Rekomendasi Peta Jalan Transformasi Digital Indonesia

Dewan TIK Nasional

Versi 1.0 – Juli 2020

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Dewan Teknologi Informasi dan Komunikasi Nasional

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Worldwide Digital Transformation

NORWAY
Strengthening leadership by establishing a national government chief information officer (GCIO)

SWEDEN
Policy coherence has become essential to seize the benefits of the digital transformation while preserving the societal values of the people

CHINA
Building out technologies 5G networks, cloud computing, the Internet of Things, smart cities and ecommerce to present opportunities for infrastructure creators

UNITED STATES
Initiating Open Data and achieving efficiency, transparency, and innovation through reusable and open source software

JAPAN
Establishing government CIO and "12 Service Design Principles" by synchronising with recent international trends

ARGENTINA
Designing and implementing citizen-centred digital services and developing single sign-on digital identity

BRAZIL
Prioritising policy issues such as connectivity, interoperability, open government data and citizen-driven service delivery and assigning Chief Digital Transformation Officer (CDTO) to

SINGAPORE
Putting in place policies and strategies, processes and organisational structures; acquiring talent to exploit digital technologies

AUSTRALIA
Establishing digital ID and utilising AI to improve digital services; Working on capability program to ensure people have the right skills to deliver great

How Ready Is Indonesia To Implement Digital Transformation

Legal Basis

Perpres No. 96/2014 tentang Rencana Pitalebar Indonesia

- **Objective:** 1) encourage economic growth and increase national competitiveness; (2) supports the improvement of the quality of Indonesian human resources; and (3) Enforce national sovereignty.

- **Key Mandated Agencies:** KOMINFO, WANTIKNAS

Perpres No 95/ 2018 tentang SPBE

- **Objective:** implementation of integrated e-government systems

- **Key mandates:** all government agencies to develop enterprise architecture that intertwines from one to another; establish a national coordination team; co-use IT systems

- **Key Mandated Agencies:** MENPAN-RB, KOMINFO, BAPPENAS

Perpres No 39/ 2019 tentang kebijakan Satu Data

- **Objective:** production and dissemination of quality data with high integrity

- **Key mandates:** agencies to comply with data governance, ensuring data adhere to standards, standardized metadata and interoperability format

- **Key Mandated Agencies:** BAPPENAS, BPS, BIG, KOMINFO

Perpres No. 18/2020 tentang RPJMN 2020-2024

- **Objective:** sustainability and equitable economic growth, and improving the quality of social and environmental life

- **Key Mandated Agencies:** BAPPENAS, KOMINFO

How Ready Is Indonesia To Implement Digital Transformation (Cont'd)

Potensi yang dimiliki

POTENTIAL ANNUAL ECONOMIC VALUE
IDR TRILLION, 2017 AND 2030 (HIGH-END SCENARIO)

THE POTENTIAL ECONOMIC VALUE IN 2030 IS
EQUIVALENT TO 9% OF INDONESIA'S PROJECTED GDP

VS

Keadaan yang terjadi sekarang

Rendahnya literasi digital

Tidak meratanya ketersediaan infrastruktur telekomunikasi yang menyebabkan terjadinya kesenjangan digital

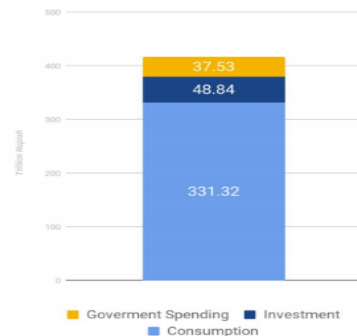Biaya akses internet masih belum terjangkau bagi masyarakat dengan penghasilan rendah
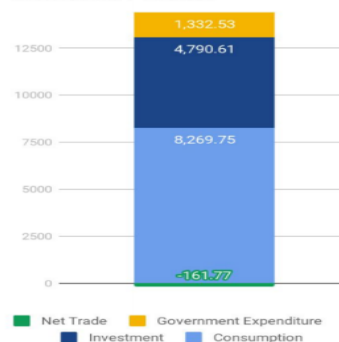
Belum adanya *digital leadership*

How Ready Is Indonesia To Implement Digital Transformation (Cont'd)

Major Challenges

Lack of Vision & Digital Leadership	Sectoral Ego and Weak Coordination	Link & Match Digital Talent	Broadband Infrastructure Gap	Data and System Silos

Sources: Wantiknas, 2020
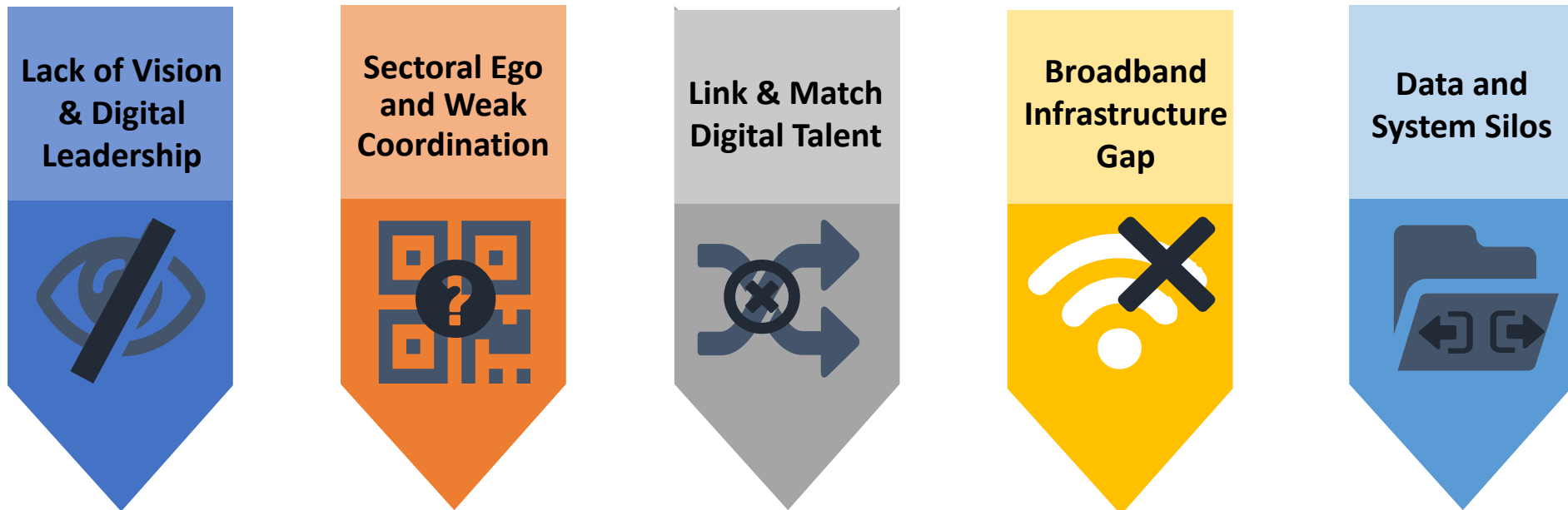
Digital Transformation Strategic Framework

