

# Our best Practices for digitalizing public services using DPI and GovStack approaches

Introduction by ID30

# About Jaume Dubois



- **Consultant for the World Bank**
- **Expert on Digital ID and DPI**
- **CEO of ID30**
  
- **GovStack practitioner**
- **Identity & Wallet workgroup lead**
- **10+ Countries engagement**
  
- **Technical assistance for Togo and Papua New Guinea GovStack DPI**

# About Smita Selot



- Product Manager with more than a decade of experience building high scale & performance software systems
- Proficient in building PoC/MVP
- **Expert on Digital ID and eServices Portal**
- Social Protection Expert - Digital Convergence Initiative
- Identity BB Author & Wallet BB reviewer
- **GovStack Tech Community Member**
- **GovStack Ambassador for country engagements**
- **Product Owner for Papua New Guinea GovStack DPI**
- Technical consultant for TOGO eServices Portal

# From a DPIS Practitioner point of view

1. How GovStack helps Digital Transformation?
2. Public Services digitalizations cases studies
3. The Building Blocks approach
4. Our concrete experiences of DPI implementation
5. A citizen portal centric design to scale methodology
6. What should you expect from GovStack ?
7. How can it help governments to establish a common driving vision with all their technical and funding partners



How GovStack  
helps Digital Transformation ?  
(Digital Public Infrastructure)

# Using GovStack for preparing the ground for Digital Transformation

**Awareness and Education** on the DPI approach

**Interoperability, Architecture and Blueprint**

Build **digital capacities** locally



# Public Services digitalizations cases studies

# Case of Digitalization by AGESIC in Uruguay: Implementation of a Digitalization Pipeline.



## URUGUAY

3 Million inhabitants, 2/3 in rural areas



### Regional Exception, called the "Switzerland" of South America

Economic stability, social progress.  
Leader in renewable energies.  
Universal access to education.

### Initial Objectives

The dematerialization of services aimed at universal, effective access supporting economic development, without ever having citizens request information that the government would already have.

### Intermediate Status

Despite an operational online portal in 2013, only 17% of 1400 services had been published by 2014.

### Situation Analysis

The transformation was not sufficiently responsible; risks in transformations are not insured: lack of equipment in centers, informal undocumented services.

### The Objectives fixed by the President in 2014 to Government assigned to AGESIC

By the end of 2015, 100% of public services accessible online through the portal.

### Implemented solution

A triple digitalization program coordinated by AGESIC:

- At the administration level
- At the level of youth and education
- At the level of the multi-use service platform

An incremental approach by level with fixed and unique objectives for each administration:

- Physical equipment of administrations
- Implementation of digital management systems for public services

### Results retained

- In 2015, information from all services was published.
- In 2017, 600 services were able to start online.
- In 2017, the government launched a hybrid secure identity solution: a dual card with a digital identity number enabling a new phase of simplification with electronic signature.
- Since 2020, Uruguay continues its development through digitalization based on its foundations in development interoperability for efficient access and resilience through cybersecurity.

### Points of attention

Have a progressive approach and stabilize each steps before moving on to the next one.

# The case of MOICT digitalization in Kenya: A PPP to boost digitalization.



## KENYA

53 Millions  
inhabitants  
70% in rural areas



**Biodiversity:** Rich flora and fauna, 50 natural parks.

**Growing economy:** Diversified, with a booming technology sector.

### Initial objectives

In 2014, the digitization of services began, with over 9,000 to be processed.

### Intermediary status

A private company hired by the state manages to process 400 services by 2022, i.e. **only 4% in 6 years.**

### Analysis of the situation

Some administrations resisted or were reluctant to adapt to digitalization.

