



EQUITABLE GROWTH, FINANCE & INSTITUTIONS NOTES

# GovTech State of Play: Challenges and Opportunities

November 2020

Supported by the GovTech Global Partnership



# GovTech – Where are we?

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This brief details the current status of our GovTech agenda that aims to support task teams engaging with clients to work on public sector modernization using technology and grappling with how proposed solutions align with the GovTech approach.<sup>1</sup> This note also presents an overview of the GovTech portfolio, and the mapping of existing digital government projects to new areas of GovTech focus. Additionally, considering the progress made toward GovTech’s goal, the note summarizes challenges and opportunities for teams developing GovTech projects.

## Digital government projects – What have we learned

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The World Bank Group (WBG) has since 1995 financed more than 1,400 digital government projects<sup>2</sup> to support the implementation of digital technology solutions in our client countries. These investments fall under the following seven categories—using the Bank’s digital government taxonomy—that have been used to tag projects since 2015.

- 1. ICT/EGOV INFRASTRUCTURE:** These projects finance investments in hard and soft digital and data infrastructure. For example, some of the DG projects introduce new or upgraded Internet Exchange Points (IXPs), broadband infrastructure, and enhanced Internet access. They can support government cloud solutions and roll-out of digital enterprise architecture and interoperability solutions. Led by the Digital Development global practice (DDGP), projects typically address cybersecurity problems. Additionally, some projects may include rolling out government email, document management and digital archive solutions.
- 2. PUBLIC FINANCIAL MANAGEMENT SYSTEMS:** A key line of business for the Governance Global Practice (GGP) has been to support investments in core government systems. Captured under public financial management (PFM) systems, this category includes projects that have supported all types of government systems including: financial management information systems (FMIS), human resource management information service (HRMIS), payroll, tax, customs, public investment management, e-procurement, debt management, digital justice solutions, and local government and central government performance systems. Such projects are usually led by the GGP and may include collaboration with the Macroeconomics, Trade and Investment (MTI) global practice or other practices to align systems and policy dialogue on topics such as taxation and debt management.
- 3. SECTORAL INFORMATION SYSTEMS:** This category includes projects which finance investments in line ministry or sector-specific systems. Typical digital solutions included here are related to the financial sector (FinTech), education (EduTech), health (Digital Health), social protection and pensions, disaster risk management, land administration, and cadastral systems. These projects are led by the relevant global practices.
- 4. ONLINE SERVICES:** These are World Bank projects that are predominantly about using technology to improve services and facilitate greater access online—such as the development of web portals, mobile applications, shared platforms. This category may also include central and sector specific investments to cover both the enablers, such as digital signature and digital payments infrastructure, and service delivery aspects—for example an online appointment system in the health sector. Many World Bank global practices (GPs) may be involved in developing these solutions that should ideally include strong cross GP collaboration. Digital Development, Governance and sector specialists are often part task teams.
- 5. OPEN GOVERNMENT:** This category of investments covers projects that improve the transparency of governments, engage with citizens, strengthen the use of technology to provide more granular, data-driven information to the public, and are more proactive and responsive in dealing with citizen feedback. These projects, which aim to improve governance, include investments in CivicTech, open government, and open data portals, and may promote open contracting solutions or asset declaration systems, for example. The Governance GP leads these projects, in collaboration with other World Bank staff such as social development colleagues who work on citizen engagement.

1. For more information on the GovTech approach, see the Launch Report and the Guidance Note 1, *GovTech: The New Frontier*.

2. The full range of projects can be reviewed in the [DG Projects database](#).

6. **IDENTIFICATION FOR DEVELOPMENT (ID4D):** Projects dealing with the fundamental enabler of a universal unique identity are categorized as ID4D investments. This category represents projects that focus on civil registration and identification systems and those that are more technology focused on the use of digital ID. Currently, there are few ID4D projects and teams working on them can be found in the Digital Development, Governance, Health, Nutrition and Population (HNP), Finance, Competitiveness and Innovation, and Social Protection and Jobs (SPJ) GPs. To ensure stronger cross-GP collaboration, the ID4D secretariat, housed in the DDGP, was established under the guidance of a cross-practice group of Directors.
7. **DISRUPTIVE TECHNOLOGIES:** The category groups emerging projects that focus on the use of new and disruptive technologies such as artificial intelligence and machine learning, cloud computing, big data analytics, mobile money, blockchain, and internet of things. These are being implemented by all global practices.

