Kementerian PPN/ Bappenas

LADM FOR
NATIONAL DEVELOPMENT PLANNING
Data User Perspectives

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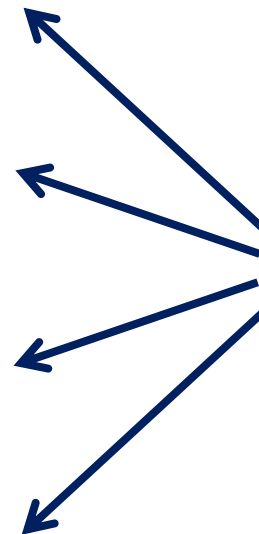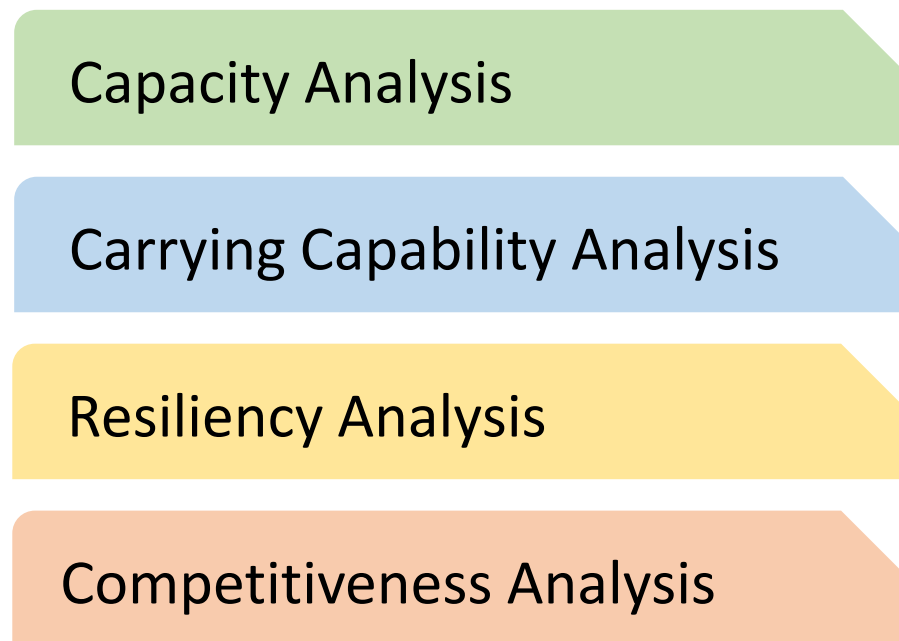
Republic of Indonesia

Wednesday, 25 September 2024

Introduction

Our Function, Services and Product

Using data for *Strategic Foresight*:

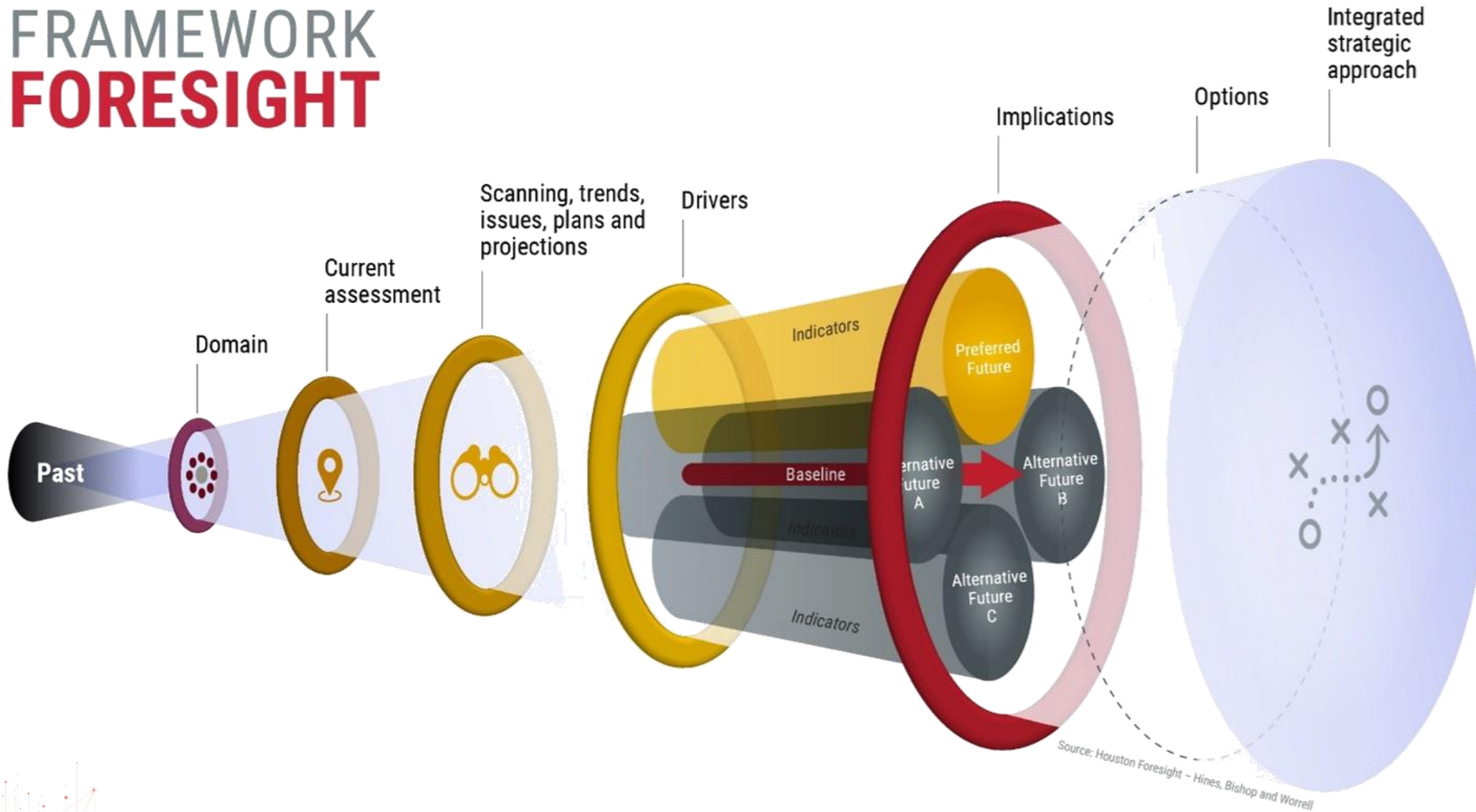- Capacity Analysis
- Carrying Capability Analysis
- Resiliency Analysis
- Competitiveness Analysis

