

ASN's Digital Literacy & Leadership as the Enablers of Indonesian Digital Government Transformation

July 2020

For internal discussions only



This Technical Note is part of the series on
“Accelerating the Indonesian
Digital Government Implementation”

Background: A sneak peak to the 1st paper on
"Accelerating Indonesia Digital Transformation Journey"

Digital technologies, combined with service-oriented business process, allow public services to be more efficient and cost-saving

KOMINFO has estimated that there are 100 million smartphone users in Indonesia and the number is increasing



Source: KOMINFO, eMarketer

Imagine if people who live in remote villages in Papua can easily retrieve their birth certificate and ID with few clicks on their phone



With ID at hands, the government can also funnel all social assistance immediately and it can be verified with few clicks and scans away.

GOI has embarked on digital transformation journey, yet there are still many rooms for improvement

The GOI has started to incorporate digital technology elements to its services, but these are largely back office system and the introduction is not well-coordinated

Non-Exhaustive

G2C



G2B



G2G



G2E



Digital adoption by the government in Indonesia is lagging compared to other Southeast Asian countries

Country	Digital Adoption Index	
	2014	2016
Singapore	0,868	0,871
Malaysia	0,655	0,686
Vietnam	0,655	0,686
Brunei Darussalam	0,574	0,629
Thailand	0,567	0,620
Philippines	0,439	0,492
Indonesia	0,390	0,457
Cambodia	0,359	0,398
Laos	0,201	0,260
Myanmar	0,172	0,259

Source: World Bank

GOI has issued set of regulations that aims to address obstacles hindering government digital transformation...

The President has two key orders mandating the digitalization of the administration

Presidential Regulation No 95/ 2018 Electronic Government System

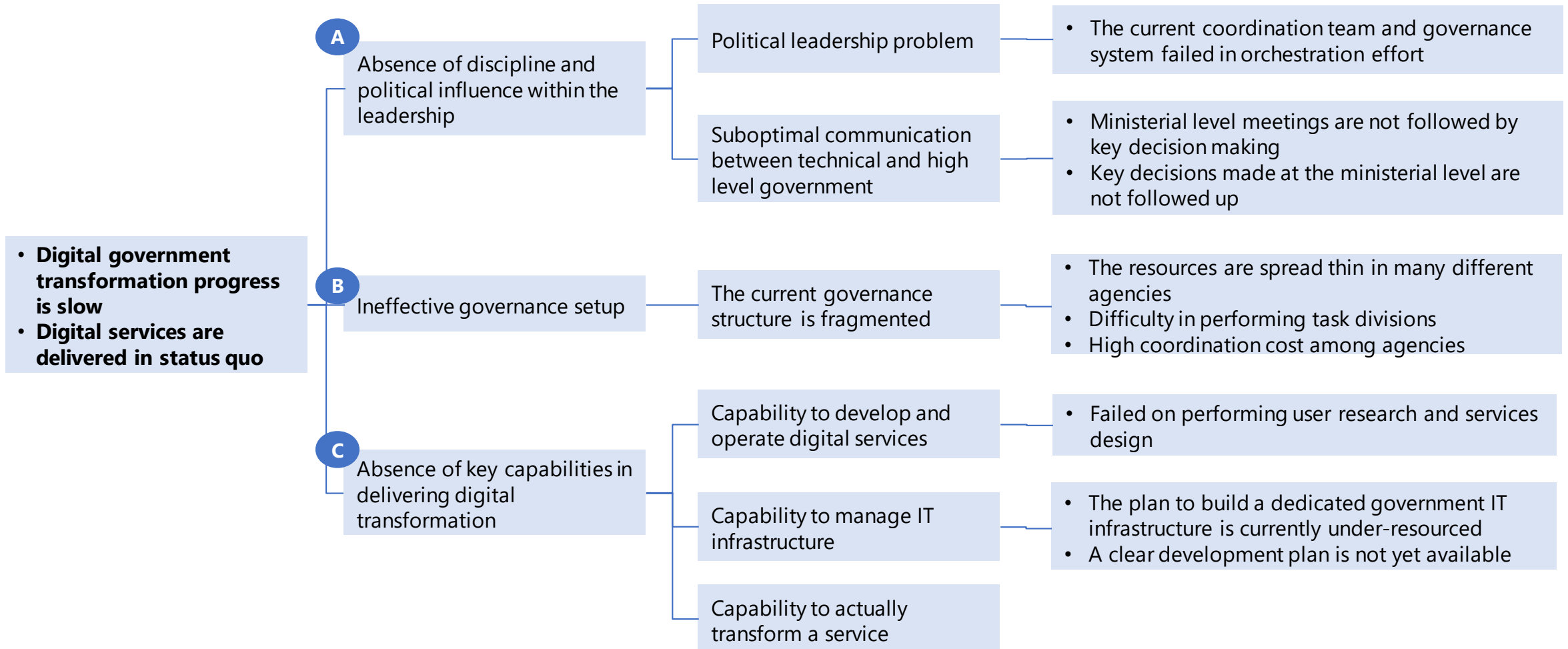
- **Objective:** implementation of integrated e-government systems
- **Key mandates:** all government agencies to develop enterprise architecture that intertwines from one to another; establish a national coordination team; co-use IT systems
- **Key Mandated Agencies:** MENPAN-RB, KOMINFO, BAPPENAS

Presidential Regulation No 39/ 2019 One Data Policy

- **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

... yet implementation is challenging

Key issues hindering successful digital government transformation

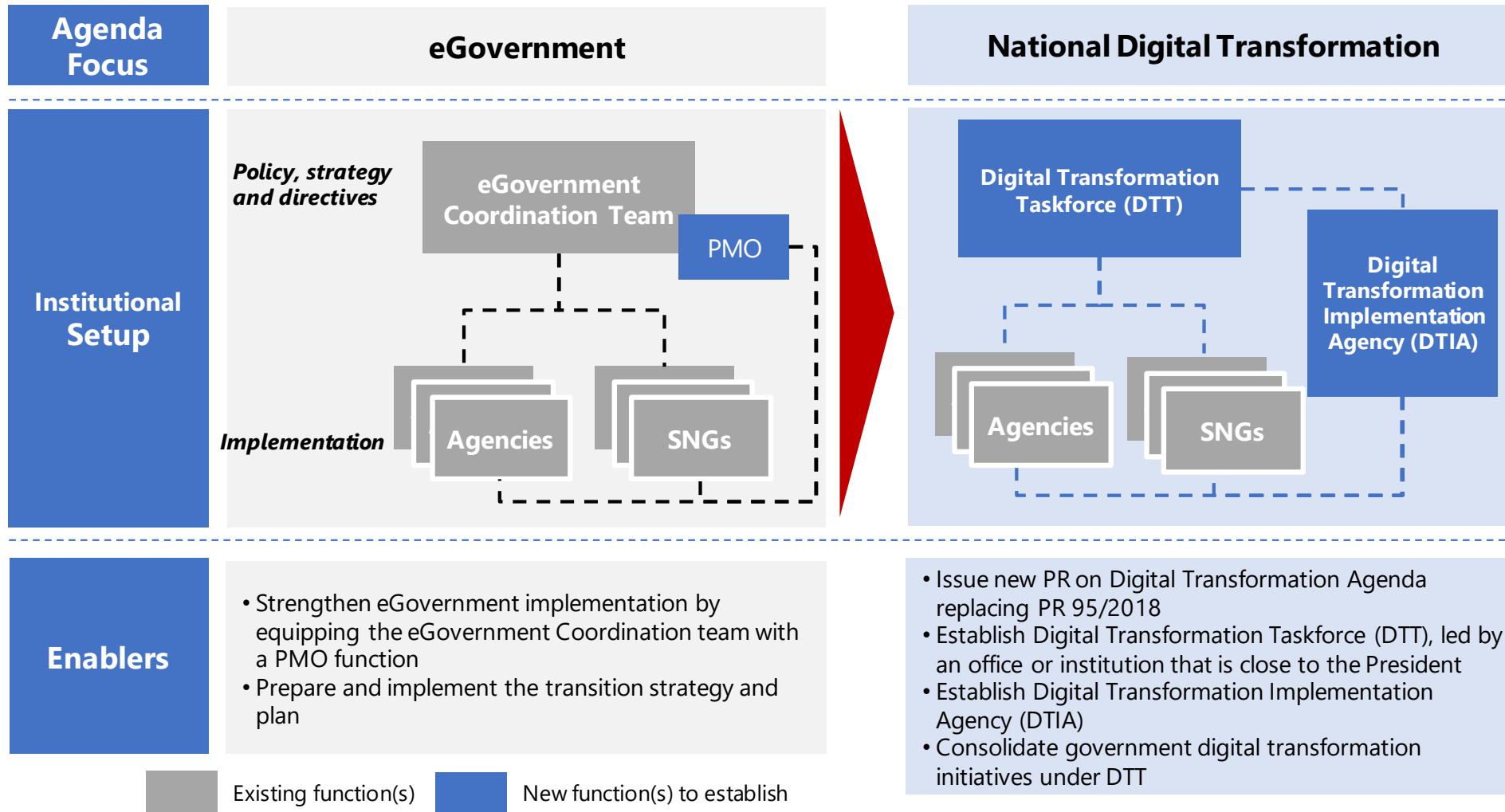


Transition Strategy: eGovernment will be part of the National Digital Transformation agenda