## Mapping of WBG DG investment categories to GovTech focus areas

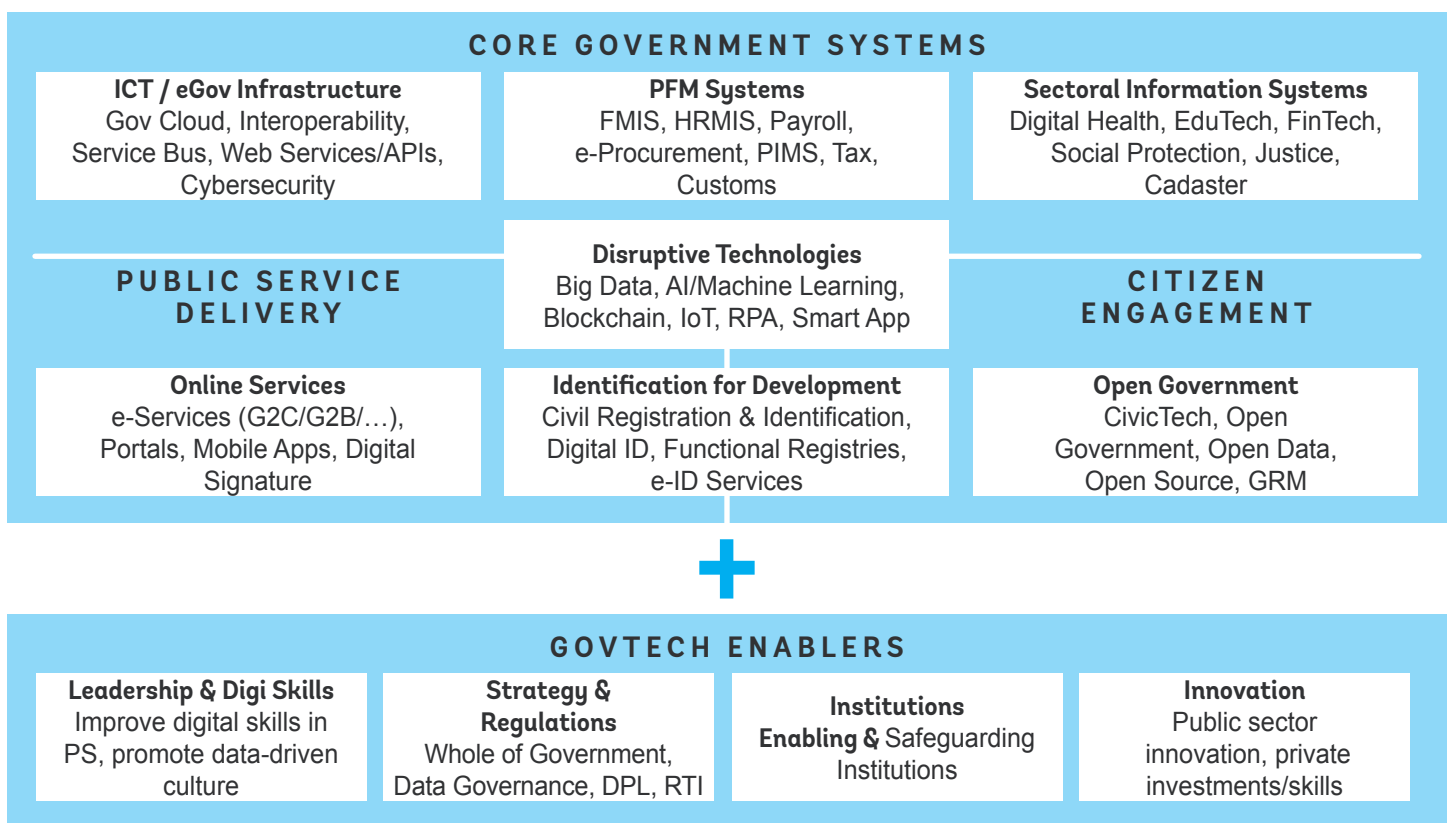
The GovTech approach emphasizes three aspects of the public sector modernization agenda: citizen-centric public services that are universally accessible; a whole-of-government approach to digital government transformation; and a focus on simple, efficient and transparent government systems.

The **GovTech areas of focus are:** (i) public service delivery; (ii) core government systems; (iii) mainstreaming citizen engagement; and (iv) GovTech enablers.

A mapping of the seven existing DG investment categories to GovTech areas of focus is presented below in Figure 1 to show the existing portfolio under these headings. This mapping helps to identify entry points to use existing operations to develop a stronger GovTech approach, and indicates potential opportunities for cross-practice coordination and collaboration while scaling up digital investments. As expected, some overlap exists across categories. For example, Disruptive Technologies and ID4D categories are relevant to three GovTech focus areas.