BUDGET ALLOCATING

PLANNING

CONTROLING

ENABLING

Function, Services and Product

Source: Houston Foresight – Hines, Bishop and Worrell

Institutional Arrangements
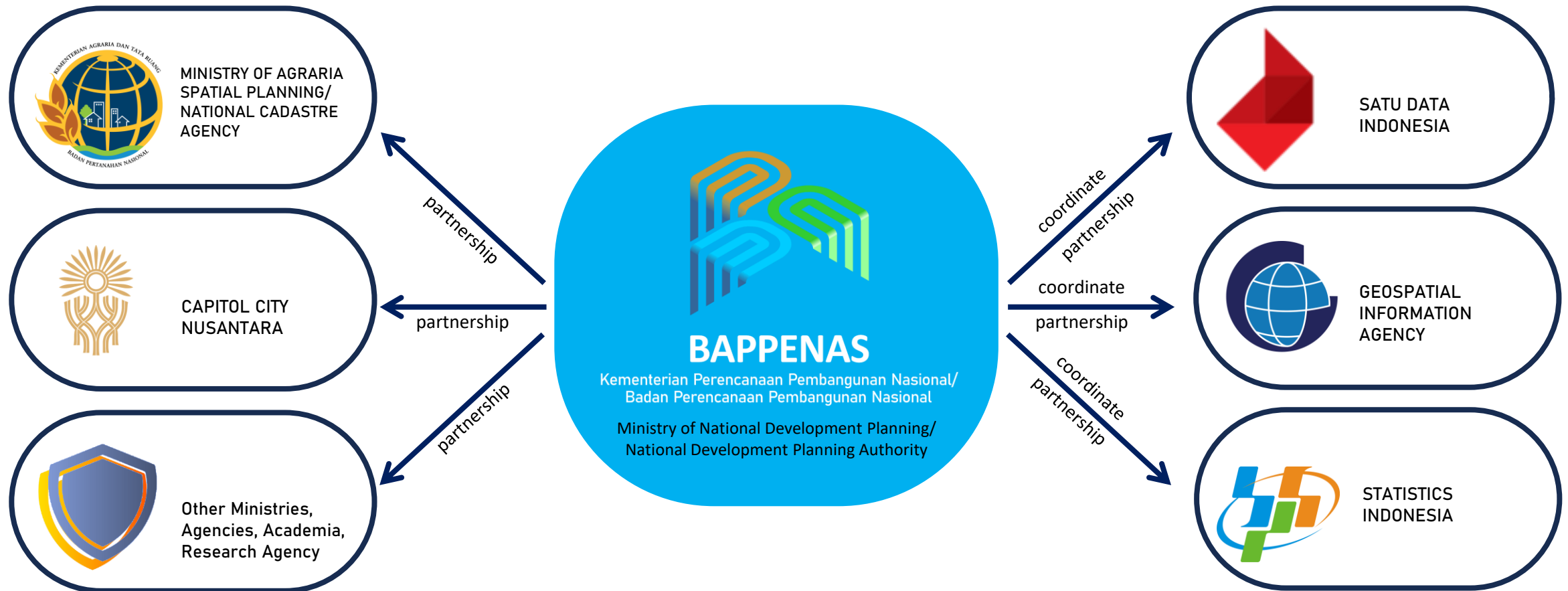
Recent Product: National Long-Term Plan (20 years)

Kementerian PPN/ Bappenas

INDONESIA EMAS 2045

A Sovereign, Advanced and Sustainable Indonesian Archipelagic Country

National Digital Transformation Agenda

E-Government

Data Governance

Accountable and Efficient

Easy Access to Public Services with Quality

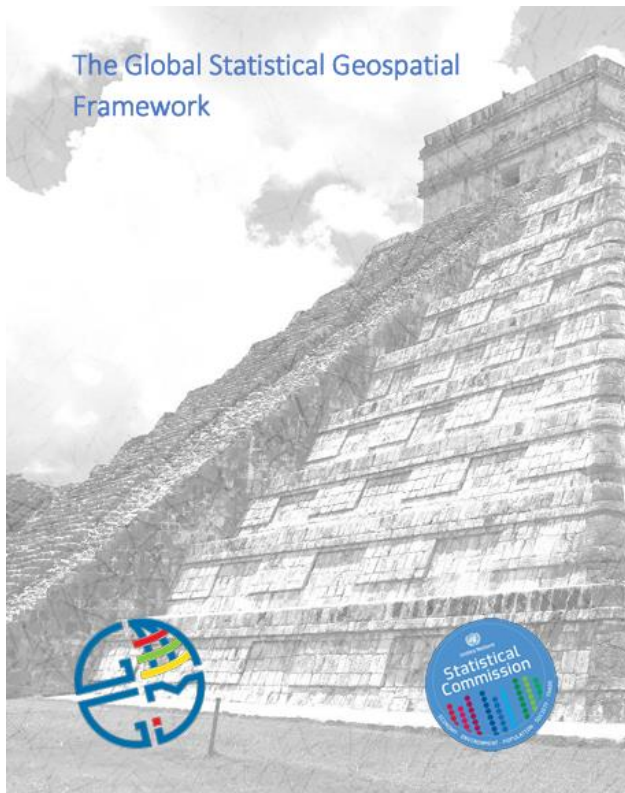**Adaptive and Targeted National Development**
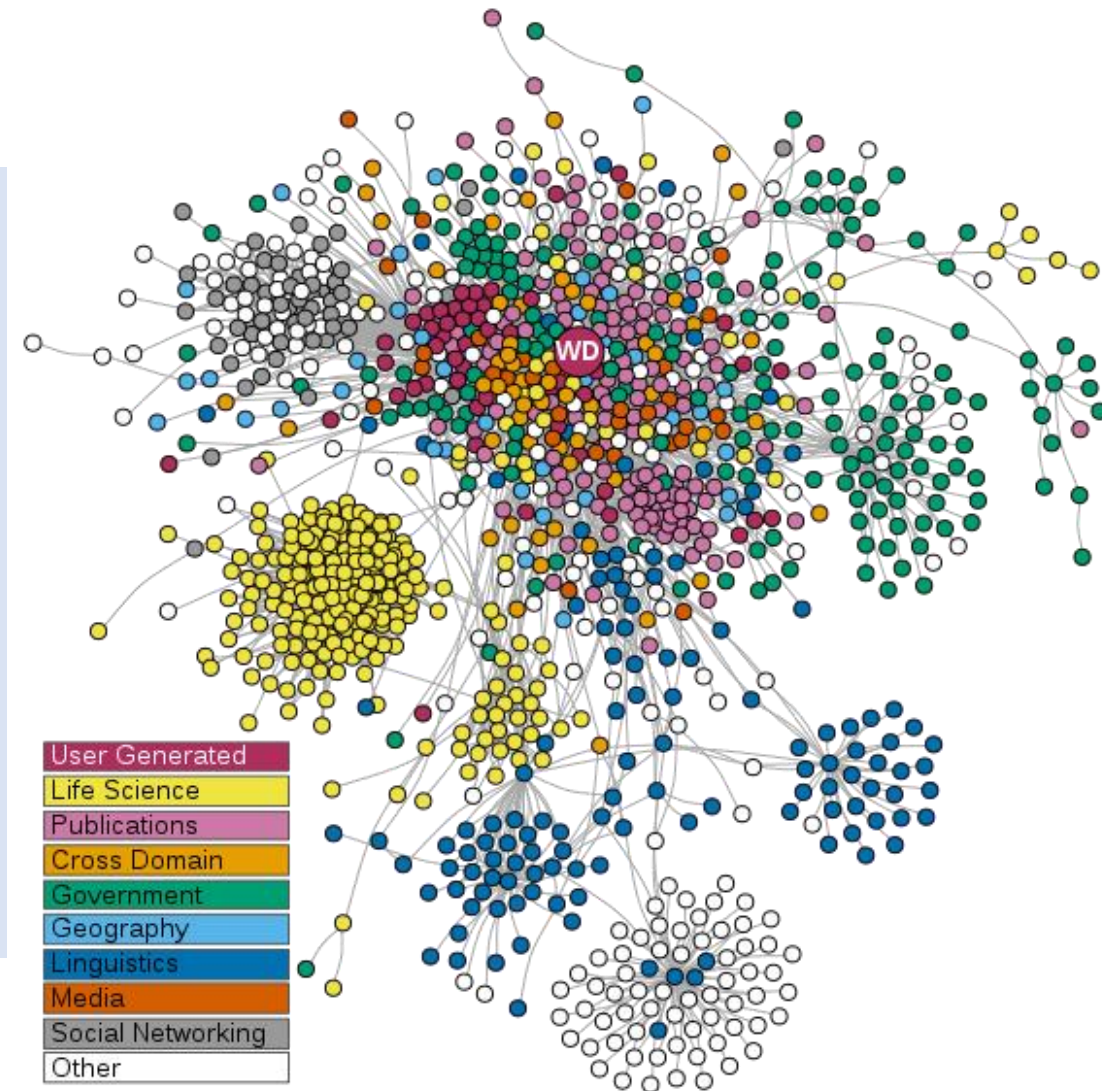
How we use your data
[your data customer activity]

