include:

5 Not Surprisingly, in all management studies discussing implementation of HIS systems and automation of Healthcare & commercial companies, the success of automation is directly linked to the passion and mission of leadership. The will to automate fully and correctly comes from the C suite and is infused throughout upper management. The leadership team is key to inclusiveness of all staff and their belief in automation and their role within the new system. In our opinion, the World Bank should consider using The Specialty Hospital and Dr. Fawzi Al-Hammouri and his IT team to spearhead the pilot. He has the acceptance of his community as head of the PHA and General Manager of the Specialty Hospital. Most importantly he has assembled an IT team to make attempts at integration. And, key to economic growth, The Specialty Hospital is a leader in revenue generation to Jordan from Medical Tourism. Making Specialty a pilot provides immediate feedback on integration (first efforts will be to convert from paper charts to digital) with a team that is composed of problem solvers, and with efficiency gained from automation more revenue by attracting more global patients.



Recommendation	Description	Key Implementation Component
	<p>potentially integrated with biometric security features to address privacy concerns - that addresses considerations related to cost, ease of use, and solution hosting on premise vs. a cloud solution, implementation process, training and support, interoperability with other systems, and the customizations provided by each solution in the market to meet the specific needs</p>	<ul style="list-style-type: none"> <li>• Engage a Human-Centered Design (HCD) specialist to consult with relevant stakeholders, and hire an IT user-focused design expert and an IT medical expert to evaluate Hakeem and also other hospital- focused available systems;</li> <li>• Identify a medical facility to house the pilot (Souktel recommends a larger, private facility that has the motivation and resources to oversee a pilot);</li> <li>• Conduct an in-depth analysis of the hospital's workflow, requirements, challenges, and its internal technical capacity;</li> <li>• Identify institutional structures, regulations and practices that will impair change management;</li> <li>• Estimate and outline the implementation budget and time frame;</li> <li>• Conduct a thorough review of the best services and solutions available based on the hospital need. It is Souktel's understanding that the solutions available widely are in services related to small practices, or specialized hospitals, or an overall solution. There are three top picks which Souktel has initially researched: AdvancedMD, Kareo, and NeuMD. Souktel recommends to have the solutions evaluated by both the Design and Medical Experts, in consultation with the pilot hospital.</li> <li>• Set a time frame for the adaptation by the hospital, and the migration of records from paper to the EMR;</li> <li>• Ensure a training program is designed and ready for a roll-out;</li> <li>• Decide on in-house or outsource technical support. Souktel identifies an in-house technical capacity would help save costs and create jobs in the short and long terms.</li> </ul>
<p><b>Pilot a facility-level integrated payment system</b></p>	<p>Souktel recommends that the World Bank select a small number (1-2) of health service providers and insurance companies to pilot a fully integrated payment system that streamlines the end-to-end payments process between providers, payers, and patients.</p>	<p>As with the previous two recommendations, Souktel recommends identification of a third-party advisory firm to work with the pilot organizations (service providers and insurance companies) to guide the process of needs mapping and solution analysis. Using this approach, main program components would include:</p> <ul style="list-style-type: none"> <li>• Identification of strategic advisor and pilot organizations;</li> <li>• Conduct user needs analysis, including workflow mapping/storyboarding, systems mapping, etc.</li> <li>• Review of regional/global payment integration platforms and selection of a solution to pilot;</li> <li>• Development of an evaluation framework by which to measure success during the pilot phase;</li> <li>• Design of a longer-term rollout plan that includes a scaling strategy, a viable business case, etc.</li> <li>• As a later step, Souktel recommends examination of business models that can harness system data for applications of predictive analysis.</li> </ul>

# WORKFORCE IMPLICATIONS

How automation/digitalization impacts the workforce is an important and necessary topic for discussion. Especially in installation of HIS systems and daily advancements in e-medicine, telemedicine, the seminal question is - will automation replace existing workers and/or will digitalization necessitate hiring of new staff members with differing talents to create the efficiency produced by innovative systems? The answer is yes to both.

Studies analyzing the installation and aftermath of automation, specifically in healthcare, show that in every instance a workflow dynamic called “task shifting” occurs. Simply put, those mundane tasks like paper recording, calling for appointments, human logistics on the lower task scale are replaced by digital inputting and transfer. But those workers who did the initial tasks are how “shifted” up to more meaningful work caused by interconnectivity with the entire healthcare team. Each level in healthcare steps up to new, more meaningful tasks, i.e., nurses no longer are burdened with clerical work and assist the physicians and specialists with diagnostic efforts and more patient to nurse contact.<sup>6</sup>



Indeed “task shifting” will require support of leadership and be a part of the overall automation mission. Some “stepping up” will, of course, require additional on site training giving workers new skills to be a part of the total automated team. It is a win-win for all healthcare workers. Regarding immediate need for workers, the installation of parts of HIS requires hiring of short term members to assist in inputting paper documents, charts into the system by use of various methods of scanning.

