

# **GovTech Maturity Index (GTMI) 2022 Update: Trends in Public Sector Digital Transformation**

**Cem Dener, Lead Governance Specialist & Global Lead for GovTech**

**November 2022**



# Contents

- What is GTMI?
- The GTMI Team
- How is the 2022 GTMI update different?
- International & Regional Outlook
- Main Findings & Conclusions
- GTMI Data Dashboard

GovTech > [GTMI web page](#) & [2021 GTMI Report](#)

OLC > [GovTech Academy e-Learning Courses](#)

GTMI Data > [2022 GovTech Dataset](#)

Project Data > [2022 DG/GovTech Projects Database](#)

Supported by:

The [GovTech Global Partnership \(GTGP\)](#) & The [KDI School](#) (Republic of Korea)





**Cem Dener**

Lead Governance Specialist & TTL



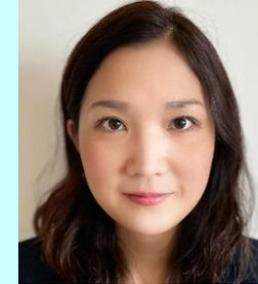
**Kimberly D. Johns**

Sr. Public Sector Specialist  
& Co-TTL



**Hubert Nii-Aponsah**

Consultant



**Asami Okahashi**

Governance Specialist



**Youngseok Kim**

Sr. Governance Specialist



**Gustavo A. Zanabria**

Consultant



**Freida Siregar**

E.T. Consultant



**Çağla Giray**

Consultant



**Till Hartmann**

Junior Professional Officer



**Charles V. Blanco**

Sr. Public Sector Specialist



**Youngyun Lee**

Junior Professional Officer



**João Vasconcelos**

Sr. Governance Specialist



**Hunt La Cascia**

Sr. Procurement Specialist

## The ITSDA Team

GTMI Online Surveys



**Anna Maria Kojzar**  
Senior IT Officer



**Parisa Nazarijam**  
Consultant



**Varun V. Doiphode**  
IT Officer



**Shrikant Bhaskar Shinde**  
Consultant

## The ITSES Team

GTMI Data Dashboard



**Manar Eliriqsousi**  
Senior IT Officer



**Misun Cho Kim**  
IT Officer



**Hristo A. Nikodimov**  
IT Officer



**Violeta S. Yovcheva**  
IT Officer



**Kaloyan Velichkov**  
Consultant



**Abdullah Bin Qamar**  
Consultant

**GovTech Maturity Index (GTMI)**  
measures the state of four GovTech focus areas  
in 198 economies  
using 48 key indicators  
to inform operations, research & analytics



**Core Government Systems Index (CGSI)**  
17 indicators



**Public Service Delivery Index (PSDI)**  
9 indicators



**Digital Citizen Engagement Index (DCEI)**  
6 indicators



**GovTech Enablers Index (GTEI)**  
16 indicators

**Target users:** Government officials, World Bank teams,  
and practitioners involved in digital transformation

# What is GTMI?

A **CITIZEN- FOCUSED** Government



offering a more enjoyable journey

# How the 2022 GTMI update is different

## Consultations

Consultations with 9 relevant int'l organizations and 10 WBG groups involved in DG/GovTech

## New Indicators

New > 5 out of 40 key indicators + 2 out of 8 external indicators measuring less-known areas

## Online Surveys

Central Gov (CG) GTMI Online Survey & Subnational Gov (SNG) GTMI Survey [ Pilot ]

## Inclusion

CG GTMI > 850+ officials from 164 economies + SNG GTMI > 350+ officials from 20 countries

## Privacy

WBG DPO accreditation to maintain the GTMI contact list. Protection of personal data.

## Participation

CG GTMI > 135 economies submitted directly + Remote data collection for remaining 63  
SNG GTMI > 122 SNG entities (states, municipalities) from 17 countries submitted directly

## Validation

Sufficient time for data collection (Mar-Jun) and validation (Jul-Aug)

## Transparency

Regular updates + All participants informed about 2022 GTMI groups before public release

