



BRUNEI DARUSSALAM

مڤتريڤ قعقكوتڤ دڤڤ اڤفوكومونيكاسي  
**MTIC** MINISTRY OF  
TRANSPORT AND  
INFOCOMMUNICATIONS

# IR 4.0: Enabling Integrity in Digital Government?

19 November 2019 | HPA 26 Civil Service Conference

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Petikan Titah  
Kebawah Duli Yang Maha Mulia  
Paduka Seri Baginda Sultan Haji Hassanal Bolkiah  
Mu'izzaddin Waddaulah ibni  
Al-Marhum Sultan Haji Omar 'Ali Saifuddien  
Sa'adul Khairi Waddien,  
Sultan dan Yang Di-Pertuan of Negara Brunei Darussalam

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# One

“.... Tidak dapat disangkal lagi, Perkhidmatan Awam adalah merupakan jentera penggerak kerajaan dalam membangun negara bagi kesejahteraan rakyat. Ia bukan sahaja untuk masa ini, malahan juga untuk kepentingan jangka panjang.

Perkhidmatan Awam berperanan menandai tanggungjawab besar untuk masyarakat. Ia perlu mempunyai usaha atau inisiatif bagi kemanfaatan masyarakat secara langsung.

Beta ingin menekankan di sini, bahawa amanah adalah wajib diamalkan oleh setiap warga Perkhidmatan Awam. Tidak ada maknanya berkhidmat tanpa amanah. **Amanah adalah ‘tiang seri’ keadilan.** Rakyat mesti dilindungi dan dibela dengan keadilan. Inilah ajaran ugama kita....”

12 November 2019 | Petikan Titah Sempena Hari Perkhidmatan Awam Kali Ke-26



“....Beta suka mengingatkan bahawa apa pun rancangan untuk memajukan Perkhidmatan Awam, sama ada didalam bentuk pelan strategik atau pelan pembaikan berterusan, maka kita adalah mustahak untuk memastikan bahawa perkara-perkara yang asas dan utama tidak diabaikan. Diantara perkara tersebut adalah seperti kedatangan, komitmen, dedikasi, disiplin dan **integriti**. Jika perkara-perkara ini tidak ada atau kurang mantap, maka **apa pun usaha untuk pembaharuan pengurusan dan teknologi**, tidak akan berhasil. Inilah nilai-nilai yang mesti dimiliki dengan sempurna. Kerana ia merupakan intipati pengurusan dan sumber tenaga manusia.....”

21 Oktober 2010 | Petikan Titah Sempena Hari Perkhidmatan Awam Kali Ke-17

“....Selain kita perlu memperkasa sifat-sifat jati diri ini, warga Perkhidmatan Awam juga mustahak menguasai kemahiran-kemahiran pengurusan moden, seperti penggunaan scorecard, **penggunaan teknologi maklumat**, penyeliaan dan lain-lain.....”

21 Oktober 2010 | Petikan Sempena Titah Hari Perkhidmatan Awam Kali Ke-17

“....Respon terhadap revolusi (IR4.0) tentu saja melibatkan semua pihak yang berkepentingan sama ada oleh sector awam, swasta dan malah seluruh masyarakat, termasuk para akademik dan graduan untuk berganding bahu menggerakkan pembangunan *knowledge-based*....”

29 Ogos 2018 | Petikan Titah Sempena Konvokesyen UBD Ke-30

# Definition of Integrity Two

# definition of Integrity

## Cambridge Dictionary:

“...the quality of being honest and having strong moral principles that you refuse to change....”

Fordham Law Review Volume 72/Lloyd Weinreb – Integrity in Government, 2003

- John Rawls identified the virtues of integrity as "**truthfulness and sincerity, lucidity and commitment.**"
- Few disagree that integrity is one of the qualities most to be valued in public officials.



# Integrity & Public Service

- Only government can set the rules to preserve the quality, integrity and accessibility of truly public services in the government as a platform world. Government leads, partners and let happens.  
**Thus, the need to ensure high ethical standards.**



# Traditional Role of Civil Service in Government and Public Service

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## Three

# Civil Service Role

## [Civil Service 21<sup>st</sup> Century]

### Civil Service Role 1 – Government's Administrative Machinery

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- Uphold Supreme Authority of His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam
- Uphold National Philosophy Malay Islamic Monarchy
- Development of the Country
- Welfare of the People

### Civil Service Role 3 – Facilitator Moderniser Thinker

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- Facilitate Public Dealing with Government / Improve and Upgrade Service Quality / Moderniser / Educated, creative and innovative officers / Thinker / Provide ideas, constructive and positive plans

### Civil Service Role 2 – Traditional Role's of Government

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Law Enforcer / Regulator / Service Provider / Peacekeeper

- Engine of national development programs and formulator of policies to improve the quality of life for citizens as well as to ensure peace, prosperity and stability of the nation;
- Driven by the 3 main goals of Brunei vision 2035 – High Quality of Life, Highly Skilled People and Sustainable Economy – **the civil service needs to be progressive, adaptable and forward-looking.**

# Public Services





# Brunei Darussalam's 21<sup>st</sup> Century Civil Service Vision - *Rukun Akhlak dan Etika Perkhidmatan Awam*

## Four

“Untuk Menjadikan Perkhidmatan Awam Negara Brunei Darussalam yang sentiasa membangun dan berusaha dengan gayanya tersendiri menurut calak Islam dalam persekitaran yang sihat dan selamat di bawah inayah dan petunjuk Allah Subhanahu Wata’ala”