**In September 2022, the new President set a target of digitizing 5,000 services by June 2023.**

By June 2023 (9 months), **5,000 public services must be 100% online, and payment 100% electronic.**

### Reasons for success:

- **Strong sponsorship from the highest level of government:** the President monitors the progress of digitization through the entity chiefs of staff. Any service not digitized must be justified in writing, and sanctions may be imposed.
- **Choice of a local private partner with a proven track record:** Kenya has renewed its confidence in its 2014 supplier to handle the 5,000 services, who has been able to draw on its experience and automation to achieve this ambitious objective.
- **Speed of approach:** the basic bricks and low-code/no-code platforms enabled the company to deliver prototypes the day after they were defined.
- **Focal points in the entities:** Company and MOICT focal points for each public entity addressed.
- **Motivation through profit-sharing:** The company was paid for its services, in particular through the financial transactions carried out on the payment platform installed in the government cloud. + service, + transactions, + incentive for all.

### The results

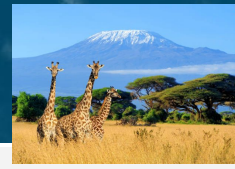
- In 2022, only **400 services digitized**
- In June 2022, **6084 online services.**
- By December 2022, the target of **9,000 services** will have been reached.

### Points of attention

Vendor lock-in and monopoly risk

Ensuring that service quality matches service quantity

# Case of digitalization by ATD in Togo: An incremental and delegated approach



## TOGO

8 Millions inhabitants  
56% in rural areas



Rich and varied, encompassing ecosystems from the northern savannas to the southern tropical forests.

Supported by reforms and improvements in the business climate.

### Initial objectives

The 2020-2025 digital plan aims to modernize public services.

### Intermediary status

The implementation of a multi-use public digital infrastructure takes time and delays the digitization of services that are long to process.

### Situation analysis

Moving to the national level requires mass processing and delegation capacity to speed up.

**The National Architecture and Blueprint are ready for large-scale implementation, framed by a super-integrator and implemented by technical partners of each administration.**

### reasons for success:

- **Strong Sponsorship at the Highest Level of the State:** A subject led by the Presidency with a clear, continuous directive for each administration.
- **Selection of a Private Partner for Pilot Testing:** The Togo Digital Agency defines the working framework, sets the governance, methodologies, and implements it at the platform level, resulting in fast-developed services and accelerated implementation.
- **Velocity of the Approach:** Using foundational building blocks and no-code platforms allows for the implementation of services without in-depth technical knowledge of the platform, with a focus on optimizing business processes.
- **Focus Points within the Entities:** Focus points within the public administrations addressed.
- **Digitalization Levels Adapted to Administration Situations:** Administrations are grouped based on their level of digital maturity. Each administration progresses annually towards the next level.

### The results

- In 2023, 20 services were digitized.
- By 2024, the environment is set for scaling.
- By the end of 2024, the pace of digitization of services will have significantly accelerated.

### Points of attention

- **Early engagement of stakeholders is essential.**
- **Reuse open-source solutions instead of developing everything from scratch.**

# Case of digitalization by DICT in PNG: Use of NO-CODE interaction platform and decentralized ID



## PAPUA NEW GUINEA



~17 Millions  
inhabitants  
77% en zone rurale



PNG's economy relies on resources like minerals and agriculture. Ecologically, it has rich biodiversity but faces deforestation challenges..

### Initial objectives

The Digital Government Plan 2023 - 2027 aims to modernize public services using a building block approach.

### Intermediary status

A first home made Government portal was performed in 2023, but it took time to implement just one service, not aligned with the objectives.

### Situation analysis

Off the shelves no-code services builder could help to fast track services implementation.

**A portal v2.0 was build in 2024, using an open-source service builder combined with Digital Wallet and Verifiable Credentials technologies, 6 services were developed.**

### Challenges

- **Short timeline (4 months):** In order to keep on plan, timeline was extremely short, leaving little space to handle events and test.

### Reasons for success:

- **Strong Sponsorship at the Highest Level of the State:** A subject led by the Presidency with a clear, continuous directive for each administration.
- **Selection of a no-code service builder solution:** The no-code service approach allowed to write down flexible workflows and develop the required screens.
- **Selection of a proven solution for Wallet/Credentials :** The solution built and used by Bhutan was reused, they were able to support fixing many operational issues thanks to their own experience.
- **Agile team with strong project management skills:** meeting on daily basis, close follow-up of supplier allowed to react quickly to issues and find solutions.