2

Strengthen the foundation

Governance structure to align with transformation agenda

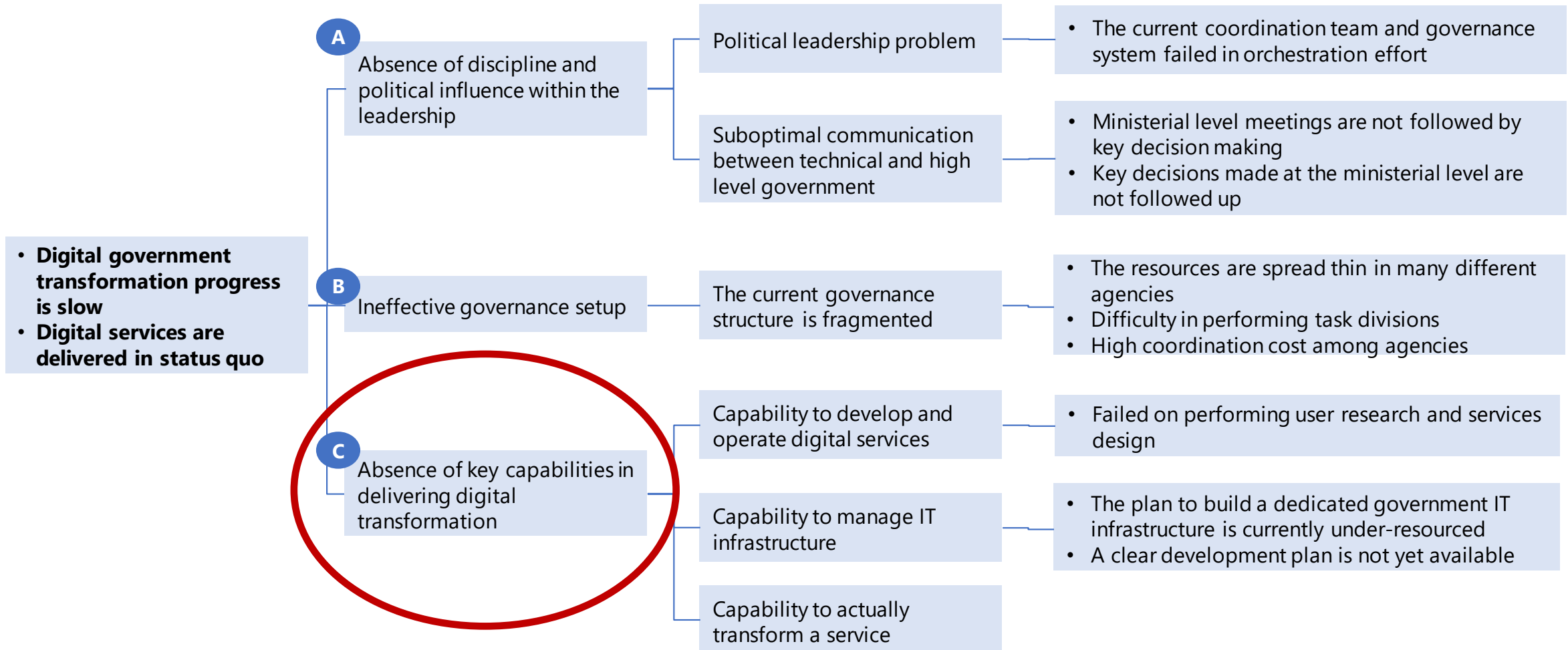


Additional Notes on National Digital Transformation Governance

- DTT to provide strategic directions on national digital transformation agenda
- DTT will consolidate the work of various government digital related initiatives aside from eGovernment, such as Satu Data, OSS, One Map Policy, etc.
- Implementation agency to be formed as an Independent Agency, with the option of being a BLU (Public Service Agency)

... yet implementation is challenging

Key issues hindering successful digital government transformation



This note would explore key issues number 3:
*"Absence of **key capabilities** in delivering digital transformation"* in more detail.

**Civil Service with relevant digital skills
is the key of successful digital
transformation.**

McKinsey & Company. 2016. Digital by Default: A Guide to Transforming Government

Indonesia starts embracing digital transformation agenda, yet current state of human capital might slow down the process

Human capital is key to the success of digital transformation agenda ...

... however there are still areas of improvement when seeing Gol's digital human capital as of now.

Table 1 E-Government Development Index of Indonesia

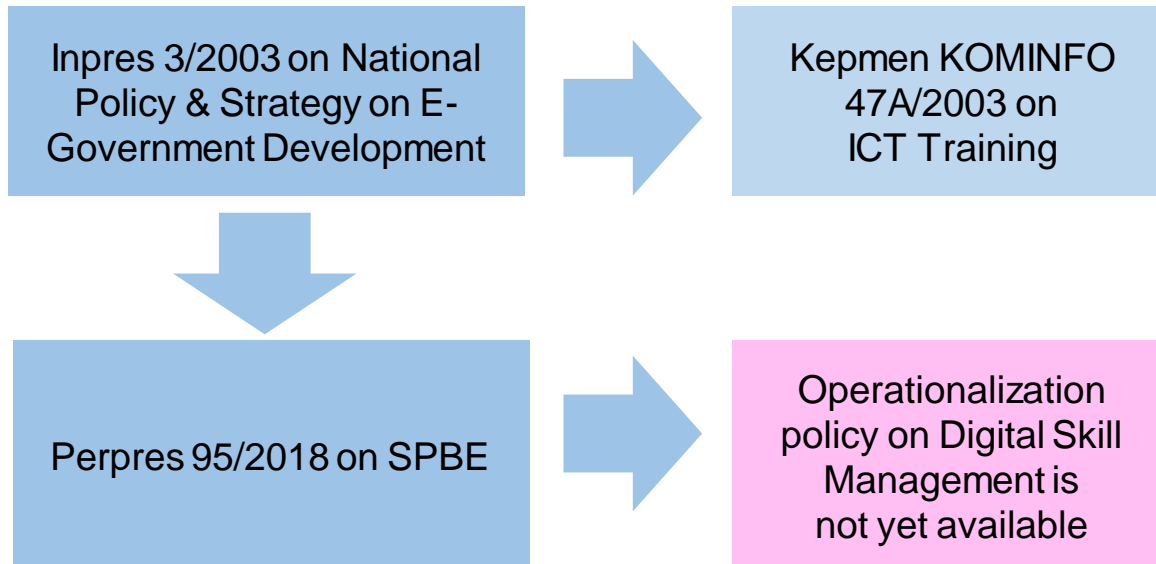
	2012	2014	2016	2018	2020
Rank	97	106	116	107	88
E-Government Development Index (EGDI)	0.4949	0.4487	0.4478	0.5258	0.6612
- Online Service Index (OSI)	0.4967	0.3622	0.3623	0.5694	0.6824
- Telecommunication Infrastructure Index (TII)	0.1897	0.3054	0.3016	0.3222	0.5669
- Human Capital Index (HCI)	0.7982	0.6786	0.6796	0.6857	0.7342

source: United Nations E-Government Survey 2012, 2014, 2016, 2018, and 2020

KPMG (2016) indicated that unless skill training is dramatically improved, Indonesia could face a **shortfall** of about **9 million** skilled and semi-skilled **ICT workers** by 2030.

Moreover, in almost 2 decades, initiatives addressing digital skill to deliver and sustain such transformation are severely lacking

Mandate on Digital Government implementation has not been much accompanied with mandate on managing the digital skill in the civil servants.



Also, no evaluation has ever been made to accurately picture the current level of digital literacy & leadership in the civil servants.



Neither PeGI Index (2011) nor SPBE Index (2018) includes measurement on human capital aspects of Digital Government implementation.

SPBE Index
2018: 1.98 inadequate
2019: 2.18 adequate

Both central as well as regional government faces the similar challenges on digital skill: quantity and quality

Quantity: Low number of ICT Specialists (Table 2)

Quality : ICT Specialists lacking hard-core technical skills (Table 3).