We use your product and integrate them

The Global Statistical Geospatial Framework

Principal of Linked Data
(Berners-Lee, 2006):

1. Uniform Resource Identifiers (URIs) for identifying things/objects.

2. HTTP URIs that are used to search for, interpret, and differentiate between things/objects.

3. Each Information related to things/objects in open standards format (eg: RDF, SPARQL, etc.)

4. Uses an HTTP URI base for publication over the Web.

User Generated
Life Science
Publications
Cross Domain
Government
Geography
Linguistics
Media
Social Networking
Other

https://unstats.un.org/unsd/statcom/51st-session/documents/The_GSGF-E.pdf

We use your product and using them for scenario planning
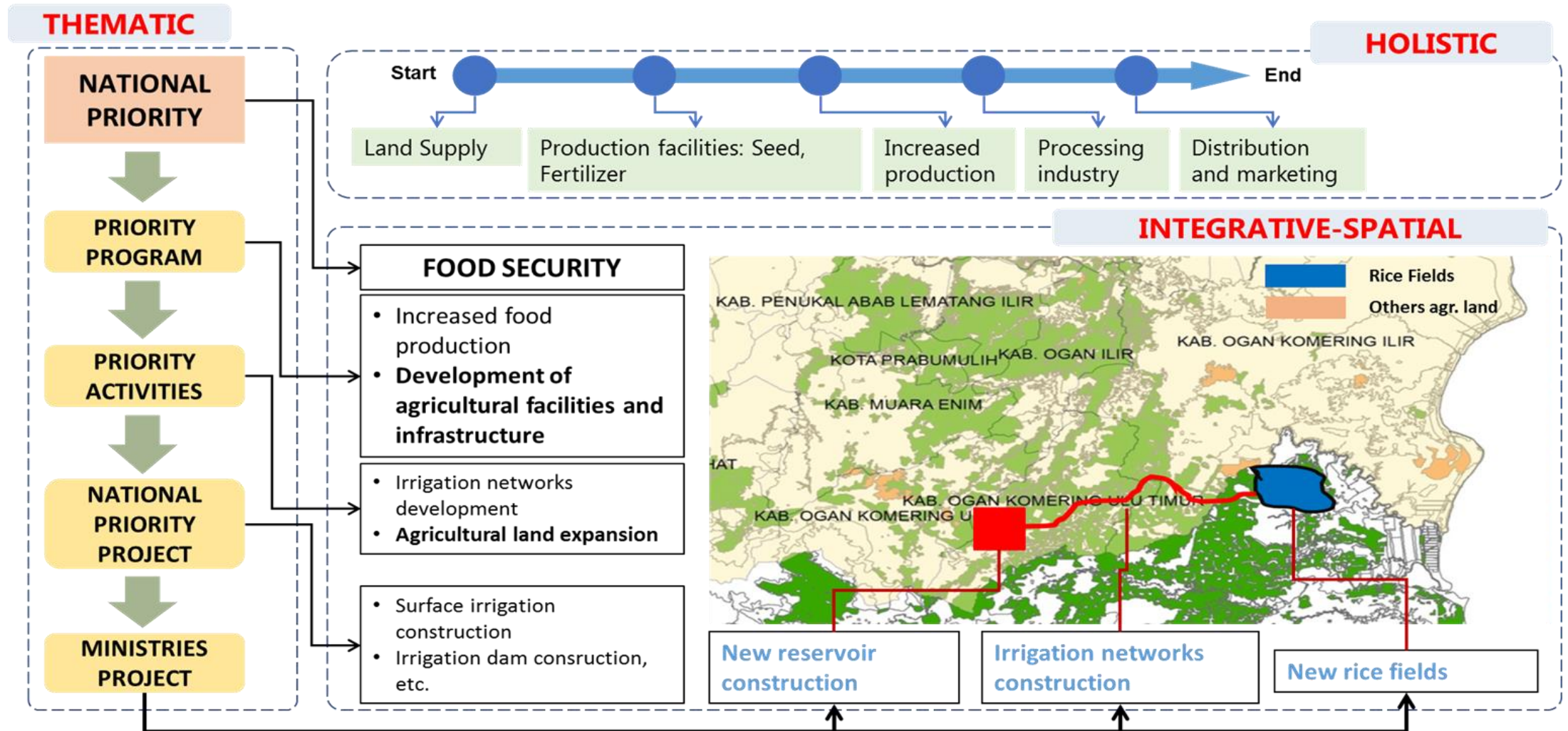
We use your product to serve society