- Bersih, jujur, dan amanah amalan mulia
- Cekap, cepat dan Tepat Tuntutan Kerja
- Titih, lutan dan menghargai masa asas kejayaan
  - Berilmu, kreatif dan inovatif asas kebaktian
- Beriltizam, keterbukaan dan akauntabiliti mengukuhkan keberkesanan
  - Sabar, tabah dan bersopan santun amalan terpuji
- Meningkatkan produktiviti dan daya saing menambah penghasilan
  - Qudwah dan Qiadah Teladan Kepimpinan
- Setia kawan, Syura dan Bermuafakat membawa berkat
  - Berjimat Cermat asas kemakmuran
  - Pemedulian asas perpaduan

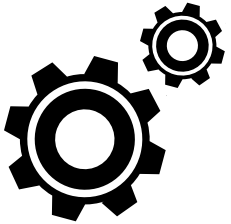
# Global Trends in Technology & Government

## Five



## Industry 1.0

Water and steam power is used to create mechanical production facilities



1800

1784: First mechanical loom

## Industry 2.0

Electricity lets us create a division of labour and mass production



1900

1870: First assembly line

## Industry 3.0

IT systems automate production lines further



2000

1969: First programmable logic controller

## Industry 4.0

Artificial Intelligence (AI), IOT, cloud technology automate complex tasks



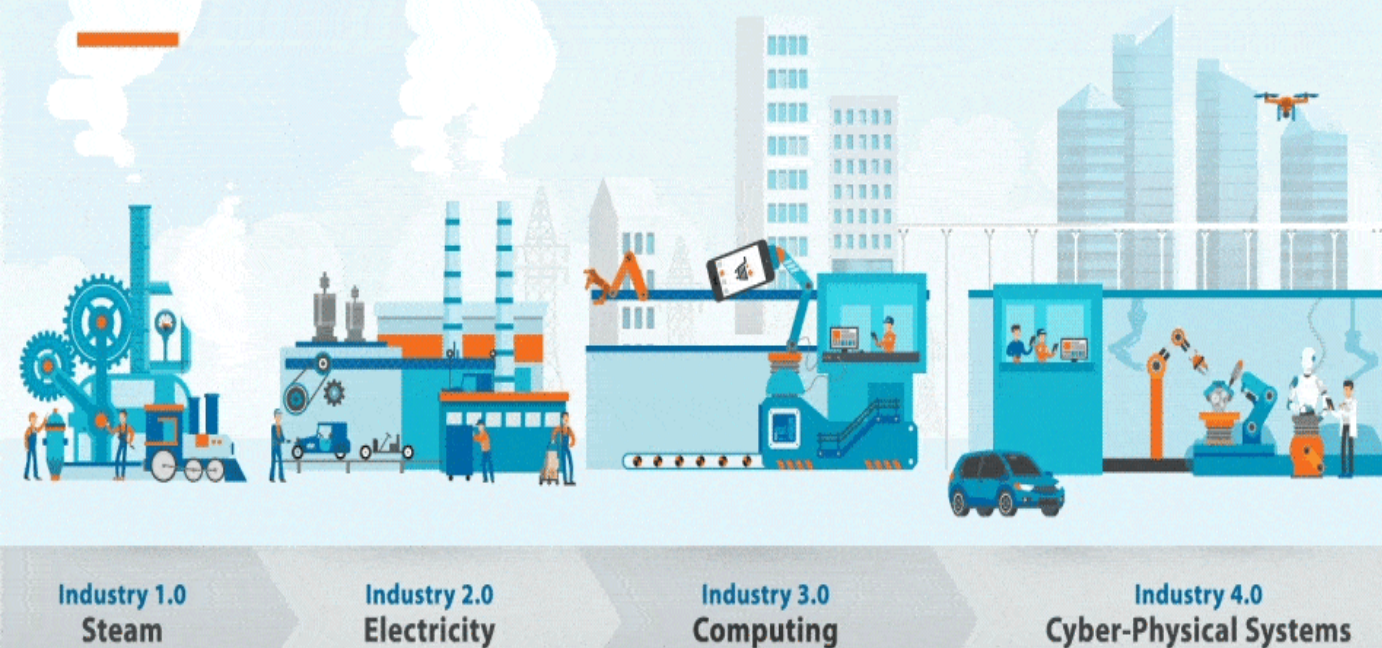
Today

The **future economy** will see economic activities transiting in the **digital economy**, where **digital technologies based on Industry 4.0** will form the basis of the activities.

As the world is undergoing digital transformation, **transforming Brunei Darussalam into a “Digital Economy”** is becoming one of the important agenda for the country’s economic growth and social prosperity.