STRATEGIC GOALS

STRATEGIC OBJECTIVES

STRATEGIC THRUST

STAKEHOLDERS
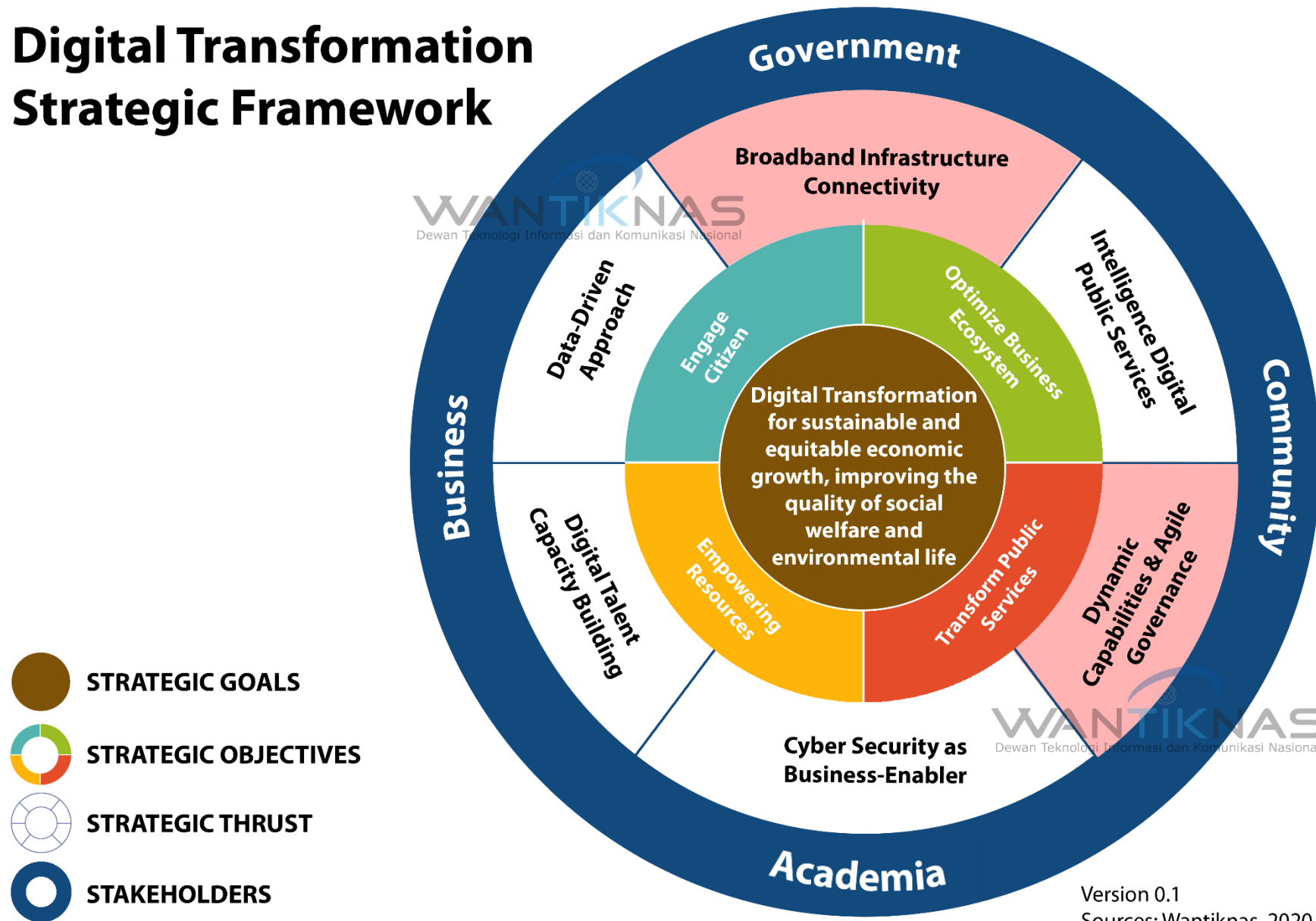
Version 0.1
Sources: Wantiknas, 2020

6

Broadband Infrastructure Connectivity

National Network Coverage

FIBER OPTIC BACKBONE

Palapa Ring – **Paket Barat** — 100%

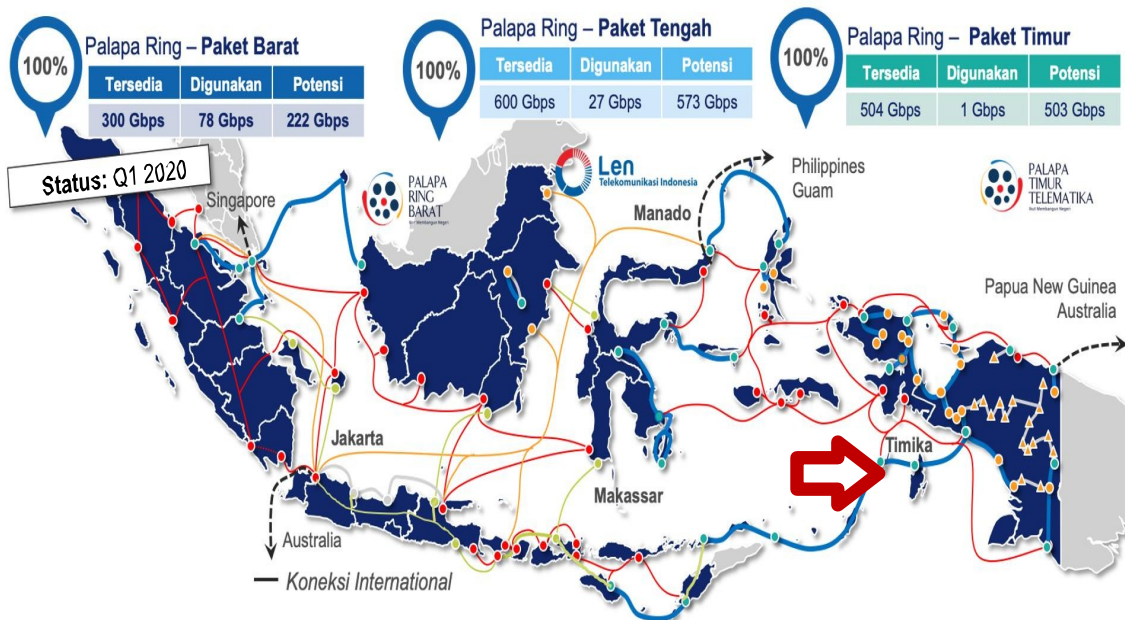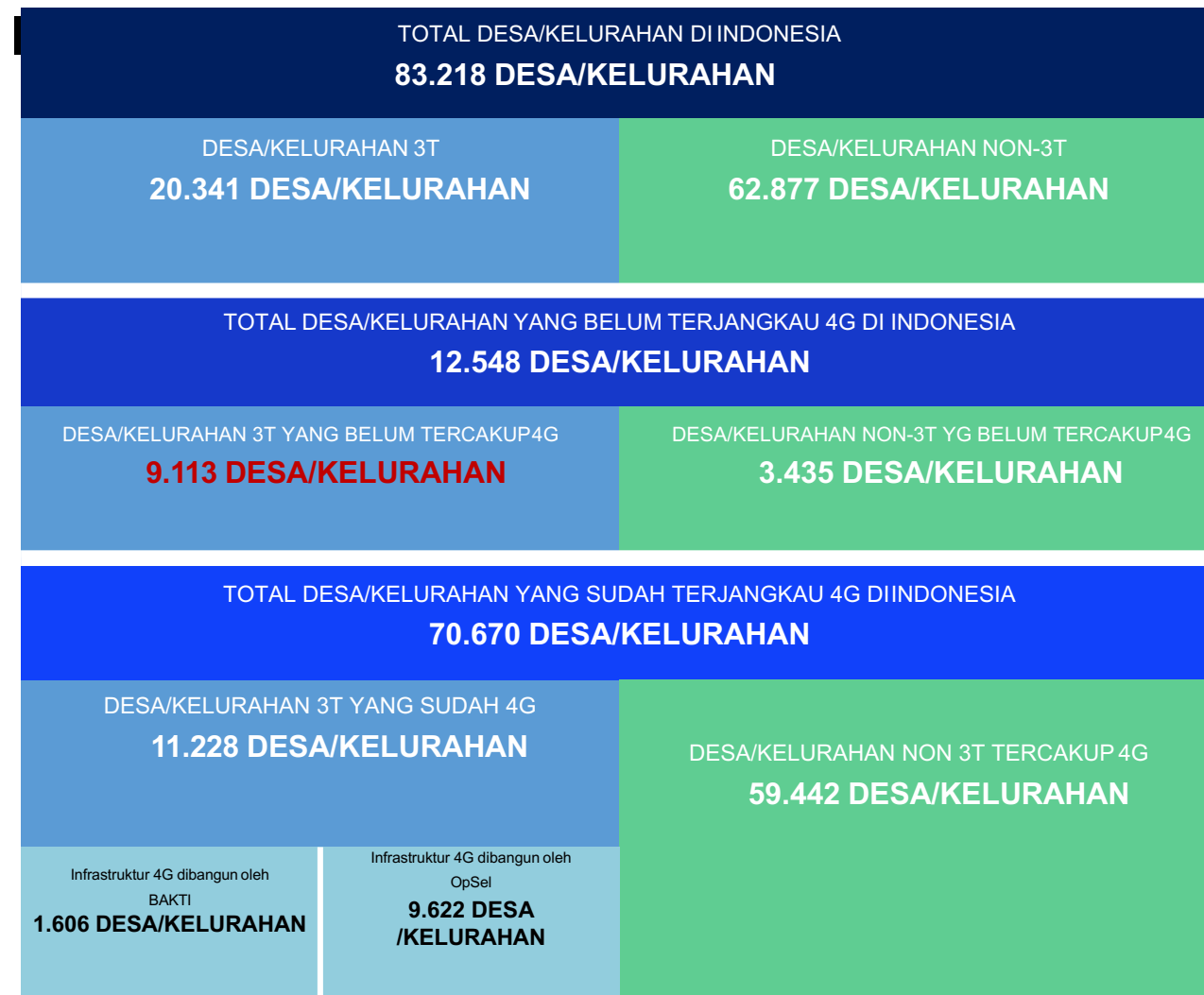| Tersedia	Digunakan	Potensi
300 Gbps	78 Gbps	222 Gbps