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**FIGURE 1 - Mapping of DG investment categories to GovTech focus areas**



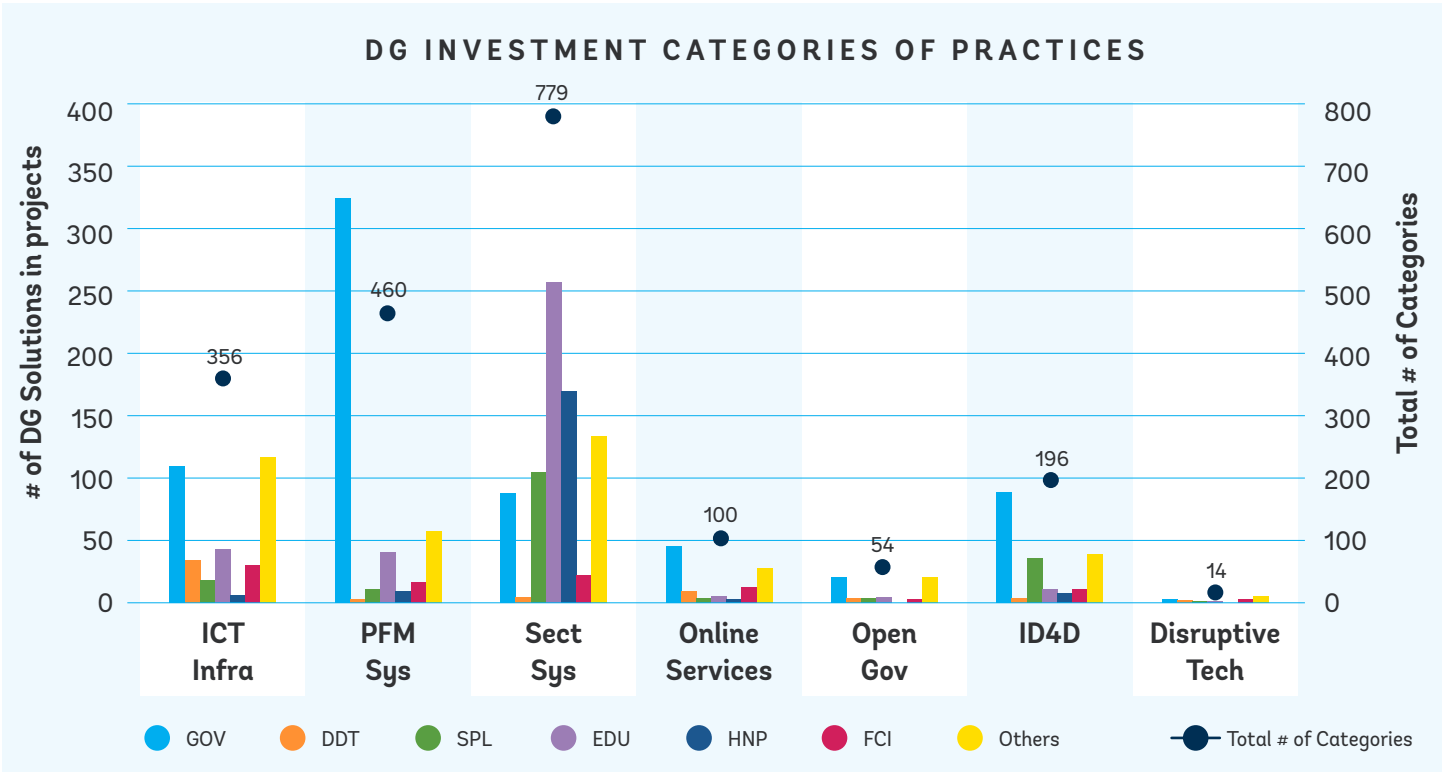


Additionally, four main cross-cutting drivers of digital transformation agenda are included as GovTech Enablers: digital skills in the public sector; an appropriate and conducive legal and regulatory regime; strong enabling and safeguarding institutions; and an environment that fosters innovation in the public sector.

The WBG global practices have mainly supported improvements in core government systems such as sectoral information systems, PFM systems and ICT/eGov infrastructure. Investments in public service delivery and citizen engagement are emerging. The distribution of investment categories by global practices is shown in Figure 2. GGP is mainly involved in the modernization of PFM systems, whereas Digital Development (DDT) focuses on ICT/eGov infrastructure and sectoral information systems to support the investments of the Education (EDU), HNP, and SPJ practices. There is growing support for ID4D activities especially in the Africa (AFR) and South Asia (SAR) regions, led by the DDT, SPJ, EDU, Finance, Competitiveness and Innovation (FCI), GGP, and several other practices.