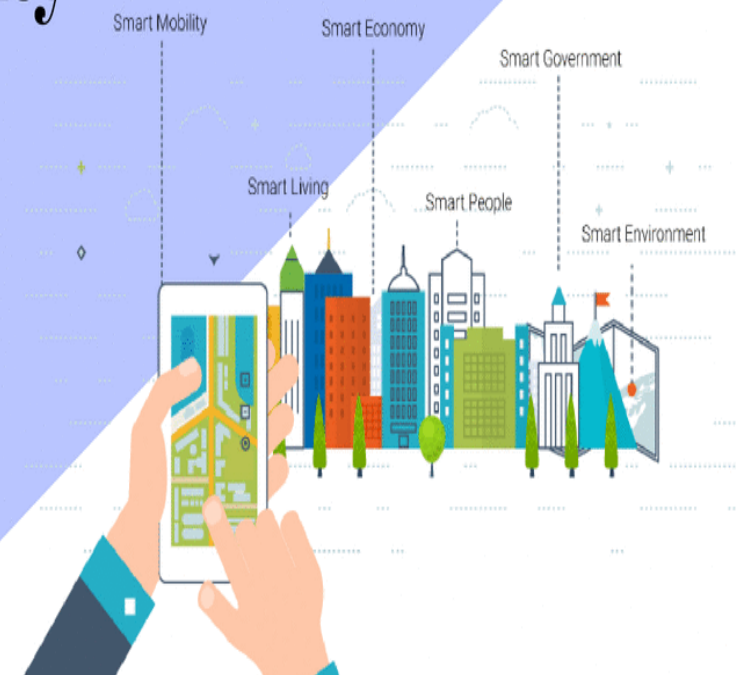
# 4<sup>th</sup> Industrial Revolution?

What is the  
**Fourth Industrial Revolution?**



Source: [innovate.ieee.org](http://innovate.ieee.org)

## Components of a "Smart City"



# Global Trends in Government

## Technological

- New technologies rapidly (exponential growth) emerging – eg artificial intelligence, machine learning and myriad others...
- Mobile phone access expanding
- Explosion of data (...but data literacy?)

## Political

- People's expectations of governments have been and continue to rise





## Economy

- Changing aspirations amidst economic uncertainty
- Circulating Talent
- Digital Barons and Talent Superhubs
- Innovating Platforms
- People as Businesses



## Technology

- Human Augmentation
- Human Substitution
- Info-Flows - Control and Opportunities
- Future of Internet

## Driving Forces



## Society

- Ageing Population
- Changing Texture of Society
- National Identity
- Urban Governance
- The Lived Experience



## Environment

- Changing Global Order
- Climate Change and the Global Carbon Regime
- Evolution of the Water – Energy – Food – Land Nexus
- Overruled Globally



## GOVERNMENT TRANSFORMATION



Administrator



Service Provider



Facilitator



Collaborator



# Brunei Darussalam's Current Digital Landscape

## Six


# Digital Accessibility



Brunei Muara 99%  
Belait 93%  
Tutong 80%  
Temburong 66%



134%



88%



61%



76%



95%



42%

## Businesses Capitalize ICT Fully

Preliminary Findings from Brunei Darussalam ICT Household & Business Survey 2018, AITI  
E-Commerce Survey for Consumers 2018, AITI

# Progression Towards Digital Government in Smart Nation

# Seven



# WHAT is Smart Nation?

Using technology to achieve significant transformation in the areas of Economy, Government and Society

#1

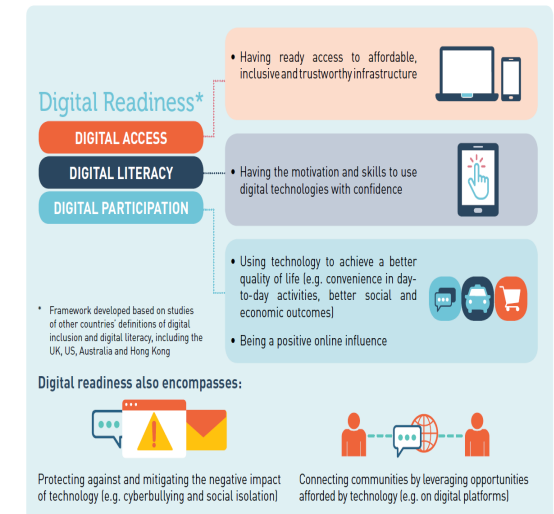
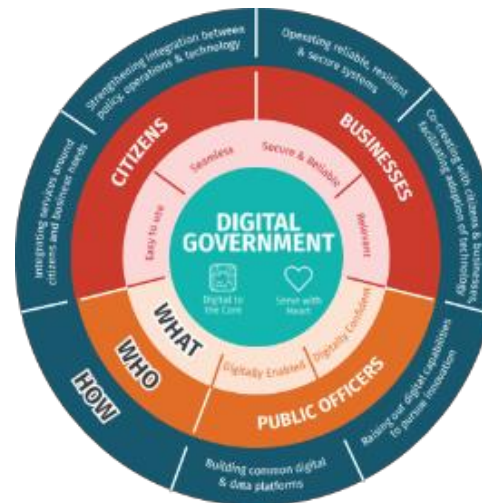
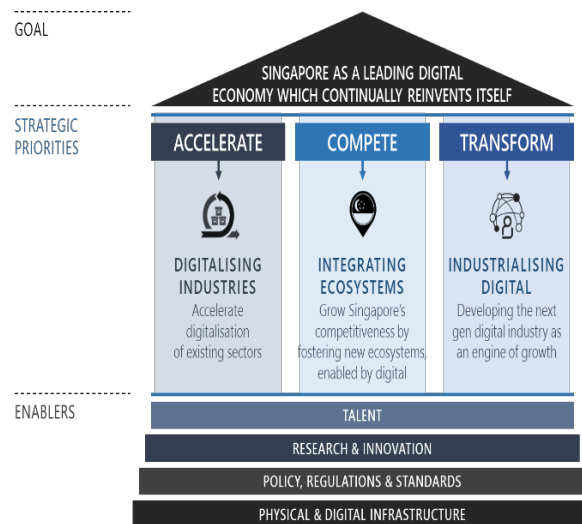
DIGITAL ECONOMY

