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The Institution of
Engineers Indonesia

THE DEVELOPMENT STRATEGY OF NUSANTARA AS SMART FOREST CAPITAL CITY

Presented by:

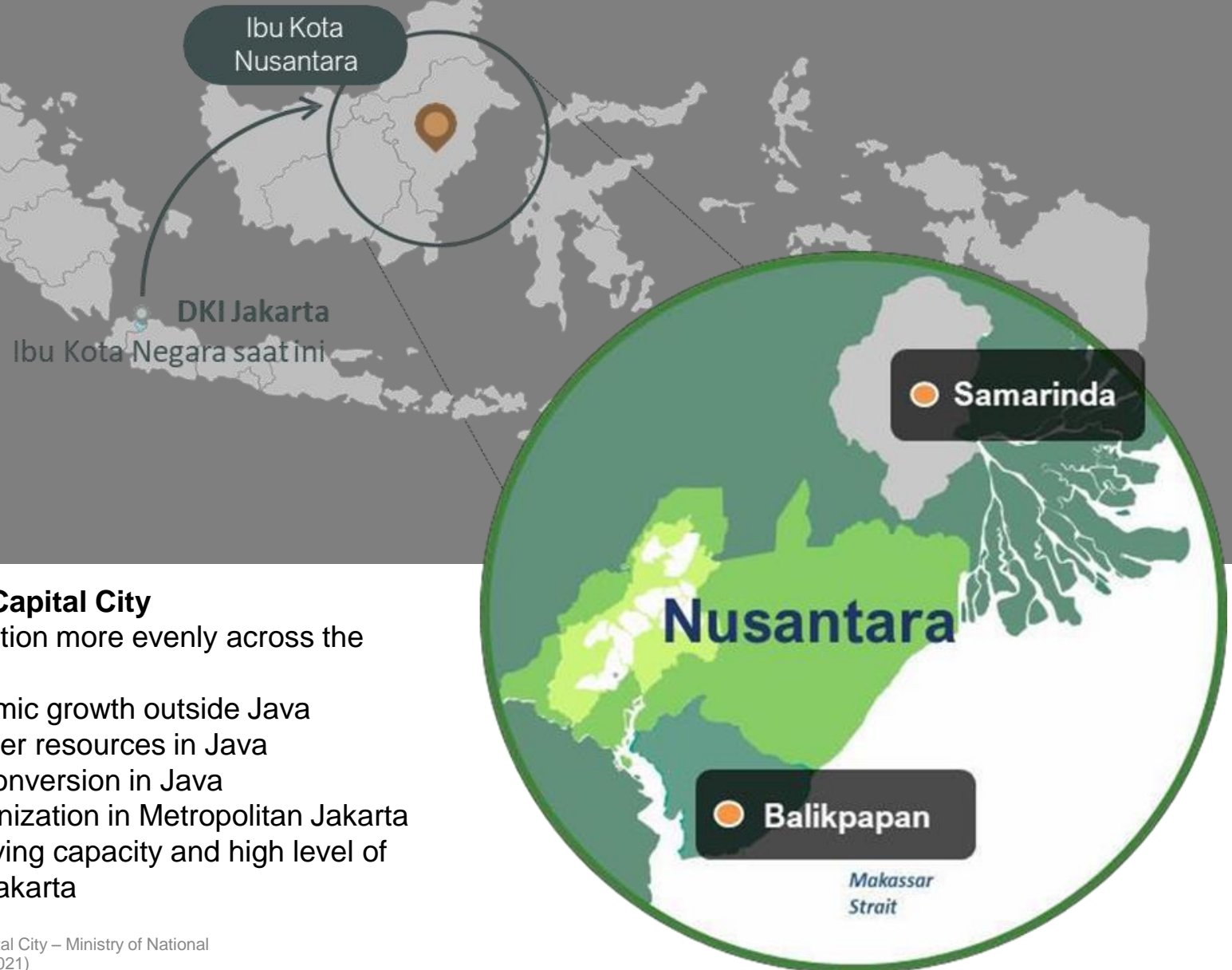
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IPU., ACPE., APEC Eng.
President of The Institution of Engineers
Indonesia (PII)**

May 16th 2022



New Capital City Nusantara Concept





Urgency to Relocate Capital City

1. To disperse population more evenly across the country
2. To increase economic growth outside Java
3. Crisis on clean water resources in Java
4. High rate of land conversion in Java
5. Concentrated urbanization in Metropolitan Jakarta
6. A decrease in carrying capacity and high level of economic loss in Jakarta

Vision and Goals of New Capital City Nusantara



01

World's Sustainable City



Safe and Reachable



In Harmony with Nature



Net zero emission



Circular and Resilient



Connected, active and accessible

VISION
WORLD CITY
FOR ALL

02

Indonesia's Economic Driver



Resilient Economic Opportunity for All



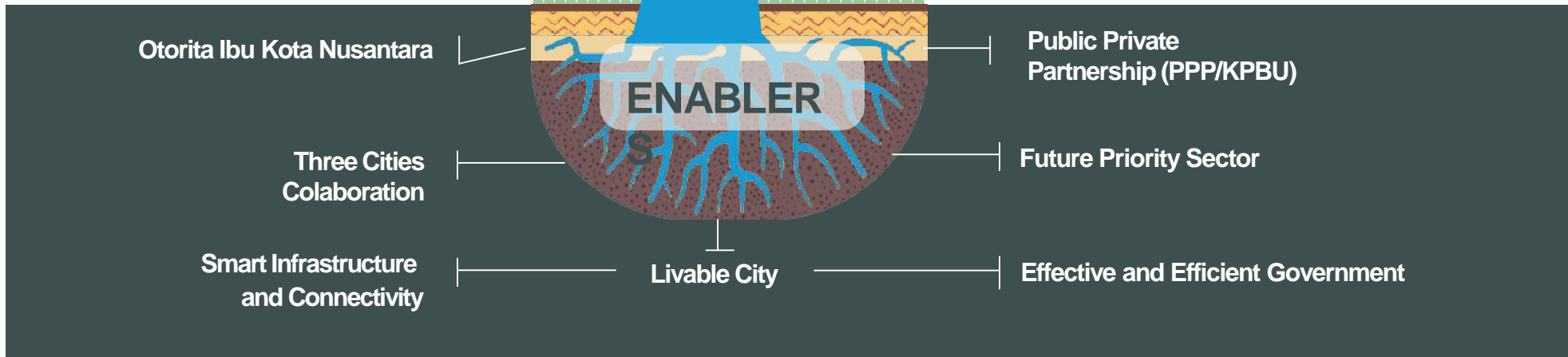
Convenient and Efficient through Technology and Innovation

03

National Identity Symbol



The Beauty of Indonesia – *Bhineka Tunggal Ika*



8 Principles and 24 KPI IKN



1 In harmony with nature

- 1.1 **More than 75%** of local Nusantara area are designated green area, incl. 65% for productive forest.
- 1.2 **All** resident can access green spaces within 10 minutes of travelling.
- 1.3 **100%** “green replacement” for each building constructed



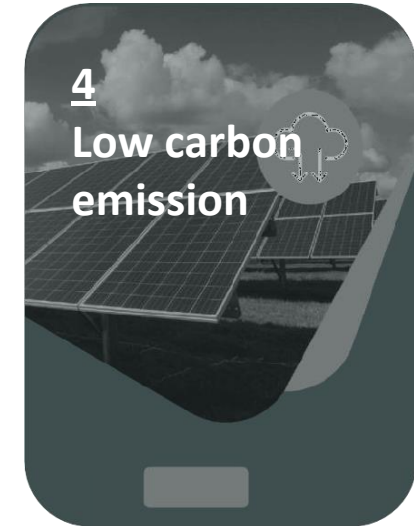
2 Unity in diversity

- 2.1 **All** resident are integrated as a community.
- 2.2 **All** resident can access social services within 10 minutes of travelling.
- 2.3 **All** public spaces incorporates local wisdom and gender-responsive designs.