### The results

- In October 2024, the portal v2.0 has been released with 6 services
- It is mobile based UX
- It use Verifiable Credentials as Input and Output of processes

### Points of attention

- **Quickly start MVP to have time to mature on solution**
- **Plan ahead in advance to not forget any prerequisites**
- **Plan for multiples additional releases to reach stability and UX efficiency**



# The building block approach

# The BUILDING BLOCKS approach



← Exit GovStack Use Case Simulation Unconditional Social Cash Transfer

openisland-self-service-welfare.govstack


**Open Island**  
Ministry of Social Welfare  
Self-Service Portal

Applicant  
ID: 1234567810

## My Information

Validate the information A

### Candidate Information



Name Date of Birth B

← ↻ →

**CITIZEN VALIDATES THEIR INFORMATION**  
PRIMARY TASK

Applicant CURRENT VIEW

GovStack 2023 - this is a frontend only simulation Privacy & Legal Get in touch

## BUILDING BLOCK ACTIVITY

Building Blocks are enterprise-ready, reusable software components providing functionalities across sectors and use cases.

- ✓ Consent i
  - Identity i
  - Information Mediator i
  - Digital Registries i
  - Messaging i
  - Payment i
  - Registration i
  - Scheduling i
  - Workflow i
- Active — Inactive

Generic Processes and interactions of Building Blocks. These are generic processes that are used in here and can be used on various use cases.

A Validating Info LEARN MORE

**SEE THE BUILDING BLOCKS AND GET THE BB MINDSET**

# Key BUILDING BLOCKS of GovStack

## USERS CAPABILITIES



Identity



Registration



Messaging



Payment



e-Signature



Consent

## FLOWS ORCHESTRATION



Workflow



Scheduling



Services  
Design

## DATA INTEROPERABILITY



Information  
Mediation



Wallet

## DATA STORAGE



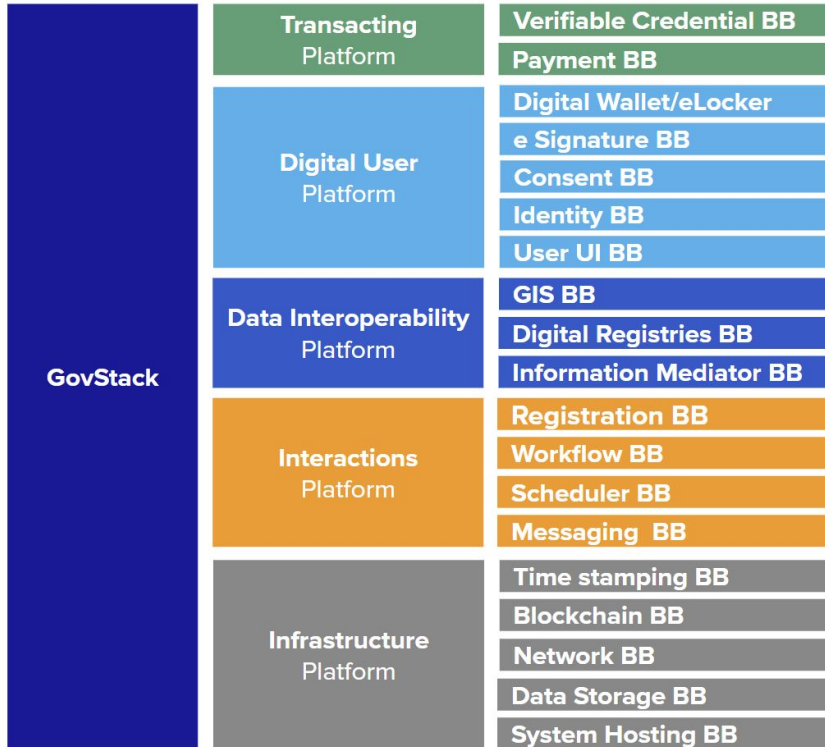
Digital Registries



GIS

[refer to: Building Blocks section of [Govstack.global](https://govstack.global)]

# Complexity made simple



- Simplify the DPI by reducing it to **digital capabilities** it can bring to citizen and services providers.
- The building blocks will **hide technical complexity** when developing digital services while protecting privacy.
- For example, a payment will be just PAY(From, To, Amount).
- Simple person identifiers will be used, no banking details shared, the Payment BB will resolve which payment means to use and find the details.