#2

DIGITAL GOVERNMENT

#3

DIGITAL SOCIETY

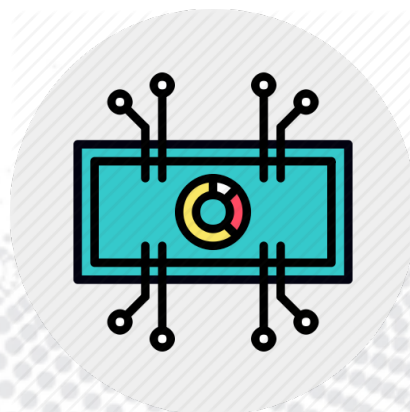


# Pillars Of SMART NATION

Digital Government

gov  
.bn

Digital Economy



Digital Society



AITi: Roadmap Towards Initiating Smart Nation Vision for Brunei Darussalam (2017)

‘... vibrant and diversified economy...’

“... improved competitiveness and economic growth by developing infrastructure, innovation, data capability, human capital and other resources...”

“... improved quality of life, public services, schools, safety, mobility of people and to achieve environment sustainability...”

Singapore: Smart Nation - The Way Forward (2018)

‘... where people will be more empowered to live meaningful and fulfilled lives, enabled seamlessly by technology, offering exciting opportunities for all..’

“... businesses can be more productive and seize new opportunities in the digital economy...”

“... a nation that collaborates with our international partners to deliver digital solutions and benefit people and businesses across boundaries...”

# Progression Towards Digital Government

## ANALOGUE GOVERNMENT

Closed operations and  
internal focus, analogue  
procedures

## E-GOVERNMENT

Greater transparency and  
user-centred approaches,  
ICT-enables procedures

## DIGITAL GOVERNMENT

Open and user-driven  
approaches, process and  
operational  
transformations



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# Digital Transformation in Civil Service

# Eight



# New Forces Shaping Government Services

Rising Customer  
Expectations, Fiscal  
Pressures, New  
Technologies

Rising Customer  
Expectations – Cutting  
Edge Service Delivery,  
Customer-Centricity

Demand on 'New Era' of  
Innovative and Connective  
Civil Service Delivery

# What is Government Digital Transformation?

**From:**

- As Service Provider
- Institution Centric
- Compliance
- Risk Avoidance
- Standardisation
- Out of Network
- Analog First
- Dogma Driven
- Tried and True
- Solution Focused
- Reactive