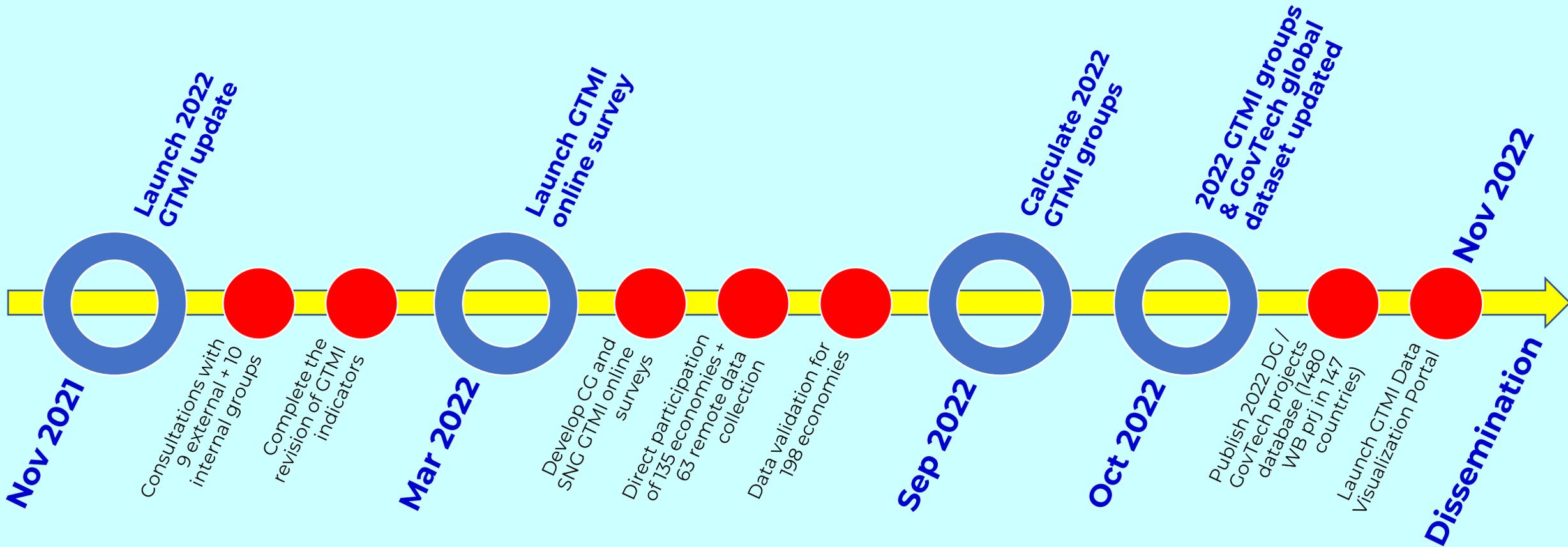
## Data Dashboard

Maps and graphs to digest and explore GTMI findings and GovTech projects database

## Open Data

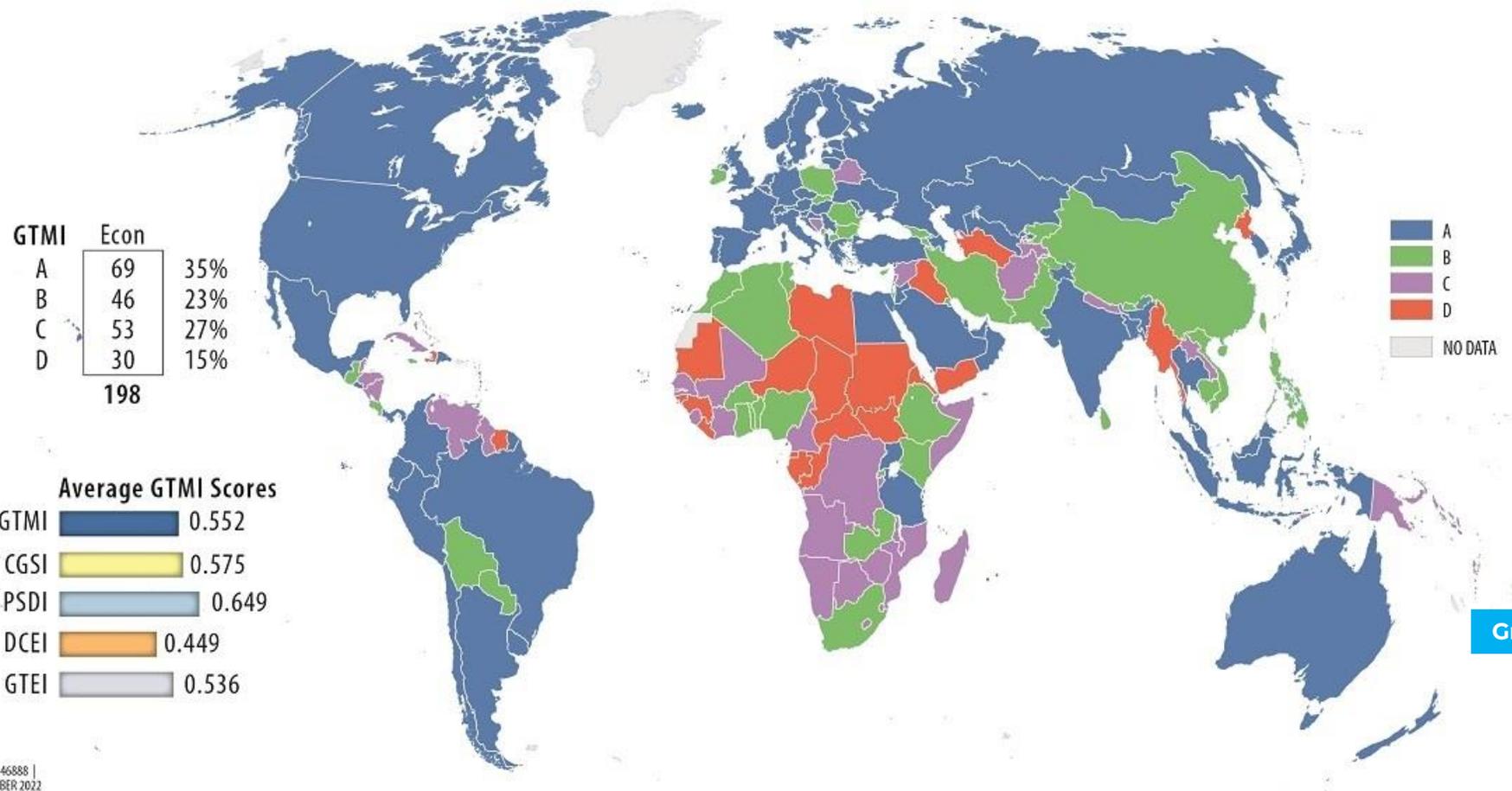
Both 2020 and 2022 editions of the GovTech Dataset are available at WBG Data Catalog

# 2022 GTMI Update: Timeline



There are 154 established Digital Government/GovTech entities around the world, and **good practices are highly visible in 69 economies** out of 198.

2022 GovTech Maturity Index



2020 GTMI is based on remotely collected data

2022 version is mainly based on online survey data provided by government officials

Based on the GTMI component scores, each economy is grouped into one of four categories (A to D)

Group	Score	GTMI
A	0.75-1.00	Very High > GT Leaders
B	0.50-0.74	High > Significant Focus
C	0.25-0.49	Medium > Some Focus
D	0.00-0.24	Low > Minimal Focus

GTMI showcases a country's overall advancement in digital transformation. GTMI is not intended to create a ranking or assess a country's readiness for or performance of GovTech.

