

Integrated Urban and Infrastructure Development in Indonesia

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Outline

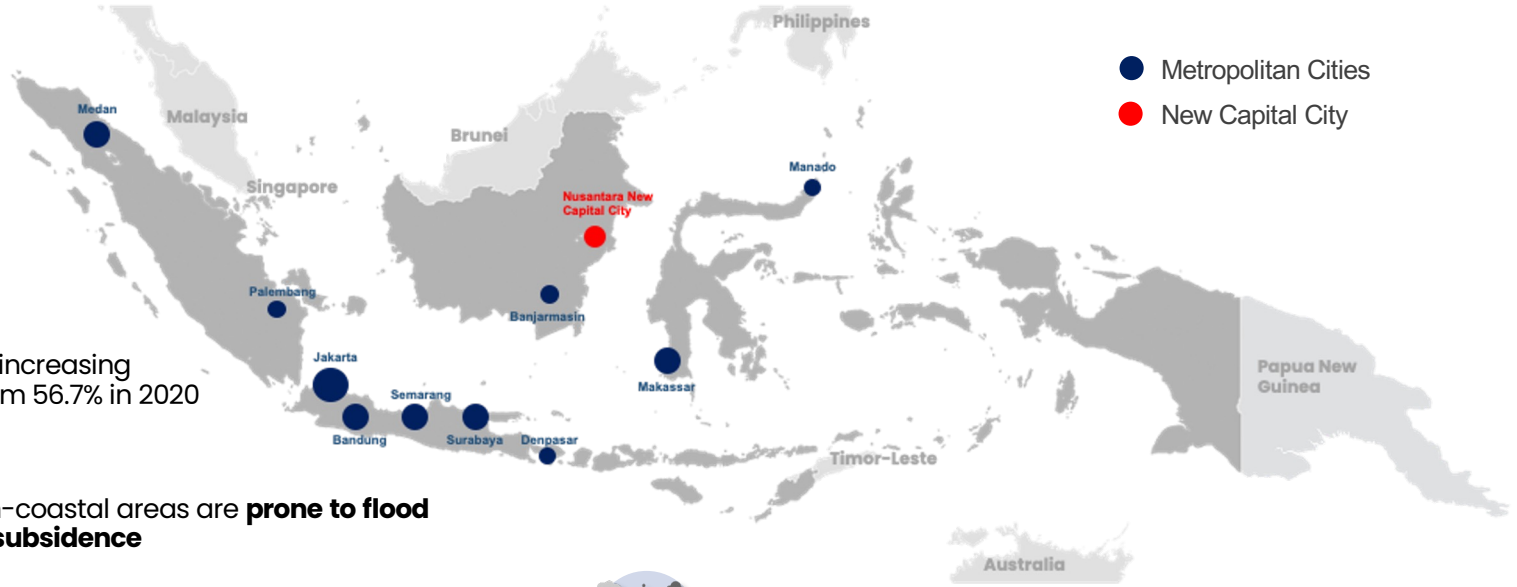
01. Issues on Urban and Infrastructure Development
02. Policy Direction on Urban and Infrastructure Development in Indonesia
03. Integrated Infrastructure Planning for Urban and Regional Development
04. National Urban Development Project (NUDP) as Collaboration Platform

01.

Issues on Urban and Infrastructure Development



Urban Challenges in Indonesia



Rapid urbanization, increasing urban population from 56.7% in 2020 to 72.8% in 2050



75% Indonesia urban-coastal areas are **prone to flood disasters and land subsidence**



<15% urban population has access to **safe and adequate drinking water**



8.85% urban population has access to **adequate and equitable sanitation**



4 of 10 urban households live in **substandard houses**



Increasing air pollution caused by vehicular emissions



>100 Million USD economic loss per year caused by **congestion** in 6 big cities: Jakarta, Bandung, Surabaya, Bekasi, Medan, Makassar



Urban infrastructure financing is **highly dependent on state/regional budgets**



Global Challenges



Paris Agreement



Strengthen countries' ability to deal with the impacts of climate change

Sendai Framework for Disaster Risk Reduction



Disaster risk reduction

Sustainable Development Goals (SDGs)



SDG 11: Sustainable Cities and Communities

New Urban Agenda (NUA)



e.g. Basic services and safe and affordable housing; transportation system for all; improve road safety, Public and green open space

Indonesia is committed to achieve global targets, such as provision of basic infrastructure (drinking water, sanitation, housing) for sustainable cities.