Digitalization in Healthcare requires strong leadership in the turnaround phase to develop the needed culture of openness, collegiality of purpose and develop a true culture of innovation. However, the end experience is more meaningful and productive work by all healthcare team members and most importantly, better medical outcomes for the patients.

<sup>6</sup> How do new technologies impact on workforce organization? - A rapid review of international evidence. Report developed by The Evidence Centre for Skills for Health, [skillsforhealth.org/uk](http://skillsforhealth.org/uk), 2018.



# FINANCIAL SERVICES



# FINANCIAL SERVICES

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## OVERVIEW

Jordan enjoys a stable and profitable financial sector with considerable financial depth and access. Banking assets account for about 180% of Jordan's GDP, mainly held in cash or government securities, and despite having one of the lower levels of financial inclusion compared to other countries, Jordan has been moving forward on the global financial inclusion index. Improvements have been seen on some of the key indicators. Namely, the share of adults with bank accounts increased from 24.6% in 2014 to 42.5% in 2018, the percentage of adults who have made or received digital payment in 2018 was 32.5% compared to only 13.0% of adults in 2014.<sup>8</sup>

The Jordanian Government has fostered an innovative regulatory environment, which when coupled with private sector buy-in, resulted in growth opportunities in the digital financial sector. Growth was noted especially in mobile payment, high mobile penetration of 150%, smartphone penetration 85% and internet penetration of 89% providing Jordan a strong foundation for growth through digital financial services.

The Central Bank of Jordan (CBJ) has developed a national strategy aimed to increase financial inclusion across the Jordan. CBJ established a private shareholding company; Jordan Payments and Clearing Company "JoPACC" to establish and develop digital retail and micro payments along with the investment in innovative technology and digital financial services. CBJ has adhered to progressive regulations for national digital payments and a platform for mobile payments in Jordan.

JoPACC owns and manages the National Mobile Payment Switch (JoMoPay), which offers security, flexibility and interoperability between the connected digital financial service providers, e-money issuers and the broader ecosystem (ATM switch, bill payment platform, etc...).<sup>9</sup> JoPACC also manages and operates eFAWATEERcom, a central payments platform that allows users to review and pay bills electronically, linking both public and private institutions (government services, utility companies, telecommunication companies, etc ..) and banks and payment services providers.

7 The Little Data Book on Financial Inclusion, 2018, World Bank Global Findex: Jordan

8 The Little Data Book on Financial Inclusion, 2018, World Bank Global Findex: Jordan

9 <http://www.jopacc.com/Pages/viewpage?pageID=22>

xJordan has five licensed payment service providers (PSPs), Mahfazti, Dinarak, Zain Cash, Aya Pay and MEPS supported by an agent network. Jordanian PSPs rely heavily on exchange houses, ATMs and post offices, and have concentrated their agents in Amman and Irbid for registration, cash-in and cash-out operations.<sup>10</sup>

# FINANCIAL SERVICES

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## FINDINGS

### SCOPING

During the in-country scoping exercise, Souktel met with a range of stakeholders in the financial and entrepreneurial spaces, including: Jordan Payments & Clearing Company, Eco4Pay, Arab Bank Accelerator, Innovative Startups and SMEs Fund (ISSF), Oasis 500, Dinarak, and Wamda. Based on these interviews and extensive desk research, Souktel identified the following gaps at the facility and service-provider levels:

- **Weak Agent Network:** Jordan Digital Payments Agent Network is small, (When combined, PSPs collectively have less than 935 active agents in the market),<sup>11</sup> mainly focused in Amman area, with some extending to Irbid. There is no Agent coverage outside of Amman and Irbid, especially in rural areas, or areas with high refugee concentration
- **Difficulty Finding Talent** and disruptive ideas mindset: Fintech startups have difficulty finding high skilled talent from the finance industry, or developers with good experience in both Finance and Tech and can't afford to compete with large corporations on talent
- **Lack of Customer Awareness and Trust:** There is a gap in awareness among citizens about digital financial products. Bill payments and cash out are the main volume driver for digital transactions.
- **Lack of Digital Financial Products:** There are few products specific to Jordan for G2P, P2G, B2B and P2B, Small Medium loans, Remittances, in addition to e-KYC, e-Signature and others to facilitate the digital financial services adoption.
- **Lack of Data Informed Decision Making:** Many institutions lack proper infrastructure to collect and manage data inhibiting their ability to utilize data to accentuate growth, and innovation. There are few products specific to Jordan for G2P, P2G, B2B and P2B, Small Medium loans,

<sup>10</sup> CBJ Data Published January 31st, 2019

<sup>11</sup> Central Bank of Jordan Annual report for 2018 - January 31, 2019

# FINANCIAL SERVICES RECOMMENDATIONS



The below recommendations are suggested by Souktel based on an analysis based on studying the “Strategic Roadmap for development of financial services in the Republic of Azerbaijan”<sup>12</sup>, where factors such as the transformation of the world economy and accelerated development of information technologies are a precondition for creating new trends in the global financial system. These new trends have been observed in prudential regulation and strengthening of control, digitalization of financial services, expansion of alternative banking, change in the behaving models of the population, rise in the demands for new knowledge and skills as well as in changing operating models of financial institutions.