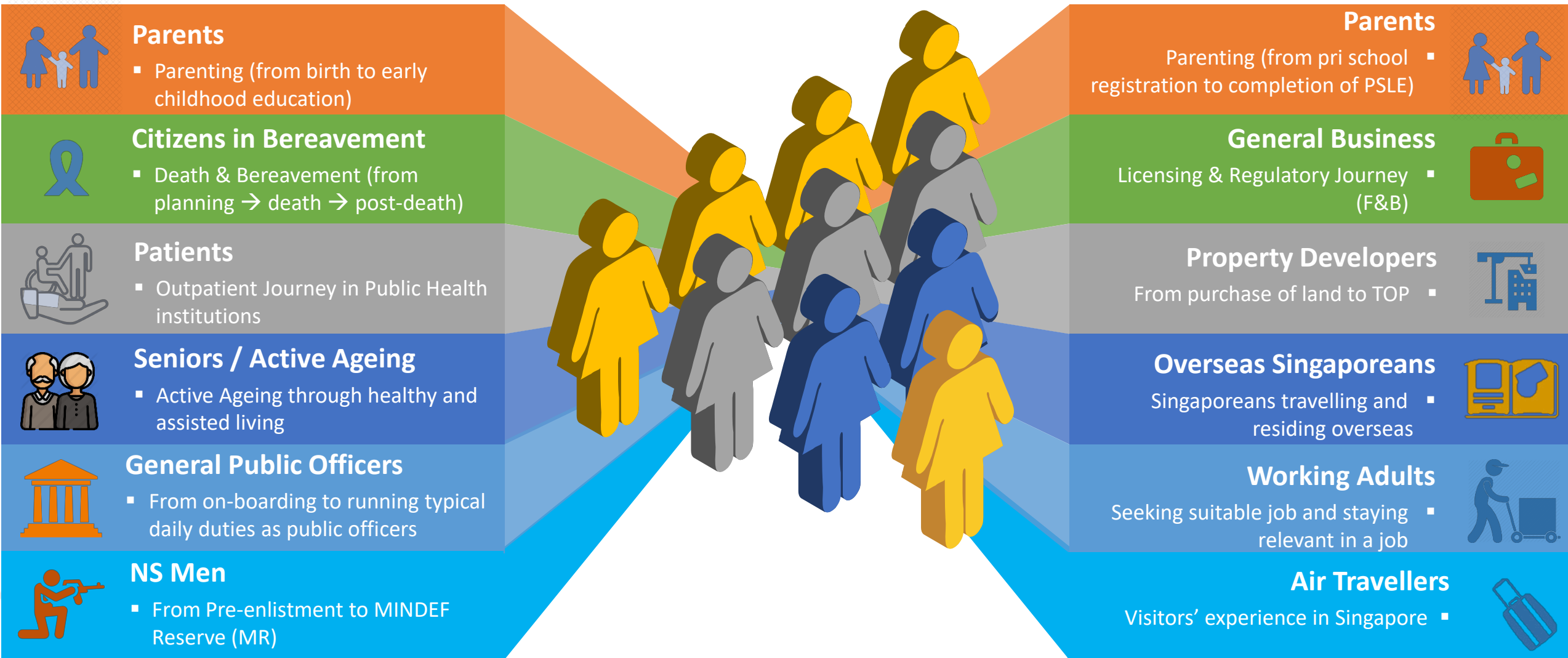
**To:**

- As Platform
- Citizen Centric
- Results
- Risk Management
- Personalisation
- In Network
- Digital First
- Data Driven
- Experimentation & innovation
- Problem Focused
- Proactive

## Change Implications:

- Mandate & Purpose
- Organisation
- Expectations
- Incentives
- Talent & Capacity
- Trust
- Transparency
- Accountability
- Anticipatory
- Agility
- Technology

# Putting the citizen at the centre



# Concept of Digital Government

# Nine



# Why Digital Government?

Why Digital Government?

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.bn



Clear Links Between Digital Transformation & Economic Growth



Fulfilling Higher Citizen Demands



New Service models for forward-looking governments

# Why Digital Government?



1. To create public value
2. Relies on a digital government ecosystem including individuals and government and non-government actors
3. Supports the production of and access to data, services and content

Focusing on these phrases, a simpler definition of digital government : digital government refers to the production and access to data, services and content, sourced and distributed across the digital ecosystem, to create public value.

# Brunei's Digital Government Strategy



## A DIGITAL GOVERNMENT TO ACHIEVE WAWASAN BRUNEI 2035

- Digital Government Strategy 2015-2020 to improve online services – convenient, fast and accessible;
- Government processes and services transformed and continuously improved;
- Seamless flow of information across government. Citizens and businesses – greater transparency and better insights to informed decision-making

# Brunei's Digital Government Strategy



Six (6) programmes supporting Digital Government Strategy implementation



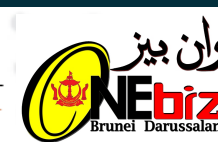
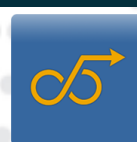
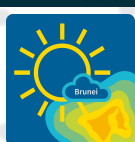
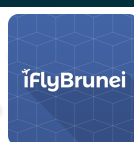
## 39 Government E-Services [36 End-to-End | 3 Partial]

 <b>Business and Finance</b> Eg. Application of import and export permit (BDNSW)	 <b>Transportation</b> Eg. Renewal of Driving and Vehicle License (SPD)	 <b>Health</b> Eg. Online health registration (BruHIMS)
 <b>Housing, Land &amp; Environment</b> Eg. Application of land transfer (LARIS) - <b>Partial</b>	 <b>Family &amp; Social Welfare</b> Eg. To book venues or sports facilities (12Book) - <b>Partial</b>	 <b>Employment &amp; Labour</b> Eg. Applying job vacancy online (Government and Private)
 <b>Immigration &amp; Travel</b> Eg. Register your travel abroad (E-Register)	 <b>Education &amp; Learning</b> Eg. Higher Education Centralised Admission System (Hecas) - <b>Partial</b>	 <b>Laws</b> Eg. Case file tracking

**gov.bn**  
 The official portal of the Government of Brunei Darussalam

665,348 Visitors  
 104,926 Registered

- What's coming.....
- database-as-a-service
  - One Common Billing System (OCBS)
  - Digital ID.



# Integrity in Digital Government

# Ten



# Challenges to Government

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# Eleven



# Governance Challenges



- How to really measure bureaucratic effectiveness, sector effectiveness, public administration and financial management



- Increasing adoption of mobile technology and social media EXPOSES GOVERNMENT PERFORMANCE limitations



- Integrated Government Information System
- Social media outreach



- Service Delivery Context



- Citizens expectations for services have increased because of consumer digital experiences



- Digital Transformation Strategy
- Business Process Re-engineering

# Transparency & Accountability



- Governance and Public Information



- Suspicion about political agenda and corruption amplified through social media and fake news



- Official Secrets Act
- Public Order Act
- Anti-Corruption Act
- Internet Code of Conduct
- Content Advisory Council