02.






Policy Direction on Urban and Infrastructure Development in Indonesia



Indonesia's Urban Policy and Strategy

National Urban Policy

Mission 2045

-  **Mission 1:** Realizing a national urban system that is balanced, prosperous, and equitable
-  **Mission 2:** Encourage livable, inclusive, and cultured urban
-  **Mission 3:** Encouraging advanced and prosperous cities
-  **Mission 4:** Encouraging green and resilient cities
-  **Mission 5:** Realizing transparent, accountable, intelligent, and integrated urban governance

Implementation Framework

Regulation

Institutional

Financing

Smart Approach



Joko Widodo, President of Republic of Indonesia



SDGs Mandate for the MPWH Infrastructure Development



Infrastructure Targets 2024 towards Smart and Sustainable Development

National Medium-Term Development Plan



BASIC INFRASTRUCTURE

70%
Households have access to Adequate Housing

100%
Households have access to adequate drinking water

90%
Households have access to adequate sanitation

24 Million
Households have access to piped drinking water

65% related to 2010 baseline
Traffic accident fatality per 1.000 vehicles ratio

550.000 ha
New irrigation system

50 m³/second
Additional raw water for industry and domestic

60
Multipurpose dam

3 m³/kg
Water use efficiency in rice farming

20 Provinces
with high disaster risk undergo increased resilience

0,23
Train accident per 1 million km trip ratio



ECONOMIC

High speed train in Java Island
Jakarta-Semarang & Jakarta-Bandung

Long distance train
Makassar - Parepare

Integrated Major Ports Network:
7 Ports
Upgrade standardized port performance and management

21 New Airports

43 Air Bridge Routes

2.500 km
New toll roads

3.000 km
New national roads

97%
Roads in good condition

1,9 hour/100 km
Travel time at island's main connectivity

27%
Interconnected shipping route (loop)

