



ڦوسٽ ڪٽڻسان اِي-ڪراجان
E-GOVERNMENT NATIONAL CENTRE
MINISTRY OF TRANSPORT AND INFOCOMMUNICATIONS
BRUNEI DARUSSALAM

Accelerating Digital Government Transformation

E-Government Ranking, Digital Transformation, Sustainability,
and Workforce Development

E-Government National Centre

Ministry of Transport and Infocommunications, Brunei Darussalam

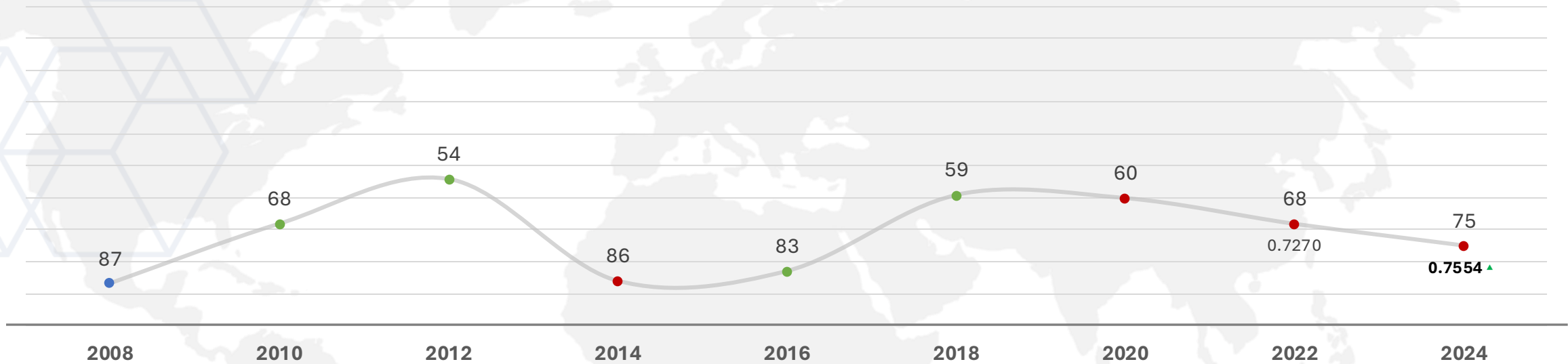
Topics

- 1** E-Government Landscape
- 2** Accelerating Digital Transformation Efforts
- 3** IT Workforce Development Frameworks

Section 1

E-Government Landscape

Brunei's Overall Ranking



E-Government Development Index












Year	OSI	HCI	TII
2020	0.6353	0.7605	0.8209
2022	0.5871 ▼	0.7567 ▼	0.8372 ▲
2024	0.5802 ▼	0.6991 ▼	0.9868 ▲

Environmental Performance Index

Year	Rank	Index
2020	100	0.5476
2022	81 ▲	0.4773 ▼
2024	94 ▼	0.4658 ▼

E-Government Development Index 2024

ASEAN + Japan

Country	Global Rank	Rank Change	EGDI
 Singapore	3	▲ 9	0.9691
 Japan	13	▲ 1	0.9351
 Thailand	52	▲ 3	0.8351
 Malaysia	57	▼ 4	0.8111
 Indonesia	64	▲ 13	0.7991
 Vietnam	71	▲ 15	0.7709
 Philippines	73	▲ 16	0.7621
 Brunei Darussalam	75	▼ 7	0.7554
 Cambodia	120	▲ 7	0.5754
 Myanmar	138	▼ 4	0.5001
 Lao	152	▲ 7	0.4404

Very High

High

Medium

Key Observations

1

Updating Legacy Systems

Compatibility and integration: Difficulty in integrating with new systems and complex data migration.

Vendor dependence: Reliance on legacy vendors limit flexibility, increase costs to maintain and make modernisation harder.

2

Skilled Talent Shortage

Lack of skilled personnel: A shortage of IT professionals with the expertise to develop, implement, and maintain e-government systems.

Talent retention: Retaining skilled professionals in the ICT sector is essential for sustained growth.