*Despite progress in online service delivery and underlying shared platforms, the digital divide widens.*

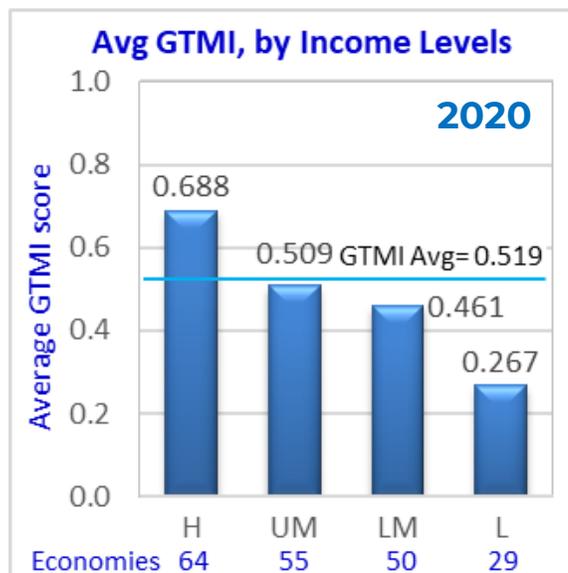
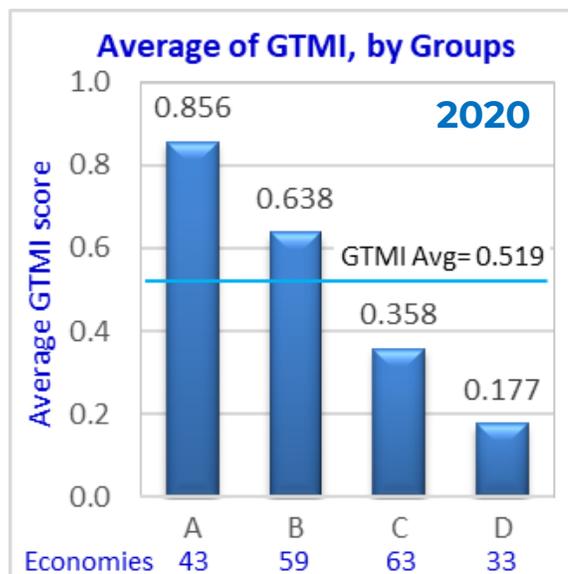
The GTMI global average value has risen from 0.519 in 2020 to 0.552 in 2022.

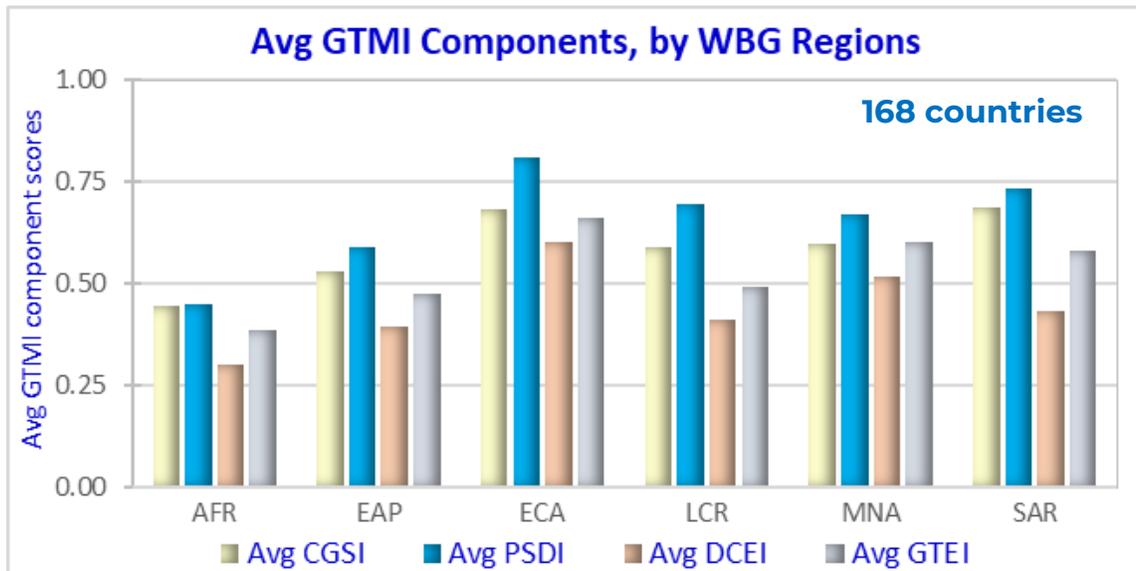
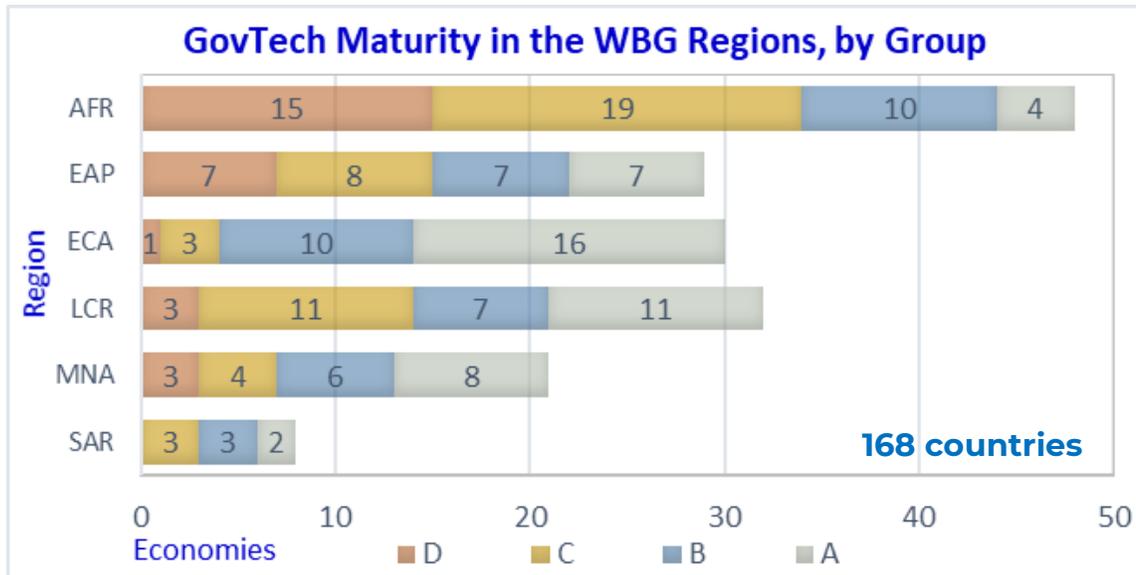
There is an overall improvement in GovTech maturity levels across economies

- **136** economies (69 %) **remained** in their GTMI group compared to the 2020 data.
- **52** economies (26 %) **moved up** one level (B to A = 29, C to B = 16, D to C = 7)
- **10** economies (5 %) **moved down** one level (A to B = 3, B to C = 3, C to D = 4).