Source: Bappenas, 2020



URBAN INFRASTRUCTURE

Urban mass public transport system in **6 Metropolitan Areas**

Households with access to good waste management
80% Managed
20% Reduced



DIGITAL INFRASTRUCTURE

95% Service Level Agreement
Palapa Ring services

95% Villages
Covered with mobile broadband network

60% Subdistricts
Covered with fixed broadband network

80% Population
Covered with digital broadcast

3 Start-Ups
New unicorn



ENERGY AND ELECTRICITY

4 Million
New city gas house connection

1.300 kWh
National electricity consumption per capita

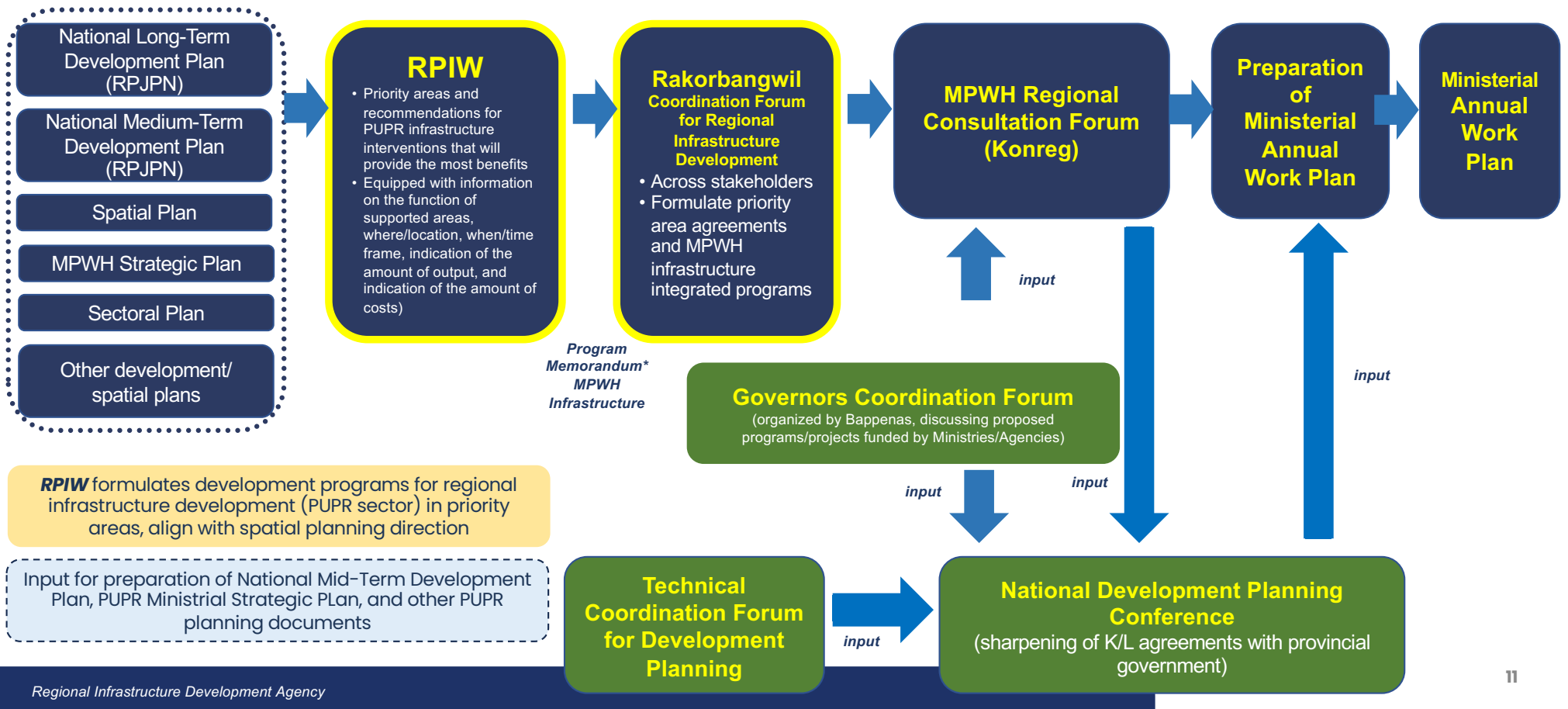
3,5 Million Tons
CO₂ emission from power plants reduced

03.

Integrated Infrastructure Planning for Urban and Regional Development



Implementation of Spatial Planning into Development Program: Integrated Infrastructure Planning for Urban and Regional Development (RPIW)





Integrated Infrastructure Planning for Urban and Regional Development (RPIW)



1 INTRODUCTION

Output: background, position in policy, urgency of preparation, content of RPIW, benefits of RPIW, and framework for preparing RPIW

2 POLICY DIRECTIONS

Outputs: synthesis of policy analysis and national and regional strategies related to spatial, sectoral, and priority/strategic areas; long-term goals and targets in MPWH Vision 2030 and the global agenda

3 REGIONAL PROFILE AND POTENTIAL

Output: physical and disaster conditions, demography, economy, socio-culture, and inter-regional interaction in the planning area

4 INFRASTRUCTURE PROFILE & PERFORMANCE

Output: profile and performance of water resources infrastructure, roads and bridges as well as settlement and housing infrastructure, as well as profile and performance of non-PWH infrastructure

5 STRATEGIC PROBLEMS AND ISSUES

Output: potential in the form of comparative and competitive advantages, regional constraints/limitations and problems, as well as regional limitations (environmental carrying capacity and capacity)

6 REGIONAL DEVELOPMENT SCENARIO

Output: growth projection, formulation of regional development vision and strategy as well as regional development scenarios (stages and prioritization)

7 INFRASTRUCTURE REQUIREMENTS ANALYSIS

Output: regional infrastructure gap analysis and infrastructure integration analysis

8 INFRASTRUCTURE DEVELOPMENT ACTION PLAN

Output: annual PUPR infrastructure development action plan along with the division of authority and funding sources

9 MONITORING AND EVALUATION

Output: mechanism to ensure RPIW can be monitored and evaluated annually and every 5 (five) years