Palapa Ring – **Paket Tengah** — 100%

Tersedia	Digunakan	Potensi
600 Gbps	27 Gbps	573 Gbps

Palapa Ring – **Paket Timur** — 100%

Tersedia	Digunakan	Potensi
504 Gbps	1 Gbps	503 Gbps

Status: Q1 2020

OPERATOR

OPERATOR	PANJANG (Km)
NON-PALAPA RING	336.294
PALAPA RING	12.148
TOTAL	348.442

JENIS

TIPE KABEL	PANJANG (Km)
INLAND	224.573
SKKL	123.869
TOTAL	348.442

Backbone berbasis serat optik **sudah tinggi penetrasinya di Pulau Jawa** dan sudah mulai masuk ke kota-kota besar di Sumatera, Kalimantan dan Sulawesi. Bahkan Palapa Ring sudah masuk di Papua.

Sources: PT. Telkom & Ditjen PPI

CAKUPAN KONEKSI 4G DI DESA/KELURAHAN

TOTAL DESA/KELURAHAN DI INDONESIA
83.218 DESA/KELURAHAN

DESA/KELURAHAN 3T	DESA/KELURAHAN NON-3T
20.341 DESA/KELURAHAN	**62.877 DESA/KELURAHAN**

TOTAL DESA/KELURAHAN YANG BELUM TERJANGKAU 4G DI INDONESIA
12.548 DESA/KELURAHAN

DESA/KELURAHAN 3T YANG BELUM TERCAKUP 4G	DESA/KELURAHAN NON-3T YG BELUM TERCAKUP 4G
9.113 DESA/KELURAHAN	**3.435 DESA/KELURAHAN**

TOTAL DESA/KELURAHAN YANG SUDAH TERJANGKAU 4G DI INDONESIA
70.670 DESA/KELURAHAN

DESA/KELURAHAN 3T YANG SUDAH 4G	DESA/KELURAHAN NON 3T TERCAKUP 4G
11.228 DESA/KELURAHAN	**59.442 DESA/KELURAHAN**

Infrastruktur 4G dibangun oleh BAKTI	Infrastruktur 4G dibangun oleh OpSel
1.606 DESA/KELURAHAN	**9.622 DESA /KELURAHAN**

Data Desa/Kelurahan 3T
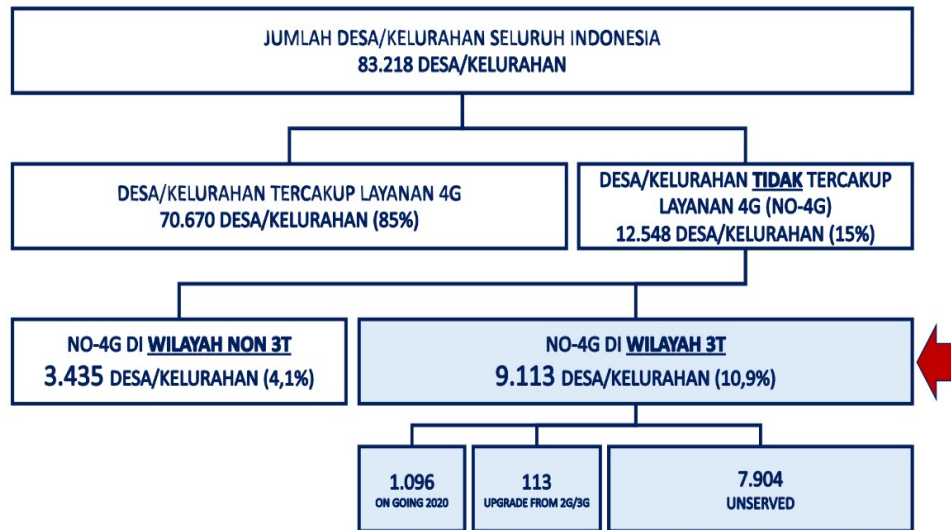
Data Desa/Kelurahan Non-3T

8

Strategic Recommendations For Digital Infrastructure Acceleration

DESA/KELURAHAN TIDAK TERJANGKAU LAYANAN 4G

- JUMLAH DESA/KELURAHAN SELURUH INDONESIA 83.218 DESA/KELURAHAN
  - DESA/KELURAHAN TERCAKUP LAYANAN 4G 70.670 DESA/KELURAHAN (85%)
  - DESA/KELURAHAN **TIDAK** TERCAKUP LAYANAN 4G (NO-4G) 12.548 DESA/KELURAHAN (15%)
    - NO-4G DI **WILAYAH NON 3T** 3.435 DESA/KELURAHAN (4,1%)
    - NO-4G DI **WILAYAH 3T** 9.113 DESA/KELURAHAN (10,9%)
      - 1.096 ON GOING 2020
      - 113 UPGRADE FROM 2G/3G
      - 7.904 UNSERVED

PEMETAAN PERKEMBANGAN PEMBANGUNAN BTS DI 7.904 DESA/KELURAHAN 3T (2020 – 2022)

Tahun 2020
639 Desa/Kelurahan 3T

- Unserved di 3T (7.904 Desa/Kel)
- Dalam proses peningkatan (1.209 Desa/Kel)
- Unserved di Non-3T (3.435 Desa/Kel)
- Sudah terlayani 4G (70.670 Desa/Kel)

Tahun 2021
Tambahan 4.200 Desa/Kelurahan 3T

- Unserved di 3T (7.904 Desa/Kel)
- Dalam proses peningkatan (1.209 Desa/Kel)
- Unserved di Non-3T (3.435 Desa/Kel)
- Sudah terlayani 4G (70.670 Desa/Kel)