Also, according to the ID4D Dataset, there are **850+ million people without an ID.**

# 2022 GTMI: International Outlook





**ECA countries** have the highest GovTech maturity in all four focus areas.

## High-performing economies in the regions

Group A	% Economies	# Econ / Total
ECA	53 %	16 / 30
MNA	38 %	8 / 21
LCR	34 %	11 / 32
SAR	25 %	2 / 8
EAP	24 %	7 / 29
AFR	8 %	4 / 48

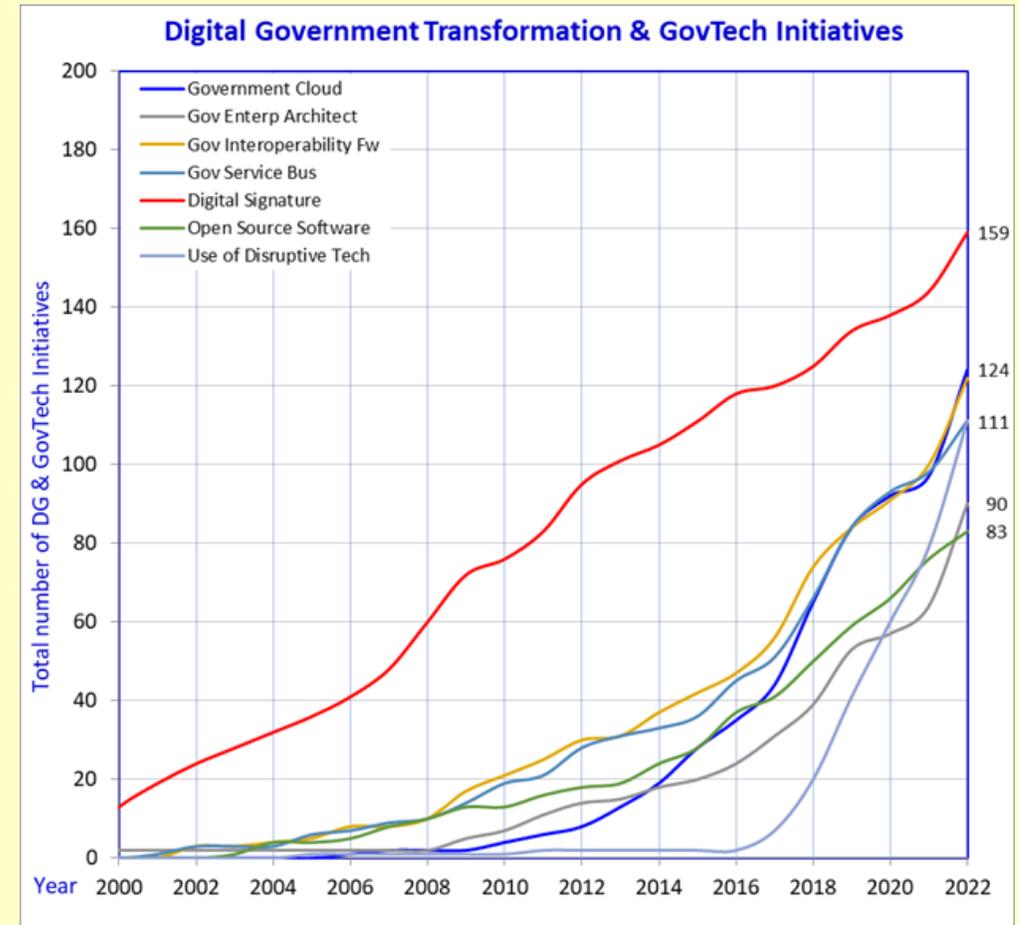
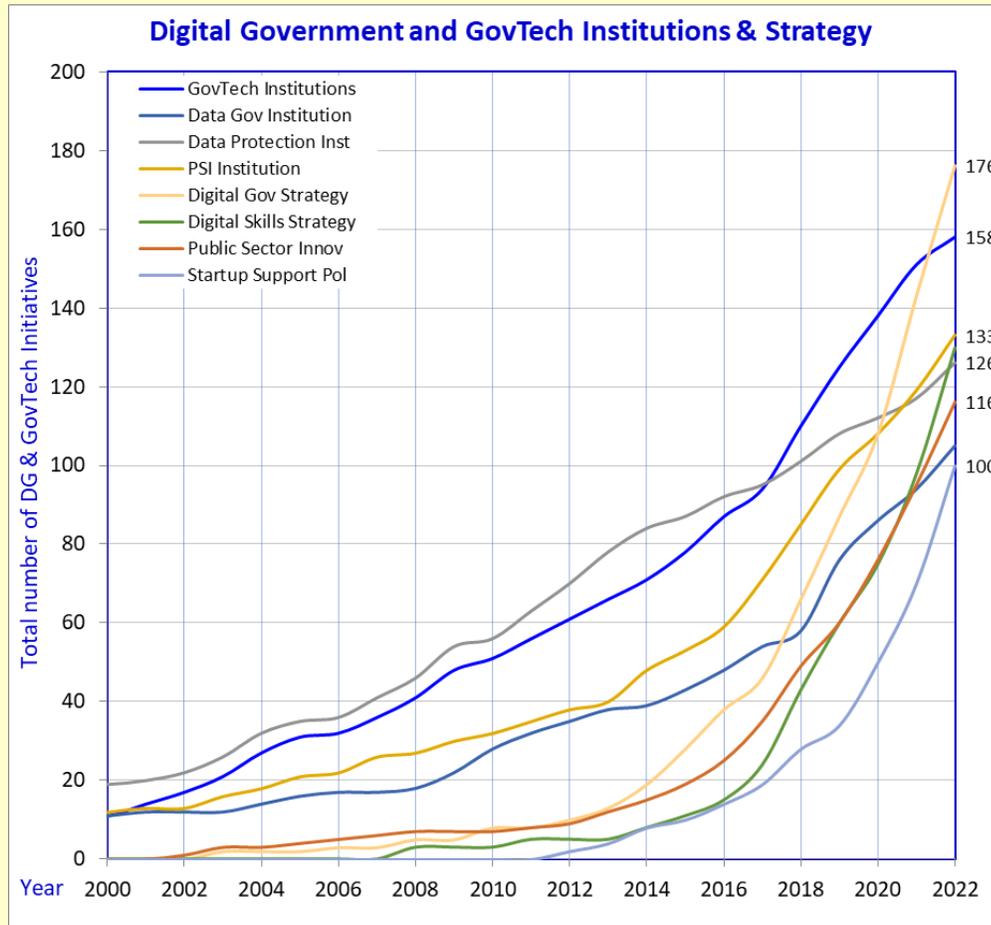
**Most AFR countries have a substantial gap** in citizen engagement, service delivery, and GovTech enablers. **Regional disparities persist.**