"A digital twin (of a city) is a mirror image of a physical process that is articulated alongside the process in question, usually matching exactly the operation of the physical process which takes place in real time" (Batty, 2018)
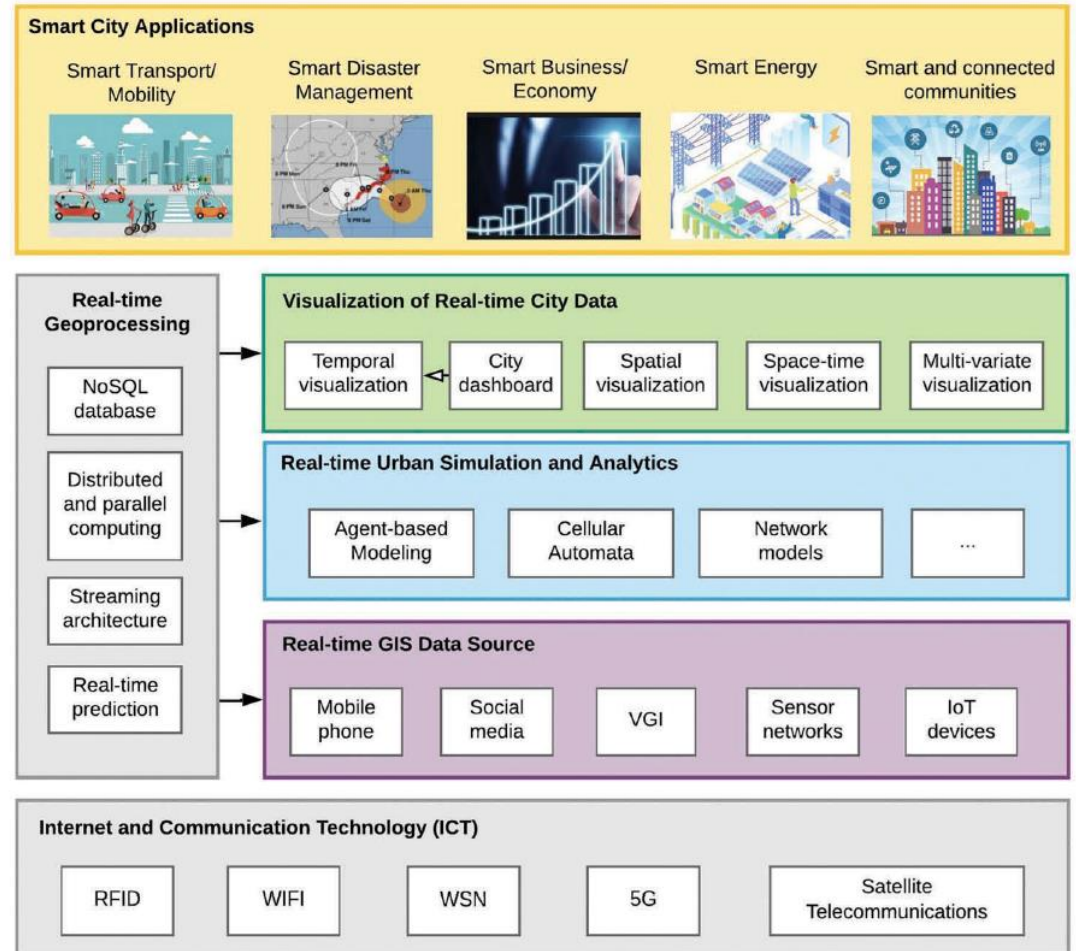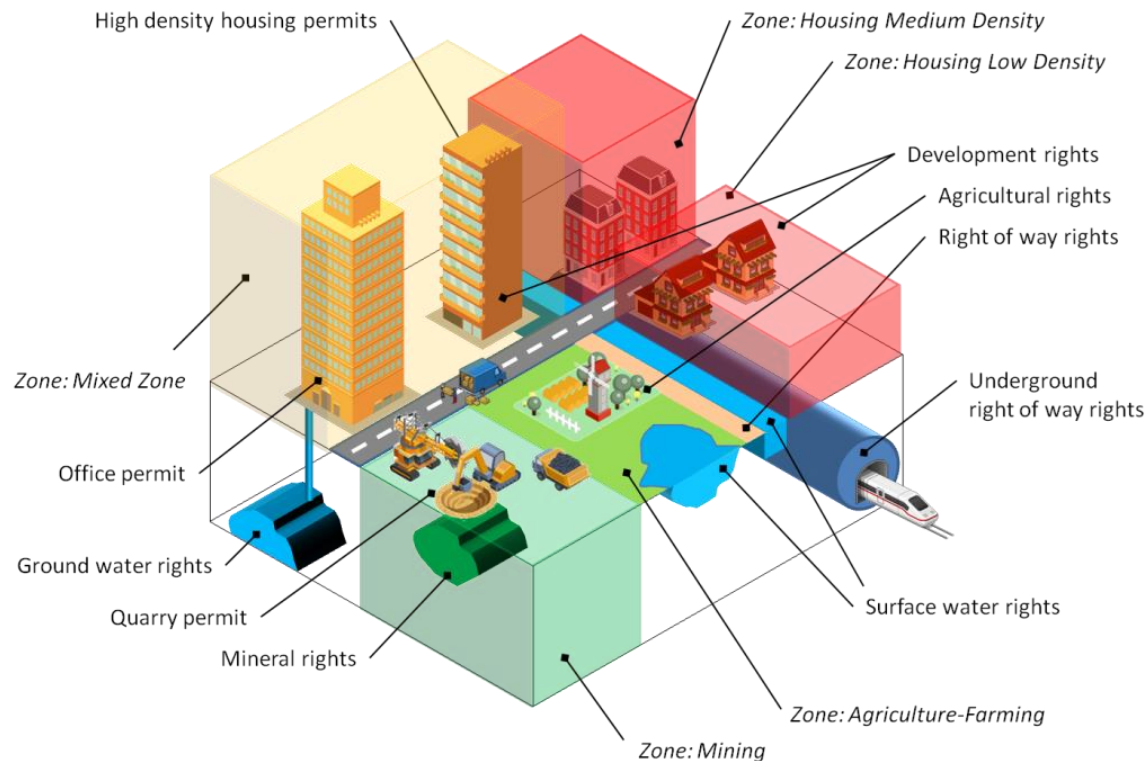
We use your product to serve capitol city