Tahun 2022
Tambahan 3.065 Desa/Kelurahan 3T

- Unserved di 3T (7.904 Desa/Kel)
- Dalam proses peningkatan (1.209 Desa/Kel)
- Unserved di Non-3T (3.435 Desa/Kel)
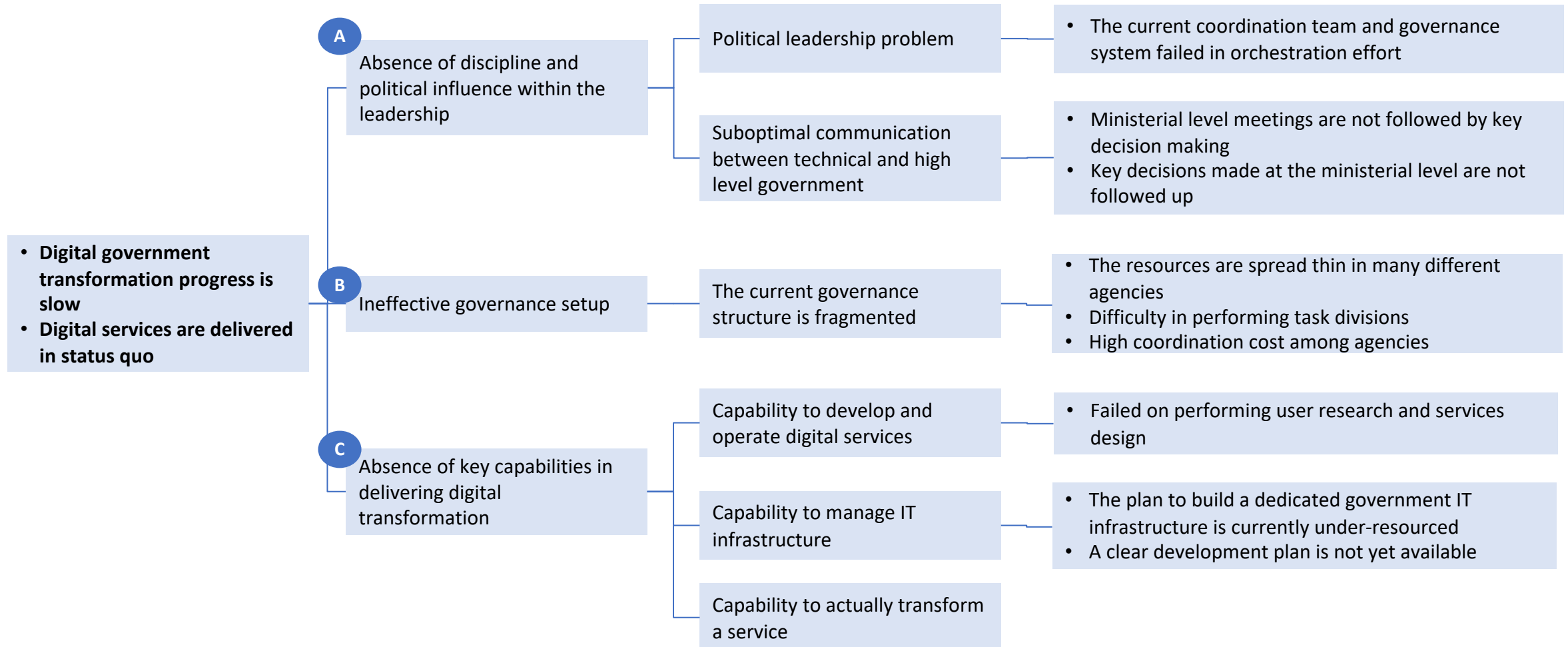- Sudah terlayani 4G (70.670 Desa/Kel)

- **Perlu adanya dorongan perluasan cakupan jaringan pada daerah yang belum terjangkau layanan 4G salah satunya melalui alokasi APBN dalam rangka percepatan pembangunan infrastruktur digital nasional**
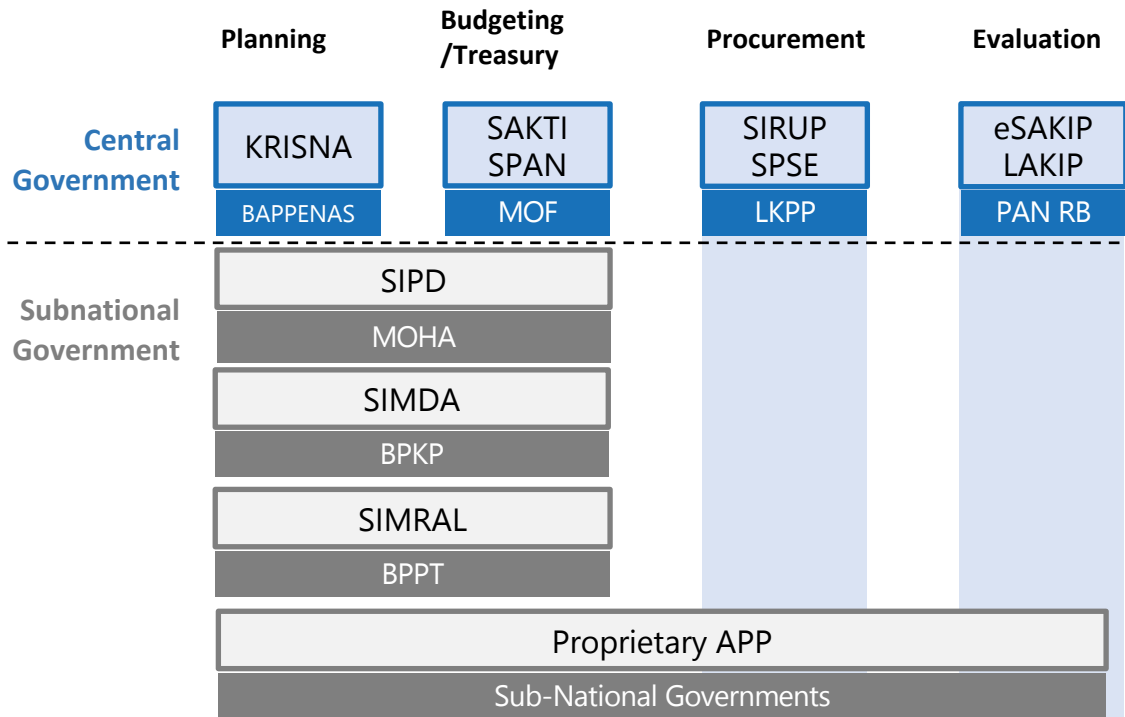
Dynamic Capabilities and Agile Governance

Key issues hindering successful digital government transformation

- **Digital government transformation progress is slow**
- **Digital services are delivered in status quo**

A Absence of discipline and political influence within the leadership

Political leadership problem
- The current coordination team and governance system failed in orchestration effort

Suboptimal communication between technical and high level government
- Ministerial level meetings are not followed by key decision making
- Key decisions made at the ministerial level are not followed up

B Ineffective governance setup

The current governance structure is fragmented
- The resources are spread thin in many different agencies
- Difficulty in performing task divisions
- High coordination cost among agencies

C Absence of key capabilities in delivering digital transformation

Capability to develop and operate digital services
- Failed on performing user research and services design

Capability to manage IT infrastructure
- The plan to build a dedicated government IT infrastructure is currently under-resourced
- A clear development plan is not yet available