Showcase RPIW Strategic Issues in IKN Surrounding Area



Urbanization

The **IKN development attracts many people to live in and around IKN area, especially in Balikpapan, Samarinda, Bontang, Kutai Kartanegara, and Penajam Paser Utara.**



Flooded in two RT in Desa Bumi Harapan, part of KIPP IKN in Kecamatan Sepaku, Penajam Paser Utara (5/10/2022). Source: Pusaranmedia, 2022

Natural Hazard

Flood becomes the annual disaster in IKN surround area. In fact, Sepaku (in Penajam Paser Utara), Samarinda, Balikpapan, and Bontang always flooded around 1 meter high every years when rainy season is coming. Furthermore, **forest fire** and **coastal abrasion** become another hazardous thing in IKN's hinterland.



Karang Mumus Slum Area. Source: Niaga Asia, 2020

Minimum Service Standards Compliance of Infrastructures

With **increase of the population**, there are **challenges to provide** sustainable raw water supplies, access to drinking water, safe sanitation, waste disposal, and livable and resilient housing.

Connectivities

To accommodate transportation between IKN and the area surrounds, **toll roads, VIP airport**, and railways has been planed.



Policy Review

Related to Nusantara Capital City/Ibu Kota Negara (IKN) Development



Kalimantan Spatial Planning Objectives

Kalimantan Spatial Plan (Presidential Regulation Number 3 of 2020)

The objectives of the spatial planning of Kalimantan Island are as follows:

- 1. Conservation area**
- 2. Energy independence and National energy storage** for electricity
- 3. Mining center:** Mineral, Coal, Oil and Natural Gas
- 4. Plantation centers:** Oil Palm, Rubber, Forest Products (eg rattan, resin)
- 5. The border area** of the State as the front porch and gateway with the State of Malaysia with due regard to: Aspects of sovereignty, Defense and security, Community welfare, Environmental sustainability
- 6. Center for the development of water-based national urban areas**
- 7. Ecotourism area** based on wet tropical forests and cultural tourism with unique animals and flora: Orangutans, Proboscis Monkeys, Meranti, Orchids, Animals and other endemic plants
- 8. Intermodal transportation network** for: Regional attachment, Economic efficiency, Regional isolation
- 9. Self-sufficiency in food** and national food storage



Source :

Presidential Regulation No. 3 of 2012 concerning Spatial Plans for Kalimantan Island