- Establish a financial system comprised of dynamic and sound institutions. aimed at the restructuring and capitalization of the banks, improvement of the assets, and development of the insurance market and strengthening of financial inclusiveness.
- Develop the financial markets
- Strengthen the infrastructure
- Improve regulation and control mechanisms
- Improve financial literacy

Based on the World Bank focus on short and medium term courses of action, Souktel's recommendations are geared towards: (1) Developing the financial market, (2) Strengthening the Infrastructure: Technology service providers (capacity building, access to market, talent, and finance), Agents Networks, and PSPs, in addition to (3) Improving the financial literacy of the customers and the underbanked. Souktel refrained from advising on Policy, regulations recommendations since these recommendations falls out of the scope of this assignment, in addition to the fact that the Government of Jordan (GoJ) and CBJ are already undertaking some of these changes in the financial sector policy and regulations reforms.

<sup>12</sup> [https://ereforms.org/store//media/ekspert\\_yazilari/islahat%20icmali/%C4%B0yun/SYX\\_maliyy%C9%99\\_en.pdf](https://ereforms.org/store//media/ekspert_yazilari/islahat%20icmali/%C4%B0yun/SYX_maliyy%C9%99_en.pdf)



Recommendation	Description	Key Implementation Component
<b>Assess Fintech startups and PSPs capacity building needs and provide technical assistance to fill gaps</b>	Assess Fintech startup and PSP network need for capacity building assistance programs to help them with business planning, marketing, product development and talent acquisition.	<p>There is an opportunity to support currently existing Fintech startups to survive and grow in the Jordanian digital financial space. Key activities recommended to achieve this:</p> <ul style="list-style-type: none"> <li>• Identify Jordanian Fintech startups and PSPs.</li> <li>• Assess the gaps and challenges faced by Jordanian Fintech startups and PSPs.</li> <li>• Provide capacity building in areas of business development, marketing, product management.</li> <li>• Provide technical support programs to Fintech startups and PSPs to help in utilization of open data and social profile and designing customer-centered and personalized products.</li> </ul>
<b>Match digital financial services companies with talent</b>	Souktel recommends that the World Bank services tangible solutions to build and strengthen the financial technology workforce by matching skilled but unemployed workers to jobs and developing targeted FinTech expertise	<ul style="list-style-type: none"> <li>• Develop digital job matching solutions to match skilled tech workers in country with Fintech startups and PSPs through mobile outreach.</li> <li>• Work with local partners and universities to provide and subsidize tailored technical training programs in AI, Machine Learning, biometrics, etc. to support product development.</li> <li>• Provide tailored financial services training to entrepreneurs alongside local universities.</li> </ul>
<b>Support Jordanian FinTech Incubators and Accelerators</b>	Provide support for innovation and entrepreneurial service providers (ex: Oasis 500) to design and implement Fintech incubation and acceleration programs, and to facilitate access to finance for Fintech ventures.	<ul style="list-style-type: none"> <li>• Build upon the successes of Oasis500 and facilitate their funding of local seed status companies.</li> <li>• Provide additional marketing support to entrepreneurs within the incubator system.</li> <li>• Bring together local universities, entrepreneurs, investors, venture capitalists, and established companies to exchange ideas through a world bank sponsored local innovation hub.</li> </ul>
<b>Support Fintech startups and PSPs adoption of digital identification and biometrics solutions.</b>	Souktel recommends that the World Bank support Fintech startups and PSPs in adopting digital identification and biometric solutions to facilitate the adoption and use of digital financial services	<ul style="list-style-type: none"> <li>• Identify Policy challenges to the adoption of digital Identification and biometrics solutions in the Fintech space.</li> <li>• Support Fintech startups and PSPs in advocating for policy changes.</li> <li>• Invest in joint ventures between digital identification and biometric service providers, such as IrisGuard, and Fintech startups (Fingerprint, Face Recognition, etc ...)</li> <li>• Support adoption of e-KYC, e-signature initiatives to ease adoption of digital solutions and e-wallets for customers.</li> </ul>