Regardless of age and education level, according to the type of work, most are said to work on office applications (>70%) more than in software engineering (11%) or network (23%).

Table 2 Specialist Functional Role in Indonesian Civil Service in 2019

	Regional	Central	Total	% to Total
Total PNS	3.235.390	953.371	4,189,121	100%
Specialist Functional Role	1,763,609	347,737	2,111,346	50,4%
ICT Functional Role (<i>Pranata Komputer</i>)	1644*	5 602**	7,246*	0.17%*

source: National Civil Service Agency (BKN), 2019

* estimated based on the assumption of 3 *Pranata Komputer* in each of 34 provinces and 514 regencies

** according to National Statistics Office (BPS) 2018 data

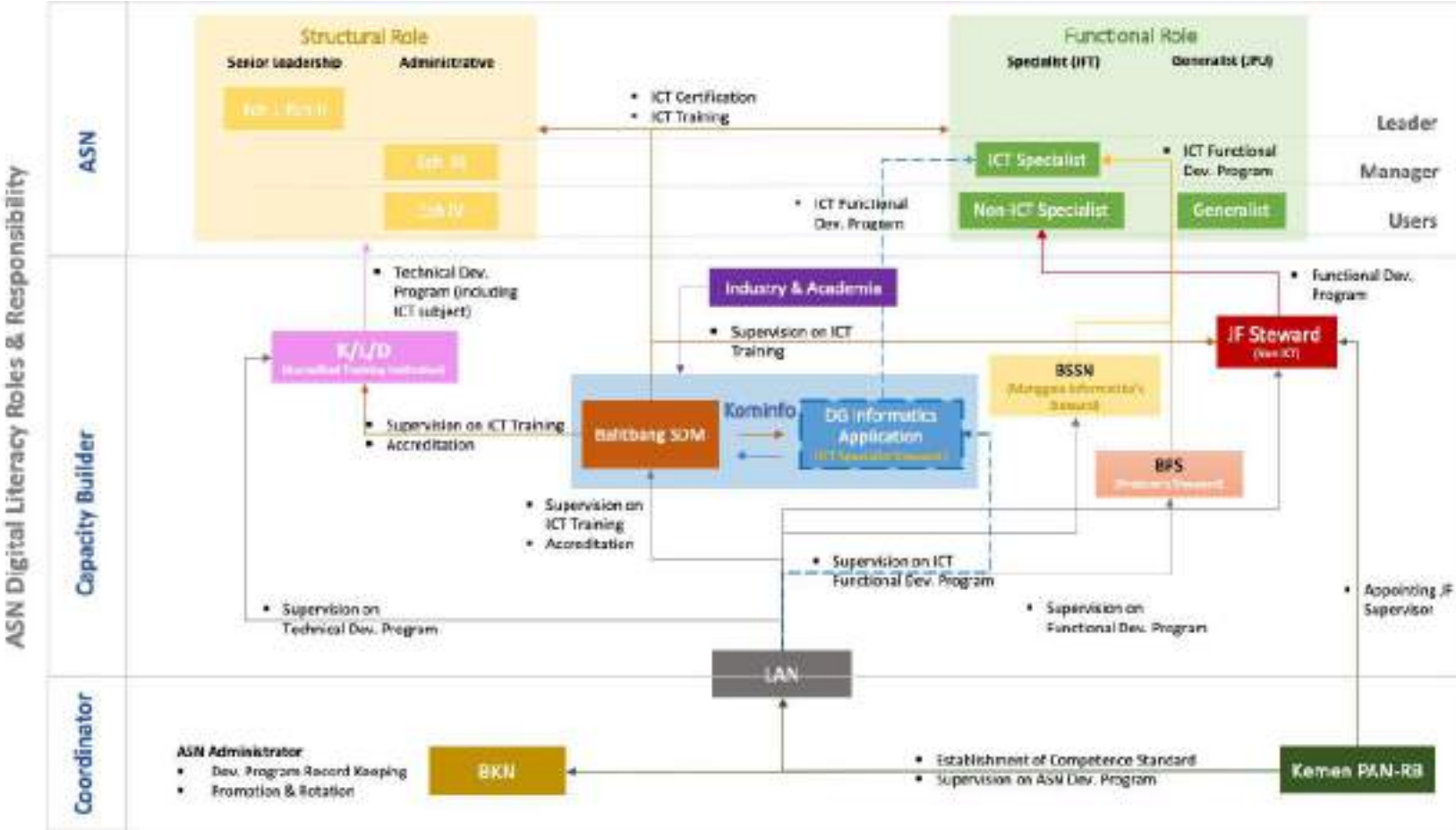
Table 3 General Level of ICT Capacity of ASN Working in ICT related Assignments in Provincial Government

Region	Office Application	Computer Operation	Multimedia	Network	Software Development	Data Management System	Average
Sumatera	2.31	2.44	1.85	2.00	1.47	1.86	02.18
Java	2.73	2.94	2.21	2.24	1.89	2.28	02.44
Kalimantan	2.54	2.61	2.06	2.10	1.63	1.98	02.28
Sulawesi	2.46	2.44	1.85	1.94	1.44	1.86	02.26
Bali-Nusa Tenggara	2.30	2.34	1.75	1.68	1.30	1.74	02.11
Maluku – Papua	2.39	2.63	2.03	2.24	1.48	2.11	02.21
Average	2.45	2.56	2.15	2.16	1.53	2.23	

source: BALITBANG SDM KOMINFO, 2018 Scale: 0-4

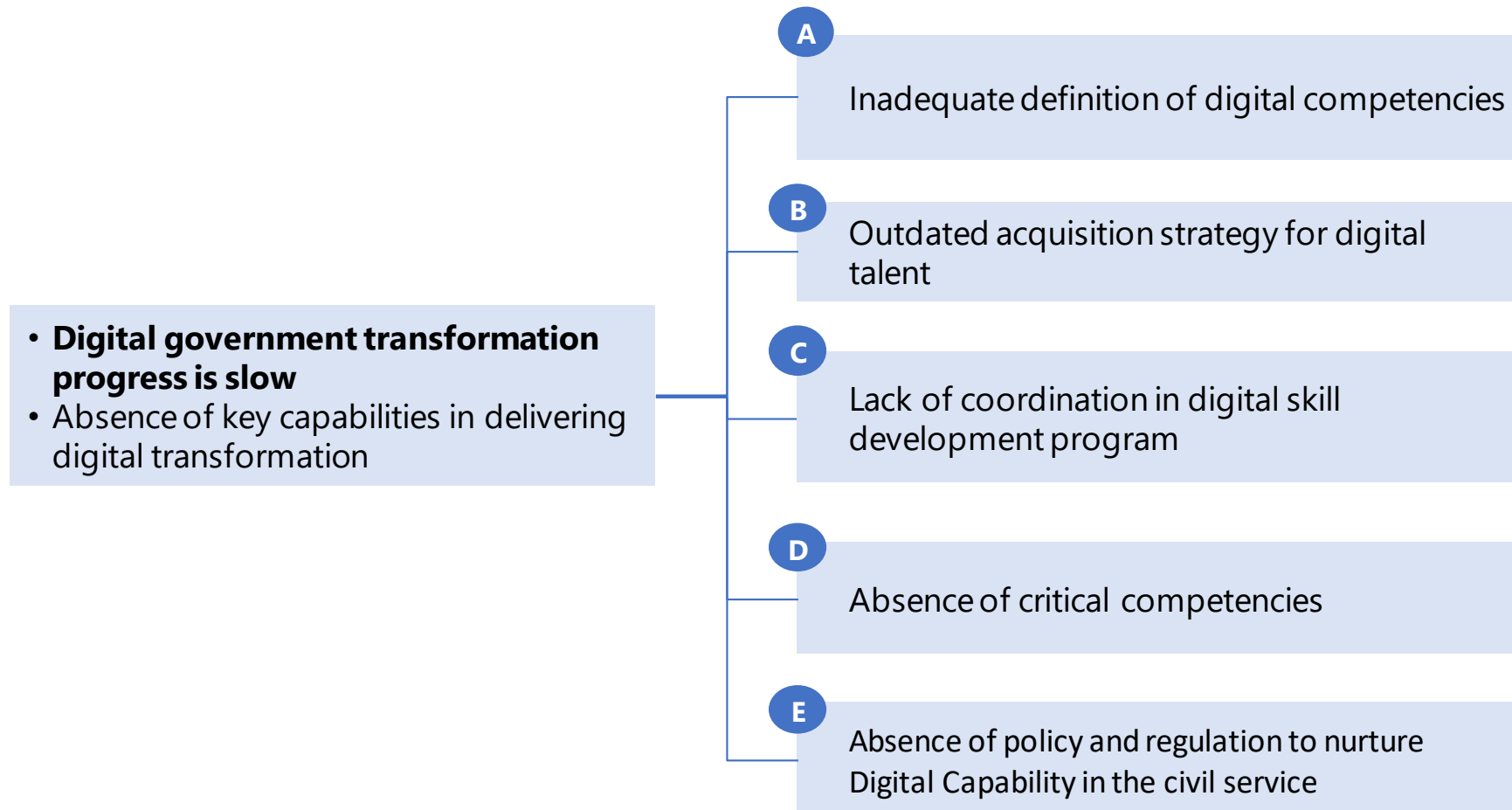
Roles & Responsibilities on ASN Digital Literacy & Leadership Development are in place, yet not well-orchestrated

While actors are in place, ASN Digital Literacy & Leadership development programs are fragmented and not well-coordinated.