Fully Renewable Energy

Precision Urban Farming

Automatic Air Quality Control

Disaster Resilient City

Forest Management System

Biodiversity & Carbon Monitoring System
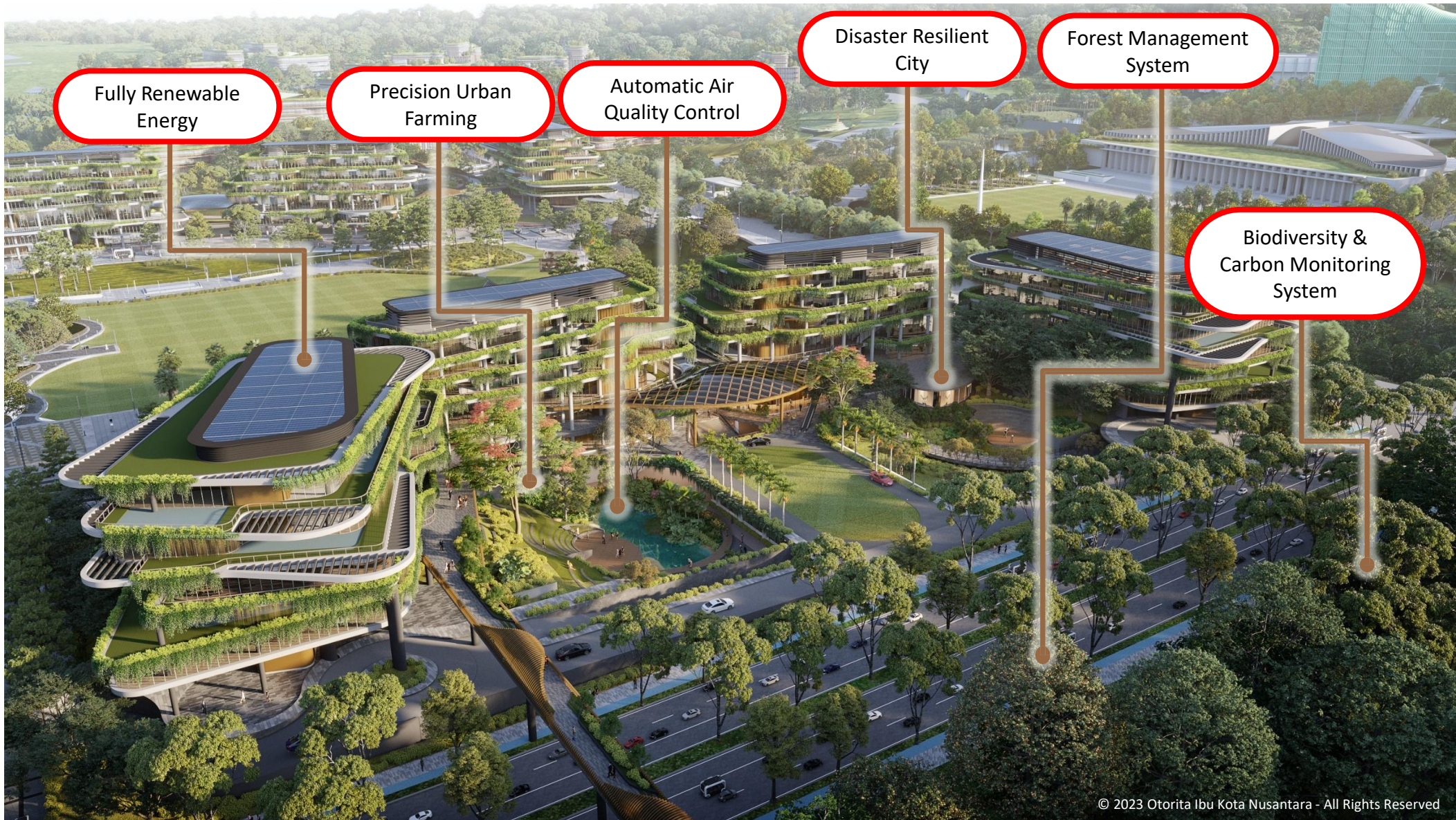
We use your product to develop building and to regulate people
Spatial Plan should be "Expected Land Use" inside its own boundary
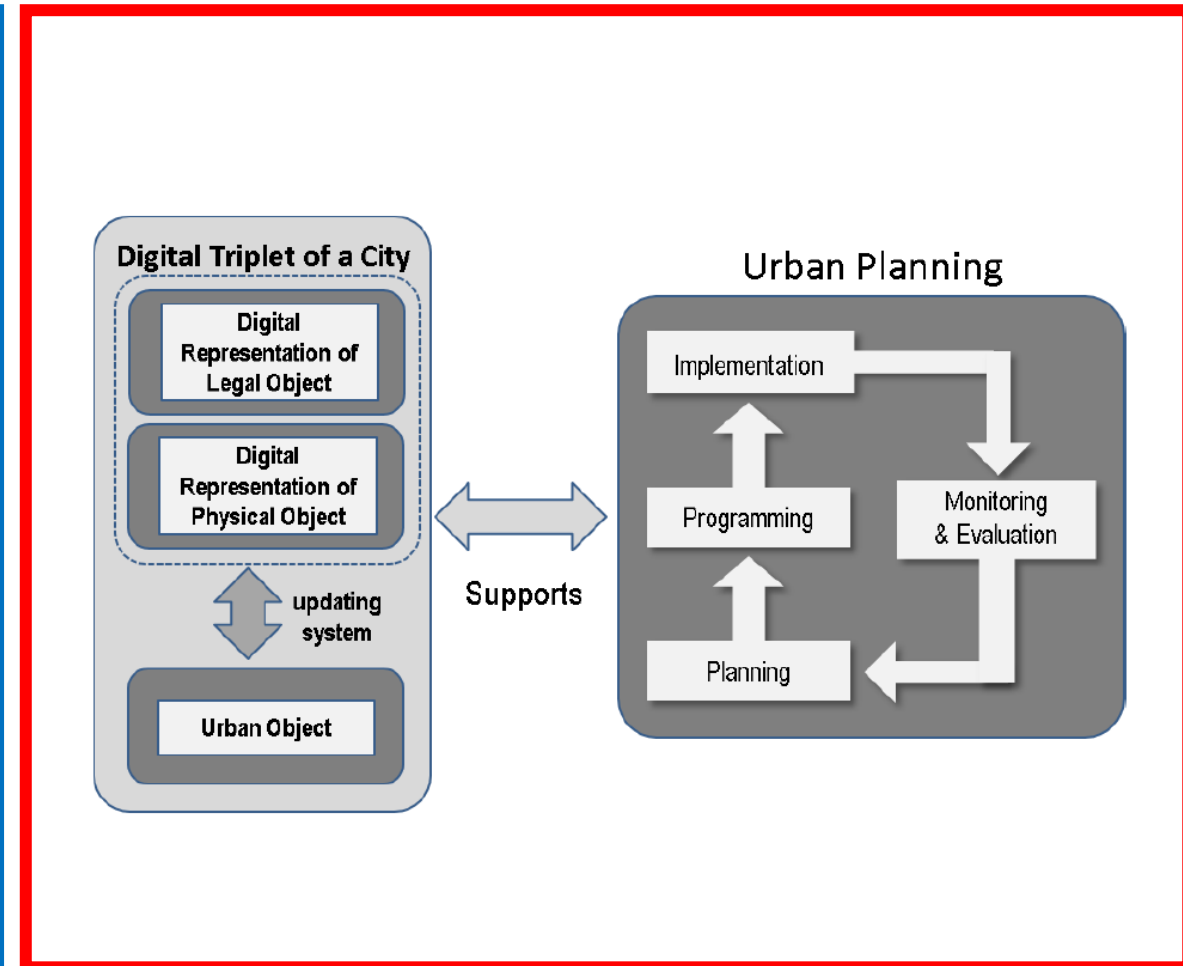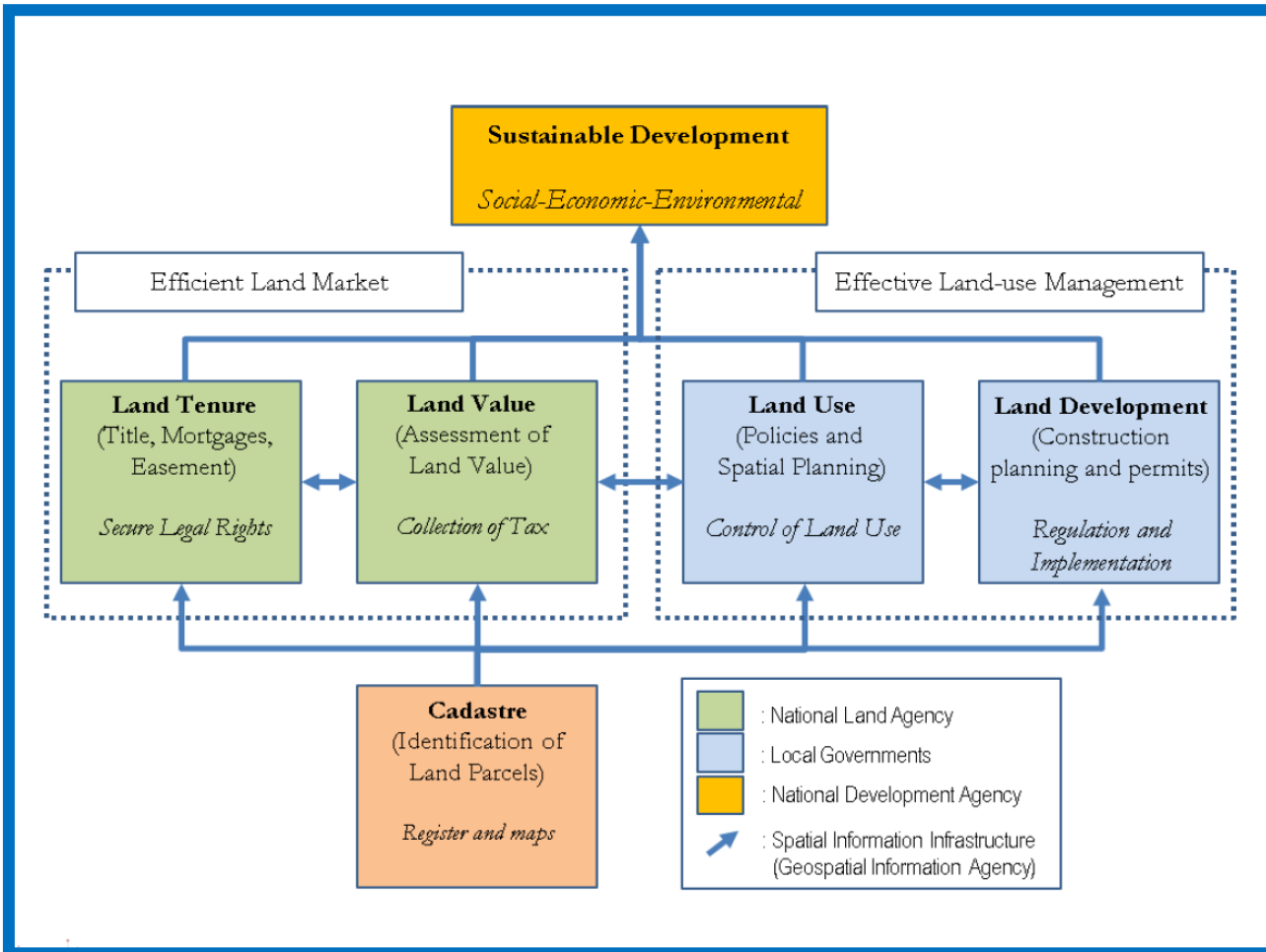
Urgency for data standardization [your data customer requirement]