- Citizen and Public Conduct



- Failure of government to be proactive

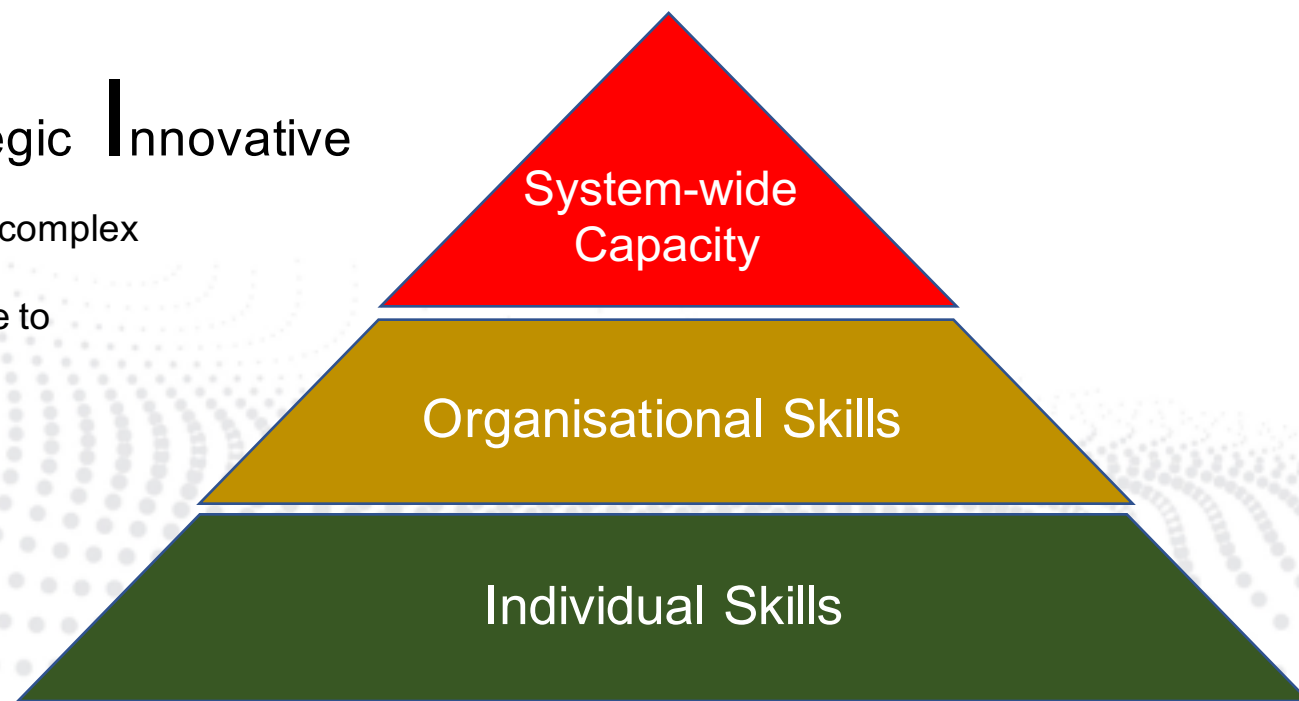


- Public Consultations
- E-portals
- Anti-corruption



## P Professional S Strategic I Innovative

- To address increasingly complex problems .....
- using new tools available to governments.....



## Other Emerging Challenges

- Personal Data Protection
- Digital Security
- Algorithms, Openness and Ethical Issues – Bias in Decision-making processes
- Misinformation and Fake News

# Promoting Integrity in Public Administration

# Twelve

# What Promoting Integrity Means

- Developing and maintaining an organisational culture or environment that supports ethical conduct;
- Focus on both the ethical conduct of individual employees and good organisational governance (i.e. performance and accountability).