Inadequate measure to handle the challenges could lead to a discouraging ecosystem to nurture digital capabilities in the civil service

Key challenges in digital literacy and leadership in the civil service



ICT Specialist in Indonesian civil service is too narrowly defined

A

Inadequate Definition of Digital Competencies

- Table 4 shows a discrepancy in the comparison of hierarchy of digital role classification in Australia, UK and Indonesia.
- Classification of digital roles in Indonesian civil service is lacking
- The broad definition does not support equal specialization for roles within the scope of JFPK job function
- The score-based evaluation that is part of civil service jobs prevents the ICT skill specialization
- The JFPK also mixes between specialization and roles
- Unclear career path to Senior Executive positions could be a disincentive for retention of talent.

Table 4 Hierarchy of Digital Role Classification in Australia, United Kingdom and Indonesia

Country	1 st Tier	2 nd Tier	3 rd Tier
Australia	ICT Job Family	Job Function:	Job Role:
		- Business Change	2 roles
		- IT Business Management	4 roles
		- Service Delivery	7 roles
		- Service Support	1 role
		- Solution Development	3 roles
United Kingdom	Digital, Data and Technology Profession	Job Family:	Job Role:
		- Data	4 roles
		- IT Operations	11 roles
		- Product and Delivery	5 roles
		- Quality Assurance Testing	3 roles
		- Technical	9 roles
Indonesia	Computing Job Family (<i>Rumpun Jabatan Kekomputeran</i>)	Job Function:	
		- JAFUNG of Pranata Komputer (JFPK)	Undefined
		- JAFUNG of Manggala Informatika (JFMI)	Undefined

source:

Australia: <https://www.apsc.gov.au/information-and-communications-technology-1>

UK: <https://www.gov.uk/government/collections/digital-data-and-technology-profession-capability-framework>

Indonesia:

- Keppres 87/1999 as amended by Perpres 116/2014 on Civil Servant Functional Job Family

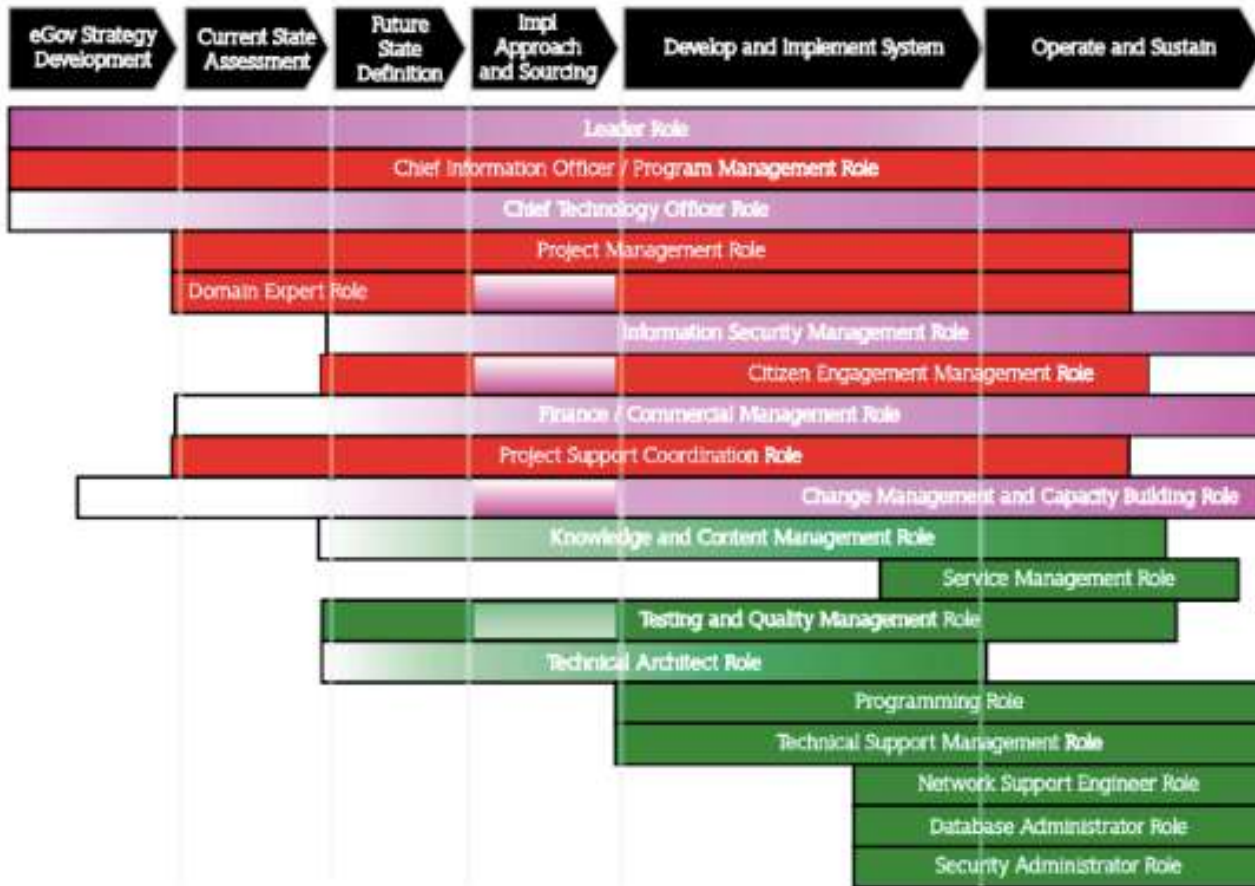
- KepmenPANRB 66/2003 on ICT Functional Role

- PermenPANRB 6/2020 on IT Security Functional Role

Digital Government implementation would involve ICT as well as non-ICT staffs, especially those in managerial and leadership positions

A

Inadequate Definition of Digital Competencies



- India's e-Governance Framework identifies and defines the competencies that are essential and critical for job performance in an e-government project setting.
- It identifies 19 roles needed in a project team across the life cycle of an e-government project, which consists of 8 managerial/administrative roles and 11 technical roles.

India's e-Government Life Cycle Mapping with e-Government Roles

source: NEGD (2014) e-Governance Competency Framework for Digital India

Digital talents prefer industry than civil service, however ...

B

Outdated Acquisition Strategy

- Relying on the conventional recruitment process would not be sufficient to attract digital talent as the government has to be creative in creating value propositions which go beyond monetary benefit.
- Fellowship programs or short-term assignments that allow top digital talents innovate within the government have been a popular modality in digitally advanced countries like Singapore, UK, Australia, and US.