# Training on the GovStack approach



## Knowledge Hub & e-Learning

In our Knowledge Hub hosted on atingi, we offer e-learning and training to give government leaders the tools, knowledge, and strategic guidance to implement effective, sustainable and affordable digital services.

[Access e-learning](#)



## Public Administration Ecosystem Reference Architecture

Learn how GovStack and Enterprise Architecture practices interact and can be combined in Digital Government.

[Access Reference Architecture](#)



## Implementation Playbook

Our Implementation Playbook provides a guide for countries as they implement the GovStack building blocks approach as part of their digital service design.

[Access Implementation Playbook](#)



## Communities of Practice and Digital Leaders Forum

Our Communities of Practice and [Digital Leaders Forum](#) provide topic-related or regional exchange forums where leaders and experts share knowledge and experiences related to the GovStack approach. Learn more about [how to participate](#).

[Visit Communities of Practice](#)



## Best Practices Collection

Our best practices collection features [WSIS Special Prize on Digital Service Design](#) Winners and Finalists, as well as, the [Women in GovTech Challenge](#) best projects. Learn more and participate in the next editions.

[Learn More](#)

## 101 Training

## TOT Training

## Deep dive

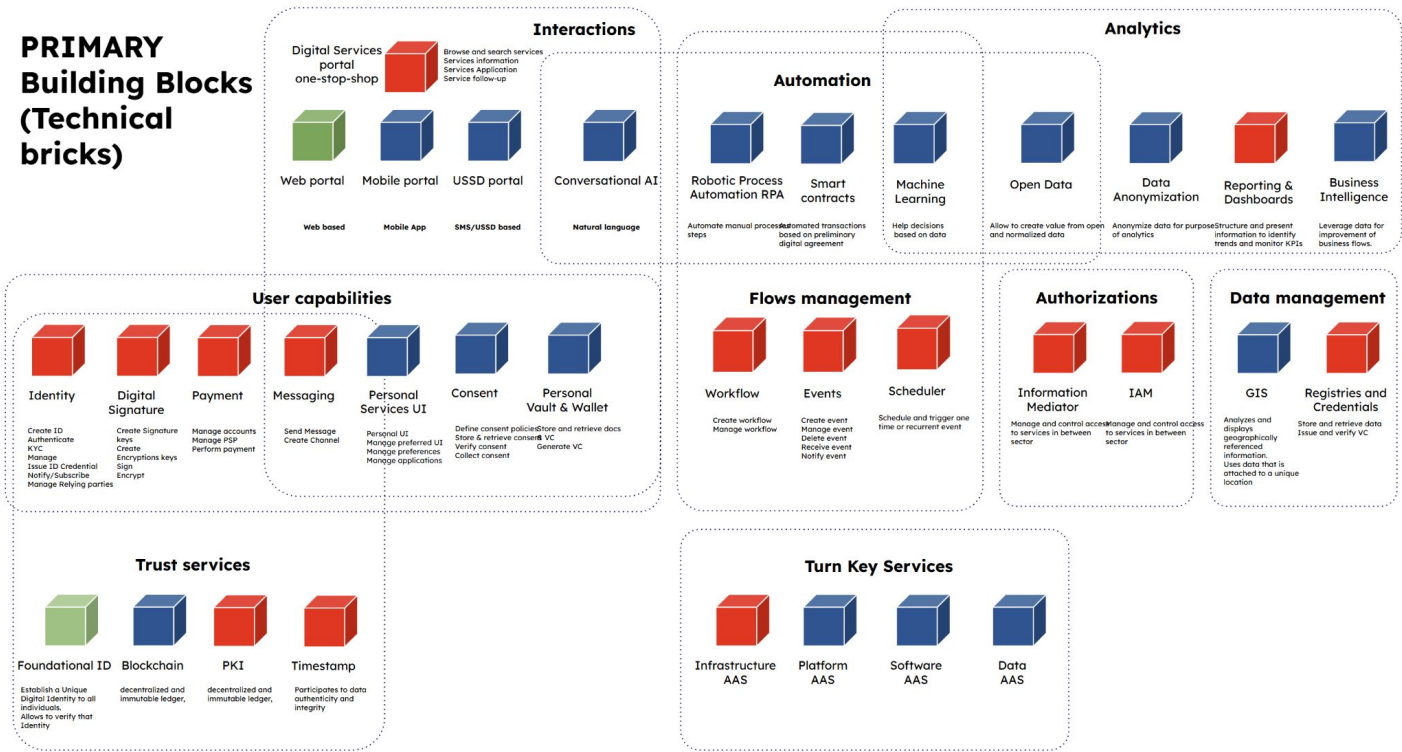
## DPI Architect

## Implementation Playbook



# Example of a DPI Architecture based on Blocks

## PRIMARY Building Blocks (Technical bricks)



Assess the already available bricks.

Align with country national digital strategic plan.

Identify quick-wins and priorities.

# Preparation of a DPI Roadmap portal centric

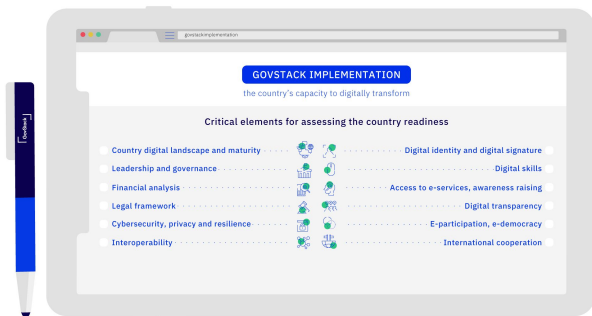