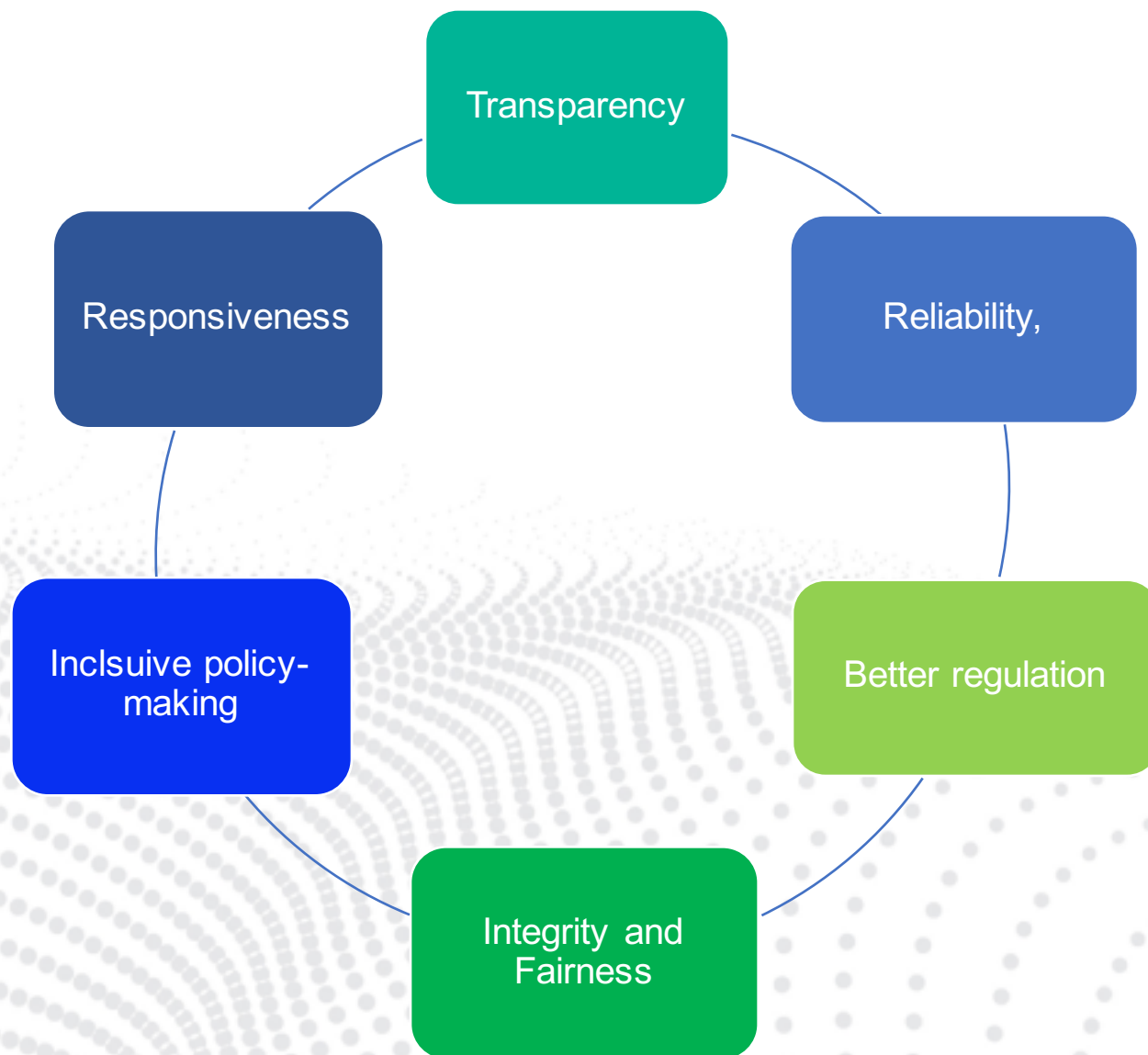
## Employee Integrity & Good Governance

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- Systems, Policies & Processes
  - Leadership
  - Organisational Culture
-



# Integrity To Remain Steadfast & Relevant to the Public



# What Do We Need to Do

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# Thirteenth

## What Do We Need To Do

- **Establish a vision** for digital government to better serve citizens, inspire civil servants and improve citizen interactions and engagement for greater trust in government
- Tackle reinvention in **manageable use cases** to mitigate risk and accelerate returns.
- **Improve the decision making** of civil servants for maximum impact and leaner operations .
- **Foster an adaptive culture** to continuously learn and iteratively improve.
- Attract and retain the workforce of the future

## Critical Success Factors

- Create citizen-centric services
- Embed digital insights within redesigned operations
- Lead culture change for restless reinvention
- Make digital architectural choices that ensure resiliency, security and responsiveness

# Benefits of A Smart Nation

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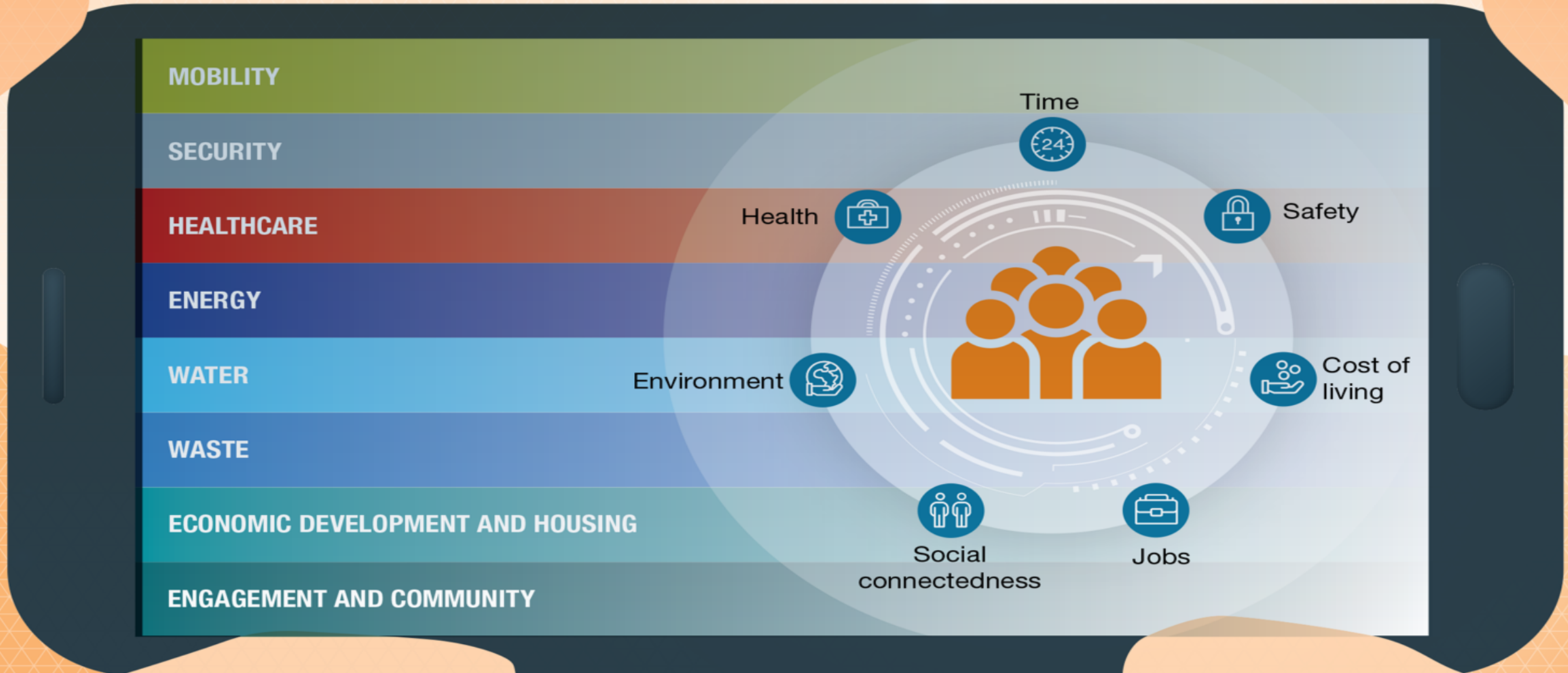
# Fourteenth





# Smart cities use data and technology to make better decisions.

Smart applications in eight domains affect multiple aspects of the quality of life



# The result?

A more efficient, responsive, and sustainable city . . .