source: <https://www.tech.gov.sg/careers/smart-nation-fellowship-programme/>



source: <https://www.dta.gov.au/help-and-advice/learning-and-development/start-your-digital-career-government>



source: <https://www.faststream.gov.uk/digital-data-technology/index.html>

... digital talents seeks for significant and impactful assignments

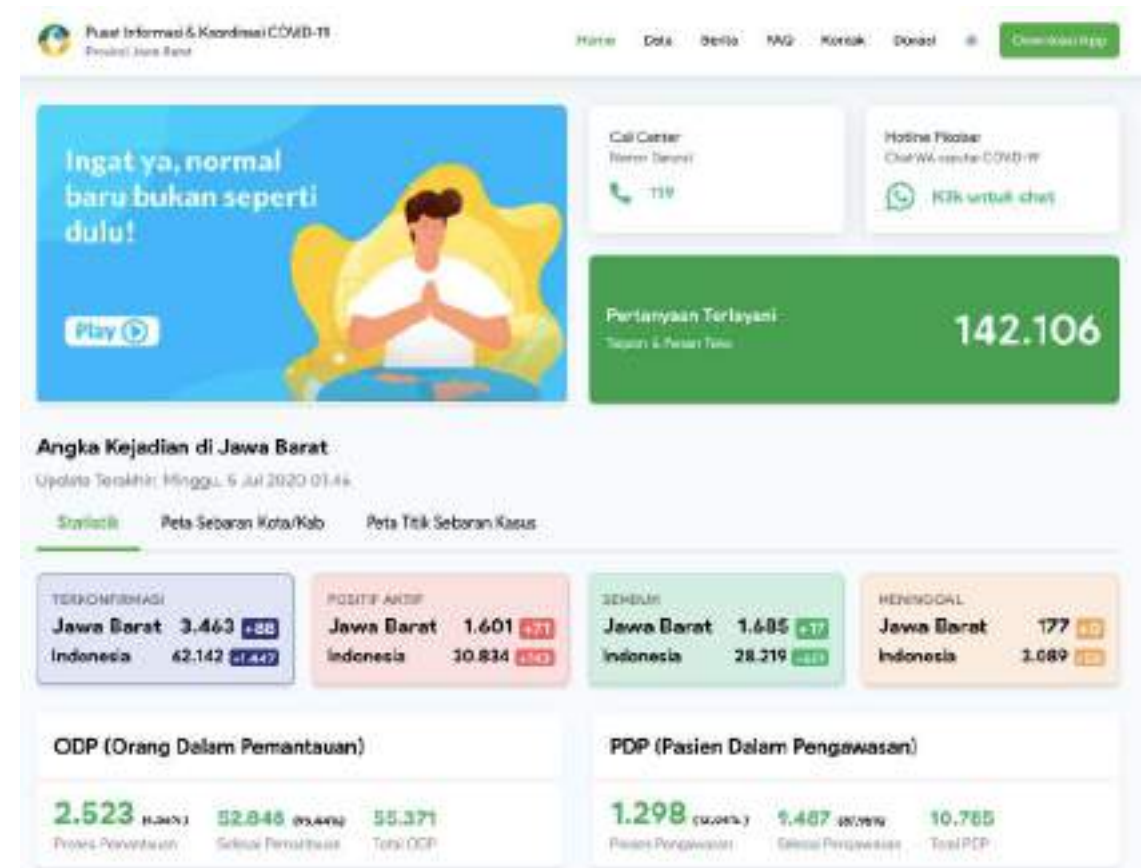
B Outdated Acquisition Strategy

Jawa Barat Digital Service (JDS)

- Operating under DINAS KOMINFO of West Java Provincial Government, JDS has recruited more than 100 top ICT talents over the last 2 year, with very low turnover rate.
- JDS highlights importance and significance of the roles and its social and economic impacts to citizens and businesses to attract top talents.
- The team is tasked with important assignments relevant to the current pressing issue, e.g. a centralized website for COVID-19 information and coordination for West Java Province.

Jakarta Smart City (JSC)

- Turn-over rate is higher in JSC with the average is said to be 1-2 years which might be due to the geographical nature of the two cities. Jakarta offers more opportunities to digital workers.
- Nevertheless, JSC could attract top talents. Identical to JDS, it is said that the talents values impact, significance of the assignments and opportunity for learning and development.



source: <https://pikobar.jabarprov.go.id/>

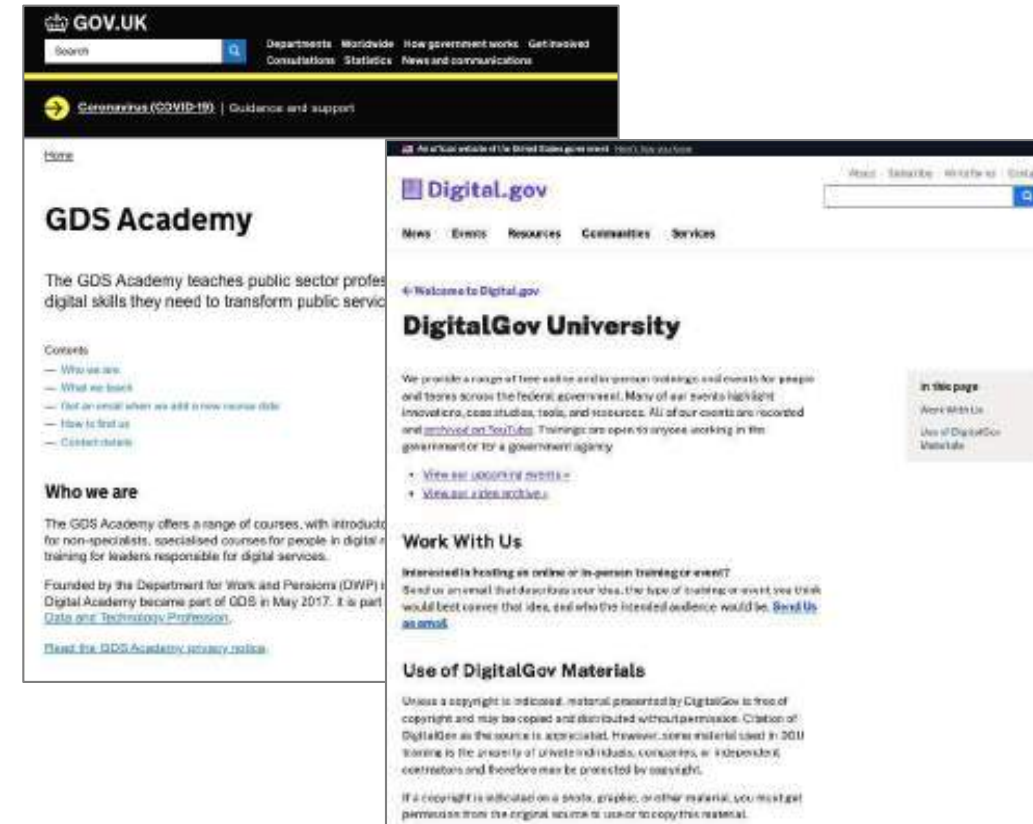
Multiple digital skill development programs are not systematically coordinated to build Digital Capability in the civil service

C Lack of Coordination in Digital Skill Development Program

- In 2018, KOMINFO has initiated their annual Digital Talent Scholarship (DTS) which provides training for different segments of the society including ASN
- Due to demands from the government, a similar program of “the Making of Indonesia 4.0” is launched by LAN to provide ASN with knowledge about and prepare for the industry revolution 4.0
- Besides, KOMINFO has a regular technical training program under BPPTIK

source:

<https://digitalent.kominfo.go.id/>
<https://bpptik.kominfo.go.id/>



source:

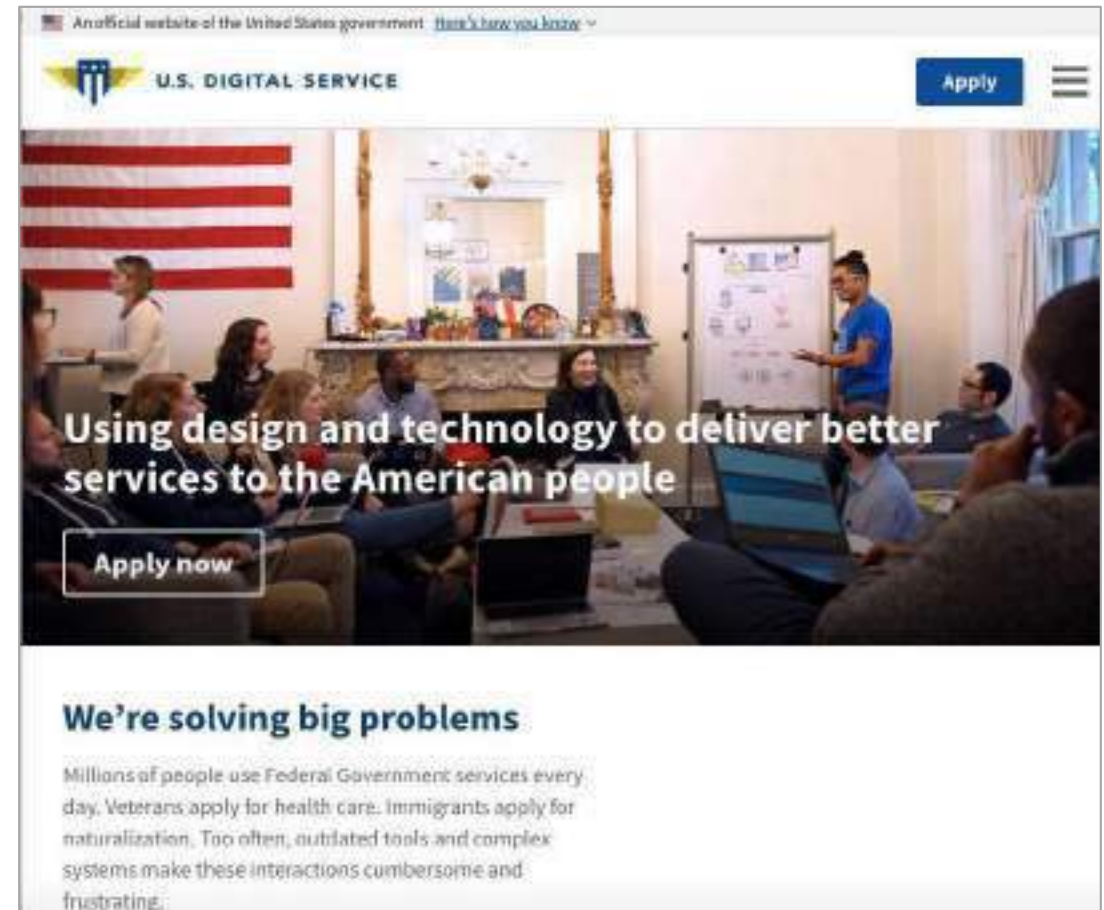
<https://www.gov.uk/government/groups/gds-academy>
<https://digital.gov/digitalgov-university/>