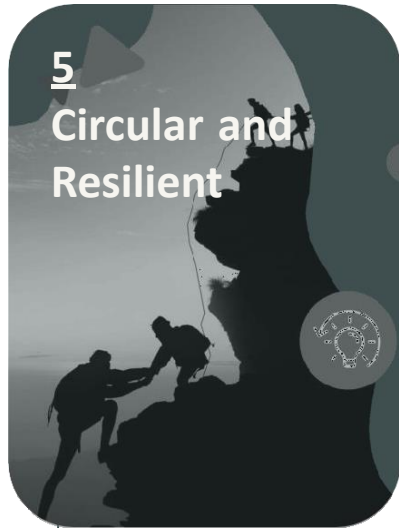
3 Connected, Active, Accessible

- 3.1 **80%** of all travels uses public transport or active mobility mode.
- 3.2 **10-minutes** distance to essential facilities and transport hub.
- 3.3 **Less than 50 minutes** to travel between Nusantara’s core area to the nearest airport, by 2030.



4 Low carbon emission

- 4.1 Renewable energy sources fulfill **100%** of the city’s energy needs.
- 4.2 **60%** energy conservation from buildings.
- 4.3 **Net zero emission** in Nusantara by 2045.



5 Circular and Resilient

- 5.1 >10% of the land is allocated for food productions.
- 5.2 60% of solid waste is recycled by 2045.
- 5.3 100% wastewater is well treated by 2035



6 Safe and affordable

- 6.1 One of world's 10 most livable cities by 2045.
- 6.2 All planned housings in Nusantara have access to essential infrastructure by 2045.
- 6.3 Proper, safe, and affordable housing with **balanced ratio**.



7 Tech-efficient

- 7.1 Achieving “very high” ranking in the UN e-Gov Development Index (EGDI).
- 7.2 100% digital connectivity to all residents and businesses
- 7.3 More than 75% satisfaction level on the government’s digital service



8 Economic opportunities for all

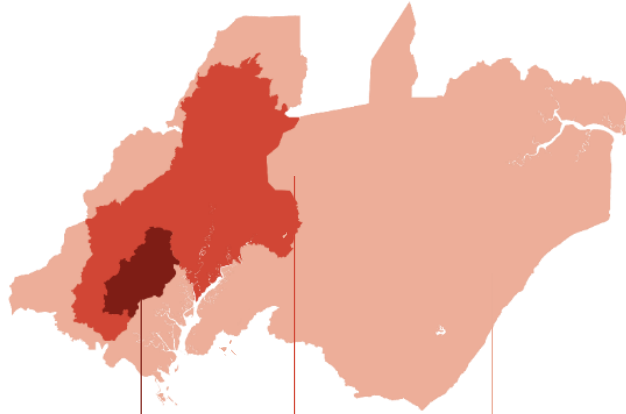
- 8.1 0% poverty in Nusantara by 2035.
- 8.2 Regional GDP equivalent to high-income economy.
- 8.3 The lowest Gini ratio in Indonesia by 2045.