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**FIGURE 2 - DG investment categories of global practices**



## GGP's GovTech portfolio

GovTech has become a major area of the GGP investments with strong client demand. As of July 2020, there were 512 active and pipeline activities in the practice, of which 213 were lending operations, and 135 of these are GovTech projects (105 active and 30 pipeline). In addition, there are 36 GovTech activities from the practice's nearly 300 advisory and analytical activities financed by Bank budget and reimbursable advisory services. The regional distribution of the 135 GGP led GovTech projects is presented in Table 1, categorized according to the GovTech focus areas. Most projects include activities across all three areas, with investment of around \$3 billion.

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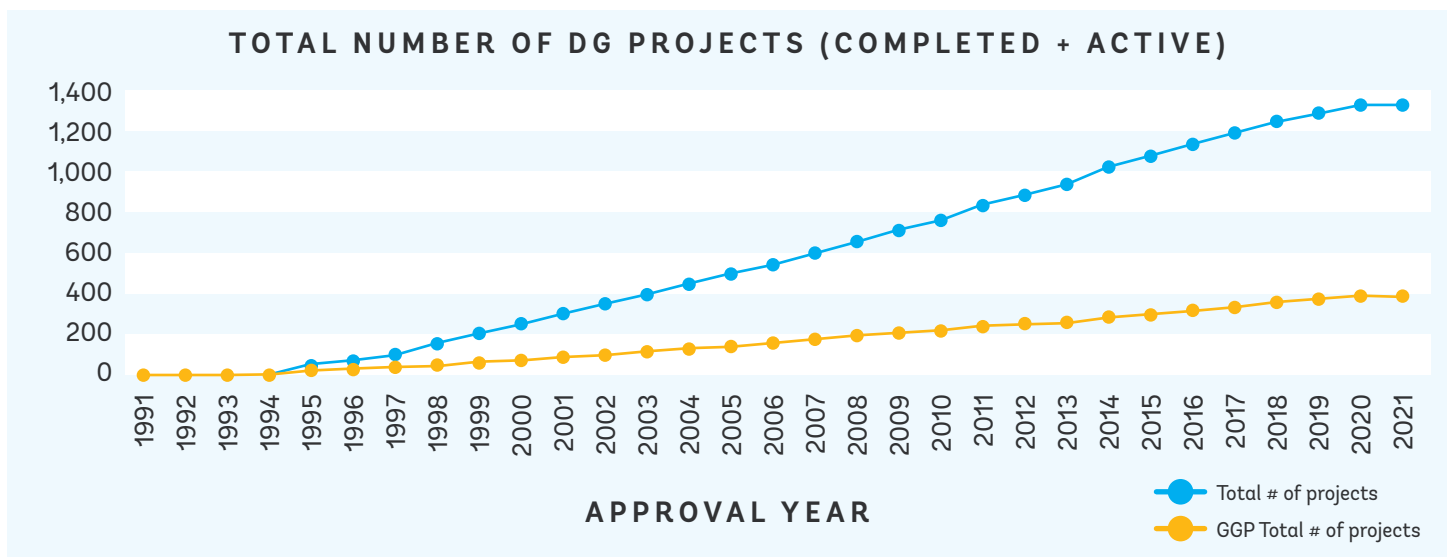
**TABLE 1 - GGP's GovTech Active and Pipeline Projects by Region compared with WBG portfolio**

Region	GGP GT Projects	Gov Ops	Online Serv	Citizen Eng	GGP GT Inv (\$m)	Total # Cty	Tot # GT Cty	GGP GT Countries	WB GT % Total	GGP % GT
AFR	59	58	26	8	1,484.3	44	40	32	90.9%	80.0%
SAR	24	23	11	4	692.8	8	8	7	100.0%	87.5%
ECA	18	18	9	1	290.9	21	20	16	95.2%	80.0%
LCR	15	14	8	2	267.3	28	18	11	64.3%	61.1%
MNA	7	7	6	2	214.4	10	8	8	80.0%	100.0%
EAP	12	11	5	3	103.5	21	18	13	85.7%	72.2%
<b>Totals</b>	<b>135</b>	<b>131</b>	<b>65</b>	<b>20</b>	<b>3,053.1</b>	<b>132</b>	<b>112</b>	<b>87</b>	<b>84.8%</b>	<b>77.7%</b>

As shown in Table 1, core government operations continue to be a strong feature of GovTech projects with most projects incorporating this aspect. Approximately half of the GovTech projects in the GGP portfolio include an element of online service delivery, while less than 15 percent incorporate citizen engagement. According to the DG projects database, GGP has led 385 out of 1,320 (29 percent) closed and active GovTech projects to date, as presented below in Figure 3. As of July 2020, there are nearly 1,940 WBG lending activities (active + pipeline) in 132 client countries. More than 440 of these projects are active GovTech investments of all global practices in 112 countries (nearly 85 percent of all countries in the WBG portfolio have GovTech activities). The GGP is leading 135 ongoing GovTech activities in 87 countries—about 78 percent of all GovTech countries. Most of the GGP's GovTech activities are found in the SAR, AFR and Europe and Central Asia (ECA) regions. Regional demand appears to be low in the Latin America and the Caribbean (LCR) region.