Capability to actually transform a service

Political Leadership Has Been Missing In The Effort Of Orchestrating Digital Transformation Agenda
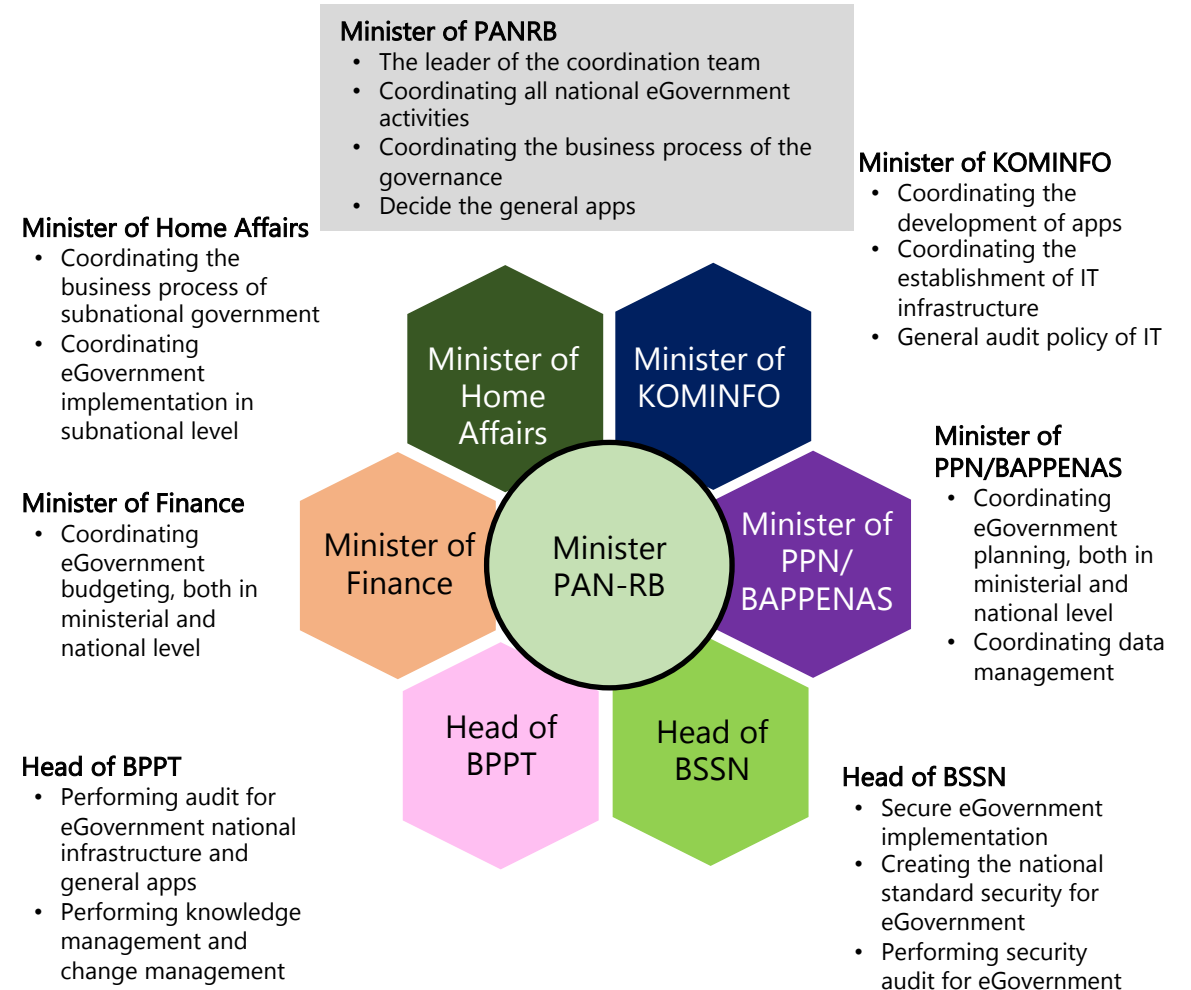
A   **Absence of political leadership**

Integration of Planning-Budgeting System is a typical system integration requiring strong political leadership

	Planning	Budgeting /Treasury	Procurement	Evaluation
Central Government	KRISNA	SAKTI SPAN	SIRUP SPSE	eSAKIP LAKIP
	BAPPENAS	MOF	LKPP	PAN RB

Subnational Government

- SIPD
- MOHA
- SIMDA
- BPKP
- SIMRAL
- BPPT
- Proprietary APP
- Sub-National Governments

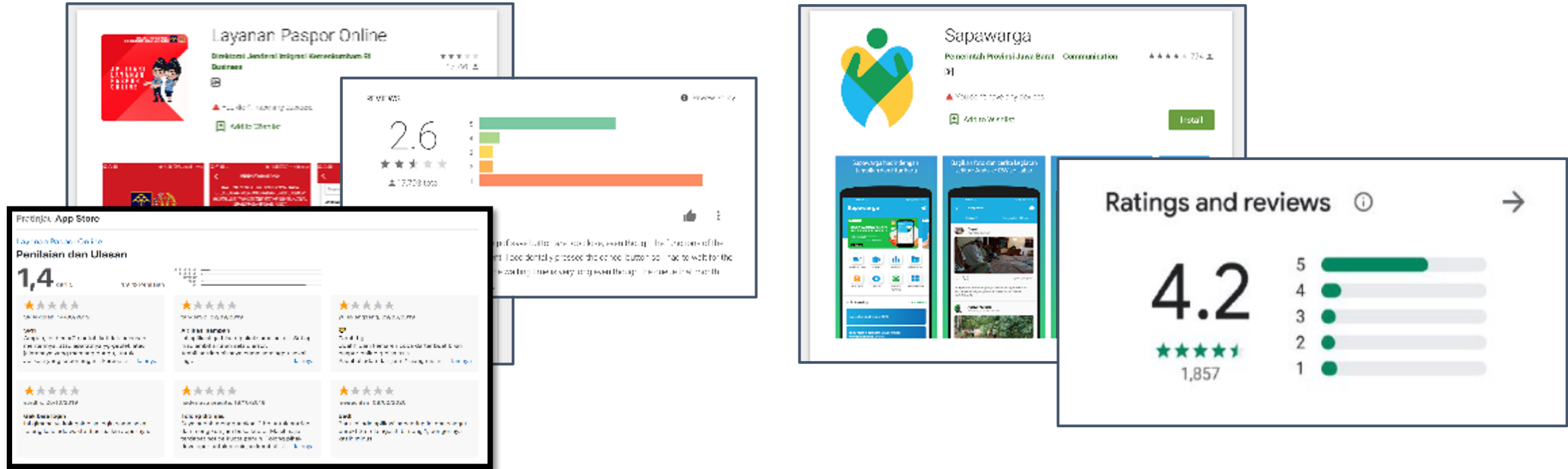**Challenges that follow the integration effort**

1. Project leadership is absent and rather fragmented
2. Lack of goodwill displayed by related entities to integrate the existing systems

Yet the current e-government coordination team has not demonstrated the expected leadership

Minister of PANRB
- The leader of the coordination team
- Coordinating all national eGovernment activities
- Coordinating the business process of the governance
- Decide the general apps

Minister of KOMINFO
- Coordinating the development of apps
- Coordinating the establishment of IT infrastructure
- General audit policy of IT

Minister of Home Affairs
- Coordinating the business process of subnational government
- Coordinating eGovernment implementation in subnational level

Minister of Finance
- Coordinating eGovernment budgeting, both in ministerial and national level

Minister of PPN/BAPPENAS
- Coordinating eGovernment planning, both in ministerial and national level
- Coordinating data management

Head of BPPT
- Performing audit for eGovernment national infrastructure and general apps
- Performing knowledge management and change management

Head of BSSN
- Secure eGovernment implementation
- Creating the national standard security for eGovernment
- Performing security audit for eGovernment

Minister of Home Affairs · Minister of KOMINFO · Minister of Finance · Minister PAN-RB · Minister of PPN/BAPPENAS · Head of BPPT · Head of BSSN

[WB ANALYSIS]

Where Capability To Deliver Digital Services Is Clearly Absent

The case of the **National** Immigration Application vs. West Java Public Service Application

Proposition	Aims to replace manual queue mechanism into an internet-based queue.	Aims to enable citizens to express their aspirations, obtain information, and obtain public services through the gadget delivery program and application platform.
Key feedback	Complaints on Overall UX/UI, confusing process, bad access No customer complaint handling	Seamless UX/UI Customer complaints being responded on Play store
Managed by	Managed by the National Immigration Public Relations Division (3rd party)	Managed by West Java Digital Service (in-house)

Sources: Worldbank, 2020

Institutional Setup Is Not Optimized To Manage Resources And Build The Necessary Capabilities For The Government To Transform Nationwide (1/2)

C Ineffective Governance Setup

Practical Implications

- Resources for delivering digital services are spread thin in many different agencies.

