



DIGITAL TRANSITION WITH OPEN GOVERNMENT AT HEART





This article explores how open government and digital transition relate to each other and identifies the challenges of the digital transformation of public-sector services. It first looks at what open government means in practice and examines its three pillars – transparency, civic participation and collaboration in delivery of public services. It then explores how information and communication technology has redefined the open government concept and discusses principles of open government data. Lastly, it looks at open government today, amid rising civic expectations in democratic systems, waning trust in governments and increased digitisation of public services due to the Covid-19 pandemic, with an example of a digital transformation project taking open government ideas to new levels.

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INTRODUCTION

The concept of open government emerged in a post-World War II context, where transparency about decision-making on public matters and disclosure of information by governments were seen as extremely important. The key messages of open government are establishing transparent and collaborative governance systems in the public sector that differ from market-oriented commercial relationships or bureaucratic principles² of traditional hierarchical governments and bridging the gap between the governing and the governed.

The expansion of information and communication technologies redefined the open government idea. Today, open government focuses on how to



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² Kuang-Tin, p.1. Please see the Bibliography section on page 17 for details on the references in the footnotes.

better navigate the challenges of the digital economy and the increasingly digitalised collective public life of communities and nations. The digital transformation of the public sector with open government at the core changes the way governments interact with society, the way information is disclosed and how people engage in public affairs.

US President Barack Obama steered efforts to embed open government in digital transformation policies and issued a memorandum on public data to ensure that the US government was transparent.³ Today, notions of open government are likely to be more visible and respected by citizens in countries emerging from autocracies and dictatorships and adopting democratic rule. Unsurprisingly, open government thinking is a cornerstone of public-sector digital transformation policies in Argentina, Brazil, Chile and Portugal. In Europe, open government remains at the heart of the European Union's (EU) digital agenda, but has only gradually found its way into the regulatory frameworks of former Soviet bloc countries.

“A GOVERNMENT IS CONSIDERED OPEN WHEN INFORMATION TRANSPARENCY, CIVIC PARTICIPATION AND COLLABORATION MECHANISMS GUIDE REGULATORY FRAMEWORKS AND LEGISLATIVE PROCESSES FOR ALL PUBLIC MATTERS.”

WHEN GOVERNMENTS ARE OPEN

Open government is a public-sector governance strategy that aims to establish structures at all levels of government that build on information transparency to citizens and their engagement in public decision-making to encourage participative and collaborative governance systems in the public sector. For example, a main proposition of the US open government directive is “to establish a transparent governing structure allowing empowered citizens to participate”.⁴ Key policy instruments, such as the US Memorandum on Transparency and Open Government and the US Open Government Directive, conceptualise it as “a new governing structure, highlighting proactive information dissemination (transparency) and accessible participatory mediums for decision-making or public service provision (participation/collaboration)”.⁵

A government is considered open – that is, it works based on open government principles – when **information transparency, civic participation and collaboration mechanisms** guide regulatory frameworks and legislative processes for all public matters, from government relationships with citizens and business to regulation of the delivery of public services.

THREE PILLARS OF OPEN GOVERNMENT

Transparency

Government transparency is a way to create openness by disclosing information about government actions and processes. Transparency increases individuals' trust in government and enhances the legitimacy of government, as citizens are aware of the decisions it adopts. Transparency is a new model of government, with information transparency policies⁶ on all public matters. This means unrestricted access to information, accountability and open data.⁷ The conditions for accessing data, as well as documents about the actions and decision-making processes of public officials, define the rights and obligations of individuals.⁸

Transparency policies have developed rapidly with the rise of new technologies. Transparency implies that government data are published online, as there is a critical difference between a mere ex-post disclosure of information and online publication of information that actually

³ Adnan, Hidayanto, Purwandari, Kosandi, Fitriani and Kurnia, p. 369.

⁴ Kuang-Ting, p. 7.

⁵ Ibid., p. 11.

⁶ Ruvalcaba-Gómez and Rentería, p. 325.

⁷ Ibid.

⁸ Ibid.

promotes transparency of governance processes by enabling citizens to act in due time.⁹ It is therefore important to have laws that clearly define the context and type of information that must be disclosed online and when. While transparency is a condition for fulfilling the other criteria of participation and collaboration, it is not in itself sufficient to achieve the goal of open government in public-sector governance.

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Participation

Citizens (and organisations from the private sector and civil society) use social collective actions to influence government decision-making. These are not linked to a general election and other political mechanisms, but aim to provide feedback on public policy and government decisions. Still, even democracies struggle to invent effective means for citizen and civic participation in government decision-making, and this is where technology can play a big role.