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**FIGURE 3 - Total number of DG Projects led by the WBG practices and GGP**












# Challenges & Opportunities

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## Challenges

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Key development challenges in GovTech domain are summarized below.


-  Trust in government and institutions remains low. More transparency and inclusiveness are needed.
-  High-level commitment and leadership are crucial to implementing the whole-of-government approach, removing inefficiencies, and reducing fraud and corruption risks.
-  Implementing digital government strategies and public sector reforms are difficult.
-  Substantial investments are needed for transition to integrated digital solutions and shared platforms.
-  Mitigating increasing cybersecurity, data protection, and privacy risks is necessary to increase uptake and use of public sector platforms, e-services, and citizen feedback mechanisms.
-  Digital investments need the support of “**analog complements**” (WDR 2016): effective **regulations** that leverage the Internet to compete and innovate; improved **technical skills** to take full advantage of digital opportunities; and accountable **institutions** to respond to citizens’ needs and demands.
-  Ensuring GovTech solutions do not exacerbate existing divides in terms of access and literacy.


# Opportunities


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The WBG has demonstrated comparative advantage, in terms of global knowledge and experience, to support our client countries to develop effective GovTech solutions in the following areas.

 **COVID-19 RECOVERY AND RESILIENCE:** GovTech solutions are crucial for ensuring the continuity of core government operations and secure remote access for government officials, supporting vulnerable people and businesses, and deploying less expensive and more reliable ICT infrastructure solutions—government cloud, mobile/portable data centers—for rapid modernization of existing systems and services.


 **GOVERNMENT CORE OPERATIONS:** Modernization and digitalization of core government functions can make them more efficient, effective and transparent. Also, digital government capacity is positively associated with lower perceptions of corruption.

 **HUMAN-CENTERED SERVICE DELIVERY:** GovTech envisions a whole-of-government approach with integrated e-service solutions and e-kiosks such as online access to tax, registries for citizens, businesses, property, land, and applying for certificates and passports. Interoperability of government systems enables governments to generate data for more informed decision making, compliance, and monitoring.


 **CITIZEN ENGAGEMENT:** GovTech facilitates citizen engagement by promoting continuous two-way communication between governments and citizens through digital solutions such as SMS messaging, social media, and online petition platforms.

 The [IDA 19](#) policy commitments include supporting at least 12 International Development Association (IDA) countries to adopt universally accessible services and improve core government systems, with a focus on FCV countries.

 [Sustainable development agenda](#) includes ambitious GovTech related targets to be achieved by 2030.

 GovTech projects can support the DG reforms needs identified in the [Digital Economy country diagnostics](#) (digital infrastructure, digital platforms, digital financial services, businesses, and digital skills).

 GovTech projects can also support the jobs and economic transformation (JET) agenda in IDA countries.

 The GovTech approach provides an opportunity to increase collaboration among WBG global practices involved in digital and disruptive technology applications and support a whole-of-WBG approach to present the WBG capabilities to client countries and development partners with a shared vision. Forging partnerships with private sector and civil society will support development and adaptation of innovative solutions and enable piloting of new and disruptive technologies in client countries.