We need nationwide data standardization to progress
Indonesia knows the importance of data standardization

We need nationwide data standardization to progress
Indonesia is moving toward OECD accession
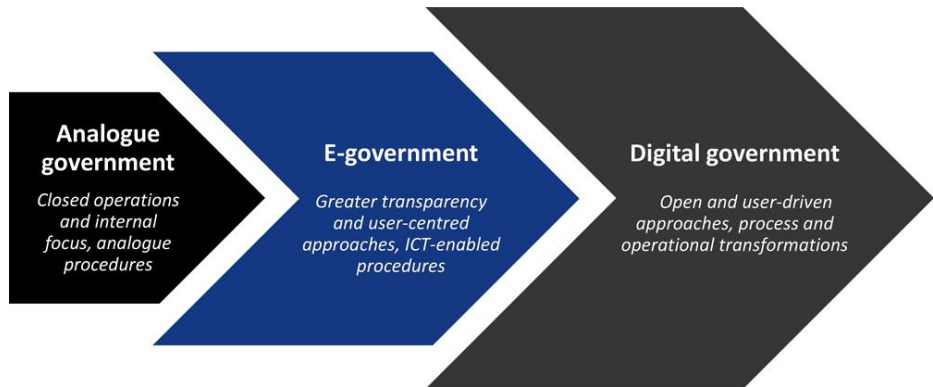
Pathway: **From analogue to digital government**
Recommendation of the Council on Digital Government Strategies (OECD, 2014)

OECD Digital Government Indicators
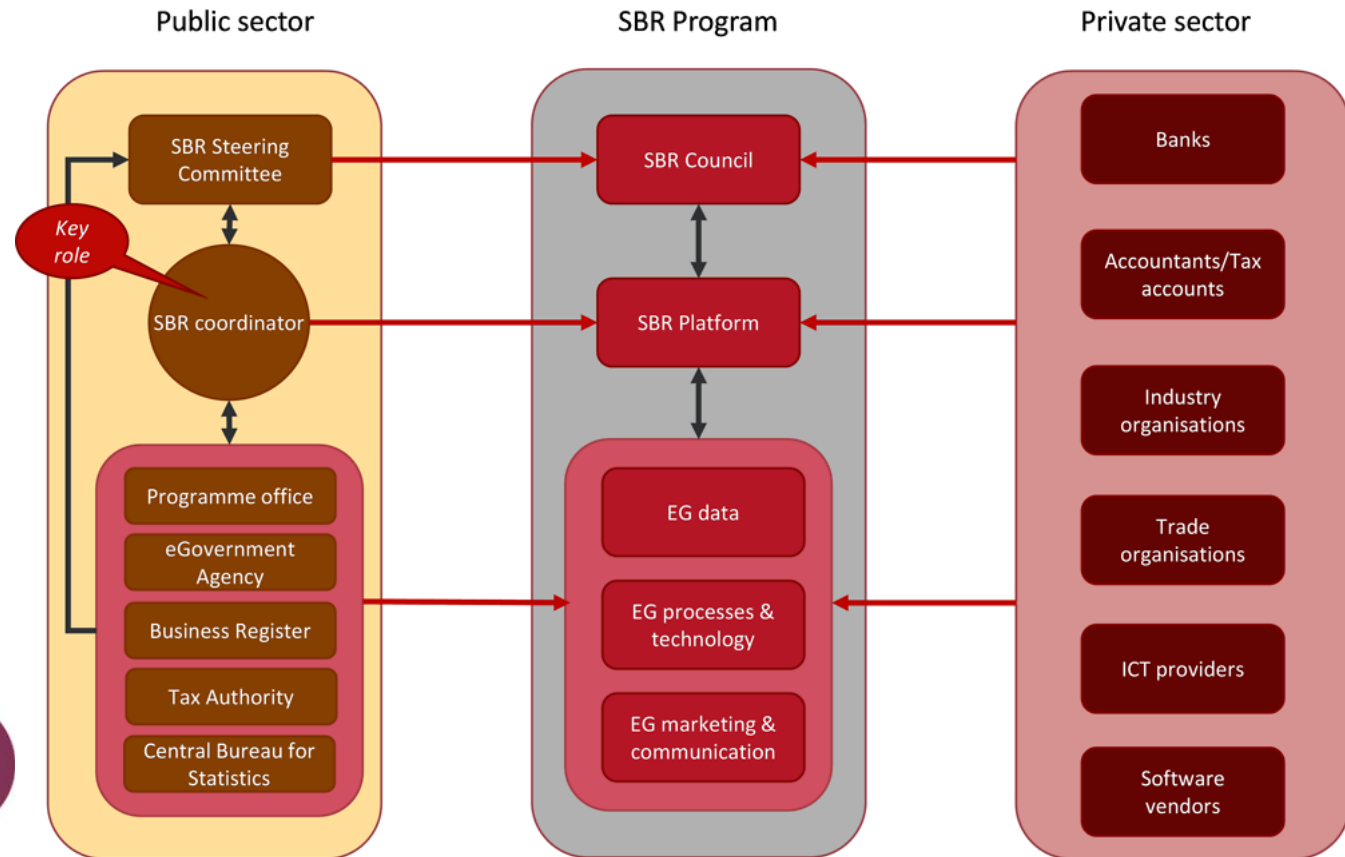
Standard Business Reporting in Netherlands
(Groenveld, 2019)