Modern technologies enable diverse ways to interact and, in particular, establish working relationships between citizens and government officials, not limited to direct political participation. This is a challenge for governments – the need to develop policies and e-government tools creating new interaction channels, allowing citizens’ voices to be heard on government decision-making. Another challenge is related to providing regulatory and operational frameworks for collaboration with the government in delivery of public interest services.

Collaboration

Collaboration with government on public service delivery is associated with the concepts of interoperability, co-production and civic tech innovation. Civic activists would like to influence the design, provision and evaluation of public services, in particular when governments start to deliver public services in a digital format, to achieve a better fit with the needs of their local communities. Collaboration of citizens and business communities with government bodies on the delivery of public services remains unexplored territory. This is mainly because an idea of civic co-production with government departments requires different protocols of engagement compared to traditional in-house public service delivery or public procurement contract-based sourcing from the market. As regulatory frameworks for operational interaction between public bodies and civil society organisations and pro-bono business communities are very new and untested, they are a novel regulatory concept for many governments.

In terms of regulatory challenges, it is easiest to introduce transparency requirements for government decisions. Several governments in the world excel in ex-post transparency communications and call themselves very transparent. It is more difficult to design and regulate a non-political transparency procedure that works ex-ante and enables civic and business participation in the process before decisions are made. Still more difficult is setting up rules for collaboration with civic activists or not-for-profit organisations seeking to contribute to the delivery of specific public services to their local communities. This is particularly difficult when these civic organisations do not fall into any of the well-established legal definitions of (a) a charity, (b) public procurement supplier or contractor or (c) political lobbyist. And the challenge increases when civic collaboration is proposed on sensitive (and expensive for the taxpayer) public services, such as education and healthcare.

WHEN GOVERNMENT DATA ARE OPEN

While regulation of open government strategies involves much more, it is true that at the bottom of all transparency, participation or collaboration mechanisms in the public sector, there is a question of access and re-use of government-created and held information. In other words, there is no open government without open government data, and this is where part of the difficulty begins.

⁹ Dorobat and Posea, p. 1; Ruvalcaba-Gómez and Rentería, p. 325.

First, there is no legal definition of open government data – data created and administered by public entities – as a *common good* in the directly binding international legal instruments. Open government data are still defined by an original industry standard of 2007: *complete, primary, timely, accessible, machine-processable, non-discriminatory, non-proprietary and licence-free*.¹⁰ The closest substitute is a G8 Open Data Charter signed in 2013 that outlines five principles of open government data: *open data by default, quality and quantity, useable by all, releasing data for improved governance and releasing data for innovation*.¹¹

Second, legal openness of government information means different things in different countries. The less democratic rule, the less government-generated information falls into the category of government open data. The latest EU policy on the concept describes open data as information that is obtainable by everyone, machine-readable, offered online at zero cost and has no restrictions on re-use and distribution. Readiness to open and share government data is a next step, as a regulatory framework for governing the re-use by third parties of datasets produced by public institutions is an important political tool to encourage democratic citizens' participation in public affairs.¹² Aiming to improve transparency, citizen involvement and cooperation, as well as social and economic value, data created and administered by public entities shall be both legally and technically available for use electronically.¹³ Therefore, it is the technical/technological capacity of the government to effectively open and share data for re-use that shifts public-sector open government strategies from “legally enabling access” to “facilitating active participation” of citizens in public matters.

Third, data created and administered by public entities are what governments use to make governance decisions about citizens and businesses.¹⁴ One of the reasons citizens expect this information to be published as open government data is to ensure that these data equally benefit all entities dealing with the government, namely citizens, businesses and government itself.¹⁵ As such, government open data are at the core of e-government – that is, “the use of information technologies to deliver to all citizens government services, information and knowledge to facilitate greater access to the governing process and deeper citizen participation”.¹⁶

While all understand that data access and data sharing are key to effective governance and the running of public services, citizens (as well as businesses) are sceptical of government data use. Levels of trust vary, but at the bottom of this distrust is the fact that development of e-government services has not been accompanied by a proportionate increase in transparency of government data. Although e-government originated in open government concepts, government technology policies and strategies were often developed to serve primarily government departments, not citizens' needs. As such, there was no care about government open data quality and no appreciation of the value of government open data and its sharing for the benefit of all stakeholders, including the government as a whole. Historically, this was partly due to inadequacies and prohibitive costs of technology and perceived risks in data sharing.

To gain citizens' trust, governments proclaimed high standards of security of government-handled data and promoted policies restricting access to government data. Development of protocols for secure government data opening and sharing was perceived as a risk. Lack of regulatory standards for opening data created and/or administered by the government also played a role. Today, progress in technology has brought forward several methodological and policy concepts for data interoperability, automated online data collection and online publication of data generated in the e-government systems. However, there are still no well-established regulatory standards for real-time government data extraction from e-government systems and their online publication for opening and sharing in the machine-readable format.