Recommendation	Description	Key Implementation Component
<b>Support financial and digital skills awareness for customers</b>	Souktel recommends that the World Bank support initiatives to provide customers with trainings, awareness sessions to understand the benefits and opportunities of utilizing the digital financial services, and the skills needed to use mobile applications for financial services	<ul style="list-style-type: none"> <li>• Fund advertising campaigns to</li> <li>• Support outreach joint campaigns to increase customer awareness about digital services, in order to raise e-wallet and mobile wallet adoption rates and build community trust in digital financial services.</li> <li>• Support regulations that increase that Support activities to increase transparency of digital transactions fees.</li> <li>• Advocate to remove attack on privacy stigmas behind digital identification.</li> </ul>
<b>Support the adoption of open API platforms.</b>	Souktel recommends that the World Bank select a number of financial institutions and banks, and guide them to implement open API platforms in order to unify the banking industry services standards, create common banking API definitions and accelerate banking application development.	<ul style="list-style-type: none"> <li>• Identify a number of flagship and pioneering financial institutions and banks to work with.</li> <li>• Identify a set of banking industry services to standardize.</li> <li>• Support bank sector wide digital digital transformation to replace their legacy management information systems with innovative platforms.</li> <li>• Support banks in building open banking platforms that enable third-party Fintech providers to integrate and develop new products and services through the use of APIs.</li> </ul>
<b>Open pathways for companies to have innovative customer engagement technology</b>	Provide technical support to Fintech companies to enhance product features and user experience, utilization of interactive platforms, such as Chatbots, Predictive analytics so that companies can best engage customers and market themselves	<ul style="list-style-type: none"> <li>• Facilitate relationships between key companies and startup networks in Jordan with global user experience specialists through conferences, remote or in-person workshops, sustained capacity building consultants.</li> <li>• Incentivize the use of predictive analytics within companies and compile full sector data to best understand and articulate to seed-level companies how to best orient themselves for success.</li> </ul>
Support Jordanian Fintech Startups and PSPs in tapping into the unbanked population.	Provide technical and business development support for Fintech startups and digital financial services providers to provide tailored solutions on unbanked customers, example: (university students)	<ul style="list-style-type: none"> <li>• Facilitate work relationships between Fintech startups and service providers and academia, to design DFS products that target students, turning ID cards into mobile payment applications to encourage students pay tuition fees, and other costs using e-wallets instead of cash payments.</li> <li>• Facilitate the creation of mobile data collection, outreach, and follow up solutions which enumerate the perception, size, and needs, of the unbanked population and provide custom support to transition from unbanked patrons to data-empowered customers of financial institutions.</li> </ul>

Recommendation	Description	Key Implementation Component
<b>Design programs to support the growth of the agent network in Amman and outside</b>	Souktel recommends that the World Bank works with Financial institutions, PSPs and agents to support the growth of the agent network	<ul style="list-style-type: none"> <li>• <i>Identify and set a workgroup of Banks, Fintech service providers and agents in order to support the growth of the agent network across the country.</i></li> <li>• <i>Boost rural agent networks by including them in national coordination through remote coordination.</i></li> <li>• <i>Identification value propositions and incentives to attract more small businesses into the agent network and help them sustain.</i></li> <li>• <i>Support the process of revising fee policies for merchants and cash out vendors.</i></li> </ul>
<b>Support the adoption of DFS in G2P, B2B, and P2B transactions</b>	Souktel recommends that the World Bank work with the Jordanian Government, businesses to promote adoption of digital services in G2P, B2B, and P2B payments	<ul style="list-style-type: none"> <li>• <i>Support the Jordanian Government in identifying incentives for adoption of digital payments in G2P transactions.</i></li> <li>• <i>Support the adoption of B2B digital transactions between payments, through awareness campaigns to business owners.</i></li> <li>• <i>Design programs to support SMEs and retail businesses in the adoption of digital payment platforms.</i></li> </ul>