Nusantara's Development Timeline



IKN Constellation

3 Planning Scale



KIPP

6.671 ha

K-IKN

56.181 ha

KP-IKN

256.142 ha

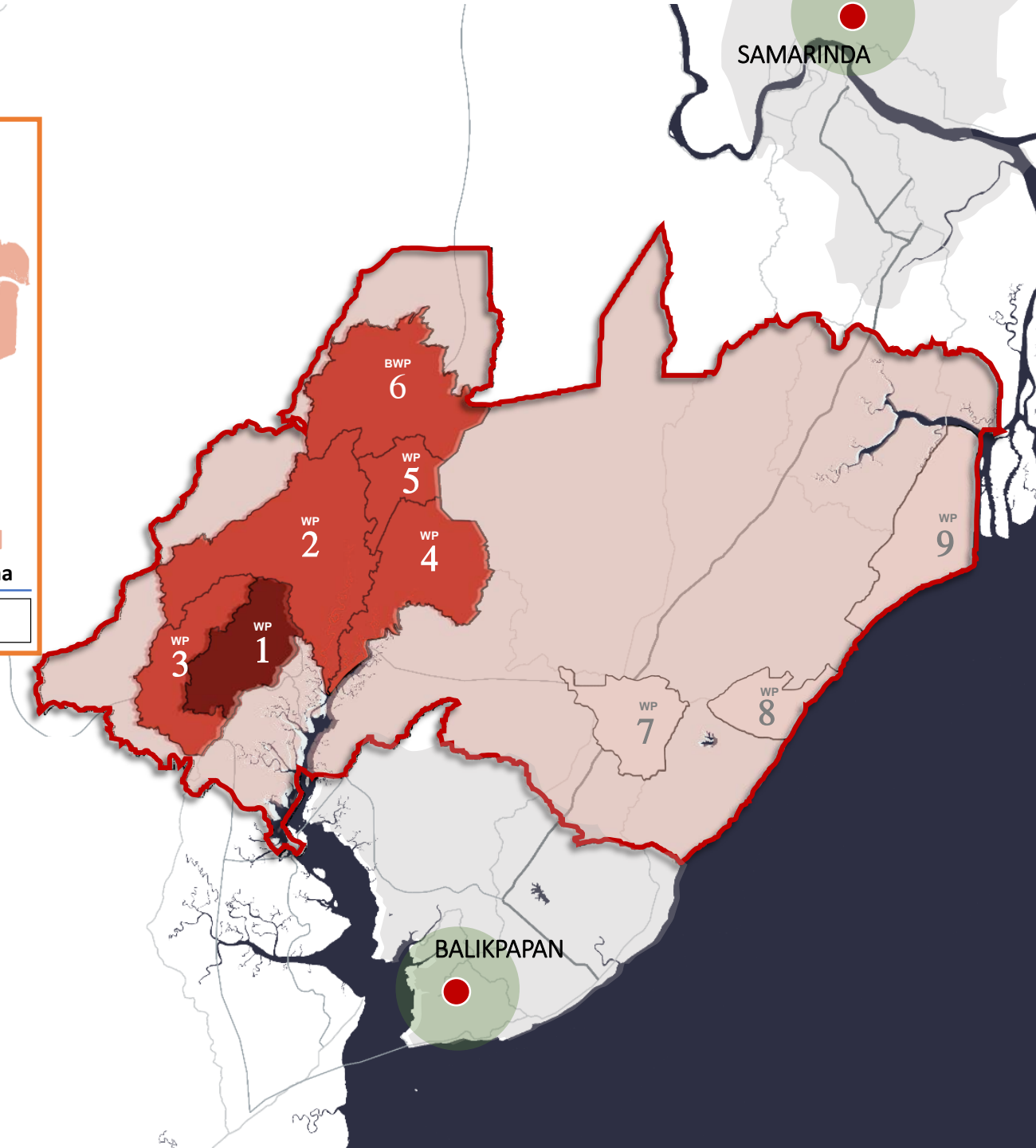
Population 2045

280–300 k

1.8 – 2 million

9 Planning Areas KP IKN

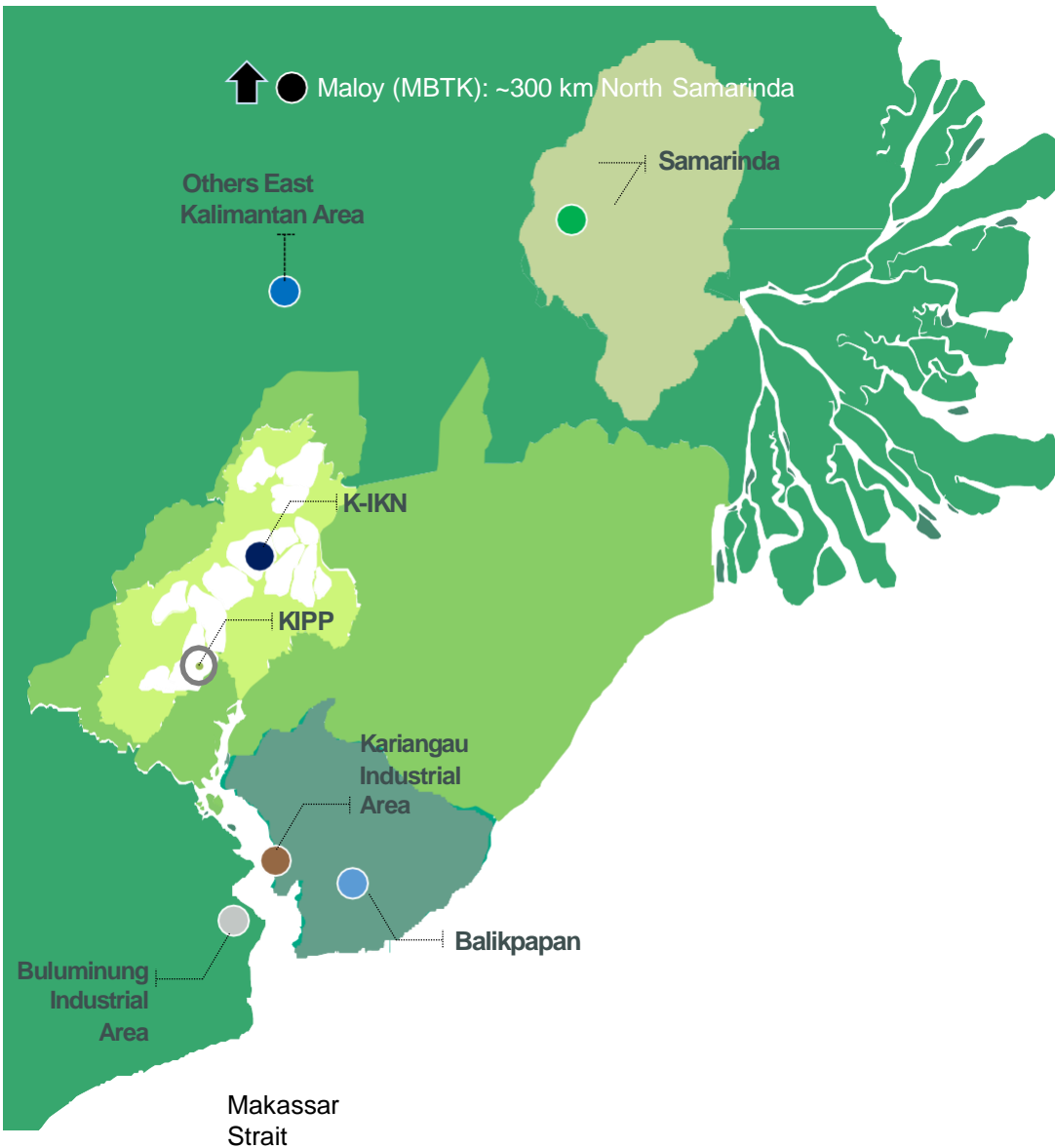
1. Government Center
2. Economic & Business
3. Health Services
4. Entertainment & Tourism
5. Education City
6. Innovation & Research
7. Trade & Distribution
8. Food & Agroindustry
9. Agriculture & Fishery



SAMARINDA

BALIKPAPAN

Economic Clusters Development



K-IKN (56.180 Ha)

- Education of 21st Century
- Center for Research and Development and Innovation for Low Carbon Energy
- Ecotourism, Urban Tourism, MICE Tourism, Medical and Health Tourism, Agrotechnology
- Center for Research and Development of Integrated Samarinda

- Low Carbon Energy, Sustainable Mining and Coal Gasification

Others East Kalimantan Area

- Sustainable Agriculture Industry
- Ecotourism and Nature Tourism
- Low Carbon Energy, Sustainable Mining and Coal Gasification

Maloy (MBTK)

- Low Carbon Energy: *Biofuels*
- Advanced Chemical Industry and Its Derivatives: Oleokimia

Balikpapan

- Integrated Pharmacy
- Advanced Chemical Industry and Its Derivatives: Petrokimia
- Future Industry Based on Renewable Energy

Kariangau Industrial Area

- Advanced Chemical Industry and Its Derivatives: Petrokimia
- Future Industry Based on Renewable Energy
- Integrated Pharmacy

Buluminung Industrial Area

- Sustainable Agriculture Industry
- Advanced Chemical Industry and Its Derivatives: Oleokimia
- Low Carbon Energy: *Biofuels*

Source: Presidential Regulations of the Republic of Indonesia Num. 63/2022 on the Details of the Nusantara's Capital City Master Plan

Law No. 3 of 2022 on Capital City

Government Regulation

PP No. 17/2022

tentang **PENDANAAN** dan Pengelolaan Anggaran dalam Rangka Persiapan, Pembangunan, dan Pindahan Ibu Kota Negara serta Penyelenggaraan Pemerintahan Daerah Khusus Ibu Kota Nusantara

PP No.12/2023 tentang Pemberian **PERIZINAN BERUSAHA, KEMUDAHAN BERUSAHA**, dan Fasilitas Penanaman Modal bagi Pelaku Usaha di Ibu Kota Nusantara

RPP Kewenangan Khusus Otorita Ibu Kota Nusantara akan melalui proses konsultasi dengan DPR RI terlebih dahulu.