3

Insufficient Policy and Regulatory Framework

Lack of clear e-government strategy: leading to inconsistency and inefficient development efforts.

Regulatory barriers: Restrictive regulations can hinder development and adoption of e-government services.

4

Ecosystem for Rapid Development

Lack of standardised tools and platforms: Establishing a unified ecosystem for developing and deploying government applications is critical to deliver efficient, secure, and citizen-centric services.

5

Security Concerns

Cybersecurity threats: A high risk of cyberattacks can deter governments from investing in e-government services.

Data privacy concerns: Concerns about data privacy and security can hinder the adoption of e-government services by citizens.

6

Digital Literacy and Adoption

Digital literacy: There is a need to enhance digital literacy and encourage the adoption of digital services across all demographics to fully leverage e-government initiatives.

Section 2

Accelerating Digital Transformation Efforts

Improvement Strategies



Strengthening Governance

- Strengthened good governance, inclusivity, and security, the Framework emphasizes the importance of leveraging digital technologies to enhance public services delivery, promote inclusivity, and achieve the Sustainable Development Goals (SDGs).
- Closing digital skills gaps, expanding digital access, investing in infrastructure, and leveraging technology and data to improve policymaking.



Emerging Technology

- Fostering technology leadership, enhancing digital infrastructure, and maintaining cybersecurity and data protection standards.
- Creating a digitally advanced and inclusive society by leveraging technology and focusing on citizen centered services.
- Deploying cutting-edge technologies like Cloud Computing, AI, IoT, AR/VR, robotics, 3D printing, Blockchain, Big Data, 5G, and Smart Cities.



Collective Efforts

- Integration of cutting-edge technologies in public services.
- Improve local e-government and support digital transformation at the national level.
- Improve inclusive digital development, ensuring that online services are accessible, affordable and user-friendly and benefit all segments of society.
- Enhancing digital services and public engagement.



Flagship Digital Projects

- Several key projects have been identified that cover a wide range of areas including one-stop Gov portal, national business service platform, digital payment hub, records management, data analytics, and data exchange.

Flagship Digital Projects

On track to launch starting this year



Digital ID

- Authenticates user in digital spaces
- Combines personal and biometric data
- Secure, verified access to government services



One-stop Gov Portal

- Super app
- Low code platform
- Development of digital services
- Form builder



Business Services Platform

- Consolidated business platform
- Integrated workflow
- Accelerate business processes
- Scalable platform



Digital Payment Hub

- Multiple payment systems integration
- Make instant in country payment
- Cross-border operation



Records Management

- Internal communication
- Managing correspondences
- Digitization (scanning) with optical character recognition (OCR) capabilities



Data Analytics

- Dashboards
- Reports
- Predictive analysis
- Prescriptive analysis



Data Exchange

- Facilitate data integration
- Logging transactions
- Monetize data

Key Efforts in Digital Transformation

Advancing digitalisation, green and sustainable initiatives



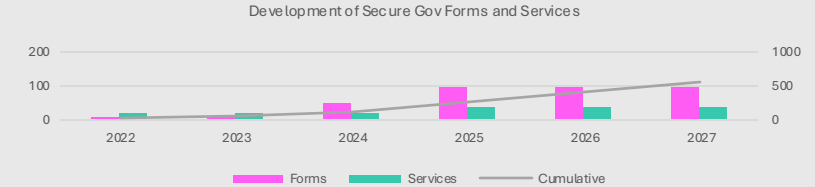
Consolidation of Digital Ecosystem

- Through this, number of legacy servers would be reduced and promote reusable microservices.
- Eliminate duplication of efforts and promote shared resources.



The Government Form Builder (FormBN)

- Initiative to accelerate the digitisation of secure government forms.
- Similar to Singapore’s FormSG and Cambodia’s FormKH, FormBN is targeted to launch in March 2025.



Shift to Hybrid-Cloud Approach

- Migration of some production workload while balancing CapEx and OpEx, with public cloud handling temporary or unpredictable resource demands.
- Support gradual migration, integrating legacy systems with cloud-native solutions.
- Enable rapid development and testing while benefiting from advanced cloud-native services.