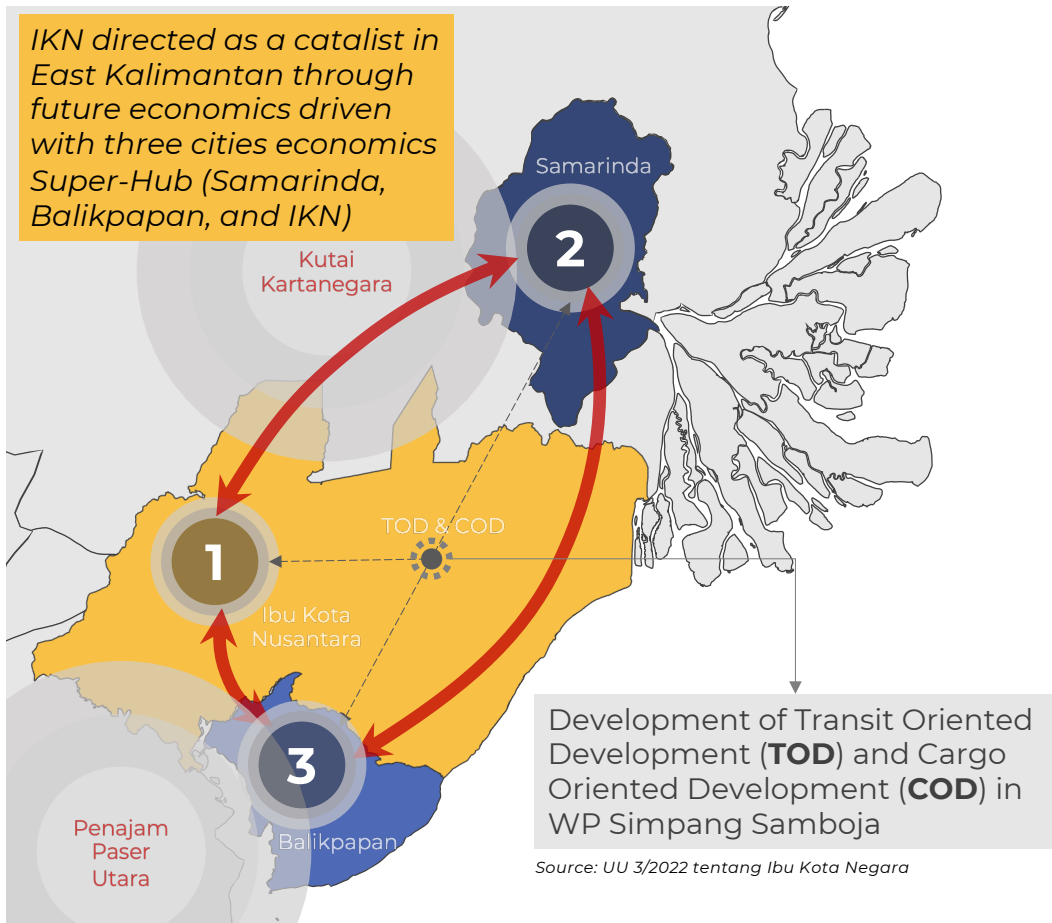


Showcase RPIW

PWH Infrastructure Development Scenario of IKN and Its Hinterland



IKN directed as a catalyst in East Kalimantan through future economics driven with three cities economics Super-Hub (Samarinda, Balikpapan, and IKN)



1

IKN as the Nerve Center:

Core of Government and Green Innovation in East Kalimantan

2

Samarinda as the Heart:

Core of East Kalimantan Heritages and Rejuvenated Energy sector

3

Balikpapan as the Muscle:

Downstream Oil and Gas and Logistics Node for East Kalimantan

East Kalimantan as a Heart of Borneo:

Center of agriculture and nature tourism

Development of IKN's Hinterland

Kutai Kartanegara:

As a food barn and the core mining in supply raw materials to downstream industrial activities of IKN

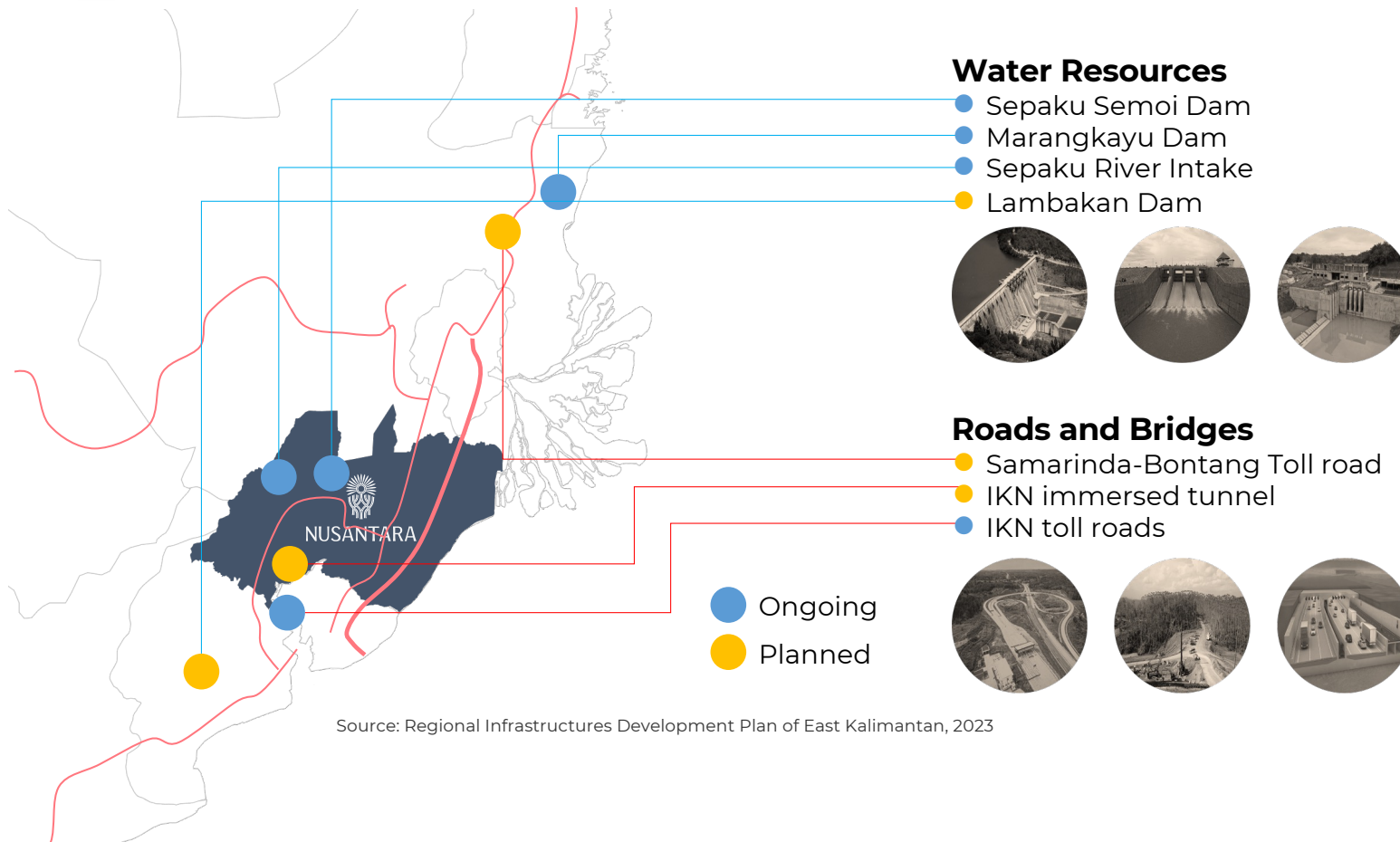
Penajam Paser Utara:

