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# Accelerating Whole-of-Government digitalization based on reusable Building Blocks: The GovStack initiative

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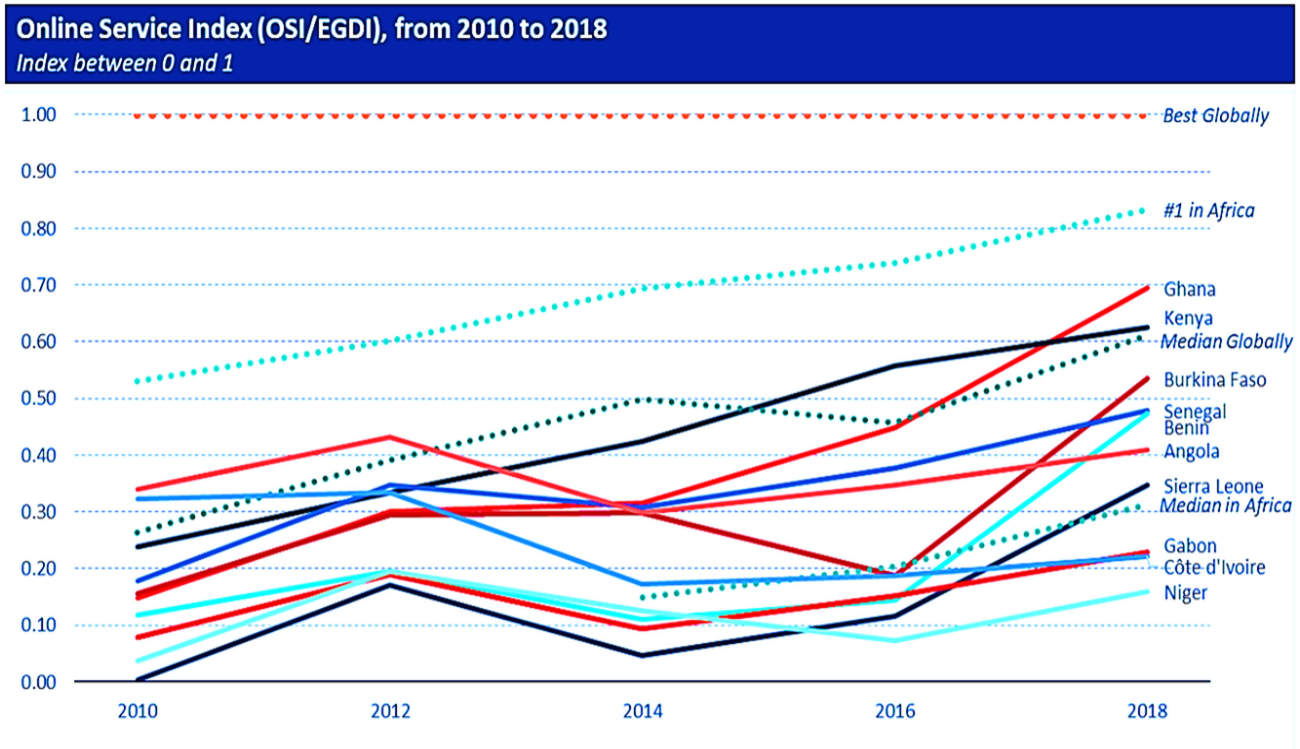
Republic of Estonia
Ministry of Foreign Affairs

Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung


dial Digital Impact Alliance

# Governments in developing countries are all on a progressive pathway to digitize service delivery. Not all are without struggles.

- **Coordination:** Problems in coordination commonly occur in aligning ICT ministry work with that of other agencies.
- **Siloes:** Siloed investments and duplicative efforts by development partners create fragmented digital governance in partner countries.
- **Funding:** Challenges in procuring and implementing affordable IT solutions persist, as do challenges in finding the necessary capital to invest in ICT infrastructure projects.
- **Scaling:** Major challenges exist in adapting and investing in projects at scale, particularly in the rollout of physical ICT infrastructure, and deployment and use of common data platforms.




Continuous but disparate digital service provision progress across selected countries [source: DIAL Listening Study]

# GovStack is a joint initiative to bring the *Building Block* approach to a broader reality.


## What is it?

*GovStack* initiative is an expert community-driven multistakeholder effort aimed at creating a common framework and technical practice for developing reusable and interoperable digital components – so-called "digital building blocks" – needed for the digital transformation of governments.

## What does it aim to achieve?

*GovStack* aims to enable countries to kickstart their digital transformation journey by adopting, deploying, and scaling digital government services and in doing so improve services for social well-being.

## Where did it come from?

*GovStack* model is an extension of the SDG Digital Investment Framework, an earlier effort by the International Telecommunication Union (ITU) and the Digital Impact Alliance (DIAL) at the UN Foundation

# There is an existing approach practiced by leading e-gov. countries to create a common shared platform to deliver digital government services …

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A **holistic (*Whole-of-Government*)** digital platform that can be used by any government agency across sectors to build new e-gov. services without the need to redesign, test and operate the underlying systems and infrastructure themselves every time.