¹⁰ Wang and Shepherd, p. 101404.

¹¹ Ibid.

¹² Ibid.

¹³ Osorio-Sanabria, Amaya-Fernández, Brito-Carbajal, Astudillo and González-Zabala, p. 157; Ali Hassan and Twinomurizi, p. 299.

¹⁴ Bates, p. 398.

¹⁵ Ibid., p. 299.

¹⁶ Ali Hassan and Twinomurizi, p. 299; cf. *infra* V.



Without exploring new models of citizen legal consent, citizen and government data ownership, designing enabling regulatory frameworks for effective primary and secondary use of data is not possible. And without new rules of operation that both citizens and business can trust, there are few opportunities of interaction between public bodies and civil society in relation to the provision of public services, particularly public services using government open data.

NEW REGULATORY STANDARD OF THE EUROPEAN UNION

Directive (EU) 2019/1024 of the European Parliament and the European Council of 20 June 2019 on open data and the re-use of public-sector information aims to bring open government laws in line with advances in digital technologies. By default, the re-use of documents shall be free of charge and an open data regime enforced via an obligation of public-sector bodies and some public enterprises to make public data available as open data, not only upon request. Open data shall also be data in an open format that can be used freely, re-used and shared by anyone for any purpose.¹⁷

Public-sector bodies shall make dynamic data available for re-use immediately after collection,

via suitable application programming interfaces (APIs) and, where relevant, as a bulk download.¹⁸ Dynamic data means digital documents, subject to frequent or real-time updates, in particular, because of their volatility or rapid obsolescence.¹⁹ Also, high-value datasets shall be made available for re-use in a machine-readable format, via suitable APIs and, where relevant, as a bulk download.²⁰ High-value datasets support society, the environment and the economy by contributing to the creation of value-added services, applications and new, high-quality and decent jobs that can benefit many people.²¹ In relation to exclusive arrangements, the re-use of documents shall be open to all potential actors in the market, even if one or more market actors already exploit value-added products based on contracts or other arrangements between public-sector bodies or public undertakings.

¹⁷ Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public-sector information, 26 June 2019.

¹⁸ Ibid., Article 5(6).

¹⁹ Ibid., Article 2(8).

²⁰ Ibid., Article 5(8).

²¹ Ibid., Article 2(10).

TACKLING LEGAL BARRIERS

In spite of policy development, governments still face challenges due to the lack of international legal standards for:

Government-to-business data sharing – The public sector makes more of the data it generates available for use as open data, especially by small and medium-sized enterprises that use it to develop new data-driven commercial and public services.

Business-to-government data sharing – Not enough private-sector data are available for re-use by the public sector to improve evidence-driven policymaking and public services, and there are too few tools in the public sector to make use of available data without a need for duplicated data collection for public governance purposes. Legal frameworks are needed that offer appropriate incentives to create a data-sharing culture and encourage the re-use of private-sector data for the public interest.

Sharing of data between public authorities – This can make a remarkable contribution to improving policymaking and public services, but also to reduce the administrative burden on companies by implementing “single window” digital public services and the “once only” principle.

Insufficient regulatory frameworks therefore prevent **citizen-sourcing** as well as more modern and collaborative ways of **business-sourcing** that aim to promote innovation in public services.

Citizen-sourcing is participatory- and innovation-oriented. This public-sector governance mechanism enables public organisations, as sectoral regulatory authorities, to engage with citizens via online intermediary platforms and seek innovative ideas and solutions that are better suited for the digital economy than services traditionally performed by public servants or outsourced to commercial operators. In addition to quick wins – such as greater trust in government decisions – these mechanisms encourage public service innovation and cutting programming costs for sectoral initiatives as new ideas are collected and new services piloted with civic activists. These policies focus on “citizen co-production” and are based on the development of new online digital tools for public services – transformative “*civic tech for govtech*”. They promote **innovation**, enhance **democratic participation**, invite **wide public involvement in policy implementation** and improve **law enforcement**.

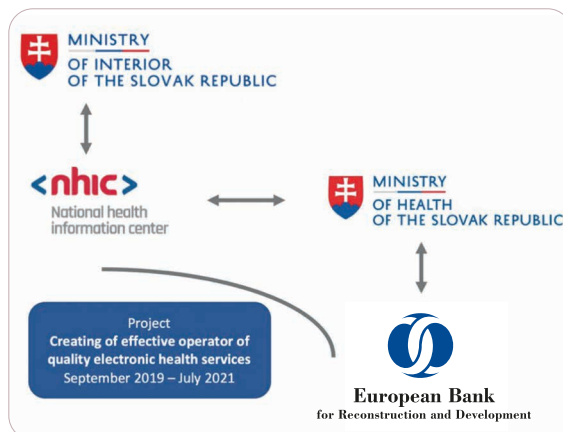
Using a new digital platform to disseminate government information and policies is not a condition for the success of citizen-sourcing. Rather, it happens when informed citizens can use an online digital platform to participate in and contribute to public service delivery, because only citizen co-production enhances public-sector accountability. Without co-production, there is an illusion of government openness without a truly open government to improve public services delivery.