As a center of manufacturing industries which support IKN (located at Buluminung and Kariangau)



Public Works and Housing Infrastructures Action Plan

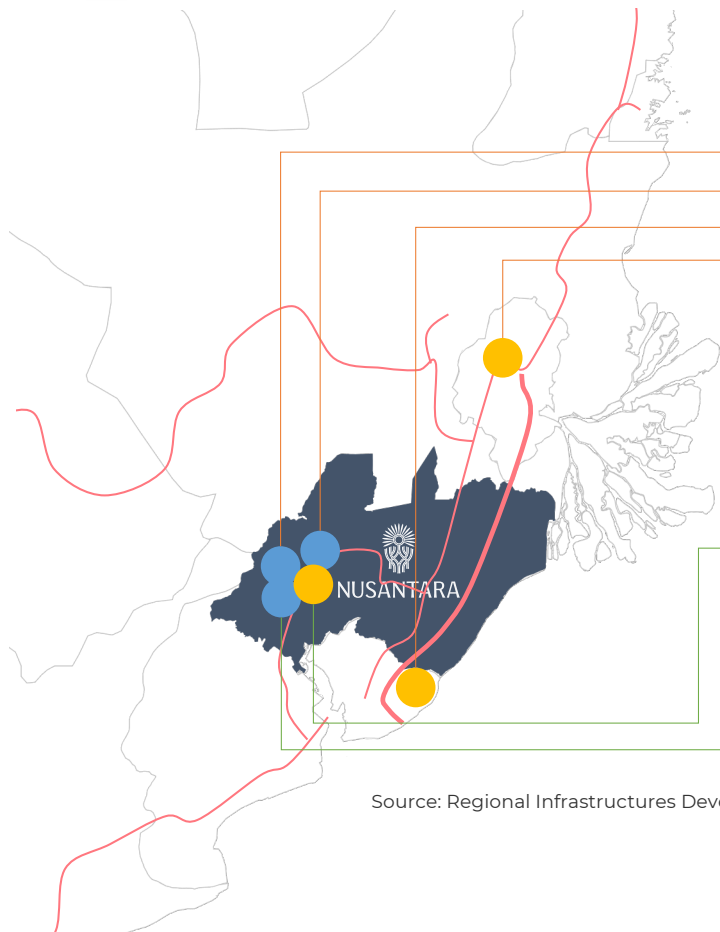
Progress and Plan during 2020-2030





Public Works and Housing Infrastructures Action Plan

Progress and Plan during 2020-2030



Human Settlement

- Office Area and Kebangsaan Axis
- SPAM Sepaku
- IPA Teritip Improvement
- IPA Kalhol Improvement