		2024		2025	
		Portal framework impl.		Portal pilot	
Portal v1	Impl Police clearance	Portal v1 maintenance		<ul style="list-style-type: none"> <li>•Registration BB</li> <li>•Workflow BB</li> <li>•Scheduler BB</li> <li>•Messaging BB</li> </ul>	
Portal v2	Discovery	Portal Design/MVP	Portal Beta version	Portal Release 1	Portal Release 2
Messaging Information Mediator / Registries	Discovery	RFP	Messaging BB		
	Discovery	RFP	Interop. BBs		
ID	Discovery	RFP	Implementation	Mass Enrollment	
Payment	Discovery	Payment GW For BSP	Payment universal GW	ID Wallet	
				PKI	
Services		Services Catalog	Impl. Top 5 Services	Design/Implement Top 20 Services	Mass Services Development
			Service Design Trainings		

This roadmap combine building blocks and eServices enabling with **time additional digital capabilities** for services providers and citizens.

Moving from the **AS-IS** situation to the **TO-BE** through different phases.

# Assess and build a digital capacities development plan



1. Use **assessment** tools to identify the needs for capacity building.
2. **Train the teams on DPI and Building Block approaches**
3. Build capacities by implementing **Proof Of Concept of services using the Sandbox**



Our concrete experiences  
of DPI implementation

# In Togo



- We helped to structure the **DPI architecture** and to define a **digital transformation strategy** that can **deliver concrete outcomes frequently** and **build at scale** in the long term.
- We used building block approach to **structure the architecture**
- We leveraged the **GovStack playbook** to define the blueprint
- We implemented a **scalable approach** : managing administrations by groups to move fast, defining 5 steps a digitization levels that each group has to reach.