## Bottom half of GTMI groups in the regions

Group C+D	WBG Reg (168)	
AFR	71 %	
EAP	52 %	About 900 m population living in Group C+D countries
LCR	44 %	
SAR	38 %	
MNA	33 %	
ECA	13 %	

**Note:** Tables present data for 168 countries in the WBG regions

- **165** dedicated GovTech entities (154 est., 11 in progress) with approved strategies, but only about **25 %** disclose information about the governance and performance / use of their institutions, shared platforms, and services, as a clear indication of the **substantial gap in transparency and accountability**.



Ind	GTMI Key indicators	Points	Weight
<b>Core Government Systems Index (CGSI)</b>			
I-1	Is there a cloud platform available for all government entities?	0 - 2	W1
I-2	Is there a government enterprise architecture framework?	0 - 2	W1
I-3	Is there a government interoperability framework?	0 - 2	W1
I-4	Is there a government service bus platform?	0 - 2	W1
I-5	Is there an operational FMIS in place to support core PFM functions?	0 - 2	W3
I-6	Is there a TSA supported by FMIS to automate payments and bank reconciliations?	0 - 2	W3
I-7	Is there a Tax Management Information System in place?	0 - 2	W3
I-8	Is there a Customs Management Information System in place?	0 - 2	W3
I-9	Is there a Human Resources Mgmt Information System with self-service portal?	0 - 2	W3
I-10	Is there a Payroll System (MIS) linked with HRMIS?	0 - 2	W3
I-11	Is there a Social Insurance system providing pensions and other SI programs?	0 - 2	W1
I-12	Is there an e-Procurement portal?	0 - 2	W2
I-13	Is there a Debt Management System in place? (Foreign and Domestic debt)?	0 - 2	W3
I-14	Is there a Public Investment Management System (PIMS) in place?	0 - 2	W2
I-15	Is there a gov Open-Source Software (OSS) policy/action plan for public sector?	0 - 2	W2
I-16	UN Telecommunication Infrastructure Index (TII)	0 - 1	E1
I-17	Does gov have a national strategy on disruptive / innovative technologies?	0 - 2	W2
<b>Public Service Delivery Index (PSDI)</b>			
I-18	UN Online Service Index (OSI)	0 - 1	E1
I-19	Is there an online public service portal? (Also called "One-Stop Shop" or similar)	0 - 2	W2
I-20	Is there a Tax online service portal?	0 - 2	W2
I-21	Is e-Filing available for tax and/or customs declarations?	0 - 2	W2
I-22	Are e-Payment services available?	0 - 2	W2
I-23	Is there a Customs online service portal (Single Window)?	0 - 2	W2
I-24	Is there a Social Insurance/Pension online service portal?	0 - 2	W2

Ind	GTMI Key indicators	Points	Weight
I-25	Is there a Job portal?	0 - 2	W2
I-26	Is there a digital ID that enables remote authentication for (online service access	0 / 1	E2
<b>Digital Citizen Engagement Index (DCEI)</b>			
I-27	UN E-Participation Index (EPI)	0 - 1	E1
I-28	Is there an Open Government web site / portal?	0 / 1	W2
I-29	Is there an Open Data portal?	0 / 1	W2
I-30	Are there nat'l platforms for citizens to participate in policy decision-making?	0 / 1	W1
I-31	Are there gov platforms for citizens to provide feedback on service delivery?	0 / 1	W1
I-32	Does the gov publish its citizen engagement statistics and performance regularly?	0 / 1	W2
<b>GovTech Enablers Index (GTEI)</b>			
I-33	Is there a gov entity focused on GovTech (digital transform, whole-of-gov)?	0 - 2	W1
I-34	Is there a dedicated gov entity in charge of data governance or data mgmt?	0 - 2	W1
I-35	Is there a GovTech / digital transformation strategy?	0 - 3	W3
I-36	Is there a whole-of-government approach to public sector digital transformation?	0 - 2	W1
I-37	Are there RTI laws to make data/info available to the public online or digitally?	0 - 2	W3
I-38	Is there a data protection / privacy law?	0 - 2	W3
I-39	Is there a data protection authority?	0 - 2	W3
I-40	Is there a national ID (or similar foundational ID) system?	0 / 1	E2
I-41	Are records in the national ID system stored in a digitized (electronic) format?	0 / 1	E2
I-42	Is there a digital signature regulation and PKI to support service delivery?	0 - 3	W3
I-43	ITU Global Cybersecurity Index (GCI)	0 - 1	E1
I-44	UN Human Capital Index (HCI)	0 - 1	E1
I-45	Is there a gov strategy / program to improve digital skills in the public sector?	0 - 2	W1
I-46	Is there a strategy and/or program to improve public sector innovation?	0 - 2	W1
I-47	Is there a government entity focused on public sector innovation?	0 - 2	W1
I-48	Is there a gov policy to support GovTech startups and private sector investments?	0 / 1	W2