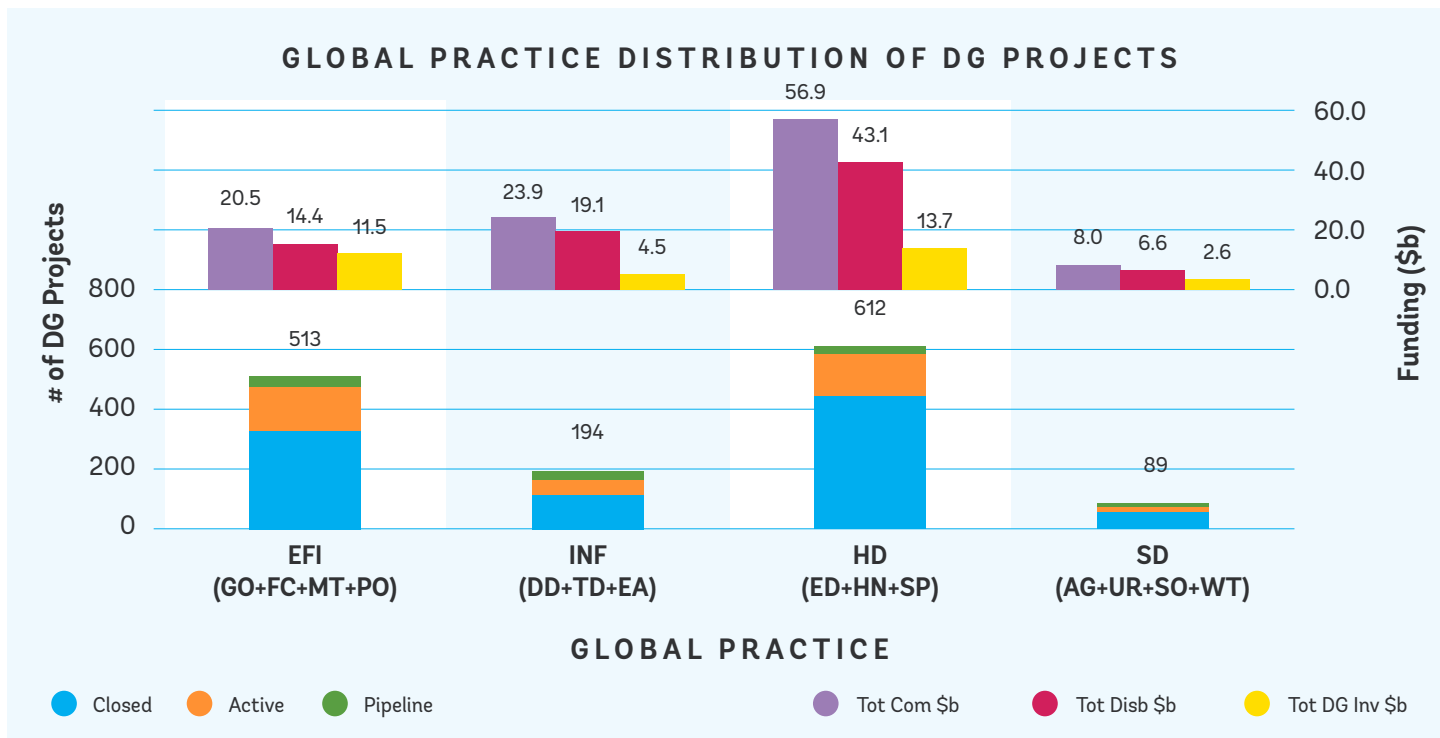
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## Working Together

The GovTech agenda calls for a whole of government approach and similarly requires a whole-of-Bank team to advise our clients. Most of the existing lending projects shown in Figure 4 target upgrading and integration of fragmented and outdated information systems and services to support public sector transformation.

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**FIGURE 4 - Distribution of DG projects by global practices**



The WBG must adapt to changing client and societal demands that stem from digital advancements. Cross practice coordination and collaboration are crucial to increase the impact of next generation GovTech projects. This will involve up-front conversations and conceptualizing projects incorporating other GPs and client counterparts from multiple agencies. Bank teams will typically comprise inputs from sector colleagues on service delivery components, digital development colleagues on infrastructure components and social development colleagues on citizen engagement components.

## GovTech Maturity Index

In order to better frame the potential for GovTech to help advance development, the GovTech Team led by the GGP is developing a new GovTech Maturity Index (GTMI). The index will measure a country's performance on a GovTech trajectory by determining the extent to which a whole-of-government approach, focus on simple and efficient government, and citizen-centric modernization are incorporated in a government's advancement of digital innovation. The GovTech Maturity Index will have four components: government core operations; public service delivery, citizen engagement and GovTech enablers. The Index will draw upon an updated and expanded version of the Digital Government/GovTech Systems and Services global dataset—and several external indices, for example the 2020 United Nations (UN) eGovernment Development Index, to provide a composite GovTech Index. The GTMI, will help task teams to benchmark countries and assess where lessons might be drawn for countries seeking to deliver GovTech solutions.









# Support to GovTech projects

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The Global Unit (EPSPA - Public Administration and Institutional Reforms) provides support to task teams to develop and conceptualize new projects, implement and oversee existing projects and to re-orient and restructure projects as the technology evolves. Under the GovTech Global Partnership the Global Unit also has outreach and relationships with several countries which have advanced on a GovTech agenda including, Austria, Germany, Korea, Switzerland and United Kingdom. In addition to financial support or seed-financing through the GTGP country window, the Global Unit has access to secondees, public and private sector contacts a roster of consultants and networks to bring to task teams.