CREATING A REGULATORY FRAMEWORK FOR CITIZEN- AND BUSINESS-SOURCING IN PUBLIC HEALTHCARE SERVICES: EBRD PILOT COLLABORATION WITH THE SLOVAK REPUBLIC

Enabling open government citizen- and business-sourcing is challenging for any public-sector service, but perhaps none is more sensitive than public healthcare. The Slovak Republic aims to create a new type of public body – a national agency operating digital healthcare services (eHealth) for the Ministry of Health. The reform programme focuses on digital transformation of the National Health Information Centre (NHIC), operator of the eHealth system, and introduces data-driven analytics to centralise public procurement in the country's national healthcare system. The objective is to transform the NHIC into a modern public-sector organisation providing proactive digital services to healthcare sector stakeholders, including mobile health (mHealth) services. Similarly, public procurement improvements aim to better control procurement processes of medical supply and devices.

Figure 1: Knowledge sharing among technical cooperation partners. Source: EBRD



As Figure 1 shows, the EBRD teamed up with the Ministry of Health of the Slovak Republic in 2019 for a pilot project, bringing in international expertise and peer organisations to introduce the latest concepts from global digitalisation leaders for healthcare procurement and digital healthcare services. The EBRD helped to identify open government policies for public healthcare and highlight key values and principles for citizen-centred design of public healthcare services (see Figure 2).

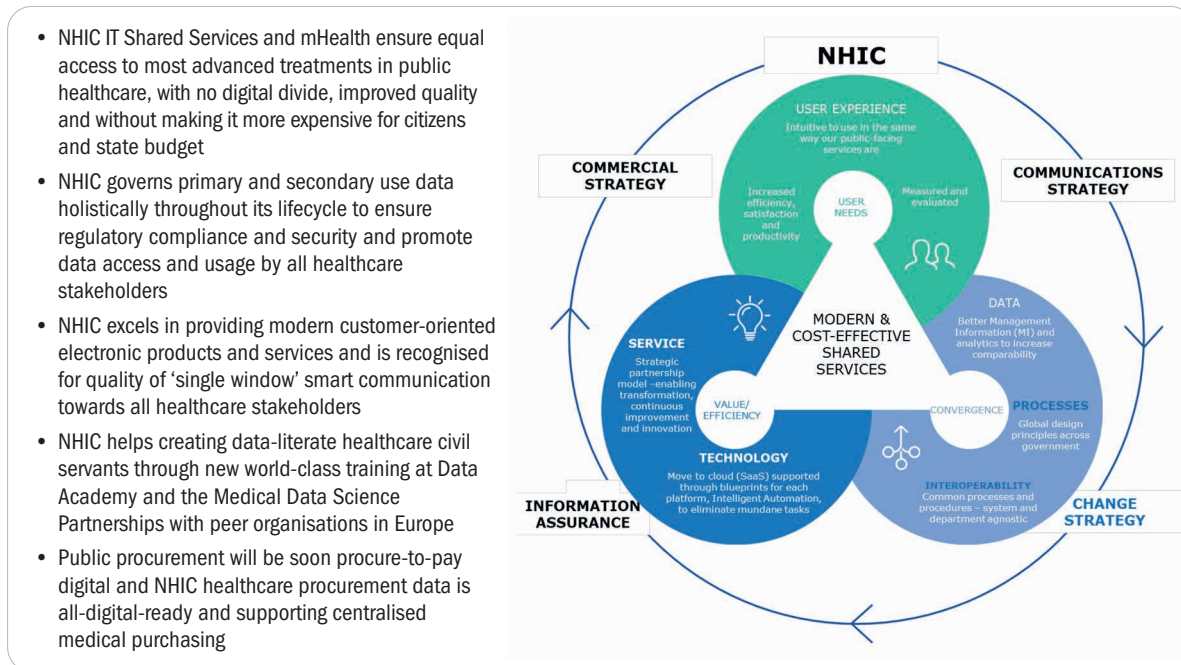
Figure 2: Citizen-centred design of eHealth and mHealth public healthcare services. Source: EBRD



Policy workshops with peer organisations from Portugal facilitated verification of policy concepts in the context of the EU acquis and specified business models and regulatory approaches to develop the vision of digital eHealth and mHealth services. Key business concepts were formulated for the NHIC as a provider of information technology (IT) shared services for public healthcare. In particular, two areas were found to be critical for NHIC's mission. One was a policy framework for open data and digital data-driven e-services, to lead digital transformation of public healthcare services. The second was a digital public procurement data to enable the creation of a modern, centralised medical purchasing agency for the Ministry of Health and to introduce better cost control and more efficient, data-driven medical supply chain management. Questions remain about the licencing terms for secondary use of health and healthcare data, as there are models of open data licences and no identifiable global best practice for secondary use of health and healthcare data.