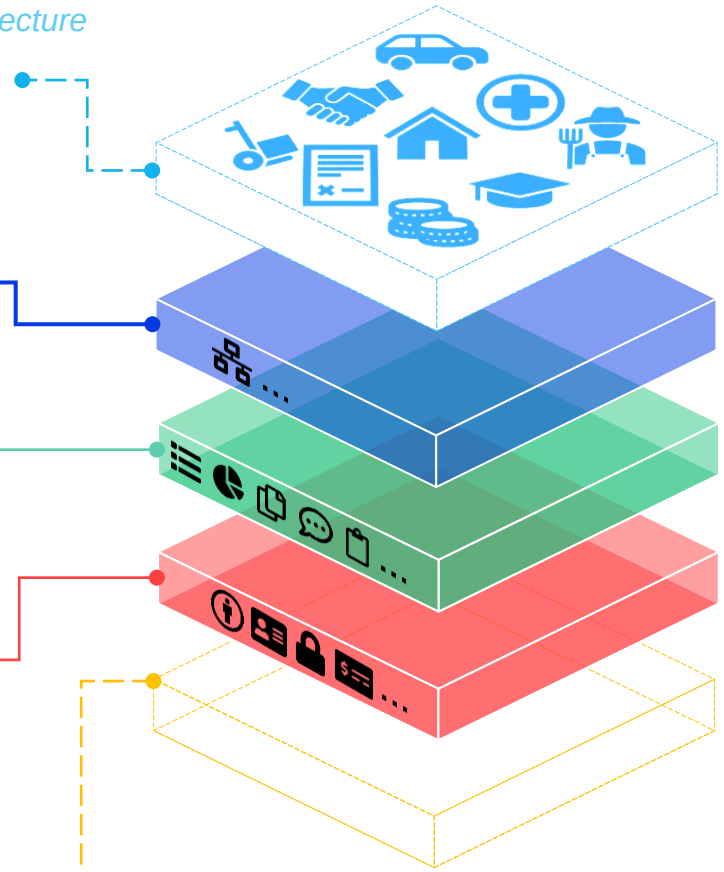
Instead of creating unique and disparate solutions, use a **common reusable stack of *Building Blocks*** to form the core platform engine and contextualize various e-gov. services on top.

**Mediation middleware**
Open API Gateway, secure data exchange

**Common Applications** *Blocks*
e-Learning, e-Marketplace, Business Intelligence / Analytics, Workflow, etc.

**Foundational** *Blocks***
Identity/Authentication, Security, Consent, Payment, Registration, Messaging, etc.
*** Digital Public Infrastructure (DPIs) considered part of this foundational layer*

***Adaptive shared citizen-centric e-gov. services*** *facilitated by a service-oriented architecture*



*Hosting*

**[Recommended reading:** *Key findings on digital government "stacks" by New America*]

# There is an existing proven framework practiced by leading e-gov. examples: The use of generic *Building Blocks*.

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## What are *Building Blocks*?

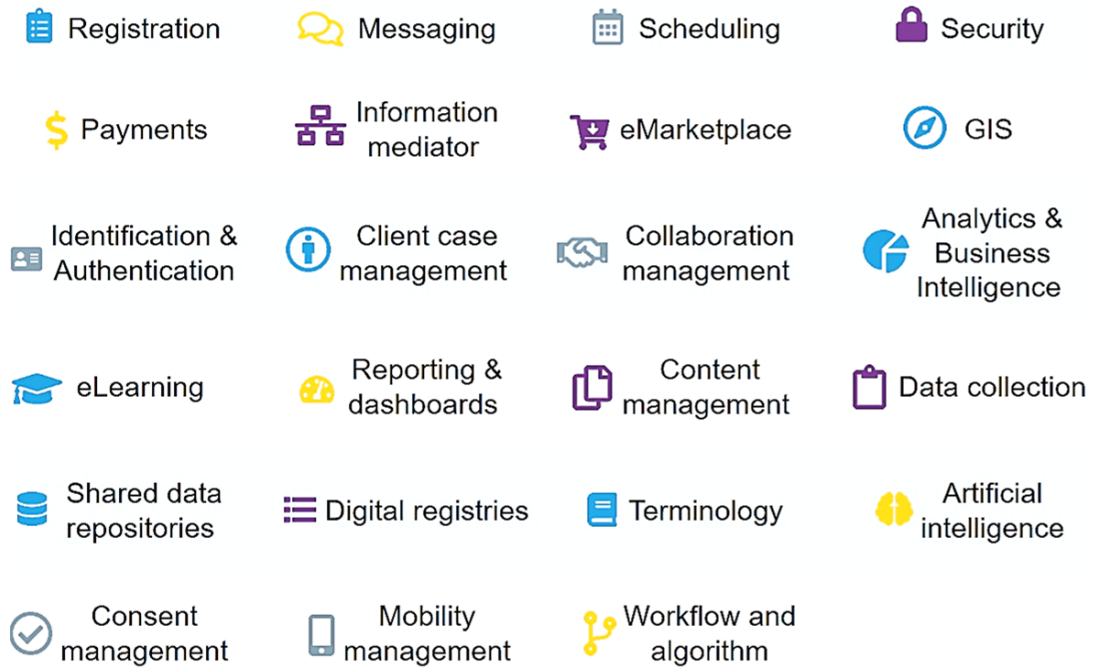
Generically-defined **software components** that in combination provide key functionalities to facilitate generic workflows common across multiple sectors.