For new projects, since each GovTech project is aligned with specific country needs, objectives and context, technical and advisory support across focus areas can be informed by the following steps:

-  Undertaking a GovTech needs assessment. There are various assessment tools in use by country teams. This includes the [Digital Government Rapid Assessment](#) (DGRA) toolkit and the Digital Economy for Africa<sup>3</sup> (The [Digital Economy Country Diagnostics](#) Tool (v2.0) can be used for assessing five pillars of the digital economy for Africa initiative: digital infrastructure, digital public platforms, digital financial services, digital businesses, and digital skills. The GGP teams in the ECA region also developed similar Digital Government Assessment Tools<sup>4</sup>.
-  Drawing upon the GovTech Maturity Index for benchmarking gaps, needs, and opportunities for possible improvements in GovTech. The Index report can be downloaded from the GovTech website (<https://www.worldbank.org/en/programs/govtech>).
-  Using other resources to form an assessment of the state of the country's digital government maturity level based on existing data and models as available from the [UN](#), [European Union](#), Organisation for Economic Co-operation and Development ([OECD](#)), and [Gartner](#).
-  Reviewing the [Digital Government/GovTech Systems and Services](#) (DGSS) dataset which collates information on the state of core government systems and services in 198 economies. The database can be used for information on the age and scope of existing government systems. The database also captures existing GovTech initiatives in 68 countries and has information on the GovTech environment and enablers (such as government cloud, digital signature, data protection laws, open government initiatives and national portals for citizen engagement).
-  Reviewing the digital government strategy and action plans of client countries and a clarification of priorities and relevant actions to support. The links to government strategies can be found in the DGSS global dataset.
-  Reviewing the [Digital Government Projects](#) dataset to identify other Bank-funded digital government projects that may inform design, development, prioritization and monitoring and evaluation frameworks of new GovTech projects.

Additional resources may be made available through the GovTech Global Partnership (GTGP). The **GovTech Global Partnership** focuses on **three pillars of work: (i) Analytics & thought leadership; (ii) Global public goods & learning; and (iii) Country and regional engagements.**

More information on the GTGP can be found in the Guidance Note 1, GovTech: The New Frontier.

The **GovTech Global Solutions Group** was established in 2020 to create a network of technical staff across the World Bank to facilitate knowledge generation and dissemination. The GSG is responsible for new knowledge generation and ensuring this is translated into operational guidance for task teams. Kimberly Johns and Cem Dener are currently the GSG Global Leads who report to the GGP Director and Practice Manager. The GSG team members listed at the end of this note include 12 WBG experts located at headquarters and in country offices. They provide support for: (i) technical quality assurance; (ii) strategy, innovation and business development; (iii) country and global engagements; (iv) intellectual leadership; (v) mentoring staff and bringing on new talent; (vi) generating new knowledge and learning materials; and (vii) partnerships and outreach with other agencies. The GSG work program responds to demands from operational units.

3. Contact Samia Melhem ([smelhem@worldbank.org](mailto:smelhem@worldbank.org)) for access to online version of the DGRA tool.

4. Contact Constantin Rusu ([crusu@worldbank.org](mailto:crusu@worldbank.org)) for details.

## Examples of GovTech support:

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### CORE GOVERNMENT SYSTEMS

Support for digital infrastructure investments, PFM systems, sectoral information systems and disruptive technology applications in collaboration with DDGP and other practices. GovTech Team led by the GGP is currently supporting COVID-19 response activities such as business continuity, remote access, and reporting spending in seven countries including Myanmar, North Macedonia, Romania, and Zimbabwe. They are also working on the modernization and integration of core government operations—FMIS, HRMIS, payroll, tax, gov cloud solutions, interoperability, and web services/APIs—in 30+ countries including Albania, Belarus, Bhutan, Costa Rica, Djibouti, Jamaica, Kyrgyzstan, Mongolia, Nepal, Nigeria, Pakistan, Philippines, Senegal, Serbia, Somalia, Ukraine, Vietnam, and Zimbabwe). Other activities include GovTech assessments, proof-of-concept for AI/ML applications, and Robotic Process Automation—ongoing in Brazil, Bulgaria, Portugal, and Turkmenistan.

### PUBLIC SERVICE DELIVERY & CITIZEN ENGAGEMENT

Support for online services, shared platforms, citizen engagement, CivicTech, open government, open data and open source applications (in collaboration with DD, ID4D and other practices). GovTech Team led by the GGP is involved in the improvement of online services and citizen engagement platforms in 20+ countries including Albania, Bangladesh, Djibouti, Iraq, Jordan, Lebanon, Lesotho, Madagascar, Malawi, Moldova, Morocco, Palestine, Saudi Arabia, Sint Maarten, Togo, Tunisia, and Uruguay.