# Togolese Republic: eServices Portal Challenges

- Using existing functional identities to authenticate on the portal
- Integrating GovStack compliant tools for Workflow, Digital Signature, and Cloud Storage
- Moving from AWS Cognito based Identity to GovStack IDBB solution

# How ID30 Helped Togo ATD ?



## Best practices for building eServices

- Platforms: Portal, Mobile App, USSD, IVR
- Inclusivity for disabled/challenged
- Compliance



## Recommendations for integrating GovStack building blocks

- Concept Note
- Architecture
- Intégration



## Advise on building a Digital Identity

- Based on existing functional identities
- Allowing access to eServices based on the trust in the identity

# In Papua New Guinea



- PNG needed to deliver digital services in short period of time.
- We went for an agile development with frequent releases..
- After a POC, we used an **on the shelves no-code open-source portal builder solution** and built a **citizen's portal** with a **digital wallet**, live after less than 4 months.
- It allowed government to prove its capability to deliver and they are now working for the **long term roadmap** and a **monetization strategy**.

# Papua New Guinea (PNG) - DPI Requirements



Trusted digital identity to enable citizens to transact online



Welcome to Portal

Government online portal for everyday tasks such as school fee and utility bills payments



Reduce number of commutes from islands to mainland offices



Digital Certificates & VCs for work permit, statement of results, and police verification

# Challenges Faced by DICT PNG

## Vendor Selection

- Minimize Vendor Lock-in
- Open-source
- Scale & Performance



## Revenue and Monetization

- Sustainable and Repeatable
- No Financial Burden for Citizens



## Challenges

## Technology Selection

- Centralized vs Decentralized ID
- Quick and Inexpensive PoCs
- Meets Requirements



## Compliance

- Standards-based
- Legal Compliance
- Best Practices
- Privacy and Data Security



# How ID30 Helped DICT PNG?



## Product Management

- eServices Requirements
- Integration of Multiple DPGs
- Feature & Product Backlogs
- Product Roadmap
- Solutions for Scalable and Sustainable architecture



## Study of Technologies & identification of Vendors

- RFPs
- Vendor Evaluations
- Selection approach



## Consultancy

- Service Monetization Models
- GovStack Compliant Architecture
- Policies & Legal Compliance
- DPI Vision & Strategic Initiatives

# Sevis PNG Solution



A Web Portal to enable millions of citizens to transact online



Hybrid approach to use the best elements from centralized and decentralized technologies

ID	Trust Tier
NID	8
PP	9
DL	5


Trust Tier based approach to build an ecosystem of identity service providers and consumers



A Wallet Mobile App to hold VCs and Digital Certificates



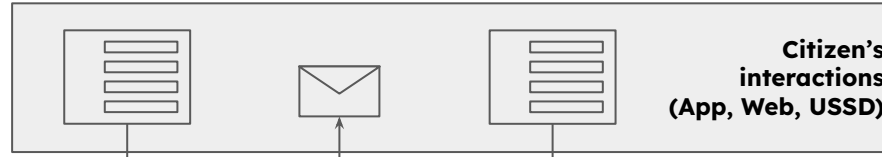
A vendor neutral and GovStack compliant platform using GovStack proposed tools