Presidential Regulation

Perpres No. 62/2022

tentang **OTORITA** Ibu Kota Nusantara

Perpres No. 63/2022

tentang **PERINCIAN RENCANA INDUK** Ibu Kota Nusantara

Perpres No. 64/2022

tentang **RENCANA TATA RUANG (RTR) Kawasan Strategis Nasional (KSN)** Ibu Kota Nusantara Tahun 2022-2042

Perpres No. 65/2022

tentang Perolehan **TANAH** dan Pengelolaan Pertanahan di Ibu Kota Nusantara

Head of New Capital City Regulation

Perka Otorita IKN No. 1/2022 tentang Organisasi dan Tata Kerja Otorita Ibu Kota Nusantara

Surat Edaran No. 01/SE/Kepala-Otorita IKN/X/2022 tentang Penetapan Buku Panduan One Map, One Planning, One Policy (1 MPP) Sebagai Pedoman Informasi Rencana Persiapan dan Pelaksanaan Pembangunan Ibu Kota Nusantara Yang Terintegrasi Lintas K/L

Surat Edaran No. 02/SE/Kepala-Otorita IKN/XI/2022 tentang Penetapan Panduan Ad Interim Terkait Tata Kelola Penyampaian Informasi Kepada Calon Investor di IKN

- Perka Otorita IKN No.1/2023 tentang RDTR WP KIPP
- Perka Otorita IKN No.2/2023 tentang RDTR WP IKN Barat
- Perka Otorita IKN No.3/2023 tentang RDTR WP IKN Timur I
- Perka Otorita IKN No.4/2023 tentang RDTR WP IKN Timur II

Ministerial Regulation

Permenkeu No. 139/PMK.08/2022 tentang Fasilitas Untuk Penyiapan dan Pelaksanaan Transaksi Pemanfaatan Barang Milik Negara dan/atau Pemindahtanganan Barang Milik Negara dalam Rangka Persiapan, Pembangunan, dan Pindahan Ibu Kota Negara

Permenkeu No. 220/PMK.08/ 2022 tentang Dukungan Pemerintah untuk Kerja Sama Pemerintah dengan Badan Usaha serta Pembiayaan Kreatif Dalam Rangka Percepatan Penyediaan Infrastruktur di Ibu Kota Nusantara

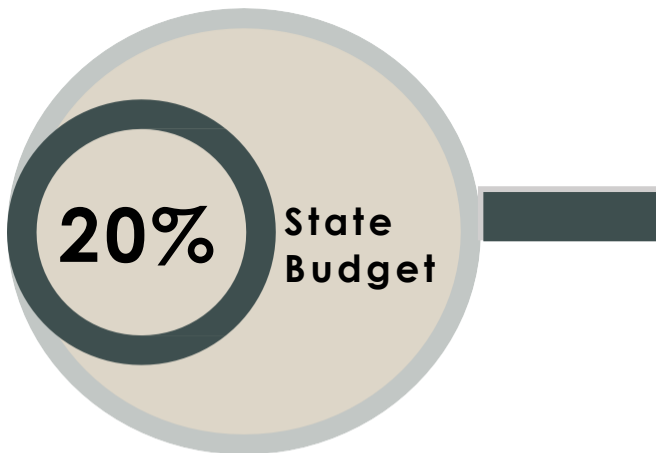
PermenPPN/Kepala Bappenas No. 6 Tahun 2022 tentang Tata Cara Pelaksanaan Kerja Sama Pemerintah dan Badan Usaha di Ibu Kota Nusantara

Municipal Regulation

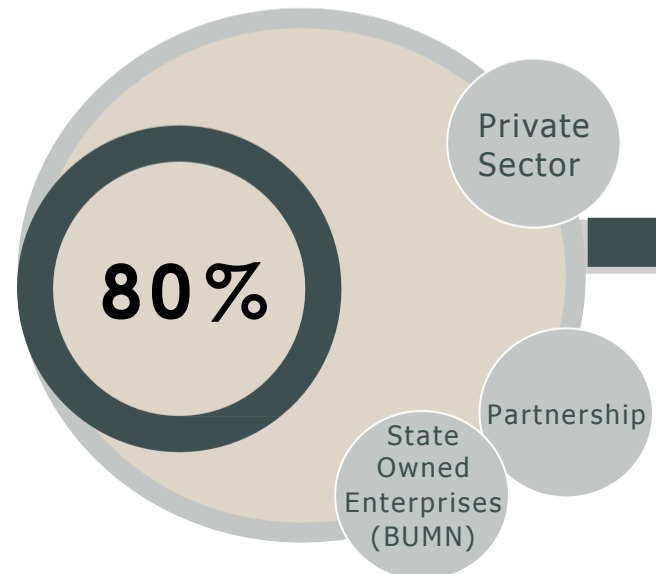
Peraturan Kepala Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah Nomor 1 Tahun 2023 tentang Tata Cara Pengadaan Badan Usaha Melalui Kerja Sama Pemerintah dengan Badan Usaha di Ibu Kota Nusantara.

- Has been issued
- ▨ Has been issued and revision process
- ▤ Soon to be issued

Total: Rp 466 T



- Housing for Civil Servant/ National Armed Forces/ Indonesian National Police
- State Palace, Strategic Building for Indonesian National Armed Forces/ Indonesian National Police
- Legislative dan Judicial Building
- Executive Building
- Land Procurement and Preparation
- Green Open Space
- Basic Infrastructure (Drinking Water, Sanitation, etc.)
- Improved Connectivity (Non-Toll Road and Logistics Line)
- Non-Governmental Organization
- Military Base



- Housing for Civil Servant/ National Armed Forces/ Indonesian National Police
 - Development of Main Infrastructure (Excluded Infrastructure from State Budget)
 - Executive Building*
 - Urban Transport (Rail Based)
 - General Housing
 - Higher Education and Private School
 - Science-technopark
 - Improved Connectivity (Airport, Harbor, Toll Road and Non-Toll Road)
 - Non-Governmental Organization
 - Private Health Facilities
 - Shopping Mall
 - MICE
- Notes:
*Funded by Asset Utilization Collaboration

Investment Sectors in New Capital City Nusantara

Core Government Area

Basic Infrastructure

- Drinking Water Supply
- Liquid Waste Management
- Solid Waste Management
- Raw Water Supply
- Housing

Energy Development

- Solar Power Plant Development
- Floating Solar Power Plant
- Development Apung in Sepaku Semoi Dam

Transportation

- BRT System
- Intelligent Transport System & Transit System
- Urban Freight Transport

Regional Infrastructure

Transportation

- Toll Access to IKN
- Airport Express Line
- Development of Kariangau and Semayang Port
- Sepinggan Airport Development