... that delivers better outcomes for the people who call it home

**30–300**

lives saved each  
year in a city of  
5 million

**30–40%**

fewer crime  
incidents

**8–15%**

lower disease  
burden

**15–30**

minutes shaved  
off the daily  
commute

**25–80**

liters of water  
saved per person  
per day

**20–35%**

faster emergency  
response times

McKinsey Global Institute, June 2018 | Smart Cities: Digital Solutions For A More Livable Future

**MCKINSEY GLOBAL INSTITUTE**

McKinsey&Company

# Is Integrity Enabled by IR 4.0?

**Yes** • Towards Fulfilling Citizen Expectations  
• Data Connection affecting all aspects of our evolving digital society





# Emerging Integrity Questions?

## BIG Data

- Who vets the data, maintains and up-dates it to ensure it is useable and protected?
- Who regulates this data over and above a government's own open and big data management and ensures all data stakeholders are covered and protected?



Privacy



Cybersecurity



Fake News



Skilled Manpower

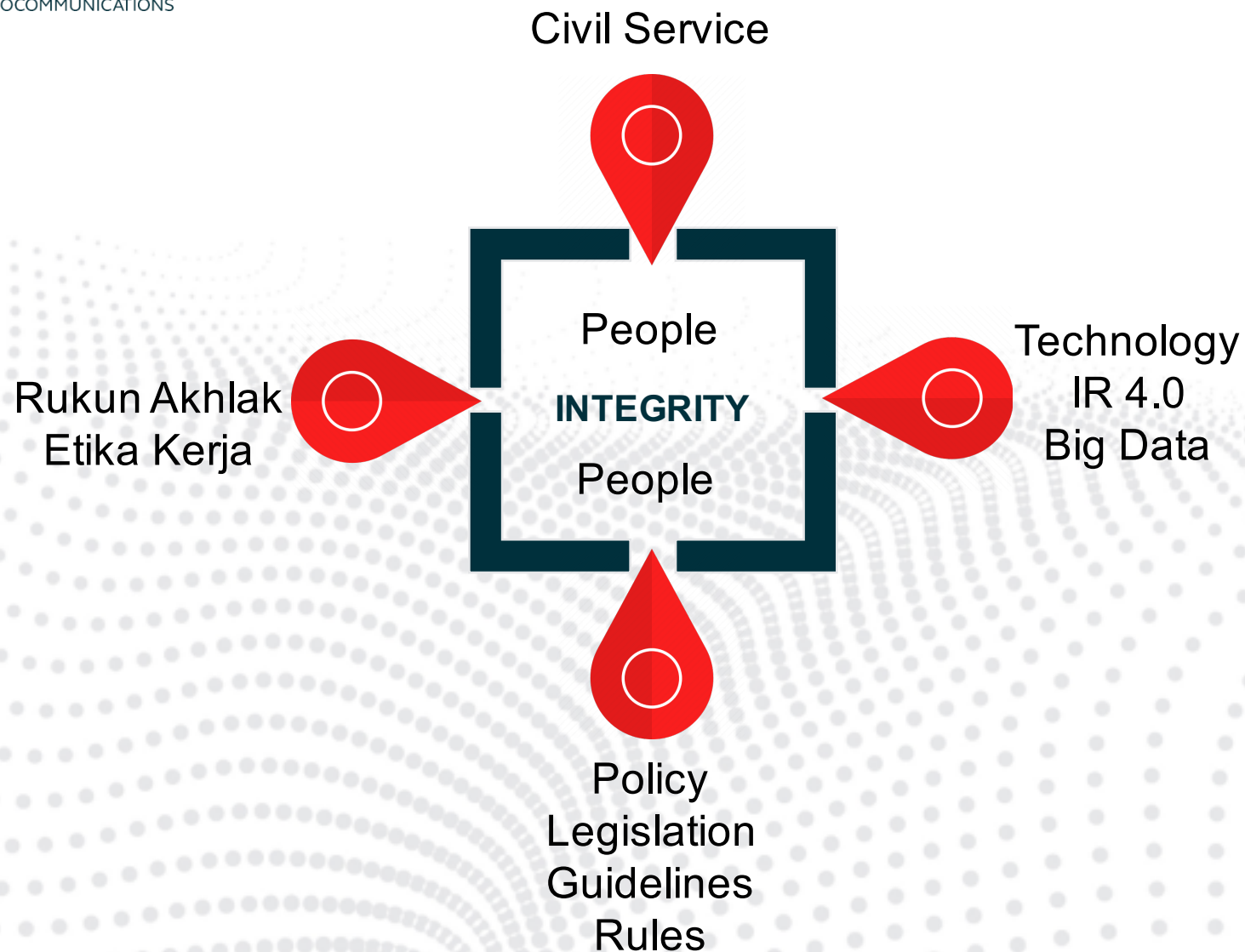


Infrastructure



Policy  
Laws  
Regulations







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