Green IT and Sustainability

- Adopt hybrid cloud solutions to leverage energy-efficient external cloud providers.
- Procure energy-efficient equipment certified by standards like Energy Star or EPEAT.
- Monitor and optimise energy usage through tools like Data Center Infrastructure Management (DCIM).
- E-waste management through programs run by government and private companies.

Brunei Digital Government Blueprint (BDGB)

Rebranded Revision of Brunei Government Enterprise Blueprint (BGEB)

Overview of **BDGB**

- Represents a whole-government enterprise architecture designed to facilitate interoperability and integration of IT systems across different agencies
- Defines technical standards, commonly used data, and IT application systems
- Ensures seamless communication and collaboration between agencies
- Allows citizens, residents, and commercial establishments to experience the convenience of integrated government services

Objectives

Ability to identify government-wide opportunities for consolidation and integration of IT systems

Aid discovery of common data required by different government agencies for sharing and exchange

Guide prioritisation and alignment of government-wide IT projects and initiatives to government functions

Components

Business Reference Model

Data Reference Model

Application Reference Model

Technical Reference Model

Key Factors



Improve EGD Ranking

Aspire to be ranked at Top 40 by 2030



Increase citizen services

Boost the effectiveness of government services to the citizens



Foster Opportunities

Emerging technologies, potential for innovation, and sustainability

Technical Reference Model (TRM)

Brunei Digital Government Blueprint (BDGB)

Key Elements

- 1 Layered Architecture**
 TRMs usually divide the architecture into layers, each representing different aspects of the technical environment.
- 2 Standards and Guidelines**
 Provides a set of standards, guidelines, and best practices for the development and seamless integration of technology components.
- 3 Reusable Components**
 Identifies reusable components and services that can be used across different projects and applications within the enterprise.
- 4 Interoperability**
 Ensures that various systems and technologies can interoperate, both within the enterprise and with external systems.
- 5 Scalability and Flexibility**
 The model supports scalability and flexibility, allowing the enterprise to adapt to changing business needs and technological advancements.
- 6 Security and Compliance**
 Incorporates security standards and compliance requirements to ensure the protection of data and adherence to regulatory guidelines.

Benefits



Consistency

Ensures a consistent approach to technical architecture across the enterprise



Efficiency

Promotes the reuse of components and services, reducing development time and costs