Industry and Economy Cluster

Smart City & Digital Hub

- Industry 4.0 for Existing Sectors
- Smart City Technology

Education of 21st Century

- Vocational School
- STEM Institute
- Twelve Years Education

Sustainable

Agriculture Industry

- Vegetable Protein
- Vegetable Extracted
- Herbal and Nutrition Products

Integrated Pharmacy

- Active Pharmaceutical
- Biosimilar

Ecotourism & Inclusive Health Tourism

- Ecotourism & Health Tourism
- Nature dan Wildlife Tourism
- Urban Tourism/Multi-Purpose Hotels
- Health Tourism

Advanced Chemical Industry

- Petrokimia
- Oleokimia

Future Renewable Industry

- PV Cell Assembly
- Two Wheel Electric Vehicles Assembly

Low Carbon Energy

- Coal Gasification and OEM
- Biofuels
- Electrification, Digitalization and Mining Rehabilitation

Priority Investment in KIPP IKN that Targeted Finish in 2024



International Hospital



Education Center Area



Office and Services Area



Mixed Use and Commercial



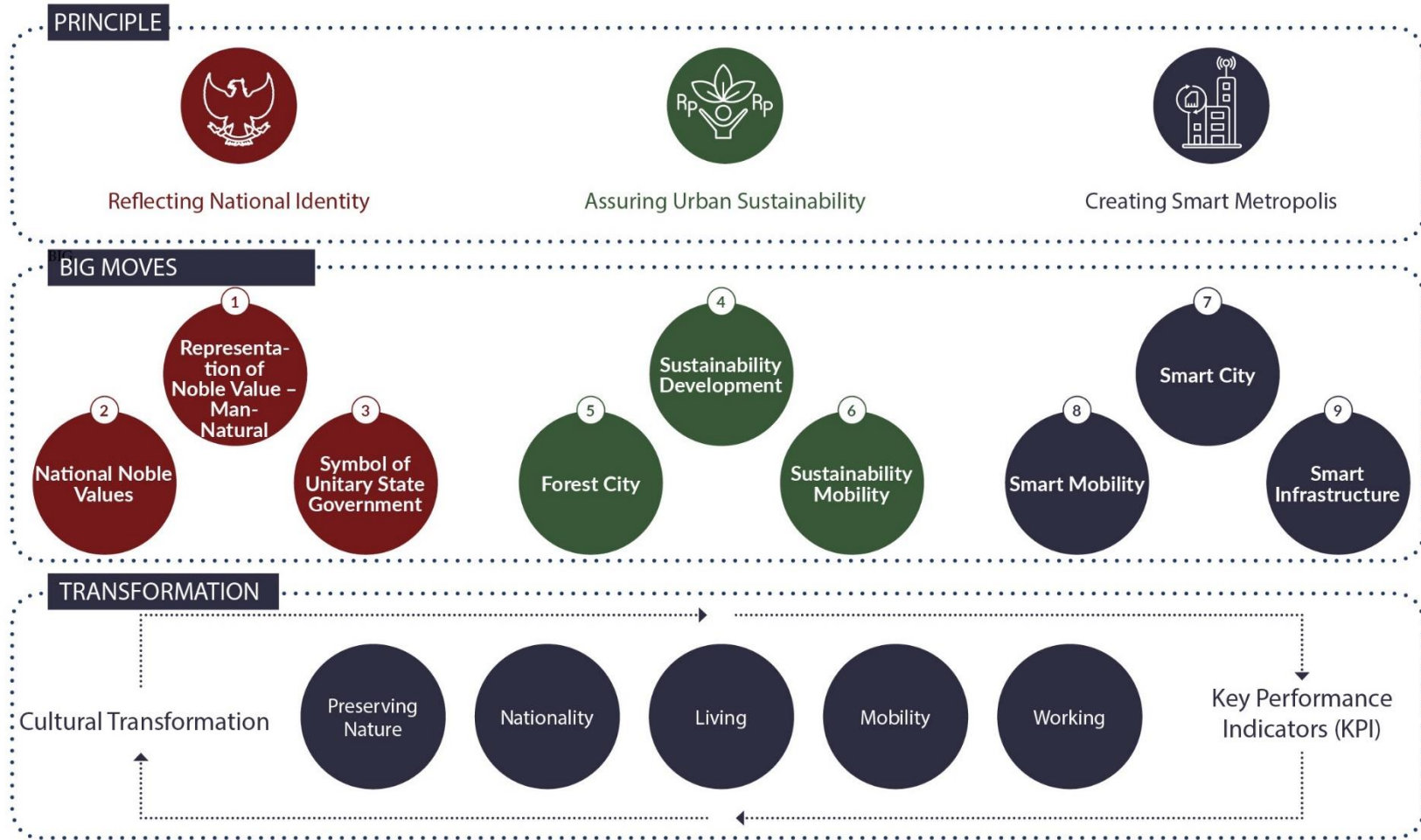
Housing Facilities



Development Progress of New Capital City Nusantara



The Capital City Center is designed by forming built environment with an integrated smart city system and living in harmony with nature



Key Performance Indicators of KIPP



Public Welfare (SOS)

10 Minutes
Access to Public Facilities and Transit Node

60-70%
Residential Units Allocated for ASN and Army/Police

Balanced Occupancy
in Accordance with 'Safe and Affordable' KPI

Public Space for National Programs and Activities

Elements/Symbols of Representation of Indonesian Cultures in Public Space



Ecology and Nature Preservation (EKO)

50-70%
Green Open Spaces

40-50%
Conservation on Kalimantan Local Plant

20-30%
Conservation on Indonesian Local Plant

75-80%
of Population have access to City Park

100%
Continuous Green Lines/Spaces

100%
Net Zero Emission

Optimized Quality on Microclimate



Connectivity/Transportation (TRA)

70-80%
Use of Public Transportation in Inner City Movement

70-80%
City Development Area Connected to Public Transport and Pedestrian Network

70-80%
Urban Area is <500m Walking Distance to Public Transport Node

<50 mins
Train Connection from Government Core Area to Airport

Integration, Schedule, Information, and Payments through ITS



City Infrastructure (INF)

150 l/person/day
Domestic Drinking Water Needs

60%
Recycling of Waste and Waste through WtE and/or to Product

100%
Centralized Domestic Wastewater Treatment and Fulfilled Quality Standards in 2035

50%
Area Using Alternative Water Resources

100%
Use of Renewable Energy



ICT Infrastructure (ICT)

100%
Internet Access

Availability
WiFi in Public Areas

ICT Integrated Operations Control Center (IOCC)

100%
E-Government in Public Services

Forest & Archipelago Based Future City Model, as Transformation Symbol & Civilization Advancement of Indonesia