- Difficulty in performing task divisions. One could see how one agency is assigned to perform various tasks. Having this situation on top of the budgeting problem, causing even more barriers on the envisioned eGovernment implementation.

- The fragmentation and assignment of one agency to the different stage of eGovernment implementation means the need to have a layered coordination.


Policy — Setting of policies & standards
Strategy — Define priorities & roadmap
Planning — Scope & write business cases
Funding — Review & approve funding
Procurement — Purchase of project needs
Delivery — Design, test, & implement
Operations — Operate & maintain systems

Responsible — Execute & complete activites

Men PAN RB	
Kominfo	

Coordination Team: Men PAN RB, Kominfo, BAPPENAS, MoHA, MoG, BSSN, BPPT

MoF

Men PAN RB
BAPPENAS
Kominfo
MoHA

Kominfo

Accountable — Sign off & approve activities

Men PAN RB
Kominfo

Consulted — Provide input in activities

Wantiknas, KSP, KPK, BPK, and Rest of The Government

LKPP
BPK — BSSN
BPKP — BPPT
Agencies/Ministries/SNGs

Informed — Informed of activity & progress

Rest of government (as and when required)

Source: WB Analysis, BAKTI, BCG Experience, BCG Analysis

Institutional Setup Is Not Optimized To Manage Resources And Build The Necessary Capabilities For The Government To Transform Nationwide:
UK Case Study (2/2)

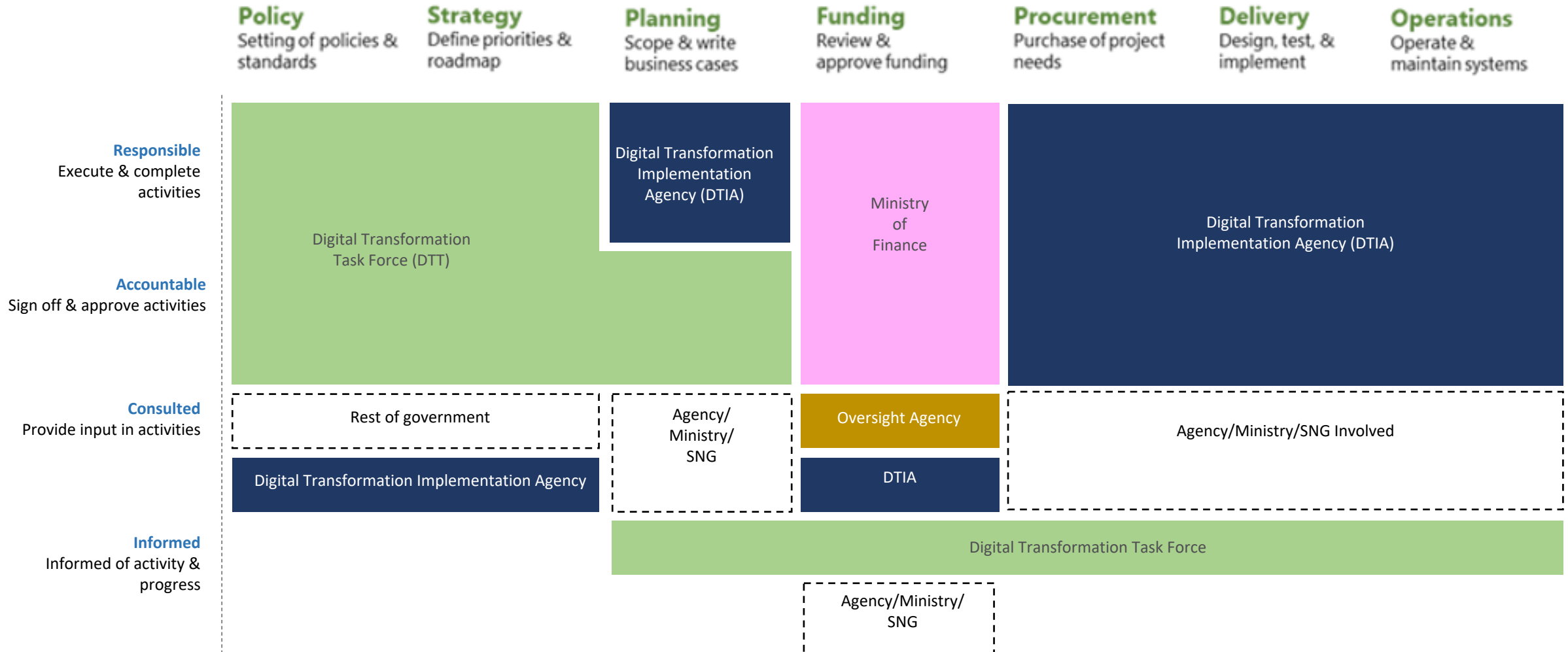### UK Digital Transformation Governance Structure
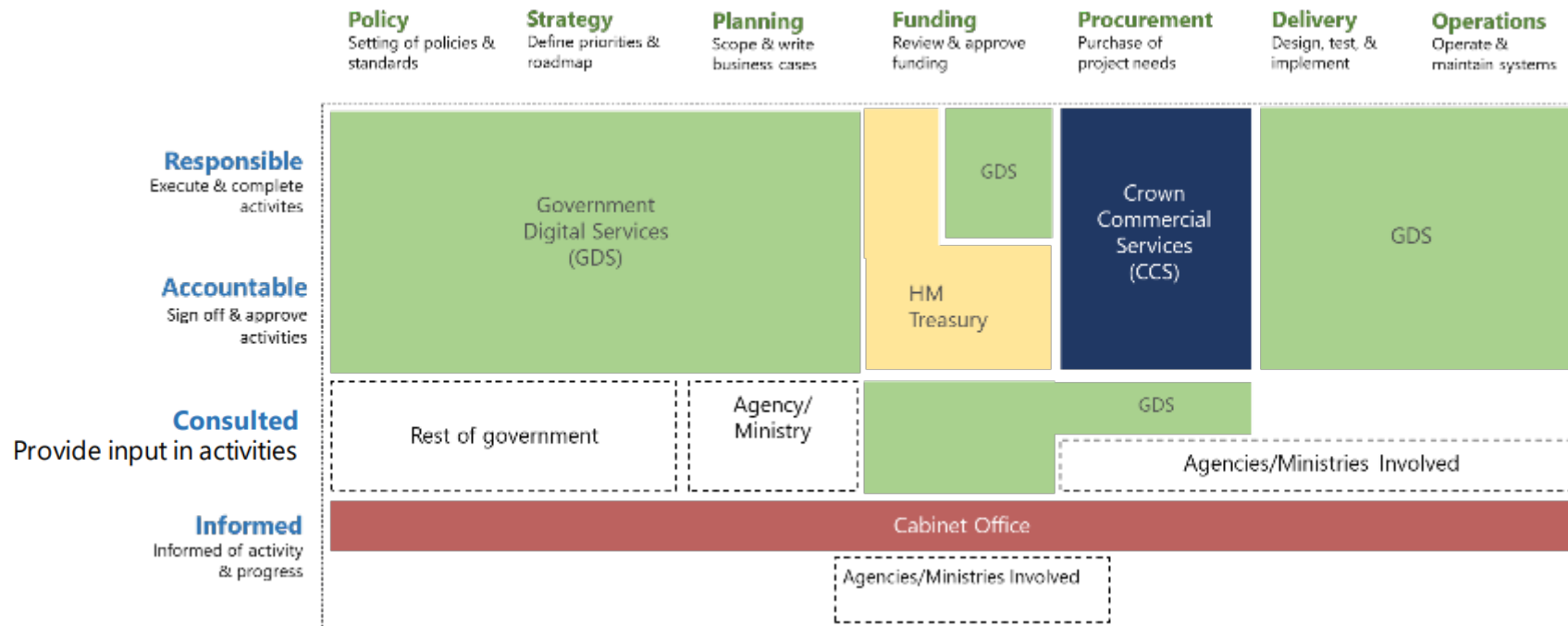
Key Features

- The digital transformation governance structure of UK is led by GDS.