## OTHER RECOMMENDATIONS

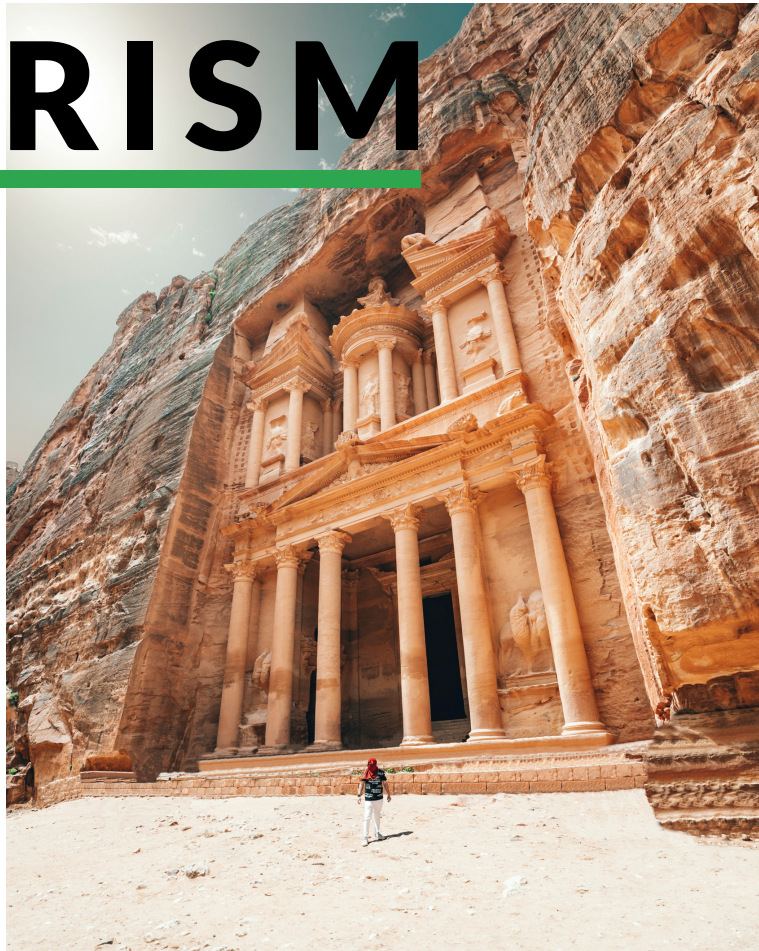
Souktel also identified opportunities in cross sector collaboration to promote Digital Financial Services in Jordan, these recommendations include:

- Promote a partnership with the insurance sector and digital service providers to integrate microfinance insurance with mobile wallets, and develop lending, micro-lending, Islamic-compliant lending, health insurance, and health provider payment products.
- Provide support to financial institutions and government public private partnership to improve and automate, loan guarantees, dispute resolution for credit card charges, and the credit rating system in addition to partnering with tech providers to integrate financial platforms with Machine Learning and Artificial Intelligence capabilities.
- Promote partnerships between Jordanian Policy makers, financial institutions and digital financial services providers to motivate digital international remittances.)
- Jordan is the major source for online Arabic content. There is a great potential to open up new businesses and job opportunities by Arabizing existing digital solutions and platforms. Partnering with local design and media companies like Magenta FZCO, Noma Consulting, and Khayal production the World Bank can support Arabic language media.<sup>13</sup>

<sup>13</sup> Information and Communications Technology Associations . Engage in the Success of Jordan ICT Sector, Int@j, OAD.

# TOURISM

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# TOURISM

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# OVERVIEW

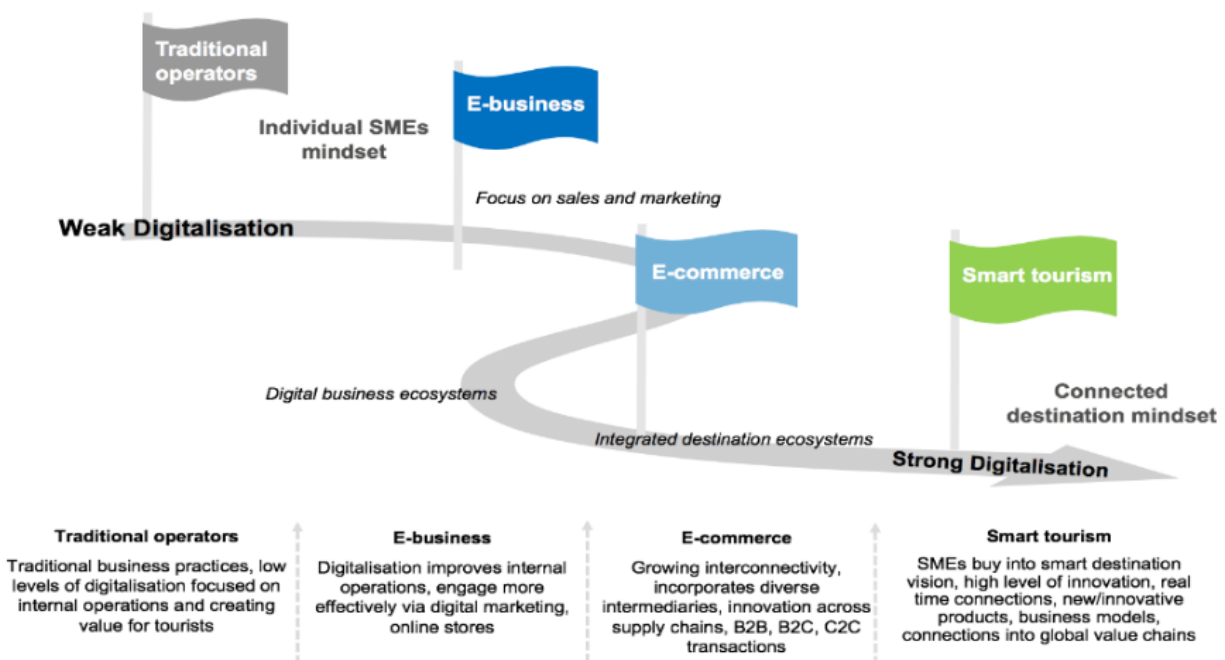
The tourism sector continues to witness growth globally, with the Middle East alone hosting over 60 million tourists a year. According to the UNWTO, international tourism totalled 1.4 billion people in 2018<sup>14</sup> and is expected to reach 1.8 billion people by 2030,<sup>15</sup> generating an estimated \$1.3 trillion in revenue, with more than half of that revenue coming through digital travel sales.<sup>16</sup> Digital tourism is revolutionizing how people plan and experience their travels: research suggests that almost 70% of tourists use digital channels to guide their decision for their next destination, while nearly 80% use a smartphone during their travels. Increasingly, service models in the tourism sector are moving towards “digital first” strategies, enabling travelers to use their devices for all aspects of planning, booking, accessing information, and paying. The tourism market has also been one of the sectors most acutely impacted by the development of social media channels; in a recent survey of millennials, almost 90% reported using a social media site such as Facebook or Trip Advisor for travel inspiration. A recent Adweek survey indicates that almost half of vacation-goers are more likely to hear about a new travel experience or destination on Twitter than anywhere else.