### ENABLERS & SAFEGUARDS

GovTech enablers are focused on the cross-cutting “analog complements” of digital investments as highlighted in the World Development Report (WDR) 2016—effective regulations, improved technical skills, and accountable institutions—as well as the public sector innovation.

-  **LEADERSHIP & DIGITAL SKILLS:** Support for transition to data-driven culture and strengthening technical skills for digital transformation.
-  **STRATEGY & REGULATIONS:** Adoption of GovTech strategy and whole of government approach, data governance policy/strategy, data protection laws, Right to Information laws, etc.
-  **INSTITUTIONS:** Support for strengthening enabling and safeguarding institutions including GovTech agencies, data governance units, etc.
-  **INNOVATION:** Support for innovation in the public sector by bringing private sector skills and investment to address development challenges, and training of officials on innovation.

The GovTech Team led by the GGP is currently involved in digital skills and digital government strategy development, strengthening of enabling institutions, and support for public sector innovation in Brazil, Costa Rica, Indonesia, Jordan, Morocco, Myanmar, Serbia, Saudi Arabia, South Africa, and Vietnam.

Most of these GovTech activities can be launched as cross-practice operational support—whole-of-WBG approach—and coordinated with ongoing Bank- and government-funded activities.

## How can we assist?

The GovTech Team led by the GGP can:

- Provide advisory and hands-on support for the design and implementation of GovTech solutions, including the cross-practice activities related to COVID-19 responses and complex development issues.
- Support the development of public goods through GovTech GP MDTF calls for proposals (grants).
- Support research and knowledge products on GovTech initiatives, innovative solutions, and results achieved.
- Provide training (GovTech clinics/workshops) to share practical examples from ongoing/completed projects on possible GovTech engagements in client countries.
- Inform the regional units and clients about country specific challenges, opportunities, and available support in digital gov/GovTech domain, and assisting in cross-practice coordination of ongoing activities.
- Analyze the impact of GovTech solutions on public sector modernization and service delivery/CE.
- Share GovTech news, good practices and relevant web solutions/datasets via GovTech knowledge portal and organizing dissemination events.
- Discuss country specific or regional GovTech initiatives and other support needs with the regional units.

## Contacts

- Please contact one of the GovTech Team members listed below to learn more about the GovTech activities or discuss operational support needs.
- Follow us from new Knowledge Portal (external) or GovTech CoP (internal) websites.

## GovTech Team Led by the GGP

List of GovTech team members:

1.	Tracey M. Lane		Practice Manager	EPSPA	Global	HQ	-
2.	Kimberly D. Johns	(GSG GL)	Sr. Public Sector Specialist	EPSPA	Global	HQ	-
3.	Cem Dener	(GSG GL)	Lead Governance Specialist	EPSPA	Global	HQ	-
4.	Reinhard R. Haslinger	(GTGP)	Sr. Operations Officer (PM)	EPSPA	Global	CO	Austria
5.	Love Ghunney	(GTGP)	Gov. and Public Sector Spec	EPSPA	Global	HQ	-
6.	Khuram Farooq		Sr. Financial Mgmt Specialist	EPSPA	Global	HQ	-
7.	Jana Kunicova		Sr. Public Sector Specialist	EAEG2	AFR	HQ	-
8.	Tiago Carneiro Peixoto		Sr. Public Sector Specialist	EAEG2	AFR	CO	Mozambique
9.	Zubair Khurshid Bhatti		Sr. Public Sector Specialist	EAEG1	AFR	CO	Kenya
10.	Dolele Sylla		Public Sector Specialist	EAWG1	AFR	CO	Senegal
11.	Constantin Rusu		Sr. Public Sector Specialist	EECG1	ECA	CO	Moldova
12.	Silvana Kostenbaum		Public Sector Specialist	ELCG2	LCR	CO	Argentina
13.	David Santos Ruano		Sr. Public Sector Specialist	ELCG2	LCR	HQ	-
14.	Henry Forero Ramirez		Sr. Public Sector Specialist	ELCG2	LCR	CO	Mexico
15.	Winston Percy Onipede Cole		Lead Financial Mgmt Spec	ESAG2	SAR	CO	Bangladesh
16.	Vikram Menon		Sr. Public Sector Specialist	ESAG2	SAR	CO	India
17.	Steve Davenport		Sr. Public Sector Specialist	EMNGU	MNA	HQ	-

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