“ WITHOUT CO-PRODUCTION, THERE IS AN ILLUSION OF GOVERNMENT OPENNESS WITHOUT A TRULY OPEN GOVERNMENT TO IMPROVE PUBLIC SERVICES DELIVERY. ”

Figure 3: Key elements of modern, cost-effective IT shared services in public healthcare. Source: EBRD



Note: The National Health Information Centre is called *Národné centrum zdravotníckych informácií* in Slovakian.

To deliver innovation and new business concepts, new policies and regulatory frameworks are needed to support and regulate eHealth and mHealth services, in particular:

1. Secure access and health data sharing:

Citizen access to personal health data at both national and EU levels.

2. Cross-border access to anonymised data for research and personalised medicine (secondary use of data): Promotion of a European data infrastructure to support information sharing among healthcare professionals in the EU.

3. Empowering citizens to use digital healthcare instruments to their advantage:

Teach people how to use digital instruments proactively to care for their health, nurture prevention and interact with healthcare providers.

Following identification of the most innovative practices for regulation of primary and secondary use of data (in addition to Portugal, the latest policy developments in Chile, Finland, Germany, the Netherlands and the United States were reviewed), a proposal was designed for a regulatory framework to answer important legal questions about governance models for citizen- and business-sourcing. It covers secondary use of healthcare data and data on medical public procurement to create models for collaboration

with civic tech organisations, academic research centres and business start-ups on eHealth and mHealth digital services. To reach the market quickly, a new regulatory process for three parallel streams is proposed: (a) validation of external solutions developed by the market, (b) mHealth applications and devices created jointly by public and private entities and (c) internal development, involving data sharing between different government entities.

MODEL OF A REGULATORY FRAMEWORK FOR OPEN DATA AND SECONDARY USE OF HEALTHCARE DATA

To promote new eHealth and mHealth digital services to citizens and medical professionals, NHIC needs a new regulation to change the way patients' health data, other healthcare data and medical public procurement data are handled. This is a major change, as it involves citizens' legal consent regarding sensitive health data, government-to-business data sharing, sharing of data between public authorities and public healthcare organisations, and business-to-government data sharing between healthcare regulators and commercial healthcare insurers in the Slovak Republic. New rules must specify the conditions for re-use or secondary use of

health data and data on medical public procurement and recommend formats for open data sharing, rules to charge for health and healthcare datasets, and standard terms of use and licences for eHealth and mHealth services.

Regulatory change is also needed to enable NHIC to introduce new business processes (see Figure 4) for collaborative development and delivery of new eHealth and mHealth services (see Figure 5). mHealth applications for smartphones exist and show promising results but are not in clinical use

due to the missing regulation. In particular, creating partnerships in prototyping and developing new IT solutions and devices for mHealth services (identified as potentially the most cost-effective approach to mHealth) and shared delivery of mHealth services by NHIC in collaboration with commercial IT vendors go beyond contracting options available in current public procurement and concession laws and existing regulation of government IT shared services in the Slovak Republic.

Figure 4: New governance process to enable mHealth solutions based on secondary use of healthcare data in the public healthcare system. Source: EBRD