Tourists who come to Jordan have a range of motivations. Some come for hotel/resort experiences on the Dead Sea and at Aqaba, others for nature tourism, some are attracted by the access to quality medical services (see below) and others come due to a personal interest in religious and historic sites such as Petra or al-Maghtas. Those coming from long distances, such as from North America, seek a longer stay and the relatively small tourism offer in Jordan makes regional tourism involving a tour that encompasses two or three countries in a region more attractive. Those motivated by history or religious reasons also seek a regional experience.

14 PR 19003, “International Tourist Arrivals Reach 1.4 billion Two Years Ahead of Forecasts.” UNWTO, 21 Jan. 2019, <https://www2.unwto.org/press-release/2019-01-21/international-tourist-arrivals-reach-14-billion-two-years-ahead-forecasts>  
15 PR11079, “International Tourists to Hit 1.8 Billion by 2030.” UNWTO, 11 Oct. 2011, [media.unwto.org/en/press-release/2011-10-11/international-tourists-hit-18-billion-2030](https://media.unwto.org/en/press-release/2011-10-11/international-tourists-hit-18-billion-2030)  
16 Digital Market Institute, <https://digitalmarketinginstitute.com/en-us/blog/11-digital-marketing-campaign-tips-for-the-tourism-sector-part-i-corporate>

In the case of Jordan, the tourism sector represents enormous economic potential. Current estimates by the Government of Jordan see tourism revenues rising to over 22% of total GDP by 2027. The importance of supporting tourism as an investable, job-creating sector is reflected in key national strategy documents, including Jordan's Economic Growth Plan 2018-2022, and Jordan 2025 – A National Vision and Strategy. However, uptake in digital tourism services has proven slow. While the dynamic Jordan Tourism Board has launched a number of global digital marketing and outreach initiatives in recent years designed to promote Jordan abroad, many of the locality-based tourism operators hailing from more traditional communities - who typically have lower levels of digital literacy - have been unprepared or unwilling to undertake major integrations of technology.

Globally, many governments and domain leaders have recognized the recent work of the European Commission in charting a path towards broad tourism sector digitization. By this model, illustrated below, Jordanian tourism is still in a comparatively nascent phase, with many of the locality-based operators and service providers hovering between the “Traditional Operators” and “E-business” stages. For purposes of this study, we have not focused on the many international brands (eg. hotel chains, airlines, restaurant franchises, etc.) that operate in Jordan, as they have typically already plugged in to regional and global value chains.



Credit: Digitalisation in Tourism, European Commission, GRO-SME-17-C-091-A, 2018

10 CBJ Data Published January 31st, 2019

11 Central Bank of Jordan Annual report for 2018 - January 31, 2019

The EC report goes on to outline a now widely-accepted digital development framework for the tourism industry that characterizes digitization through three main steps:

Phase of Development	Key Services
<b>Phase I:</b> <i>Development of Sales and Marketing Platforms</i>	<ul style="list-style-type: none"> <li>• Digital point-of-sale software</li> <li>• Web-based reservations systems</li> <li>• Website/digital marketing platforms</li> <li>• Online distribution systems that connect consumers, web sites, travel agents and tourism operators to a range of travel products and services (eg. online travel agencies, government tourism boards, daily deal websites, visitor information centers, concierge services, etc.)</li> </ul>
<b>Phase II:</b> <i>Strengthening Digital Business Ecosystems</i>	<ul style="list-style-type: none"> <li>• Online virtual marketplaces</li> <li>• Web-based intermediary services (eg. Expedia and Booking.com)</li> <li>• Property management systems</li> <li>• Automated stock control tools</li> <li>• Customer relationship management (CRM) systems</li> </ul>
<b>Phase III:</b> <i>Integration of Systems</i>	<ul style="list-style-type: none"> <li>• Augmented or virtual reality experiences</li> <li>• Chatbots/automated customer satisfaction or instant advice solutions</li> <li>• Social media planning, management of review websites (eg. TripAdvisor)</li> <li>• Integrated smartphone applications</li> <li>• Use of Google analytics, or other predictive analysis applications</li> </ul>