- GDS is part of cabinet office so that it has strong political and bureaucratical influence.

- GDS collaborating with departments to help the with their own transformation. It works with departments to build platforms, standards, and digital services.

Source: WB Analysis, BAKTI, BCG Experience, BCG Analysis

Digital Transformation Taskforce And Implementation Agency Would Reduce Roles And Responsibilities Fragmentation

## Recommended Governance Structure to Implement Digital Transformation Agenda

	Policy Setting of policies & standards	**Strategy** Define priorities & roadmap	**Planning** Scope & write business cases	**Funding** Review & approve funding	**Procurement** Purchase of project needs	**Delivery** Design, test, & implement	**Operations** Operate & maintain systems
Responsible Execute & complete activities	Digital Transformation Task Force (DTT)		Digital Transformation Implementation Agency (DTIA)	Ministry of Finance	Digital Transformation Implementation Agency (DTIA)		
Accountable Sign off & approve activities							
Consulted Provide input in activities	Rest of government		Agency/ Ministry/ SNG	Oversight Agency	Agency/Ministry/SNG Involved		
	Digital Transformation Implementation Agency			DTIA			
Informed Informed of activity & progress			Digital Transformation Task Force				
			Agency/Ministry/ SNG				

Sources: Worldbank, 2020

How does the Governance of DTIA And DTT Look Like
- Two Options
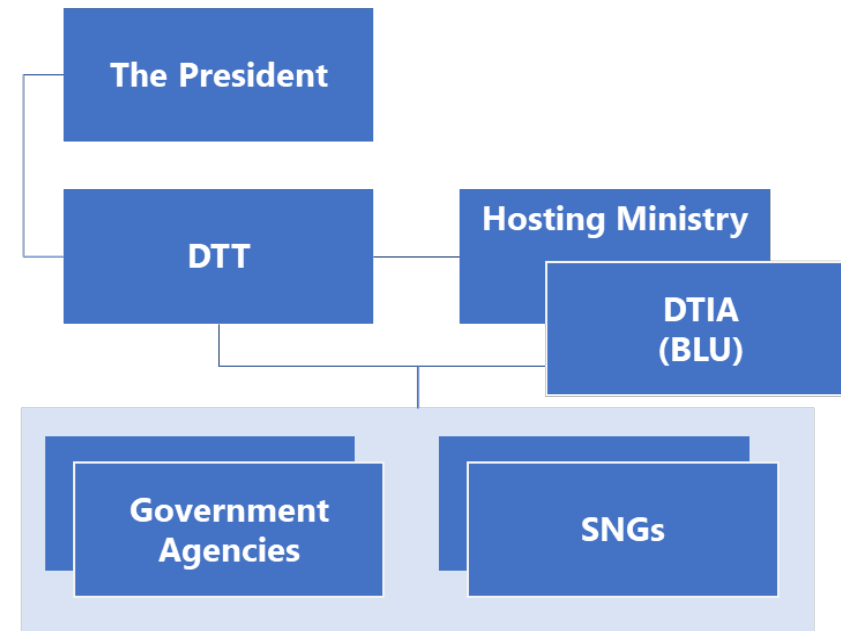
Option 1 – DTIA as an independent agency
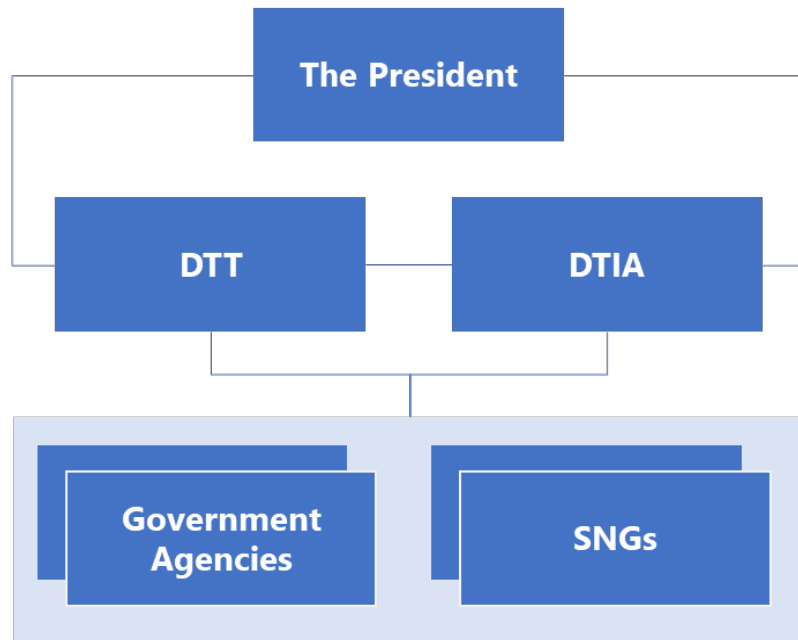
The President
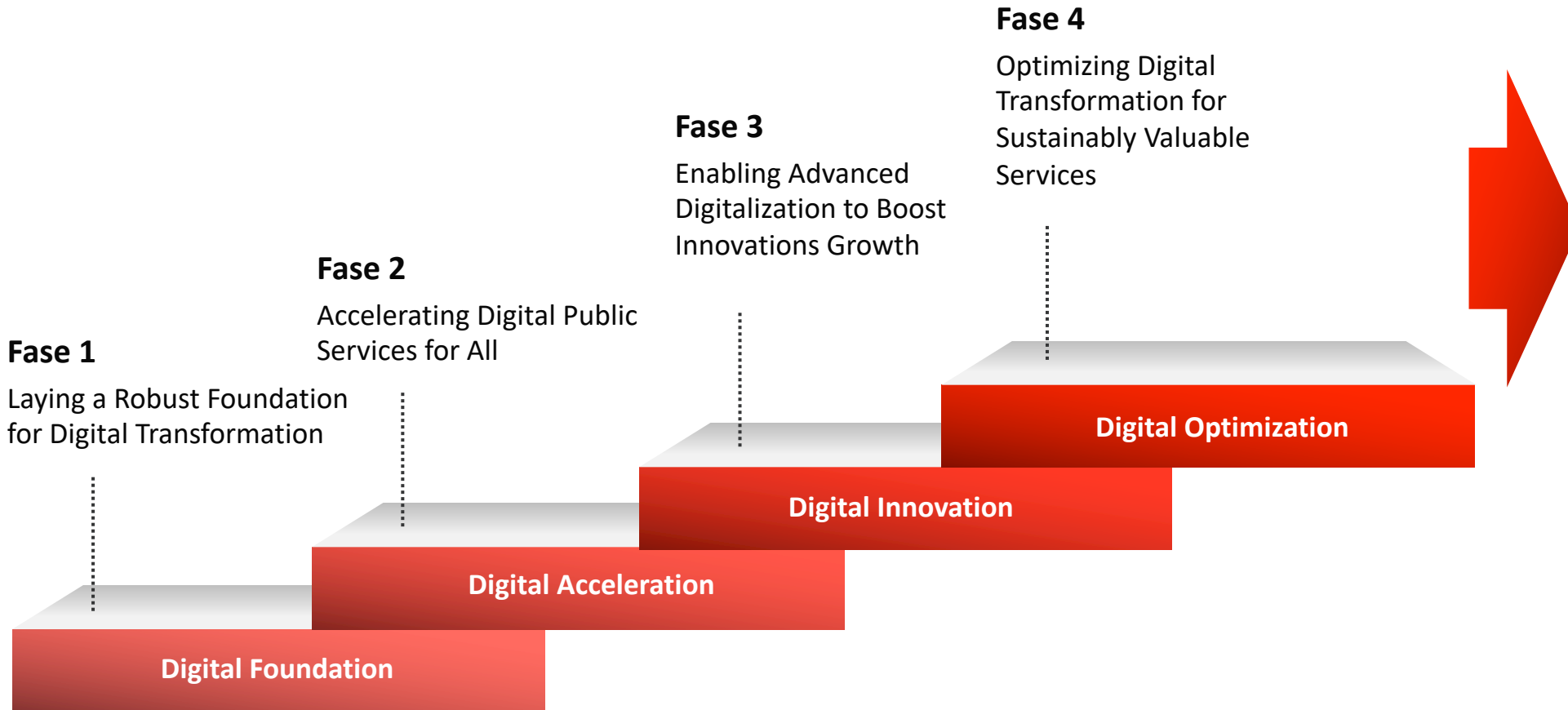
DTT