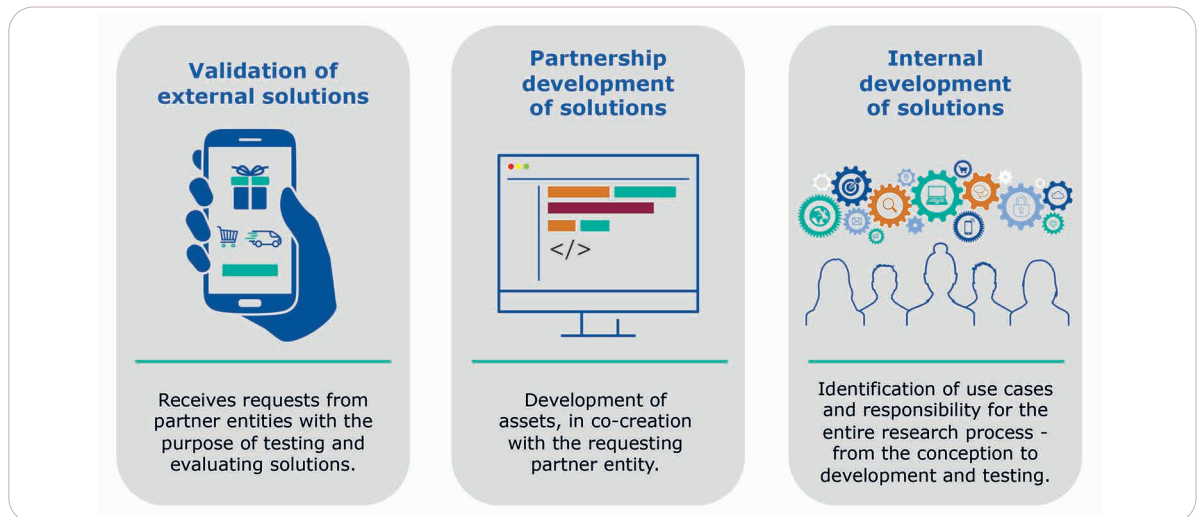
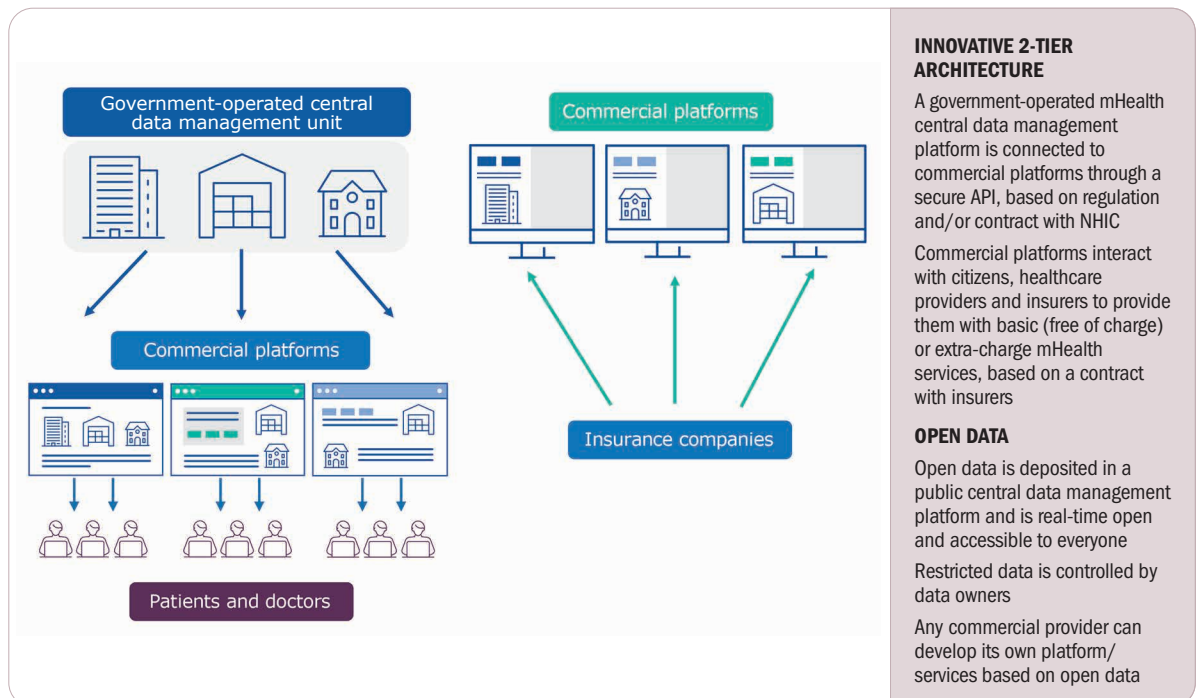