Substantial Digital Government implementation would require expensive and scarce expertise owned by highly skilled professionals



Absence of Critical Competencies

- Currently, there is no centralized efforts in supplementing critical skill gaps in Indonesia and KOMINFO could be one of the potential agencies to host such initiative.
- In the US, the US Digital Service (USDS) deploys small, responsive groups of designers, engineers, product managers, and bureaucracy specialists to work with and empower civil servants.
- Similarly, in India, the State e-Governance Mission Team (SeMT) is a team of Professionals which provides technical and professional support to the States and Union Territories, in areas such as Enterprise Architecture, Business Process Re-engineering and Change Management which skills typically do not exist within the Governments.

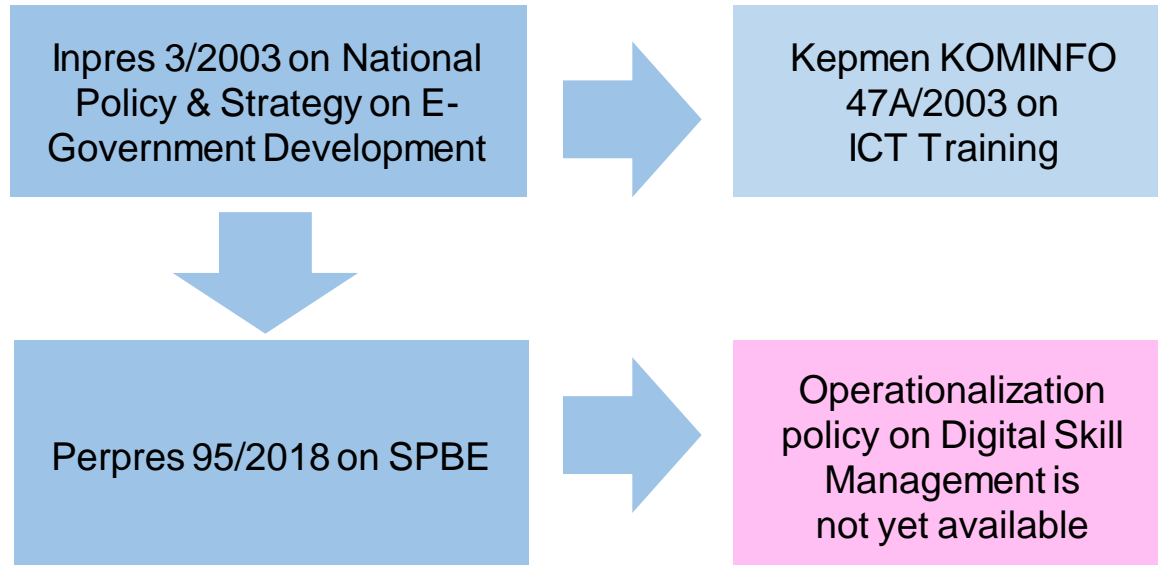


source: <https://www.usds.gov/>

To date, there is no regulation pertaining to human resource management in Digital Government implementation context

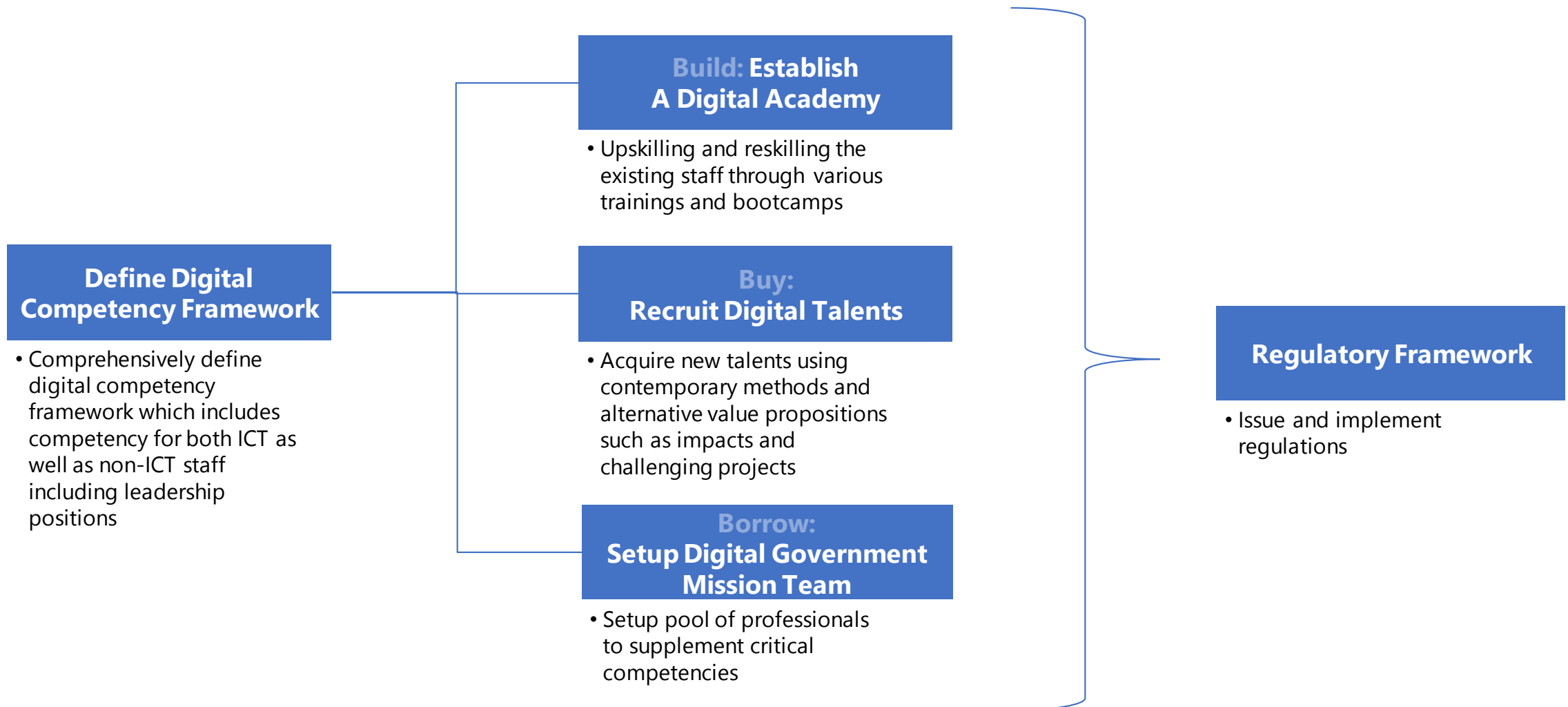
E

Absence of policy and regulation to nurture Digital Capability in the civil service