DTIA

Government Agencies

SNGs

- DTT regularly reports to the President on the progress of Digital Transformation agenda
- DTT provide strategic direction and coordinate implementation plan with DTIA
- DTT develop policies regarding digital transformation
- DTIA implement the digital transformation agenda

Option 2 – DTIA as a BLU

The President

DTT

Hosting Ministry

DTIA (BLU)

Government Agencies

SNGs

- DTT regularly reports to the President on the progress of Digital Transformation agenda
- DTT provide strategic direction and coordinate implementation plan with DTIA through the hosting ministry (Host ministry and DTT to sit as board of commissioner for DTIA)
- DTT develop policies regarding digital transformation
- DTIA implement the digital transformation agenda

Sources: Worldbank, 2020

Indonesia Digital Transformation Roadmap

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Fase 4
Optimizing Digital Transformation for Sustainably Valuable Services

Fase 3
Enabling Advanced Digitalization to Boost Innovations Growth

Fase 2
Accelerating Digital Public Services for All

Fase 1
Laying a Robust Foundation for Digital Transformation

Digital Foundation

Digital Acceleration

Digital Innovation

Digital Optimization

Digital transformation for economic restoration, public services and bureaucracy reformation

4 Priorities Area:
- **Health**
- **Education**
- **Government**
- **SMEs**

Thank You

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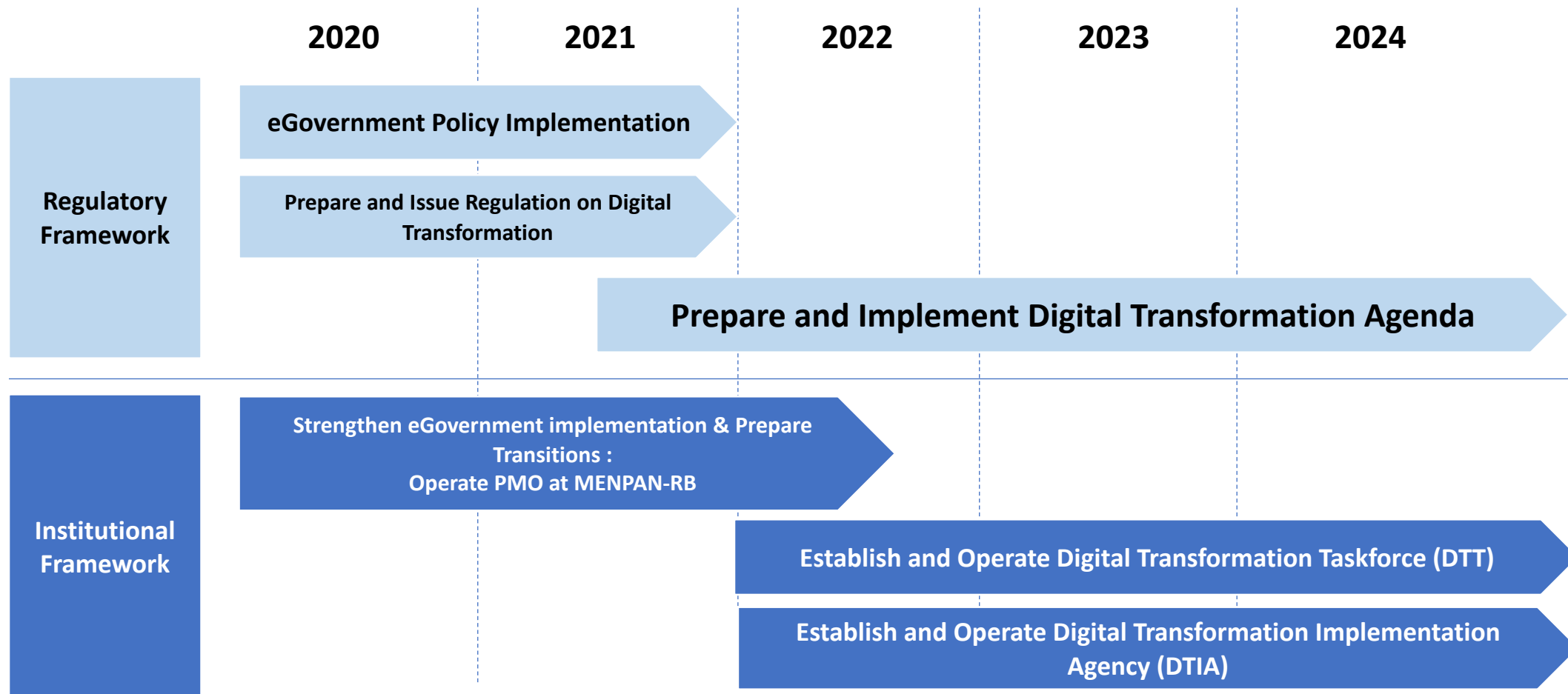www.facebook.com/wantiknas

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Transition plan:
From eGovernment to focus on National Digital Transformation

	2020	2021	2022	2023	2024

Regulatory Framework

- eGovernment Policy Implementation
- Prepare and Issue Regulation on Digital Transformation
- **Prepare and Implement Digital Transformation Agenda**

Institutional Framework

- Strengthen eGovernment implementation & Prepare Transitions : Operate PMO at MENPAN-RB
- Establish and Operate Digital Transformation Taskforce (DTT)
- Establish and Operate Digital Transformation Implementation Agency (DTIA)

Solution Linkage For National Digital Transformation

Key Milestones

- National Integrated Data Center and DRC
- Fixed-broadband network coverage
- Intra-government network
- Cloud Policy
- Satellite coverage
- Open data
- Data leadership for decision making
- ICT SKKNI with ABG+C
- Local Makers growth
- Cyber Security Regulation
- Risk Management approach
- National Chief Digital Officer
- Redesign Telecommunication Operators' playing field
- National Digital Architecture
- Cross-institution collaboration platform
- National digital ID

Major Challenges

- Lack of vision and digital leadership
- Sectoral ego and weak coordination
- Link&match digital talent
- Broadband infrastructure gap
- Data and system silos

Sources: Wantiknas, 2020