We need nationwide data standardization to progress
Indonesia is improving business environment
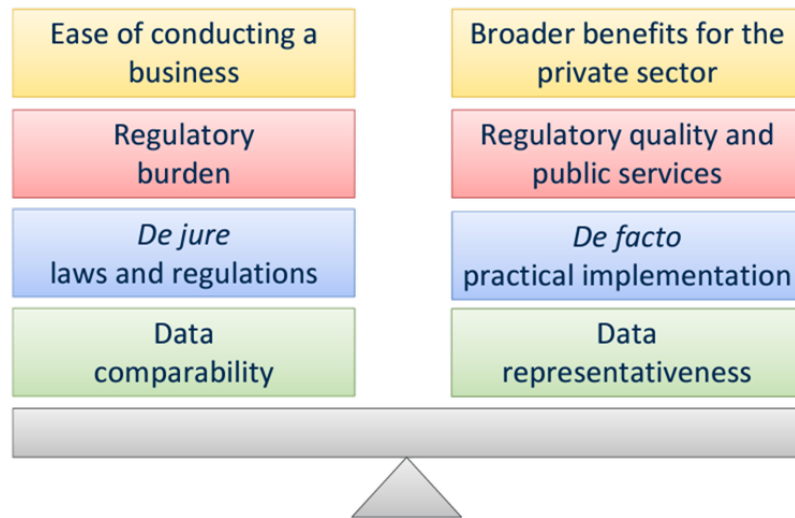
Source: B-READY team.

https://www.worldbank.org/en/businessready
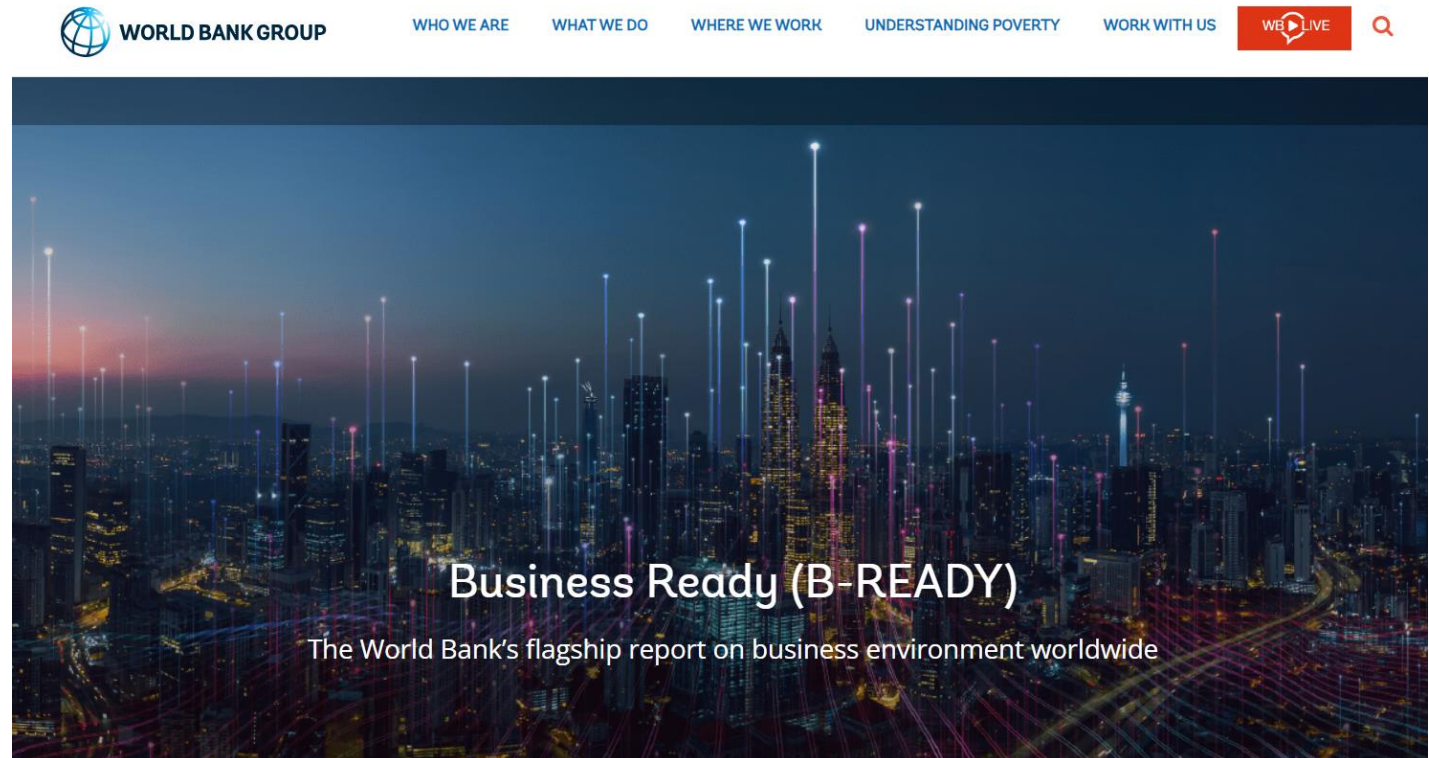
We need nationwide data standardization to progress
Indonesia is improving data for – 2. business location permit

Opening a business		Operating & expanding a business							Closing a business
Business Entry	Business Location	Utility Services	Labor	Financial Services	International Trade	Taxation	Dispute Resolution	Market Competition	Business Insolvency

Source: B-READY team.

MINISTRY OF AGRARIA SPATIAL PLANNING/ NATIONAL CADASTRE AGENCY

SATU DATA INDONESIA

2. Business Location	
Regulatory framework (de jure): Quality of regulations for immovable property lease, property ownership, and urban planning	Good regulatory practices for land administration
	Good regulatory practices for building regulations and environmental licenses
	Restrictions on property leasing and ownership
Public services (de facto): Quality of public services and transparency of information	Availability of online services and reliability of infrastructure for property transactions
	Interoperability of services for property transactions
	Availability of online information on immovable property
	Availability of online services for building permitting and environmental licenses
	Interoperability of building permitting systems
	Transparency of information for building permits and environmental licenses
Efficiency (de facto): Efficiency of obtaining a business location in practice	Time to purchase a property and obtain an occupancy permit, building permits, and environment-related permits
	Cost to purchase a property and obtain an occupancy permit, building permits, and environment-related permits

We need nationwide data standardization to progress
Indonesia is improving data for – 3. utility connection

Opening a business		Operating & expanding a business							Closing a business
Business Entry	Business Location	Utility Services	Labor	Financial Services	International Trade	Taxation	Dispute Resolution	Market Competition	Business Insolvency

Source: B-READY team.

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3. Utility Connection	
Regulatory framework (de jure): Quality of electricity, water, and internet regulations	Regulations for efficient connection deployment and reliable service supply for electricity, water, and internet
	Safety of utility connections
	Environmental sustainability of utility connections
Public services (de facto): Performance and transparency of utility services	Monitoring and transparency of key performance indicators on the quality, reliability, and sustainability of utility supply
	Transparency of utility services
	Interoperability of utility services
	Implementation of regulations on safety of utility connections in practice
Efficiency (de facto): Efficiency of utility service provision in practice	Time to obtain electricity, water, and internet connections
	Cost to obtain electricity, water, and internet connections
	Reliability of electricity, water, and internet services

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Source: B-READY team.