**Reflecting
National Identity**



**Assuring Urban
Sustainability**



**Creating Smart
Metropolis**



135.000-150.000*
Population estimation



13% Housing Area



40.000-45.000 unit*
*Housing estimation
based on ratio 3.4
person / unit*



**1.5% Facilities and
Infrastructure**



**65% Green Open
Space**



9% Connectivity Line



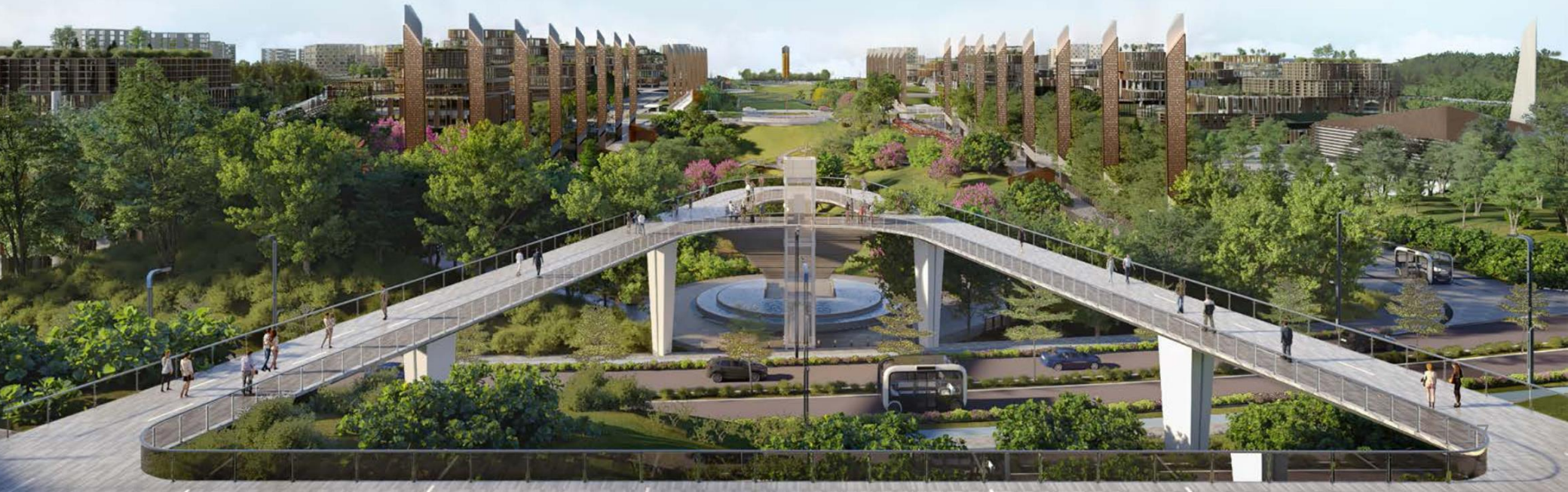
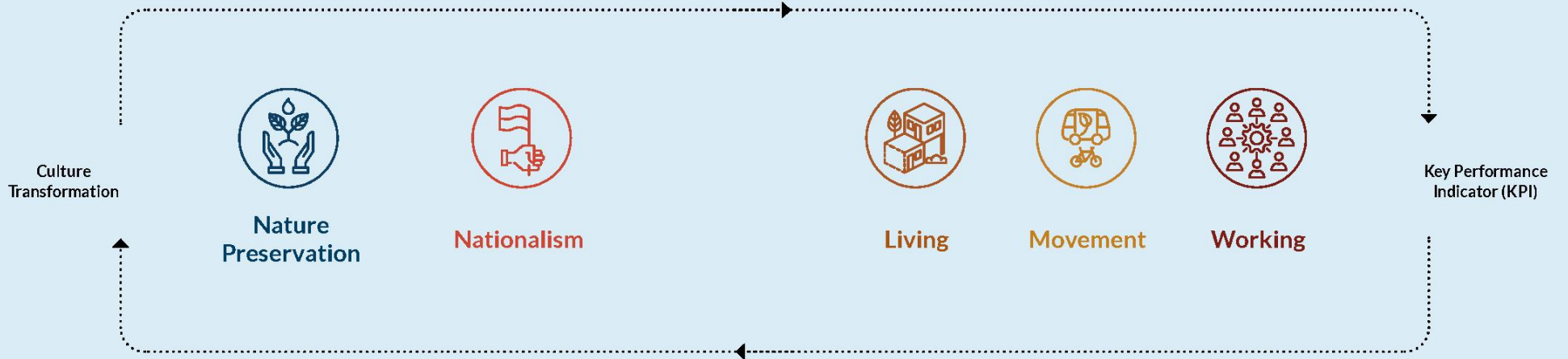
**6% Government
Area**

*Other Function:
Security and Defense, Mixed-use, Office
and Commercial, and Special Facilities*



** Total population depends on housing capacity*

5 Capital City's Culture Transformation



Celebrating The Beauty of Indonesia's Nature in Capital City



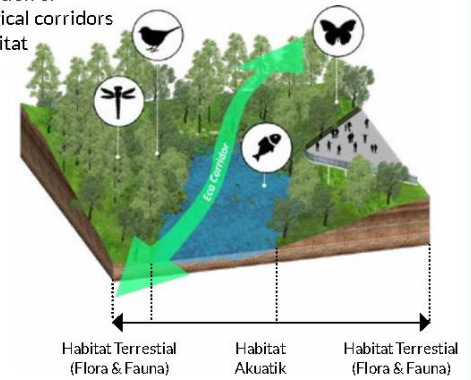
Ecological Connectivity

Ecological connectivity through continuity of open space, sustainability of green road corridors & ecological green corridors.



Biodiversity Enhancement

Utilization of ecological corridors as habitat parks.



Rainwater Harvesting & Management

Water runoff management through conserving, harvesting, reuse, and recharge strategies.



Conserve
Conserve & retain
as much as -natural
drainage pattern



Harvesting
Wet-season
capturing of rainfall
to offset demand for
irrigation during dry
season



Reuse & Recharge
Directing stormwater
runoff from adjacent road
and development into
open space planters filter
runoff to promote water
efficiency



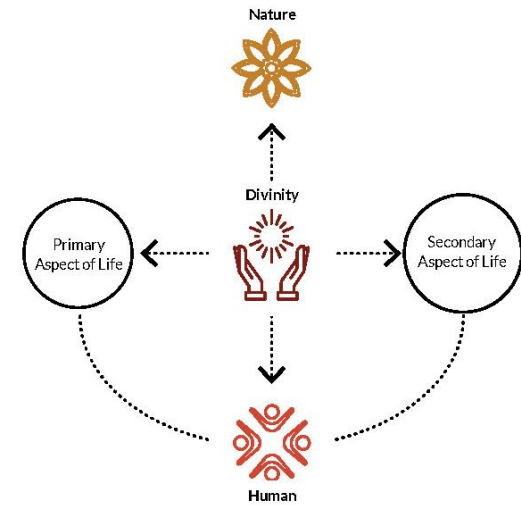
Transformation in Nature Preservation

Celebrating Indonesian Diversity, Richness of Culture, & Treasures in Public Space



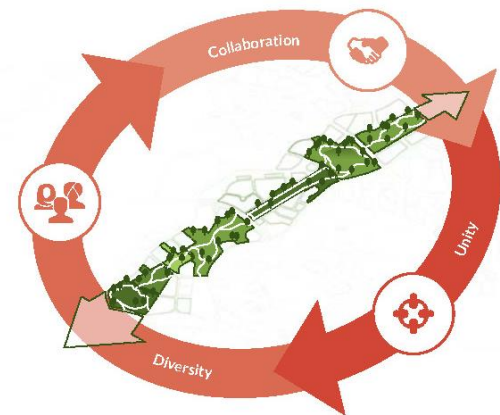
Kebangsaan Axis Concept

The Axis Philosophy as a representation of the Divinity - Human - Nature is a repositioning of the Cosmology of the Archipelago.