Alignment

Aligns IT infrastructure and applications with business goals and strategies



Interoperability

Facilitates interoperability between different systems and technologies



Scalability

Supports the scalability of IT systems to meet growing business demands



Security

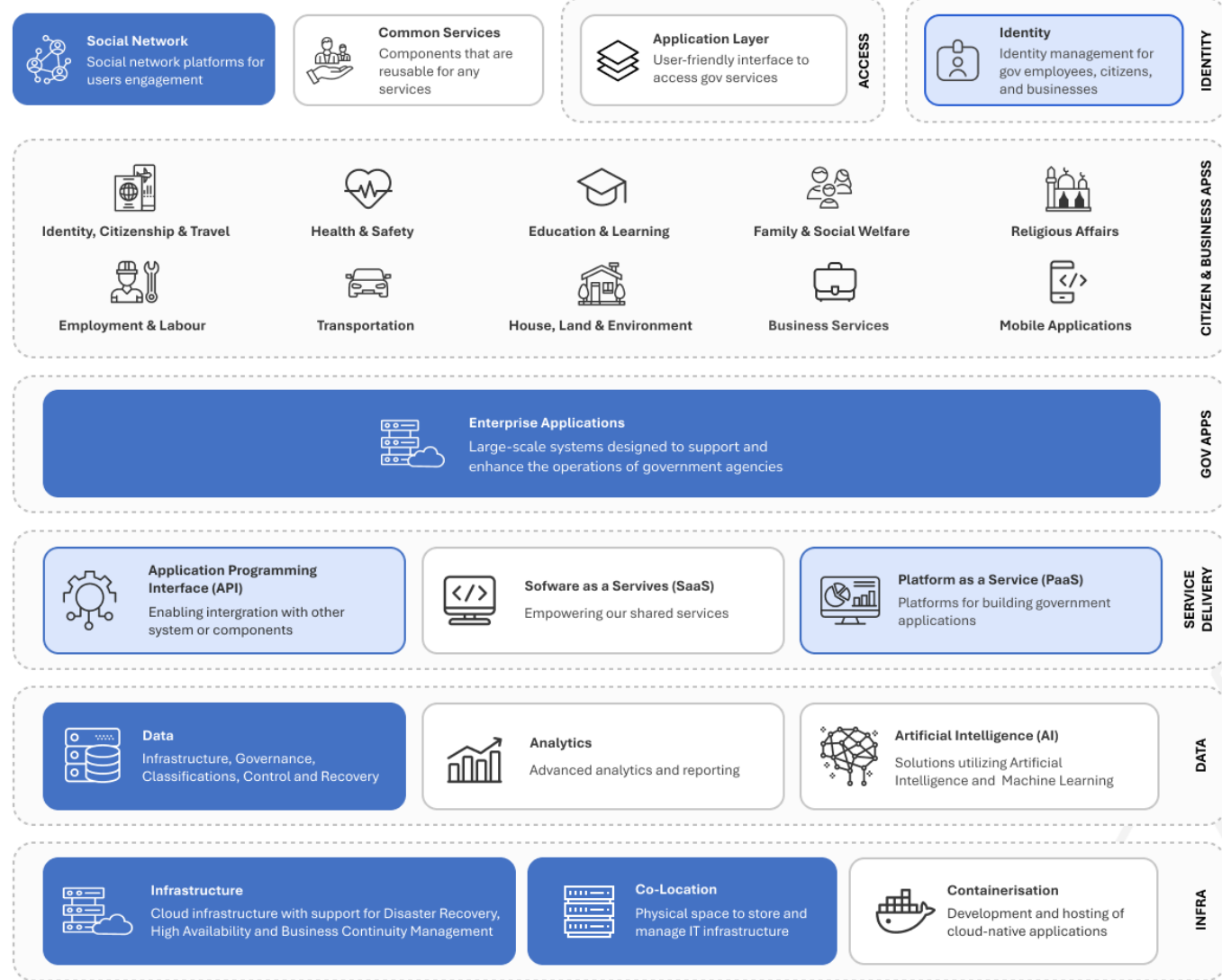
Ensures that security and compliance requirements are integrated into the architecture

The Technical Reference Model (TRM) outlines a structured framework for describing an enterprise's technical architecture. It acts as a foundation for designing, developing, and managing IT infrastructure and applications. Integrated within a broader enterprise architecture framework, the TRM ensures consistency, interoperability, and alignment with business objectives.

Digital Transformation Ecosystem and Technology Stack



CYBER SECURITY RESILIENCE
 Preparedness and resilience of critical infrastructure and services
 Risk Assessment, Vulnerability Assessment, Penetration Testing, Threat Intelligence and Detection, Incident Response