Housing

- Civil Servant Housing
 - Ministers Housing
 - Self-help housing stimulant assistance (BSPS)*
- *Annual Program



- Ongoing
- Planned

Source: Regional Infrastructures Development Plan of East Kalimantan, 2027

04.

National Urban Development Project (NUDP) as Collaboration Platform



NUDP as Platform for Urban Transformation in Indonesia

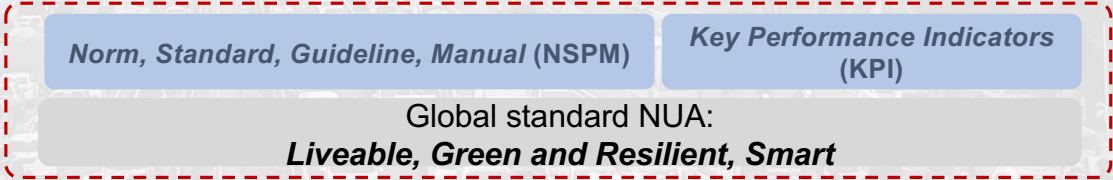


Indonesia's Vision 2045

Realizing sustainable cities by 2045



2045
(projection)





NUDP Promotes Integration of Infrastructure Across Sectors and Stakeholders



National Urban Policy (NUP)

National urban development policy which aims to implement the vision of sustainable cities in 2045 that are Inclusive, Prosperous, Green and Resilient.

Ministry of National Development Planning (Bappenas), other related ministries/institutions



NUDP



Capital Investment Planning (CIP)

Urban development budgeting and planning through prioritizing investment

Ministry of Home Affairs, Local governments, Private sector, State-owned enterprises, other related ministries/institutions

National Urban Development Strategy (NUDS)

Urban development scenarios and strategies based on the system of cities and their characteristics as a basis for national urban infrastructure development planning

Ministry of Public Works and Housing, Ministry of National Development Planning (Bappenas), Ministry Agrarian Affairs and Spatial Planning, Local governments, other related ministries/institutions



Integrated City Plan (ICP)

Urban settlement planning and development instruments in accordance with national urban development scenarios and strategies and refer to spatial plan directions

Ministry of Public Works and Housing, Ministry Agrarian Affairs and Spatial Planning, Ministry of Transportation, Ministry of Industry, Ministry of Tourism and Creative Economy, Ministry of Energy and Mineral Resources, Ministry of Communication and Information Technology, Local governments, other related ministries/institutions

TKPPN (Coordination Team of National Urban Development)
as forum for coordinating the formulation of urban development policies and strategies that involves multi-stakeholders participation



New Paradigm and Standard: New Capital City: Nusantara (East Kalimantan)