Representation of Nusantara's History, Nature, & Culture

Public space is a celebration of unity in diversity and strengthens mutual cooperation and collaboration.



Transformation in Nationalism



Inclusive, Smart, Collaborative, Compact Living Environment based on **10-minutes City Concept**



Shared Living Facilities

Shared facilities and communal spaces for residents.



One-Level Connectivity

Continuous & integrated connectivity between residential complexes.



Collaborative Active-Space at Ground Level

Residents' active collaborative space on the ground floor.



Future Village

Adaptation of horizontal residential culture on vertical stacking to achieve land efficiency and flexibility.



Green & Smart Living

Application of technology in the infrastructure of residential areas and units.



Compact Living Modules

Modulation of residential units to maximize the use of compact residential space.



Green Mobility Oriented to Pedestrian, Bikers, & Integrated Public Transport



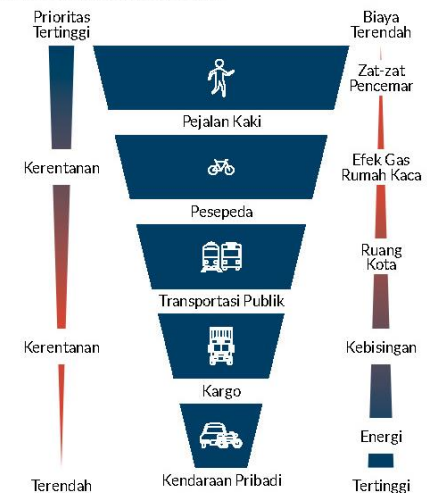
10 minutes City

Serving city residents within 10 minutes reach from and to all facilities.



People & Transit Oriented

Efficient and effective mobility of people-oriented and integrated transit-based.



Integrated Pedestrian Connectivity

Continuous and integrated pedestrian connectivity at various levels of the building.





1 *Hybrid
Workplace*



2 *Blended
with
Nature*



3 *Multi-
Layered
Program*



4 *Seamless
Workplace*



5 *Integrated
Zones*



6 *Future-Ready
Workplace*



Land Development Plan for KIPP (1A)



Office and Commercial Area



Presidential Palace Area



Education Center Area



International Hospital

Sub WP1A

2.876 ha

Core Government Building and Facilities

Sub WP1B

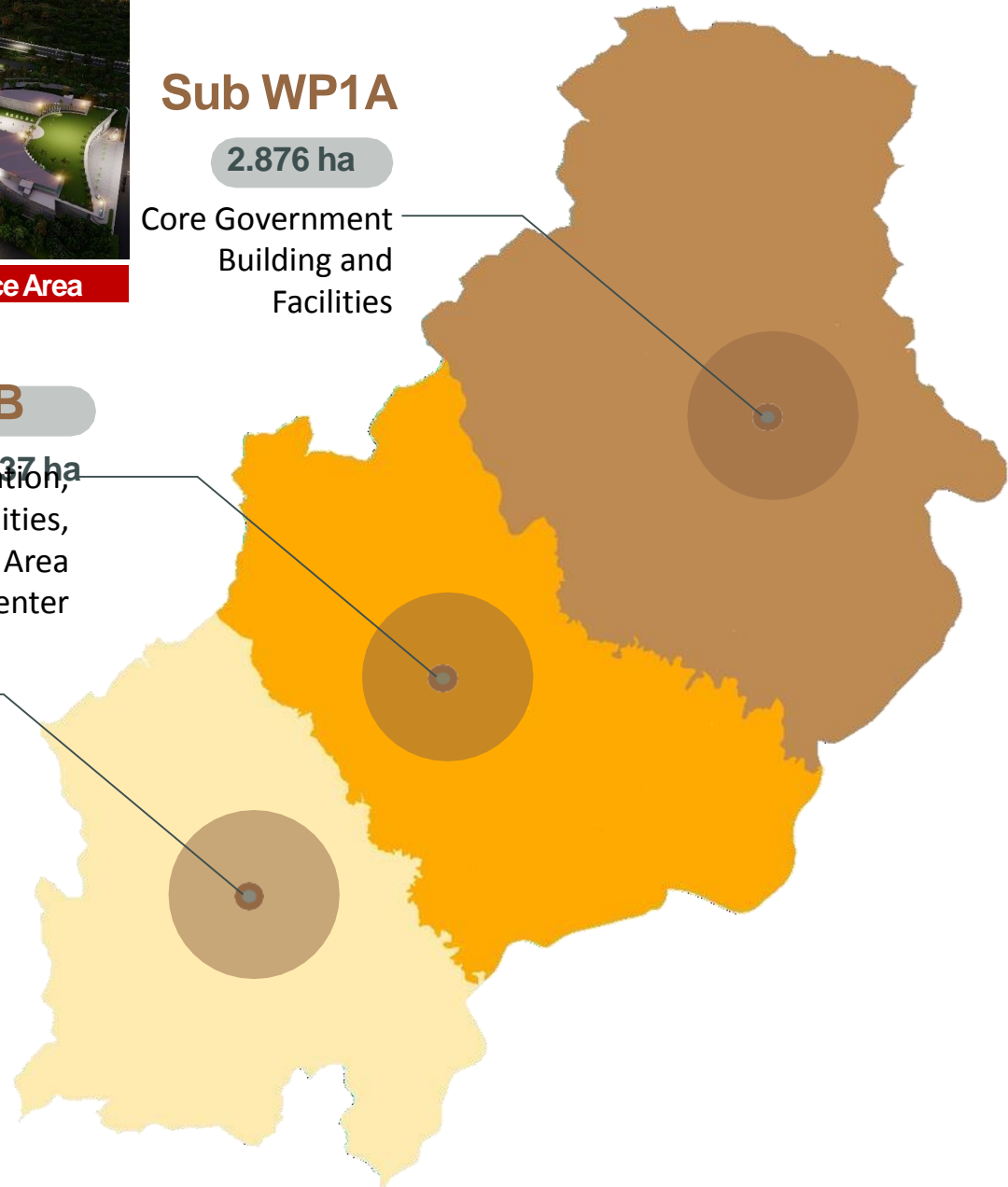
2.037 ha

Basic and Higher Education, MICE and Sport Facilities, Valley Multifunction Area and City Service Center