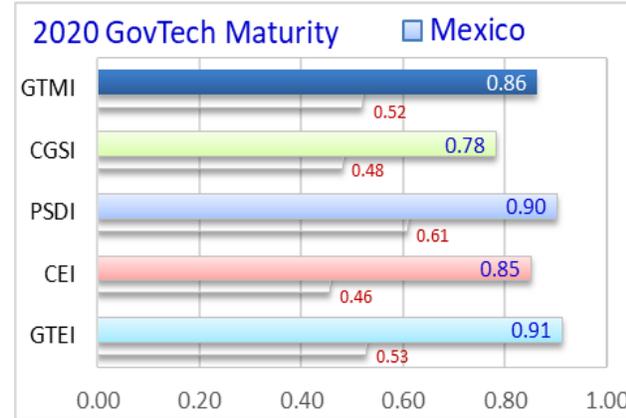
## Progress >

- Improvements in all four GovTech focus areas (No change in the GTMI Group = A)
- Interopera MX to improve interoperability of existing core government systems and services
- Promotion of the use of open-source software in public sector
- Public service delivery channels, citizen engagement and enabling environment

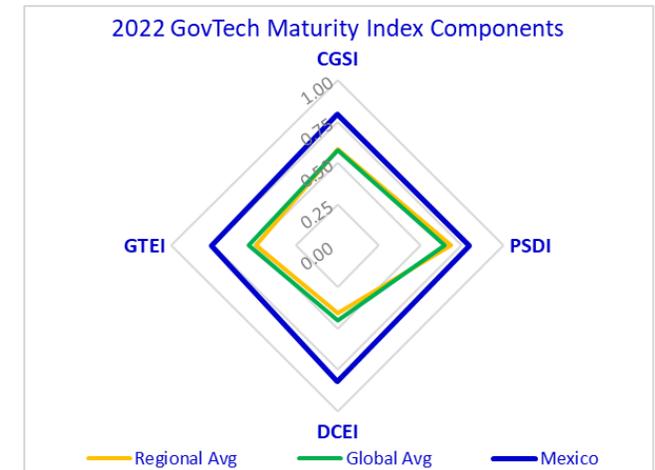
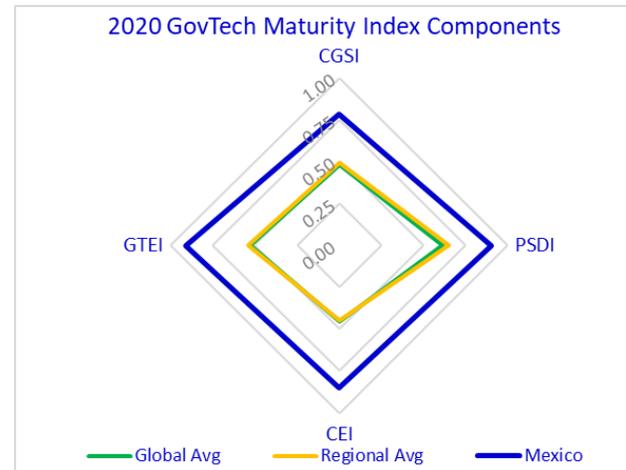
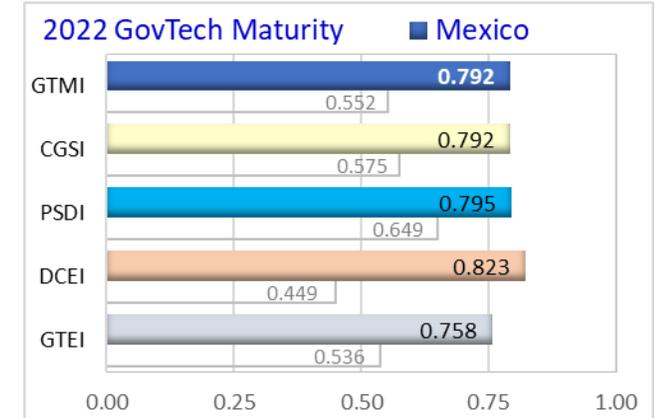
## Possible improvements >

- Monitoring the performance/use of existing systems and services
- Coordination of transition to whole-of-government approach
- Focus on digital skills and public sector innovation
- Incentives for GovTech startups

## 2020 GovTech Maturity



## 2022 GTMI update



## What do you want?



- ▶ Progress amidst a widening digital divide
- ▶ 26% of 198 economies improved their GovTech maturity levels
- ▶ Dedicated GovTech entities are visible in 154 economies (78 %)
- ▶ Adoption of WoG is in progress in 140 economies (70 %)
- ▶ 85 economies (43 %) institutionalized the WoG approach
- ▶ Public Service Delivery Index (PSDI) > highest avg score (0.649)
- ▶ **Citizen Engagement Index (DCEI) > lowest avg score (0.449)**
- ▶ ECA, MNA, LCR, SAR regions > higher GTMI component scores
- ▶ AFR and EAP > recorded the lowest scores
- ▶ HIC (58 %) and UMIC (26 %) dominate Group A
- ▶ Only 16 % of both LMIC and LIC are in Group A
- ▶ Urgent needs in 45 (of 59) IDA and 8 (of 15) Blend countries
- ▶ GovTech foundations are weak in 86 % of FCV economies