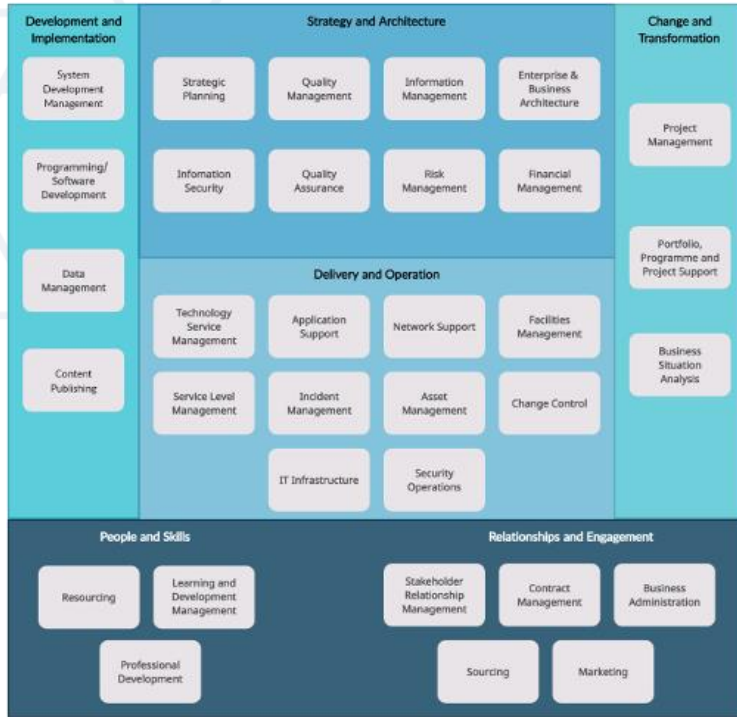


- In place
- Partial
- Upcoming

Section 3

IT Workforce Development Frameworks

IT Human Resource Development Frameworks



EGNC Competency Development Framework (CDF)

Applies to all Gov IT employees



Brunei ICT Industry Competency Framework (BIICF)

Covers the whole nation IT employees

EGNC Competency Development Framework (CDF)



What is it?

- The IT competences and job profiles framework
- Based on BCS SFIA Framework

Objectives

- Identify skill gaps that need to be addressed
- Build up ICT human resource to be IT professionals
- Better prioritize development needs now and into the future
- Develop clear career pathways for ICT Professionals

Alignment to IT Scheme of Service

Chiefs/Specialists

Level 7

Set strategy, inspire, mobilise

HOD/DTL

Level 6

Initiate, influence

Manager

Level 5

Ensure, advise

Analyst

Level 4

Enable

Administrator

Level 3

Apply

Assistant Administrator

Level 2

Assist

Support

Level 1

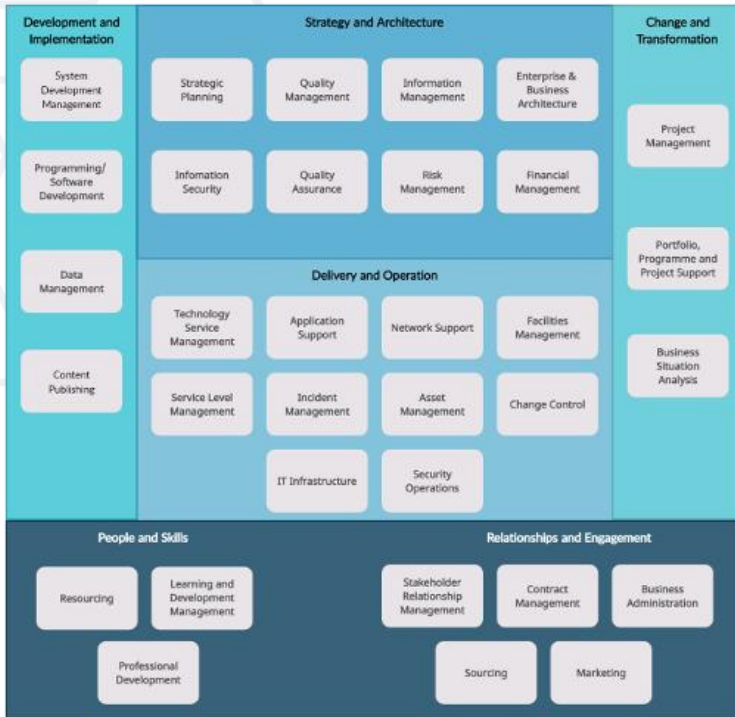
Follow

How is CDF being used at EGNC?

Current Application

- Helps EGNC HR to align deployment and development of EGNC staff accordingly.
- Stay relevant: reflects the evolving reality of skills and competencies practiced in the real-world working environment.