Sub WP1C

1.758 ha

International Hospital and Healthcare Area



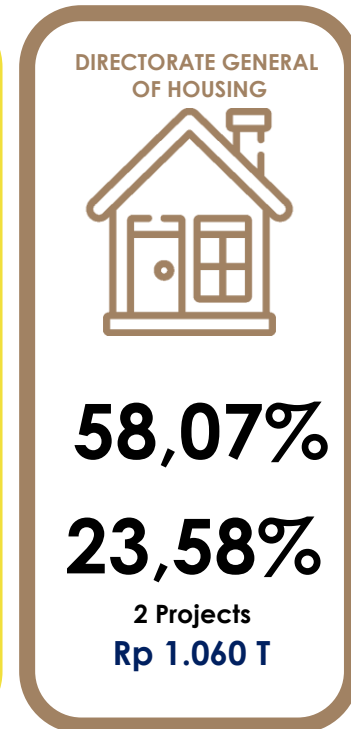
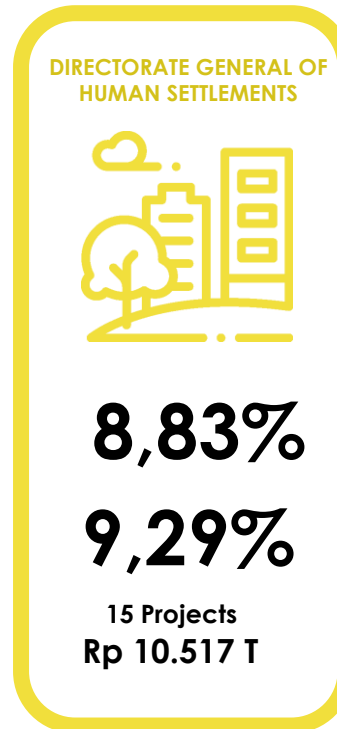
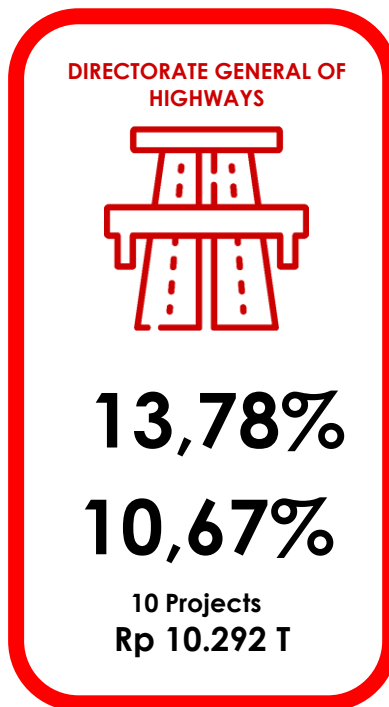
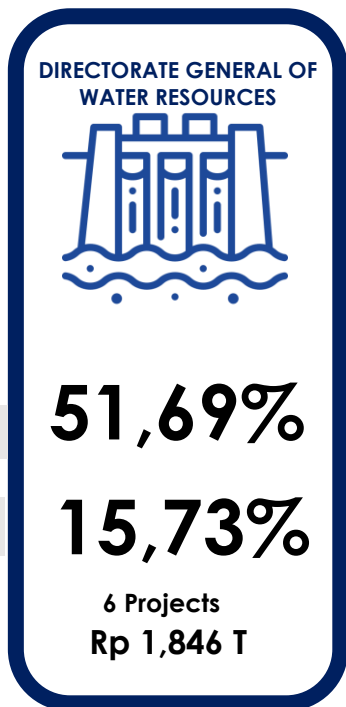
TOTAL **23.72T** **33 CONSTRUCTION PROJECTS**

REGIONAL AND KIPP-IKN INFRASTRUCTURE CONSTRUCTION PROJECT

CONSTRUCTION PROGRESS

FINANCIAL PROGRESS

* Ultimate 2024



Government Core Area (KIPP) IKN



Progress: May 3rd 2023

Realization 22,83%

(Infrastructure Development in IKN,
Proportion to Years Budget of 2020 -
2023)



Presidential Palace Area



Progress: May 3rd 2023

Presidential Palace and Field Ceremony

Planning: 10,07%
Realization: 11,54%
Deviation: 1,47%

President Office

Planning: 10,35%
Realization: 10,42%
Deviation: 0,07%

President Secretariat and Supporting Buildings

Planning: 13,26%
Realization: 13,29%
Deviation: 0,03%



Coordinating Ministry Package 1



Progress: May 3rd 2023

Coordinating Ministry Package 1

Planning: 2,66%

Realization: 2,67%

Deviation: 0,01%



Coordinating Ministry Package 3



Progress: May 3rd 2023

Coordinating Ministry Package 3

Planning: 1,49%
Realization: 1,83%
Deviation: 0,34%



Coordinating Ministry Package 4



Progress: May 3rd 2023

Coordinating Ministry Package 4

Planning: 2,38%

Realization: 2,72%

Deviation: 0,33%



State Secretariat Ministry



Progress: May 3rd 2023

State Secretariat Ministry

Planning: 3,07%
Realization: 5,26%
Deviation: 2,19%



Kebangsaan Axis (Coremonial Plaza)



Progress: May 3rd 2023

Ceremonial Plaza

Planning: 3,90%

Realization: 17,10%

Deviation: 13,20%



Ministerial Housing



Progress: May 3rd 2023

Ministerial Housing

Planning: 6,34%

Realization: 9,92%

Deviation: 3,58%



Toll Road

Progress: May 3rd 2023

Segment 3A

Planning: 4,14%

Realization: 4,21%

Deviation: 0,07%



Progress: May 3rd 2023

Segment 3B

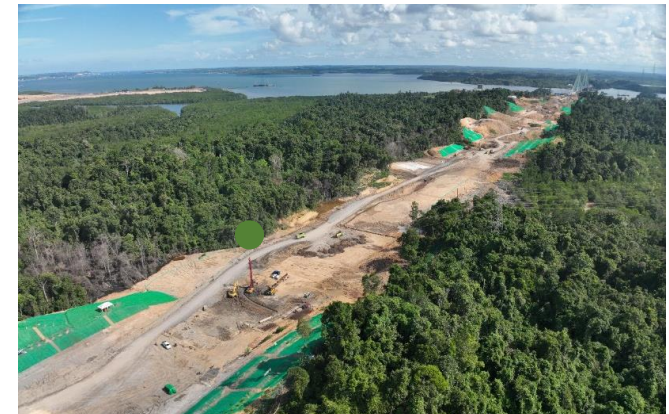
Planning: 17,98%

Realization: 18,13%

Deviation: 0,15%



Toll Road



Progress: May 3rd 2023

Segment 5A

Planning: 16,75%

Realization: 17,92%

Deviation: 1,17%



Sepaku Semoi Dam



Progress: May 3rd 2023

Sepaku Semoi Dam

Planning: 91,19%

Realization: 91,20%

Deviation: 0,01%



Intake Sepaku River



Progress: May 3rd 2023

Intake Sepaku River

Planning: 91,48%

Realization: 91,50%

Deviation: 0,02%

Thank You

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