- **Digital divide** > Sustain high-level commitment and allocate adequate resources
- **CGSI** > Improve interoperability and expand shared digital platforms (WoG approach)
- **PSDI** > Extend human-centric transactional and connected services (life events)
- **DCEI** > Develop multifunctional citizen engagement platforms to improve public trust
- **Access & Use** > **Monitor and report the use and quality of online public services**
- **GTEI** > Invest on digital skills and innovation and promote data-driven culture
- **Public data platforms** > Promote the use of public data to create added economic value
- **Private sector** > Provide more incentives to GovTech startups/ SMEs
- **Innovative tech** > Explore possible use of DT to improve operations and online services

## *No voice left unheard*

e-People is the single online service made for the concerns of the people





**THE WORLD BANK**  
IBRD · IDA | WORLD BANK GROUP



**GovTech**  
Putting people first

## GovTech Maturity Index (GTMI) Data Dashboard

GTMI Groups

GTMI at-a-glance

Economy

Indicators

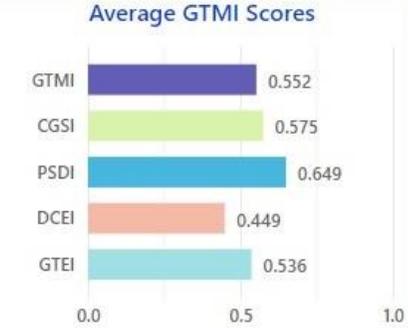
Trends

Projects

The GTMI Groups page presents the maturity of four GovTech focus areas in 198 economies around the world. The GTMI score is the simple average of the normalized scores of four components (CGSI, PSDI, CEI, and GTEI).

GTMI data
Project data

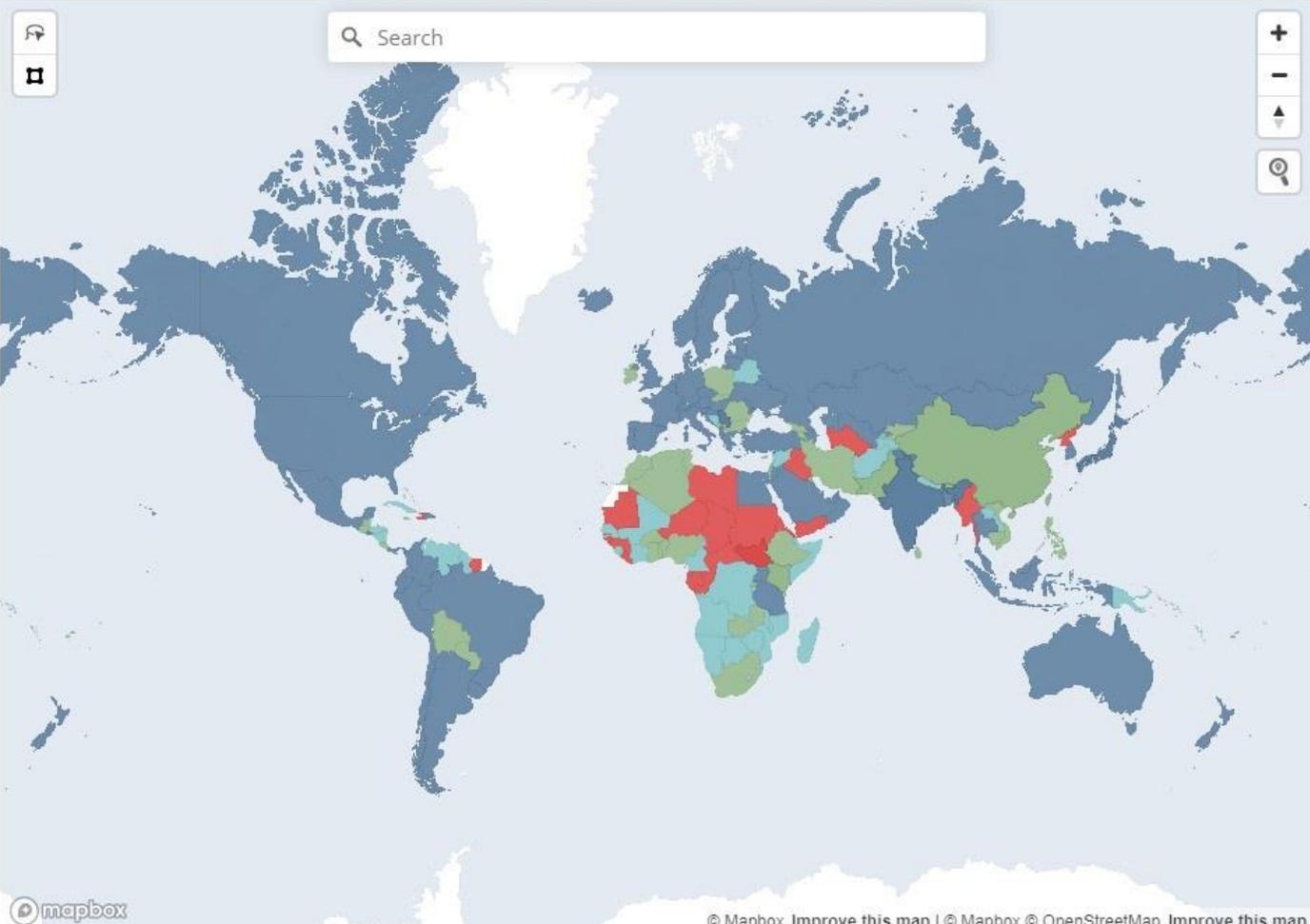
### Average GTMI Scores



Indicator	Average Score
GTMI	0.552
CGSI	0.575
PSDI	0.649
DCEI	0.449
GTEI	0.536

GTMI GovTech Maturity Index  
 CGSI Core Government Systems Index  
 PSDI Public Service Delivery Index  
 DCEI Digital Citizen Engagement Index  
 GTEI GovTech Enablers Index