As we will outline in the next section, many of Jordan's locality-based operators are still in pre-Phase I, while some need support in jumping to more advanced phases of development. The remainder of this chapter will offer insights on some of the major challenges limiting digital uptake in the tourism sector, and outline recommendations for short-term interventions to push the sector forward in the journey to digitization.

# TOURISM FINDINGS

## SCOPING



During the in-country scoping exercise, Souktel met with a number of tourism sector representatives, including the Jordan Tourism Board, Jordan Inbound Tour Operators Association (JITOA), MEDXJordan, tourism sector implementing partners, and individual tour guides, in addition to supporting this effort with secondary research. Based on that, Souktel identified the following gaps in working towards digitally- enhanced tourism:

- Many locality-based tourism operators come from more traditional communities, with relatively low levels of digital literacy and comfort with technology. As a result, commitment to and investment in digital solutions has remained extremely limited, putting small- and medium-sized operators at a competitive disadvantage as the sector becomes increasingly digitized.
- To date, there has been little investment in digital infrastructure, even at major tourist hubs. Most major sites still operate on an all-cash basis; even when large tourist groups are involved, there are few pre-payment or non-cash options.
- Despite the significant current and potential economic impact of the tourism sector, there are low capital expenditures by government in tourism-related infrastructure, resulting in underdeveloped facilities (transportation options, sleeping facilities, support services such as tour operators or banks, and infrastructure such as water and electricity) and thus an overall unattractive tourism offer.
- Travel service providers face challenges in identifying and booking local travel experts or guides based on availability, expertise, area, and languages.
- National and smaller tourism companies are not linked regionally so there is limited scope to offer Jordan as part of a regional package; international chains can do this.



# MEDICAL TOURISM



One unique aspect of Jordan's tourism sector is the major role of medical tourism, which contributes an estimated \$1 billion in revenue to the Jordanian economy every year. Previous World Bank publications rank Jordan as the number one medical tourism destination in the Middle East and North Africa, leveraging its well-trained medical corps, advanced medical facilities, range of specialist hospitals (for example, the King Hussein Cancer Hospital is the only specialized cancer treatment center in the Middle East), and the popularity of the Dead Sea as a health and wellness destination.

In terms of digital tools, the medical tourism subsector is primarily supported by MedX (<https://www.medxjordan.com/>), a web-based portal that allows prospective patients to find medical providers, book appointments and procedures, arrange transportation and lodging, and more. While MedX has reportedly had some success as a "one stop shop" for patient-travelers, our interviews also suggest that uptake has been limited, both in terms of registration in the system by Jordanian medical providers, and in terms of potential overseas users. A general usability testing initiative with the MedX platform should be considered along with the efforts to increase marketing around MedX by the Private Hospitals Association (PHA), the industry association charged with promotion of Jordan as a health destination.

# TOURISM

## RECOMMENDATIONS

Using the aforementioned EC framework for tourism sector digitization, and after evaluation of the current gaps in the Jordanian sector, Souktel recommends a number of steps to catalyze ICT for tourism:

Recommendation	Description	Key Implementation Component
<b>Support in digital solutions development for travel service providers, coupled with digital skills and social media training to travel service providers and tour agents</b>	Souktel recommends that the World Bank support initiatives for collaboration between universities, small businesses and travel service providers to develop or upgrade websites, booking portals, mobile applications, or other digital tools. This ideally would be accompanied by digital skills & social media training.	<p><i>Based on Souktel's in-country scoping and secondary research, there is an opportunity to utilize currently existing travel service providers' expertise and step it up in the digital sphere. Key activities recommended to achieve this:</i></p> <ul style="list-style-type: none"> <li>• Identify travel service providers which lack the digital experience or require upscaling their current skills;</li> <li>• Assess the travel service providers needs, challenges and gaps in the digital space;</li> <li>• Provide capacity building in digital skills and marketing, basics of running a digital business, benefits of staying connected, and the ROI on investment;</li> <li>• Utilize campaigns and influencers- focus on social media marketing</li> <li>• Evaluate periodically the behavior change and the digital transformation impact on the travel service providers' revenue.</li> <li>• Provide opportunities for university students and fresh graduates to develop web platforms and mobile applications for travel service providers;</li> <li>• Crowdsourcing platforms for daily excursions (Allow tourists and local experts arrange and gather tourists for daily excursions, match tourists with local experience (Hinge for Tourists and Tour Guides /locals);</li> <li>• Regularly and frequently upgrade the currently existing "tour operators" page under the Jordan Tourism Board platform to promote travel service providers services and packages.</li> </ul>
<b>Pilot a travel service provider-level integrated payment system</b>	Souktel recommends that the World Bank select a small number (3-5) of travel service providers to pilot an integrate payment system that streamlines the end-to-end Payments process between Providers, payers, and tourists.	<ul style="list-style-type: none"> <li>• Identification of strategic advisor and pilot organizations;</li> <li>• Review of regional/global e-payment platforms and selection of a solution to pilot;</li> <li>• Development of an evaluation framework by which to measure success during the pilot phase;</li> <li>• Design of a longer-term rollout plan that includes a scaling strategy, a viable business case, job creation opportunities, etc.</li> <li>• As a later step, Souktel recommends examination of business models that can harness system data for applications of predictive analysis.</li> </ul>