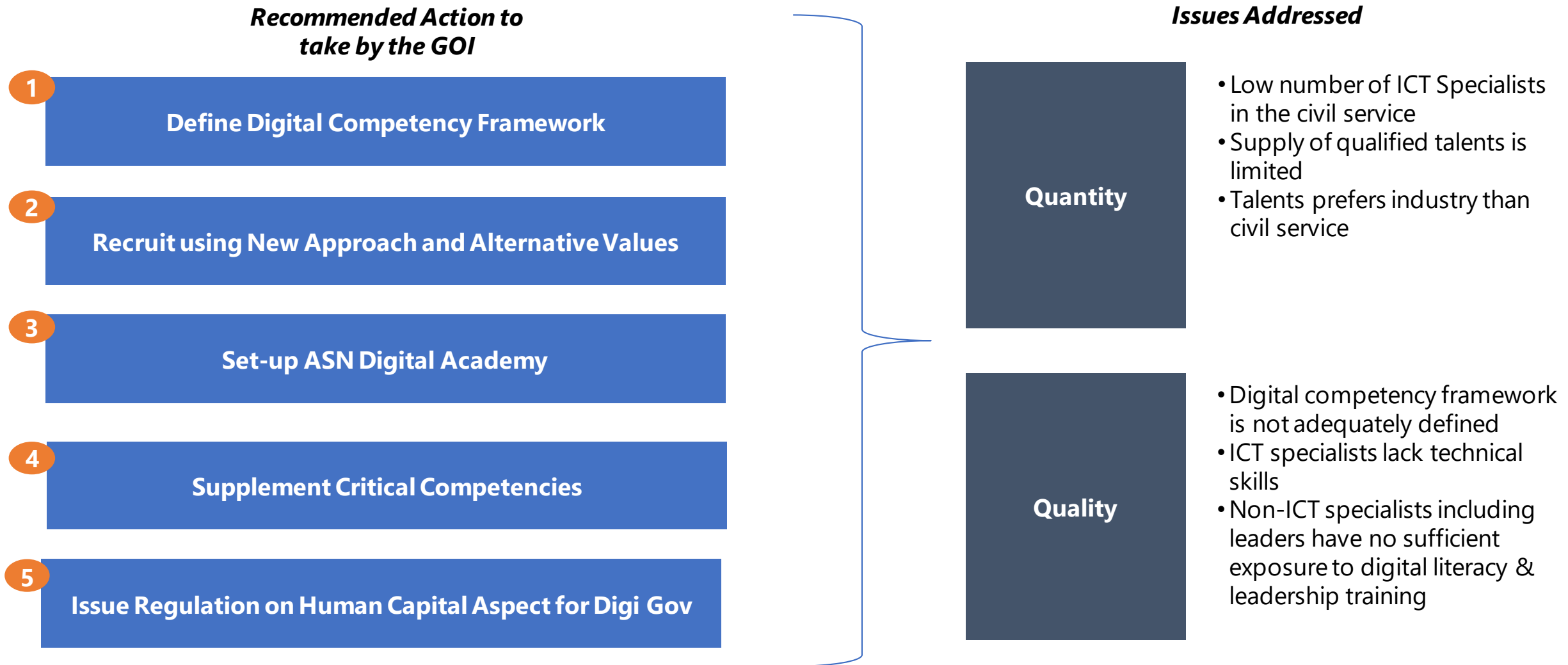


- The current policy is no longer relevant (Kepmen KOMINFO 47A/2003)
- This would be the underpinning policy for Government Digital Talent Management that spans over planning, acquisition, development, supervision and deployment stages of Digital Talents in Digital Government, along with the continuous improvement of the overall ASN Digital Literacy and Leadership.

GOI needs to take action to ensure the availability of relevant digital skills in the civil service



If properly addressed, GOI could resolve the Quantity and Quality issues of Digital Capability in delivering successful digital government transformation



Indonesia needs a breakthrough to reform digital competency framework in the civil service

A

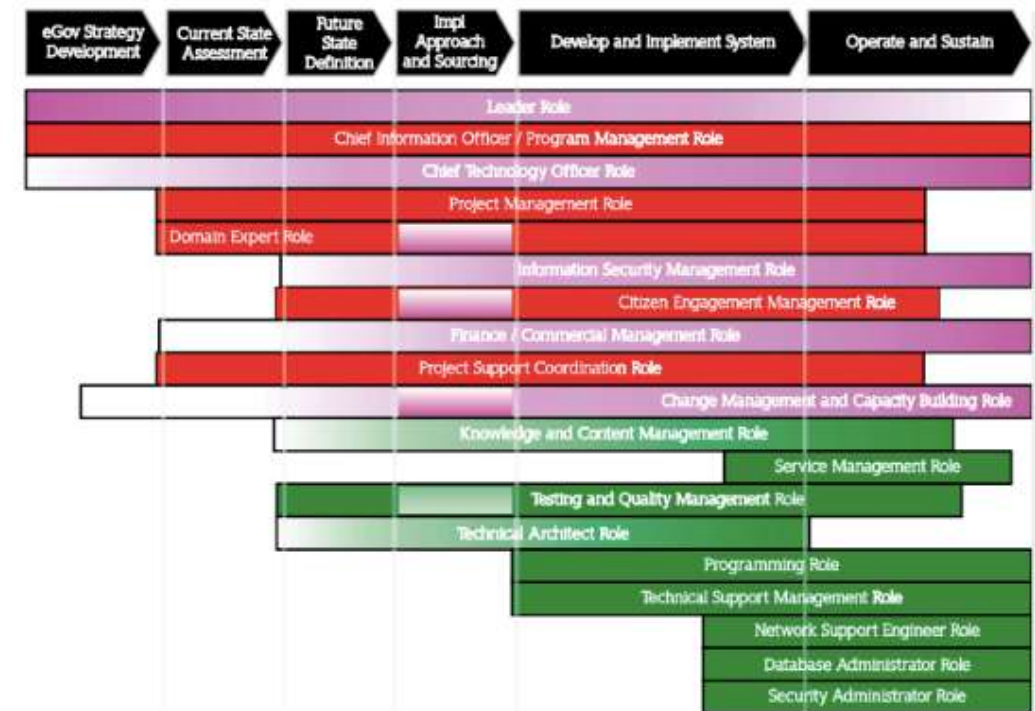
Comprehensive Digital Competency Framework for ASN

Digital Competency Framework should:

- identify the key components of digital competence;
- be comprehensive enough, to include both ICT as well as non-ICT roles along with leadership and managerial roles; and
- inform the creation of *JAFUNG TIK* (ICT specialist roles)

JAFUNG TIK should:

- be centrally managed to optimize digital talent management
- be well-harmonized to avoid duplications and overlaps among the potential JF Stewards e.g. KOMINFO, BPS, BSSN;
- feature strong reward systems;
- encourage continuous training and skill developments; and
- have clear specialization and career paths including to Senior Executive positions.



India's e-Government Life Cycle Mapping with e-Government Roles

source: NEGD (2014) e-Governance Competency Framework for Digital India

To better target qualified Digital Talents, GOI has to recruit talents using new approach and alternative value propositions

B

Effective Recruitment and Retention of Qualified ICT Talents



Rebrand Government as **Digitally Innovative Institution**.

Jabar Digital Service and Jakarta Smart City practices in acquiring talents using **value-driven mission** as alternative value proposition to monetary benefits only, needs to be studied further and properly documented as a national reference and as for other government agencies

Explore **creative approach** than conventional recruitment, e.g. scholarships, innovation competitions, hackathons, internship and fellowships

Ayo bergabung, KAMI SEDANG MEREKRUT!

Jabar Digital Service membuka kontrak jangka pendek untuk posisi TENAGA AHLI dan TENAGA TEKNIS guna membantu penanganan COVID-19

di Jawa Barat. Klik tombol di bawah untuk info lebih lanjut!