A citizen portal centric design  
to scale methodology

# An agile and modular infrastructure

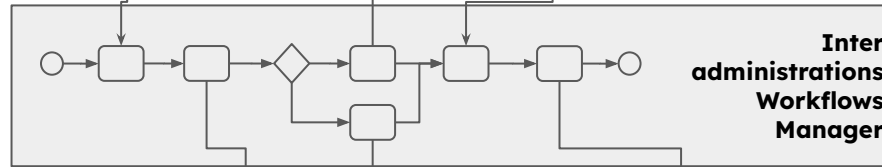
**User interactions interfaces**



**Citizen's interactions (App, Web, USSD)**

**Citizen's Portal:** Search, Apply, Follow-up  
**Civil Servant Portals :** Manage applications, Monitor, Troubleshoot

**Business workflow**



**Inter administrations Workflows Manager**

Modelize, test, publish a service

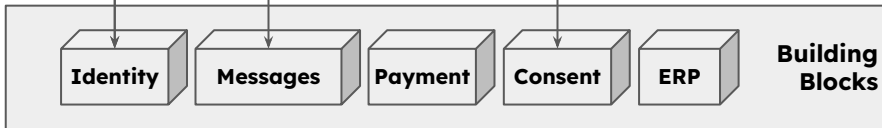
**Business Micro-Services**



**Business Toolbox**

Services design bricks integrated to building blocks

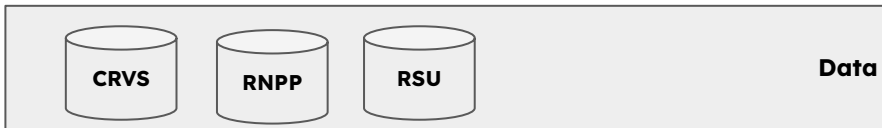
**Building Blocks**



**Building Blocks**

Authenticate, Sign, Consent, Pay, Cloud Wallet

**Data referentials**



**Data**

Identity, Civil Status, Properties, Businesses, ..

# Rapid-prototyping with a ServiceBuilder and interoperability

## Off-the-shelves Service building (we selected Joget)

ID	UI	Pay
	Workflow	
Interoperability		
Datas		

- Joget is an **open-source, no-code**, service builder and service-engine platform
- It allows to build end-to-end services **from day 1**
- It allows to switch modules to GovStack compliant modules

## Proof of Concept Rapid prototyping

	Service 1	Service 2	Service 3
ID	UI		Pay
	Workflow		
Interoperability			
Datas			

- POC of e-Services can be developed easily using Joget
- Targeted Joget modules can be replaced by adapters to existing government systems or data sources (ie referential registries, ID or Payment system)

## Build at scale Mutualize the platform

Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8
ID	UI			Pay			
	Workflow						
Interoperability							
Datas							

- With time each administrations can be interconnected thanks to APIs on their reference registries.
- They can digitize their services using a mutualized portail platform
- The services provider benefits of a large database of enabled digital users (auth., eKYC, Pay, eAttestations, ....)



What should you expect  
from GovStack ?

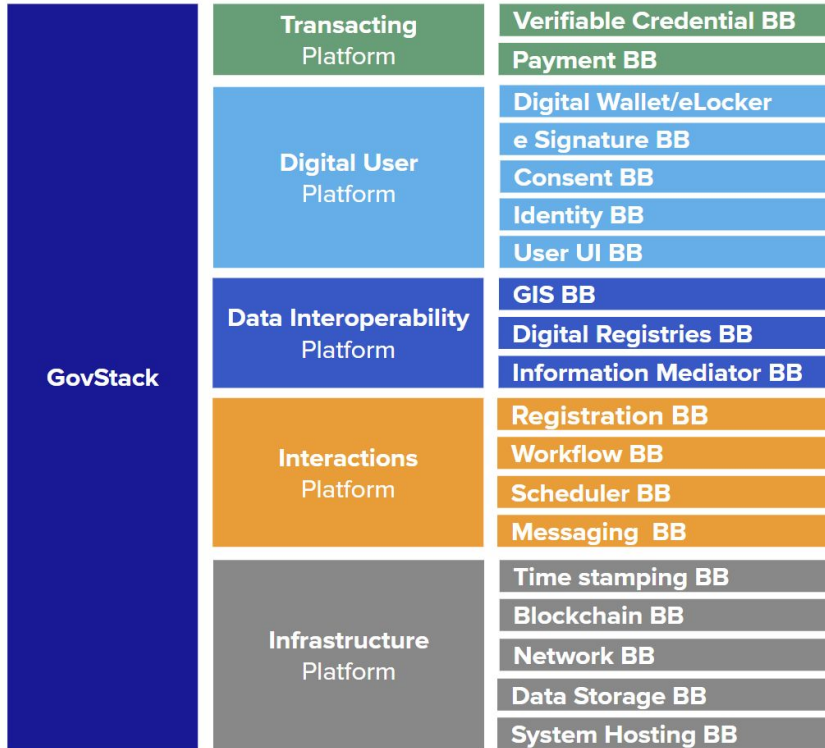
# What can be the expectations ?