EGNC Manpower

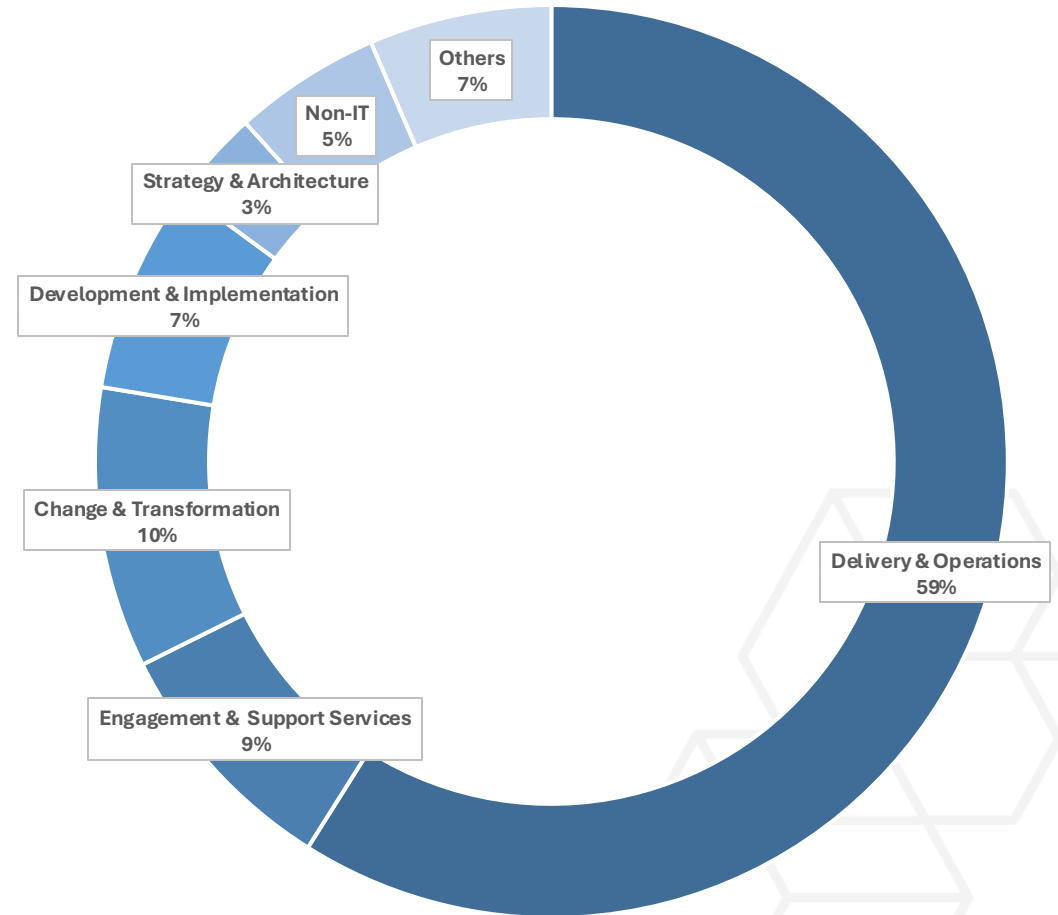


6 Job Profiles, 33 Job Roles

All Gov IT employees are mapped

- Majority manpower allocated to support EGNC Shared Services (under Delivery & Operations)
- 26 identified Project Managers allocated to support all Ministries & Higher Education Institutions (HEIs).

Manpower Distribution



Brunei ICT Industry Competency Framework (BIICF)



A structured guide developed to standardize and enhance the skills and competencies required within the Information and Communication Technology (ICT) sector in Brunei.

It aims to align the workforce's capabilities with the country's goals of fostering digital transformation, economic diversification, and building a knowledge-based economy.

 Launched 3 August 2022

Key Objectives



Skill Standardisation

Provides a clear competency structure for ICT professionals across different roles and levels.



Career Pathway Development

Helps individuals map their career progression in the ICT industry by defining the skills and expertise needed at various stages.



Alignment with Industry Needs

Ensures that the competencies outlined match the current and future demands of Brunei's ICT sector.



Guidance for Training Providers

Assists educational institutions and training providers in designing courses and certifications aligned with industry requirements.



Support for National Goals

Contributes to Brunei Vision 2035 by strengthening the ICT workforce to drive innovation and economic growth.

ICT Industry Sub-Sectors

1

IT Services

2

Telecommunications
and Network

3

Applications and
Solutions Development

4

ICT Security

5

Digital Media

6

Data and Artificial
Intelligence