8 Principles and 24 KPIs of Ibu Kota Nusantara (IKN) as a “World-class City for All”

1. Designing with nature	2. Unity in diversity	3. Connected, Active and Accessible	4. Net Zero Emission IKN	5. Circular & Resilient	6. Safe & Affordable	7. Convenience and efficiency through technology	8. Robust economic opportunity for all
1.1 >75% of the 256 thousand Ha area for green space (65% protected area and 10% food production)	2.1 100% integration of all communities	3.1 80% of all trips made by public transport or active mobility	4.1 The installation of renewable energy capacity will meet 100% of the Nation's Capital Energy Needs.	5.1 >10% of 256 thousand Ha is available for food production	6.1 Ranking in the top 10 most livable cities in the world by 2045	7.1 IKN will achieve a very high ranking in the E-Government Development Index (EGDI) by the United Nations.	8.1 0% poverty in the IKN population by 2035
1.2 100% of residents can access recreational green space in 10 minutes	2.2 100% of residents can access to social/community services within 10 minutes	3.2 10 minutes to key amenities and public transport nodes	4.2 60% energy savings for energy conservation in buildings	5.2 60% recycling solid waste generation by 2045	6.2 Existing and planned settlements in the 256 thousand Ha area will have access to critical infrastructure by 2045.	7.2 100% digital and ICT connectivity for all residents and businesses	8.2 GRDP per capita of high income country
1.3 100% green replacement of building footprint > 4 stories (institutional, commercial, and residential building)	2.3 100% public spaces designed using universal access, local wisdom and inclusive and responsive gender design principles	3.3 <50 min Express transit connection from KIPP to strategic airport by 2030	4.3 Net Zero Emission for IKN for 2045 at 256 thousand Ha	5.3 100% of wastewater will be treated through the treatment system by 2035	6.3 Decent, safe, and affordable housing that meets a balanced occupancy ratio.	7.3 >75% Business Satisfaction with Digital Services rating	8.3 Lowest regional GINI ratio in Indonesia by 2045

The Capital City as Nation's Excellence and Advancement Representation



The nation's capital is not only a symbol of the nation's Identity, but also a representation of the nation's progress. This is for the realization of equity and economic justice. This is for the vision of Advanced Indonesia. Indonesia that lives forever.

State Address: August 16th 2019

Joko Widodo
2nd President of The Republic of Indonesia

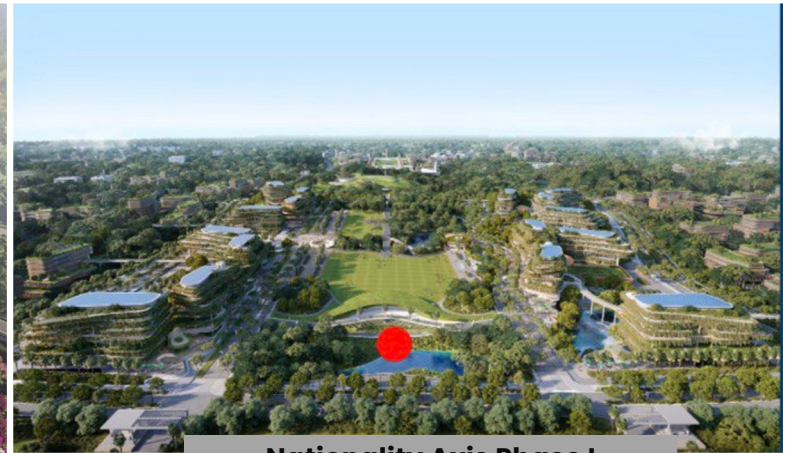
Source: Lampiran II UUU No. 3 Tahun 2022 tentang Ibu Kota Negara



Public Works and Housing Infrastructure in Nusantara Capital City



State Palace



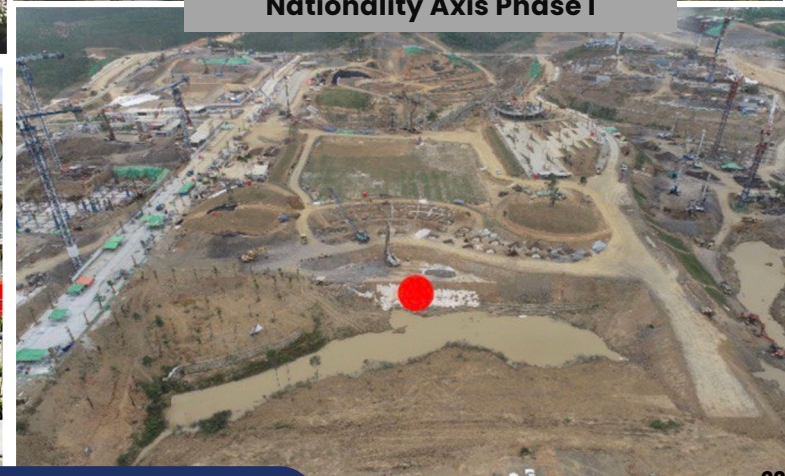
Nationality Axis Phase I



Toll Road to NCC
(reduce time travel from 2 hours to 30 minutes)



**Construction Worker
Residential Tower**





Thank You



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