SIMPLE CONCEPTS

IMPACTING MESSAGES

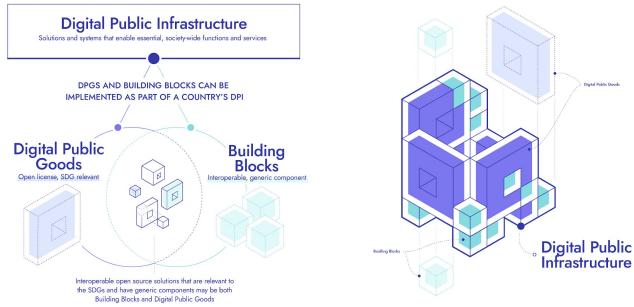
TECHNOLOGY NEUTRALITY

# Complexity made simple

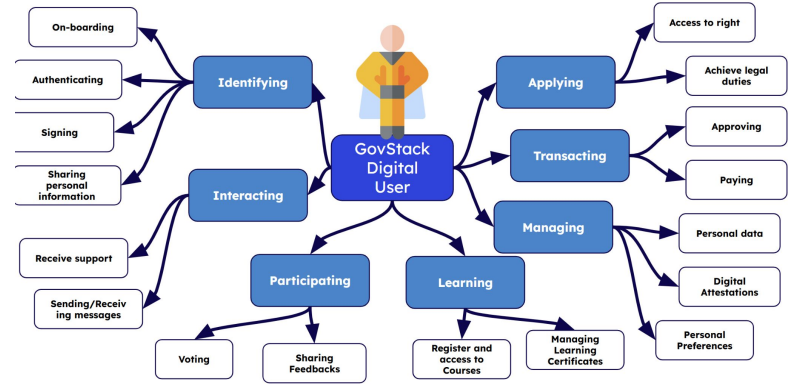


- Simplify the DPI by reducing it to **digital capabilities** it can bring to citizen and services providers.
- The building blocks will **hide technical complexity** when developing digital services while protecting privacy.
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- Simple person identifiers will be used, no banking details shared, the Payment BB will resolve which payment means to use and find the details.

# Impacting messages



**Fast-track implementation of Digital Public Infrastructure leveraging the GovStack building blocks designed from leading countries experience**



**A nationwide database of digitally enabled trusted users which are already onboarded and equipped with digital capabilities for authenticating, interacting, transacting and paying.**

# Neutrality



NEUTRALITY

- GovStack ensure **Technology Neutral** with ITU.
- Deliverable are **Specifications only**
- Use in RFP for ensuring **interoperability and sustainability, no need to mention** specific softwares.
- It's built from **different horizons**.
- **Unique platform** mixing different experiences and approaches, **leveraging best practices WW**.
- **Top-hat initiative aligning with other DPI/DPGs**.

# is not a magical solution for digital transformation

**NOT AN OFF THE  
SHELVES SOFTWARE**

but rather a

**JOURNEY TO BUILD  
COUNTRY OWN DPI**

**GAPS STILL  
TO BE FILLED**

because

**DOES NOT COVER  
DIVERSITY OF CONTEXTS**

**GOVSTACK IS NOT  
ONE-FIT-ALL SOLUTION**

So

**TO APPLIED WITH  
PRAGMATISM**



How can it help governments to  
establish a common driving  
vision with all their technical  
and funding partners

# Establishing solid foundations

## GovStack

**UNIVERSAL  
CONCEPTS**

**TECHNOLOGY  
AGNOSTIC**

**OPEN  
STANDARDS**

**DPI  
MINDSET**

**BEST  
PRACTICES**

**TOOLKIT**

# GovStack approach is community driven

## PARTNERS

Built by multiple NGOs and Governments experts sharing same principles aiming to have a consistent support to country around a common toolkit.

## EXPERTS

Experts from successful DPI implementation capitalize their learnings in the GovStack toolkit ready to use by countries.

The community of experts is accessible to anyone.

## COUNTRIES

Country can be part of the community and exchange with peers.

They can leverage each other's experience and toolkits.

THANK YOU!