Recommendation	Description	Key Implementation Component
<b>Establish payment gateways at tourism hubs</b>	Souktel recommends that the World Bank select a small number (1-2) tourism hubs to pilot an integrated payment system that streamlines the end-to-end Payments process between hubs, payers, and tourists.	<ul style="list-style-type: none"> <li>• Identification of strategic advisor and pilot organizations;</li> <li>• Conduct user needs analysis, including workflow mapping, storyboarding, systems mapping, etc.</li> <li>• Review of regional/global payment integration platforms and selection of a solution to pilot;</li> <li>• Development of an evaluation framework by which to measure success during the pilot phase;</li> <li>• Design of a longer-term rollout plan that includes a scaling strategy, a viable business case, job creation opportunities, etc.</li> <li>• As a later step, Souktel recommends examination of business models that can harness system data for applications of predictive analysis.</li> </ul>
<b>Pilot a digital rewards program</b>	Test a loyalty program designed to engage, reward, and retain customers using digital assets.	<ul style="list-style-type: none"> <li>• Identification of strategic advisor and pilot organizations;</li> <li>• Conduct user needs analysis, including workflow mapping/storyboarding, systems mapping, etc.</li> <li>• Review of regional/global digital loyalty applications or platforms and selection of a solution to pilot;</li> <li>• Development of an evaluation framework by which to measure success during the pilot phase;</li> <li>• Design of a longer-term rollout plan that includes a scaling strategy, a viable business case, etc.</li> <li>• As a later step, Souktel recommends examination of business models that can harness system data for applications of predictive analysis.</li> </ul>
<b>Develop platforms to connect investors with investment opportunities</b>	Pilot a digital matchmaking platform that can connect angel investors, crowdfunders, or venture capitalists to investment opportunities in the Jordanian and regional tourism sector. This could be housed within Jordan Tourism Board.	<ul style="list-style-type: none"> <li>• In consultation with JTB, scope possibilities for developing an ICT-enabled investment model</li> <li>• If initial findings determine it to be a viable option, draft specifications for build out of an investment platform</li> <li>• Contract firm to build and handover to JTB.</li> </ul>
<b>Undertake a design and architecture review of the MedX platform to increase usability/ functionality</b>	Undertake an in-depth review of the functionality and usability of the MedXJordan platform, and evaluate opportunities for integration with the Jordan Board Tourism site and potential collaboration with the private hospitals	<p>Souktel finds an opportunity to scale up MEDXJordan platform as the national platform for Medical Tourism in Jordan. In order to achieve that, Souktel recommends the following key steps:</p> <ul style="list-style-type: none"> <li>• Identification of design review team (including both ICT specialists and domain specialists);</li> <li>• Identification of key MEDXJordan stakeholders, and users, including Ministry of Tourism &amp; Antiquities, Ministry of Health, MoICT, Jordan Board of Tourism, Private Hospitals Association;</li> <li>• Convene a thorough review of MEDXJordan, including workflow mapping, integration planning, key informant interviews, focus group, etc.;</li> </ul>

Recommendation	Description	Key Implementation Component
		<ul style="list-style-type: none"> <li>• Set design and implementation plans for system integration on the national level;</li> <li>• Conduct a marketing strategy to promote MEDXJordan as the national platform for medical tourism in Jordan</li> <li>• Set a strategy with the objective of scaling Jordan as the top ranked country for Medical Tourism in the Region.</li> <li>• Revisit the strategy and evaluate the implementation plan and do necessary iterations.</li> </ul>
<b>Develop a platform connecting crossborder pilgrimage</b>	Evaluate the opportunity to connect Jordanian and Palestinian travel service providers, pilgrimage-focused, to offer inclusive packages covering both Jordan and Palestine.	

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