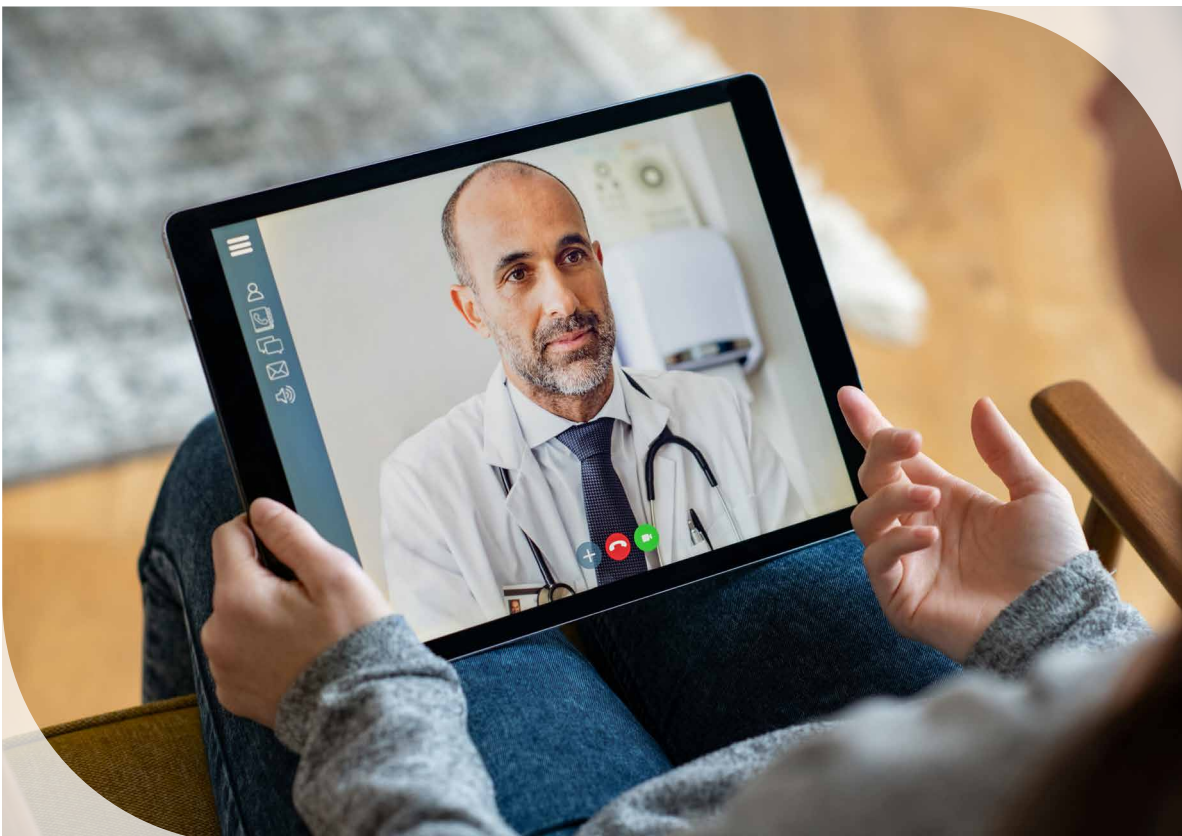
Figure 5: User-pays sustainable financing models for mHealth applications and devices in the public healthcare system. Source: EBRD