## What are their characteristics?

- Reusable software components
- Open-source, commercial off-the-shelf (COTS), or freely available with open access to data
- Facilitate one or more generic op. workflows
- Applicable to use cases across multiple sectors
- Interoperable with other *Building Blocks*

## *Building Blocks* set

Identified **components** so far




[refer to: *Building Blocks* section of Govstack.global]

# A holistic digital platform utilizing reusable stack of *Building Blocks* should help a country see a wide range of benefits...

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**Speed**
Increases speed of delivery by facilitating reuse of core service elements and redirecting resources towards improving citizen outcomes.

**Cost-efficiency**
Provides common capabilities cross-departments / -agencies which avoids duplication of efforts, reduces cost to develop new e-gov. services.

**Real economic return**
Provides socioeconomic ROI by enabling faster and closer connections from government to addressing needs of citizens and businesses.

**ONE government**
Enables service delivery that links and invokes different parts of government, providing a connected, consistent and seamless user experience.

**Agility + Responsiveness**
Enable governments to design and deliver new services quickly to respond to needs and unexpected circumstances (e.g. global pandemic and disasters).

**Integration + exchange**
Enables integrated transactions and exchange of information across other equivalent stacks and systems through standards and open APIs.

**Harmonized policies**
Opens possibilities for aggregation of big data for richer insights that would help develop better nonconflicting policies and monitor operations.

**Minimized vendor lock-in**
Minimizes product 'lock-in' and allows independent services to run where modular *Building Blocks* could be replaced without impacting overall exp.

[Ref. on other documented rationalization w. AsiaPac. countries examples: GSMA Report "Advancing digital societies in Asia Pacific: a whole-of-government approach"]

# The initiative has 3 strategic areas

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| | Major Strategic Areas | | Goal |
|---|---|---|---|
| **1 Specify**  | Develop and evolve **specifications for high-priority Building Blocks,** and a **Blueprint** for an illustrative digital government service that uses them | → | Create technical reference pieces of generic digi. gov enabling components |
| **2 Demonstrate**  | Invite approach demonstration and develop working reference models of the illustrative stack showcasing applicability of digital services, guided by specification outputs from Phase I (Building Blocks and Blueprint) | → | Show how the GovStack approach can employ a set of cross-sector, interoperable, secure and integratable Building Blocks to demonstrate delivery of a pipeline of digital services |
| **3 Apply**  | Engage **pilot countries to inform approach in their <u>larger</u> digital government strategy effort** and implementation roadmap, and sustain ongoing advocacy and address country capacity needs | → | Ultimately inform national digi. gov strategy drawing from proposed approach + diff. reference models in their transformation journey |

# The following *Building Blocks* technical working groups were established...

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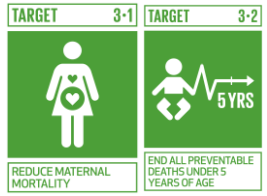
[1] Registration
Messaging
Scheduling
[2] Security
Payments
Information mediator
eMarketplace
GIS
[3] Identification & Authentication
Client case management
Collaboration management
Analytics & Business Intelligence
eLearning
Reporting & dashboards
Content management
Data collection
Shared data repositories
[1] Digital registries
Terminology
Artificial intelligence
Consent management
Mobility management
Workflow and algorithm

**Wave 1**

[1] Registration and Digital registries addressed as one
[2] Security potentially redressed as "Authentication"
[3] Identification & Authentication to focus on "Identification"

**Wave 2**

# Specs were guided by a set of Use Cases

| Use Case | SDG Targets | Brief Description |
|---|---|---|
| **Postpartum and Infant Care** (detailed here) |   | Profiles the care service for mother and child spanning the mother's prenatal and postnatal periods to ensure both are health. 7 steps. |
| **Market Linkage** (detailed here) |   | Profiles a service of information service delivery and provision of market linkage for rural farmers to improve incomes and their livelihoods. 9 steps. |
| **Rural Agri. Advisory Services** (detailed here) |   | Profiles a service connecting rural farmers to market information and other informational services with a vital role to improve knowledge. 9 steps. |
| **Unconditional Social Cash Transfer**** (detailed here)<br>***COVID-relevant* |   | Profiles specifically the delivery journey of a generalized unconditional social cash transfer service provided to financially disadvantaged or vulnerable people or households without conditionality. 9 steps. |
| **Remote Learning** (detailed here) |   | Profiles a service for delivering digital content and tools that can be used to provide or supplement all types of learning in disconnected or connected environments. 5 steps. |

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# THANK YOU

www.govstack.global

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