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7. Taxation	
Regulatory framework (de jure): Quality of regulations on taxation	Quality of tax regulations
	Energy taxes and carbon pricing
	Effective tax and contribution rate
Public services (de facto): Public services provided by the tax administration	Electronic systems for tax filing, payment, and assessment
	Risk-based audit
	Dispute resolution mechanisms
	Transparency of tax administration
Efficiency (de facto): Efficiency of tax systems in practice	Time to comply with tax regulations and a generic tax audit
	Use of electronic systems to file and pay taxes
	Use of VAT cash refund mechanisms

We need nationwide data standardization to progress
Indonesia is improving data for property transfer, urban planning, and environment permitting

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NATIONAL CADASTRE
AGENCY

SATU DATA
INDONESIA

	Pillar I–Quality of Regulations for Immovable Property Transfer, Urban Planning, and Environmental Permitting (62 indicators)
1.1	**Regulatory Standards for Land Administration (11 indicators)**
1.1.1	Property Transactions Standards (4 indicators)
1.1.2	Land Dispute Resolution Mechanism (4 indicators)
1.1.3	Land Administration System (3 indicators)
1.2	**Restrictions on Property Lease and Ownership (19 indicators)**
1.2.1	Restriction for Domestic Firms to Lease Property (5 indicators)
1.2.2	Restriction for Domestic Firms to Own Property (4 indicators)
1.2.3	Restriction for Foreign Firms to Lease Property (5 indicators)
1.2.4	Restriction for Foreign Firms to Own Property (5indicators)
1.3	**Gender (1 indicator)**
1.3.1	Gender Incentives for Professional Participation (1 indicator)
1.4	**Regulatory Standards for Building Regulations and Environmental Licenses (31 indicators)**
1.4.1	Building Regulations Standards (13 indicators)
1.4.2	Building Energy Codes and Standards (4 indicators)
1.4.3	Zoning and Land Use Planning (1 indicators)
1.4.4	Environmental Clearances in Construction (10 indicators)
1.4.5	Dispute Mechanisms for Building Permits and Environmental Clearances in Construction (3 indicators)

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Pillar II–Quality of Public Services and Transparency of Information (46 indicators)	
2.1	**Availability and Reliability of Online Services (20 indicators)**
2.1.1	Property Transactions-Digital Public Services (6 indicators)
2.1.2	Property Transactions-Reliability of Infrastructure (5 indicators)
2.1.3	Property Transactions-Coverage (4 indicators)
2.1.4	Building Permits and Environmental License-Digital Public Services (5 indicators)
2.2	**Interoperability of Services (6 indicators)**
2.2.1	Interoperability for Property Transactions (4 indicators)
2.2.2	Interoperability for Building Permits (2 indicators)
2.3	**Transparency of Information (20 indicators)**
2.3.1	Transparency of Information for Immovable Property (8 indicators)
2.3.2	Gender Data on Property Ownership (1 indicator)
2.3.3	Transparency of Information for Building Permits and Environmental Licenses (8 indicators)
2.3.4	Transparency of Information on Zoning and Land Use (3 indicators)
Pillar III–Efficiency of Obtaining Business Location (8 indicators)	
3.1	**Time to obtain a Business Location** (4 indicators)
3.1.1	Time to Transfer Property (1 indicator)
3.1.2	Time to obtain a Building Permit (1 indicator)
3.1.3	Time to obtain an Occupancy Permit (1 indicator)
3.1.4	Time to obtain an Environmental Clearance in construction (1 indicator)
3.2	**Cost to Obtain a Business Location (4 indicators)**
3.2.1	Cost to transfer property (1 indicator)
3.2.2	Cost to Obtain a Building Permit (1 indicator)
3.2.3	Cost to obtain an Occupancy Permit (1 indicator)
3.2.4	Cost to obtain an Environmental Clearance in construction (1 indicator)

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We need nationwide data standardization to progress
Indonesia is planned to improve data for LAS and RRR (TBD)

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SATU DATA INDONESIA

Table 5. Subcategory 1.1.3–Land Administration System

	Indicators	Components
1	Disclosure of land registry information	Legal framework specifies who can obtain information on land ownership at the immovable property
2	Disclosure of cadastral information	Legal framework provides who can consult cadastral plans of private land plots
3	Infrastructure for land administration	Existence of cadaster/mapping agency (institution in charge of surveying each plot of land)

Table 9. Subcategory 1.2.4–Restriction for Foreign Firms to Own Property

	Indicators	Components
1	Restriction of ownership on the area of the land for foreign firms	Restriction of ownership on the area of land for foreign firms
2	Restriction on the duration of ownership for foreign firms	Restriction on the duration of ownership for foreign firms
3	Restriction on property ownership based on location for foreign firms	Restriction on property ownership based on location for foreign firms
4	Restriction on the ownership of agricultural land for foreign firms	Restriction on the ownership of agricultural land for foreign firms
5	Restriction on the ownership for foreign firms by certain type of buildings	Restriction on ownership for foreign firms by certain type of buildings (residential, commercial, industrial)

Table 13. Subcategory 1.4.3–Zoning and Land Use Planning

	Indicators	Components
1	Land use and zoning regulations	i) Requirements for trunk infrastructure availability (water, electricity, sanitation) ii) Hazard maps or related means that identify areas in which construction is not permitted due to natural hazards iii) Hazard maps or other tools that identify minimum separation between residential and hazardous occupancies iv) Maps or related means that identify areas in which construction of buildings is not permitted in relation to natural resources v) They do not exist

Recommendations
[your data customer wishes]

Indonesia need more R for Risk
Recent Law introduce Risk-based Permit Assessment

Public-domain Law

Geography condition
Disaster Management

Natural Resources
Human Resources
Artificial Resources
Economy
Social
Culture
Political Aspect
Regulation
Environment
Science and Research
Security & Defense

Geostrategy aspect
Geopolitical aspect
Regional Economy setting

Spatial Planning Law

Regulate
Directing
Executing
Supervise

Spatial Plan Compilation
Implementation
Spatial Control
Spatial Policy
Specific Utilization
Resources allocation

Private-domain Law

Cadastre Law

Penentuan Hak atas Ruang
Space Allocation Plan

Zoning Policy
Permit
Incentive
Sanction

Land Tenure
Land Use
Land Utilization

Right | Restriction | Responsibility

Risk

Sustainable Development: Spatial Aspect
(*land tenure, land valuation, land use planning, land development, disaster management*, etc.).

Accountability Aspect
(*land valuation, land use planning, land development*)

Mapping Agencies (Spatial Data Custodians)

Fundamental Datasets (incl. *Land Use Map*)
Thematic Datasets

Countries need guidelines to implement standard
Success story is the best guideline

Product → **Metadata**
SNI/ISO 19115:2019 dan SNI 8843-1:2019
Regulation BIG 3/2023 dan Circulation Note BIG 6/2021

Product → **Data**

Standardization → Product, Process, Equipment, People, Organization

Data → **Content**
SNI/ISO 19131:2014 (Spesifikasi Produk Data)
Circulation Note BIG 6/2021

Data → **Semantic**
SNI/ISO 19110:2015 dan Katalog Unsur Geografi Indonesia
SNI/ISO 19152:2016 (LADM)
Circulation Note BIG 6/2021

Data → **Format**
OGC-WMS (raster), OGC-WFS (vektor), OGC-WMTS (tile)
Circulation Note BIG 6/2021

Terima Kasih

Thank You