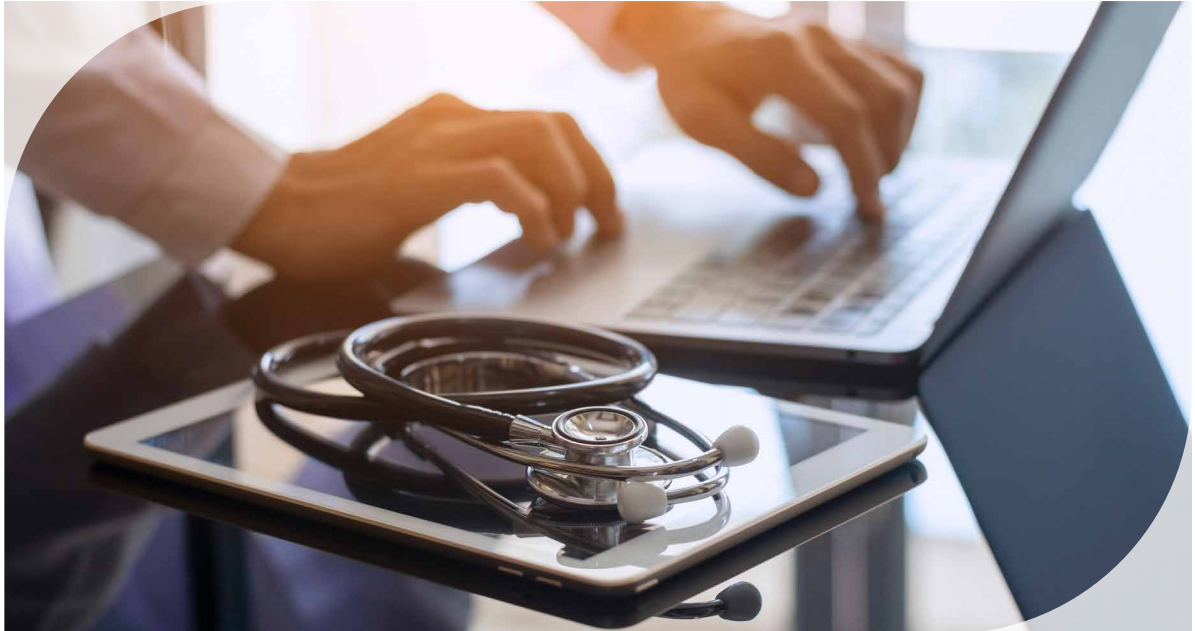


“ TO PROMOTE NEW eHEALTH AND mHEALTH DIGITAL SERVICES TO CITIZENS AND MEDICAL PROFESSIONALS, THE NATIONAL HEALTH INFORMATION CENTRE NEEDS A NEW REGULATION TO CHANGE THE WAY PATIENTS’ HEALTH DATA, OTHER HEALTHCARE DATA AND MEDICAL PUBLIC PROCUREMENT DATA ARE HANDLED. ”

The NHIC eHealth system shall further automate data collection by government, commercial entities and patients. New data governance processes shall separate health data and healthcare data into restricted, closed and open datasets that are published online in relevant repositories and available for appropriate re-use. Data governance mechanisms and the anonymisation of data for secondary use must lead to data that are available online, machine-readable, accessible, findable and re-usable together with their metadata and, where possible, in open data formats of JavaScript Object Notation formats, which are popular with the IT industry. Datasets qualified for secondary use shall be made available for open re-use in machine-readable format, via suitable APIs and/or as bulk download.

To avoid creating barriers in data re-use that may limit development of new mHealth digital services, NHIC should consider making secondary data available for free or exceptionally charged at the marginal cost of dissemination, when NHIC needs to generate revenue to cover part of the costs of data collection and governance. In addition to defining certification procedures for





mHealth services and devices, to make mHealth services sustainable, the Ministry of Health must decide and adopt user-pay tariffs/charges for mHealth services and specify any applicable conditions for including mHealth services and devices in doctors' prescriptions and reimbursing the cost of eHealth and mHealth services from public health insurance. Based on this, NHIC would be able to develop online charging systems for eHealth and mHealth services, both available by medical prescription and refundable from public health insurance as well as certified but non-refundable and only for private purchase.

The institutional transformation of NHIC progresses. However, challenges the Ministry of Health faces in managing healthcare during the Covid-19 pandemic have delayed legislative initiatives and implementation of the new regulatory concepts in practice. If implemented, the Slovak Republic would introduce a very advanced open government regulatory and business concept for secondary use of healthcare and medical procurement data and sustainable "mHealth on prescription" models for mHealth applications/devices in Europe's public healthcare system.

Bibliography

H.R. Adnan, A.N. Hidayanto, B. Purwandari, M. Kosandi, W.R. Fitriani and S. Kurnia (2019), *Multi-Dimensional Perspective on Factors Influencing Technology Adoption for Open Government Initiatives: A Systematic Literature Review*, International Conference on Advanced Computer Science and Information Systems, pp. 369-374.

M.I. Ali Hassan and H. Twinomurini (2018), "A Systematic Literature Review of Open Government Data Research: Challenges, Opportunities and Gaps," 2018 Open Innovations Conference, pp. 299-304, doi: 10.1109/OI.2018.8535794.

J. Bates (2014), "The strategic importance of information policy for the contemporary neoliberal state: The case of Open Government Data in the United Kingdom," in *Government Information Quarterly*, 31 (3), pp. 388-395.

I.C. Dorobăț and V. Posea (2021), "Open Data Indicator: An Accumulative Methodology for Measuring the Quality of Open Government Data," 13th International Conference on Electronics, Computers and Artificial Intelligence, pp. 1-4, doi: 10.1109/ECAI52376.2021.9515147.

European Union (2019), Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 in *Official Journal of the*

European Union. See <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L1024&from=EN>

P.T. Jaeger and J.C. Bertot (2010), "Transparency and technological change: Ensuring equal and sustained public access to government information," in *Government Information Quarterly*, 27, pp. 371-376.

T. Kuang-Ting (2021), "Open government research over a decade: A systematic review," in *Government Information Quarterly*, 38, p. 101566.

M. Osorio-Sanabria, J. Brito-Carvajal, H. Astudillo, F. Amaya-Fernández and M. González-Zabala (2020), "Evaluating Open Government Data Programs: A Systematic Mapping Study," Seventh International Conference on eDemocracy & eGovernment. Institute of Electrical and Electronics Engineers, pp. 157-164. 10.1109/ICEDEG48599.2020.9096755.

E.A. Ruvalcaba-Gómez and C. Rentería (2020), "Contrasting perceptions about transparency, citizen participation, and open government between civil society organization and government," in *Information Polity*, 25, pp. 323-337.

V. Wang and D. Shepherd (2020), "Exploring the extent of openness of open government data - A critique of open government datasets in the UK," in *Government Information Quarterly*, 37, p. 101405.