### State of GovTech Maturity, by GTMI Groups, 2022



GTMI	# of Economies
<span style="color: #0056b3;">■</span> A GovTech Lead...	69
<span style="color: #76923c;">■</span> B Significant Fo...	46
<span style="color: #4682b4;">■</span> C Some Focus	53
<span style="color: #d62728;">■</span> D Minimal Focus	30
<b>Total</b>	<b>198</b>

A Very high $\geq 0.75$	B High $\geq 0.50 \& < 0.75$
C Medium $\geq 0.25 \& < 0.50$	D Low $< 0.25$

#### Selected Filters

2022

Region	All selected
Economy	All selected
Income Level	All selected
Borrower Category	All selected
FCV Countries	All selected

© Mapbox Improve this map | © Mapbox © OpenStreetMap Improve this map



## Q&A

- **GovTech/GTMI web page:** <https://www.worldbank.org/en/programs/govtech/gtmi>
- **GTMI Report (OKR):** <https://openknowledge.worldbank.org/handle/10986/36233>
- **GovTech Dataset:** <https://datacatalog.worldbank.org/search/dataset/0037889/GovTech-Dataset>
- **GovTech Projects Database:** <https://datacatalog.worldbank.org/search/dataset/0038056/digital-governance-projects-database>
- **GovTech OLC e-Learning course #1:** <https://olc.worldbank.org/content/govtech-fundamentals-and-key-concepts>
- **GovTech OLC e-Learning course #2:** <https://olc.worldbank.org/content/trends-govtech-solutions-public-financial-management>

- ▶ **Operations > GTMI informed the design of 15+ new investment projects in 2021-22**  
(ALB, BDI, BEN, BRA, CAF, GHA, GMB, IDN, KSV, LBR, LSO, MKD, NGA, SOM, WBG, ...)
- ▶ New **GTMI Data Dashboard** presents the findings of the GovTech Dataset (2020 & 2022) and the GovTech Projects Database. GTMI web page also contributes to knowledge sharing and learning from country experiences and good practices.
- ▶ **GTMI is not intended to create a ranking or assess a country's readiness for or performance of GovTech;** it is intended to complement existing tools and diagnostics by providing a baseline for GovTech maturity and identifying areas for improvement.
- ▶ The 2022 GTMI update will also be used for the preparation of regional or country briefs to present the progress, gaps and possible improvements.
- ▶ GTMI will be updated every two years to reflect progress in GovTech domain globally.

## Services connected to life situations



Having a child



Getting married



Working



Studying

## GovTech Academy e-Learning courses launched through Open Learning Campus (OLC)

SELF-PACED E-COURSE

### GovTech: Fundamentals and Key Concepts



#### ABOUT THE COURSE

Governments have been using technology to modernize the public sector for decades. The World Bank Group (WBG) has been a partner providing both financing and technical assistance to support countries' digital transformation journeys since the 1980s. Over the last five years, developing countries have more frequently been requesting WBG funding and advisory support to design even more advanced digital transformation programs to increase government efficiency and improve access and quality of service delivery, enhance transparency and reduce corruption, improve governance and oversight, and modernize core government operations. The World Bank's [GovTech Initiative](#) launched in 2019 appropriately responds to this growing demand.

The "GovTech: Fundamentals and Key Concepts" self-paced e-Learning course introduces the GovTech concepts, focus areas, solutions, and good practices to support digital transformation reforms of governments around the world.

GovTech OLC e-Learning course #1:

### GovTech: Fundamentals and Key Concepts

#### MODULES

The GovTech: Fundamentals and Key Concepts self-paced course consists of four modules:

- **Module 1**, "GovTech: The Latest Generation in Public Sector Reforms," presents the definition of GovTech, the evolution of digital government, and GovTech approaches, and introduces the GovTech Global Partnership.
- **Module 2**, "GovTech Focal Areas: How They Work in Practice," explains the four GovTech focal areas in detail.
- **Module 3**, "GovTech Maturity Index (GTMI)," presents the objective, methodology, findings, and conclusions of the GTMI that measures the maturity of four GovTech focus areas.
- **Module 4**, "GovTech Solutions for Practitioners," describes different types of digital government investments, gives examples from GovTech solutions in the four focal areas, and describes GovTech challenges and opportunities.

SELF-PACED E-COURSE

### Trends in GovTech Solutions for Public Financial Management



#### ABOUT THE COURSE

This is the second e-Learning course of the World Bank's [GovTech Academy](#) program that was launched in 2020 to assist the World Bank staff and client countries working on digital transformation in the public sector through knowledge sharing and learning activities.

The first GovTech course "[GovTech: Fundamentals and Key Concepts](#)" was launched in November 2021 to introduce the GovTech concepts, focus areas, solutions, GovTech Maturity Index (GTMI), and good practices, and assists practitioners in the design of new digital transformation projects.

This self-paced e-Learning course (Trends in GovTech Solutions for Public Financial Management) explores the role of digital technology in the modernization and enhancement of Public Financial Management (PFM) systems, and the associated risks, challenges, and opportunities with a focus on fragile and low-income countries. It also looks at the innovative GovTech solutions and trends for budgeting, tax administration, public procurement, and financial fraud detection.

GovTech OLC e-Learning course #2:

### Trends in GovTech Solutions for PFM

#### MODULES

The Trends in GovTech Solutions for Public Financial Management self-paced course consists of five modules:

- **Module 1**, "Use of New Technologies in Public Financial Management," explores how technology innovations can have an impact on PFM, as well as the challenges and benefits associated with digital transformation.
- **Module 2**, "Public Budgeting," explains trends in the modernization and interoperability of financial management information systems and other PFM solutions, and how these platforms can transform the process of planning, executing, monitoring, and reporting public budgets.
- **Module 3**, "Tax Administration," talks about why technology maturity is important for a transition to digital tax administration and how different technologies can improve the tax administration processes and transparency.
- **Module 4**, "Public Procurement," explores the context for improving the procurement of GovTech solutions, innovative procurement solutions, e-Procurement, and Procurement Data Analytics.
- **Module 5**, "Financial Auditing," covers the transition to data-driven financial auditing and the application of digital technology to fraud detection.