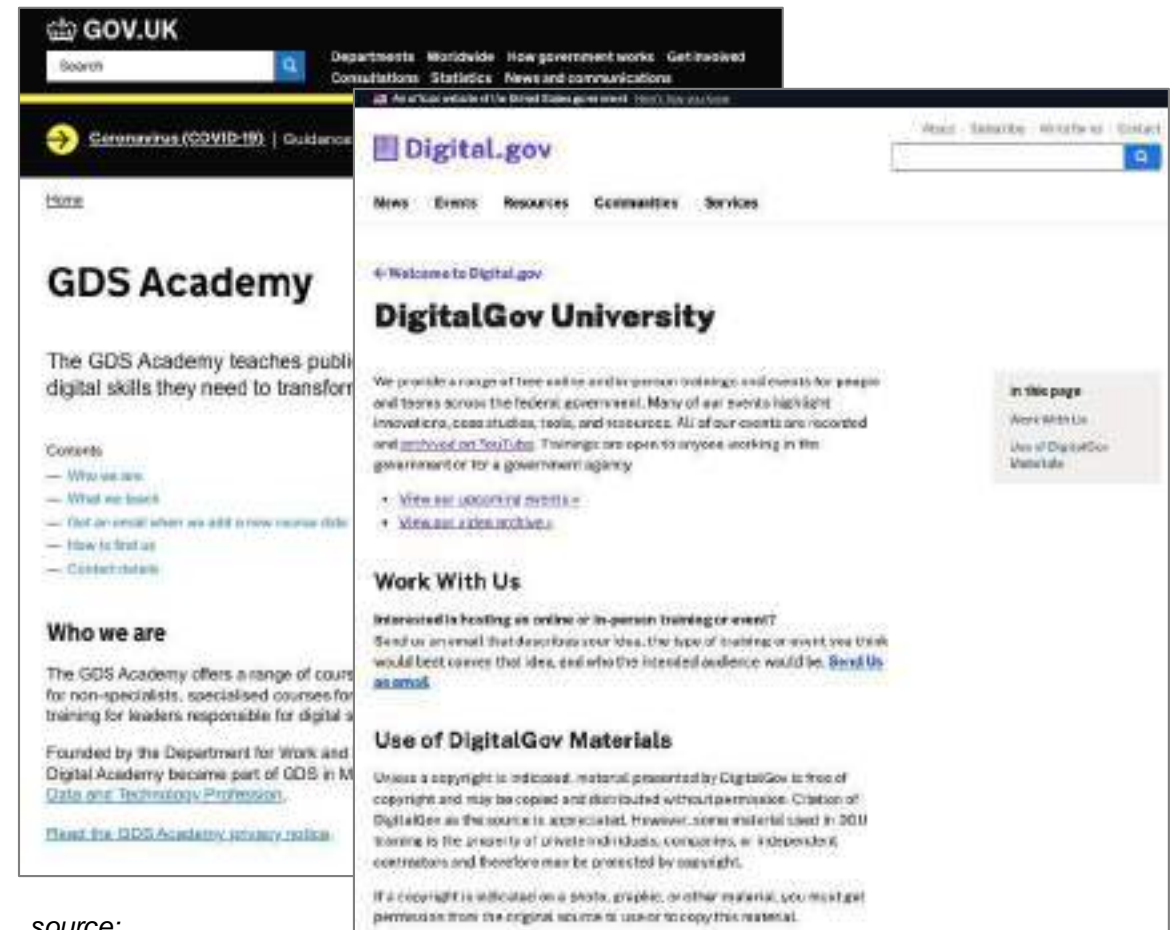
source: <https://digitalservice.jabarprov.go.id/>

Internally, to maintain the availability of skills, GOI needs to setup ASN Digital Academy

C ASN Digital Academy

Responsibility of ASN Digital Academy:

- Constantly be in the lookout for new trends, development, practices in the industry
- Supervise the development of digital competency
- Oversee the development of curriculum and learning materials co-created by the government, industry and academia e.g. KOMINFO, LAN, BSSN, BPPT, MOF etc.
- Influence the training curriculum to make it relevant to the current and forthcoming trend in technology
- Facilitate on-the-job training by matching talents with complex and challenging ICT projects in the government.
- Supervise the quality of the training programs delivery.
- Provide trainings for subjects not yet covered, e.g. Agile Development and User-Centered Design
- Manage and disseminate knowledge e.g. webinar archives by Community of Practices



source:
<https://www.gov.uk/government/groups/gds-academy>
<https://digital.gov/digitalgov-university/>

To supplement the critical competencies, a pool of proficient professionals needs to be made available to the government

D

Digital Government Mission Team

Organize special task force of professional centrally hired by the government ...

... to **flexibly move** from one project to another in short to medium term assignments ...

... which will **solve critical Digi-Gov implementation problem** while working with and empowering civil servants with whom they are interacting.

For example, to respond to the COVID-19, the special task force could be deployed to produce digital solution to facilitate a better delivery of social assistance in the national level, similar to JDS and JSC platform in the provincial level.



source:
<https://corona.jakarta.go.id/id/informasi-bantuan-sosial>



source:
<https://bansos.pikobar.jabarprov.go.id/>



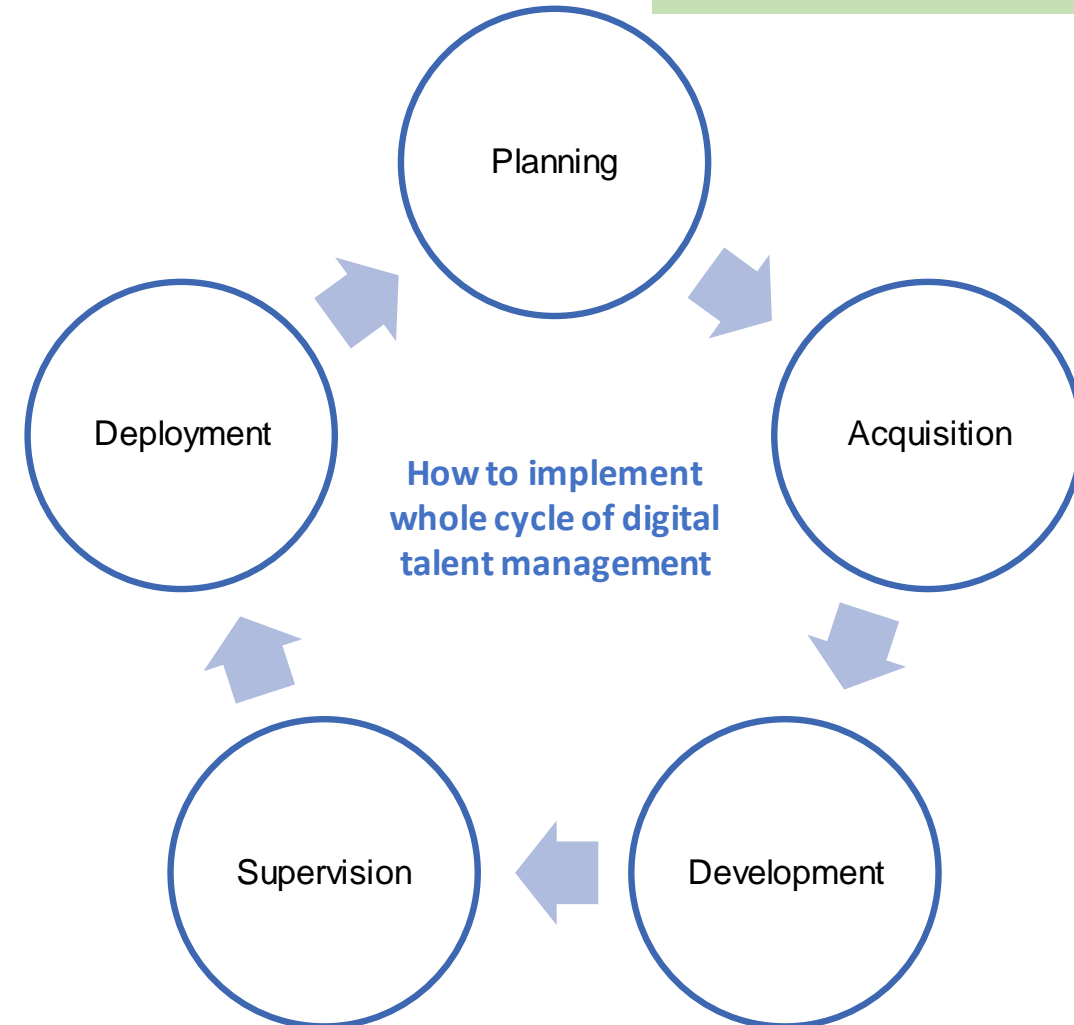
source:
<https://republika.co.id/berita/qbv0r0354/kpk-terima-303-laporan-keluhan-penyaluran-bansos-covid19>

As the basis to create a sustainable ecosystem, a regulation pertaining to HR management in the context of Digital Government operationalization should be comprehensively constructed

E

Regulation for Human Capital in Digital Gov.

- Streamline key actors in every stages of digital talent managements especially in the stewardship, recruitment process as well as trainings and development
- Compensation system both monetarily and non-monetarily
- Methods to supplement missing critical competencies
- Development of digital literacy and leadership for both ASN in ICT as well as non-ICT roles:
 - Promote making digital leaders
 - Development of skillful ICT professionals



Conclusion

- Digital literacy and leadership in the civil service are the **main challenges** to achieve successful government digital transformation
- To recruit qualified ICT talents, **the government has to rebrand** itself as an organization with strong commitment and solid leadership to embark on challenging and impactful digital projects
- The government has to revolutionize their **digital competency framework**. This includes redefining ICT specialists job family model to caters contemporary roles and a better compensation system including non-ICT and leaders (e.g. *Pranata Komputer* needs to allow more specializations)
- To ensure the availability of skills and competencies, **an integrated digital academy** will provide a platform to facilitate knowledge sharing and easy supervision of training needs and availability
- Last but not least, as the basis to create the supporting ecosystem, an **overarching policy** on digital literacy and leadership development in the civil service needs to be issued (as mandated by PR 95/2018).

Thank You