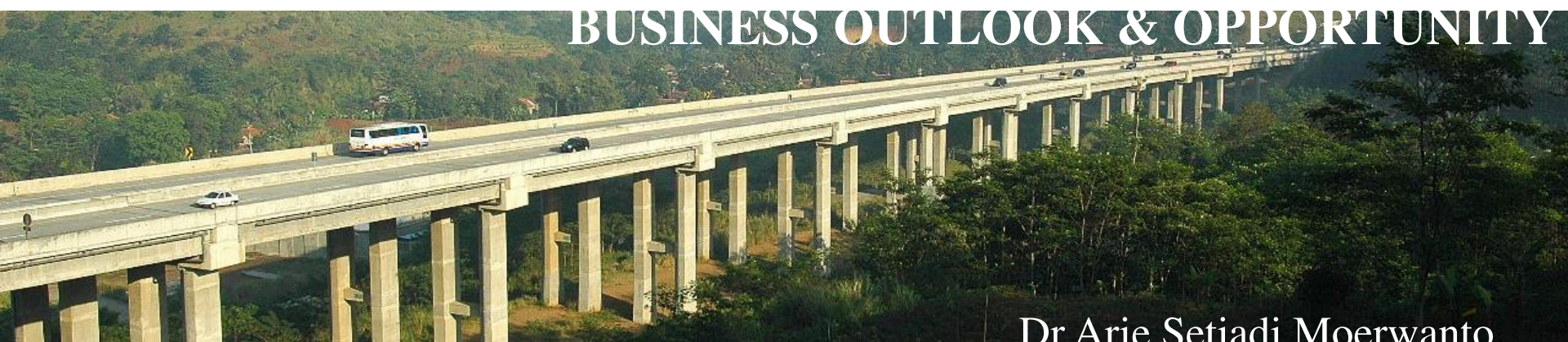




INDONESIA'S ROAD DEVELOPMENT 2015 – 2019 BUSINESS OUTLOOK & OPPORTUNITY



Dr Arie Setiadi Moerwanto
Director General of Highways
Ministry of Public Works and Housing
Republic of Indonesia



107th Meeting of REAAA
Governing Council

Manila July 20, 2017

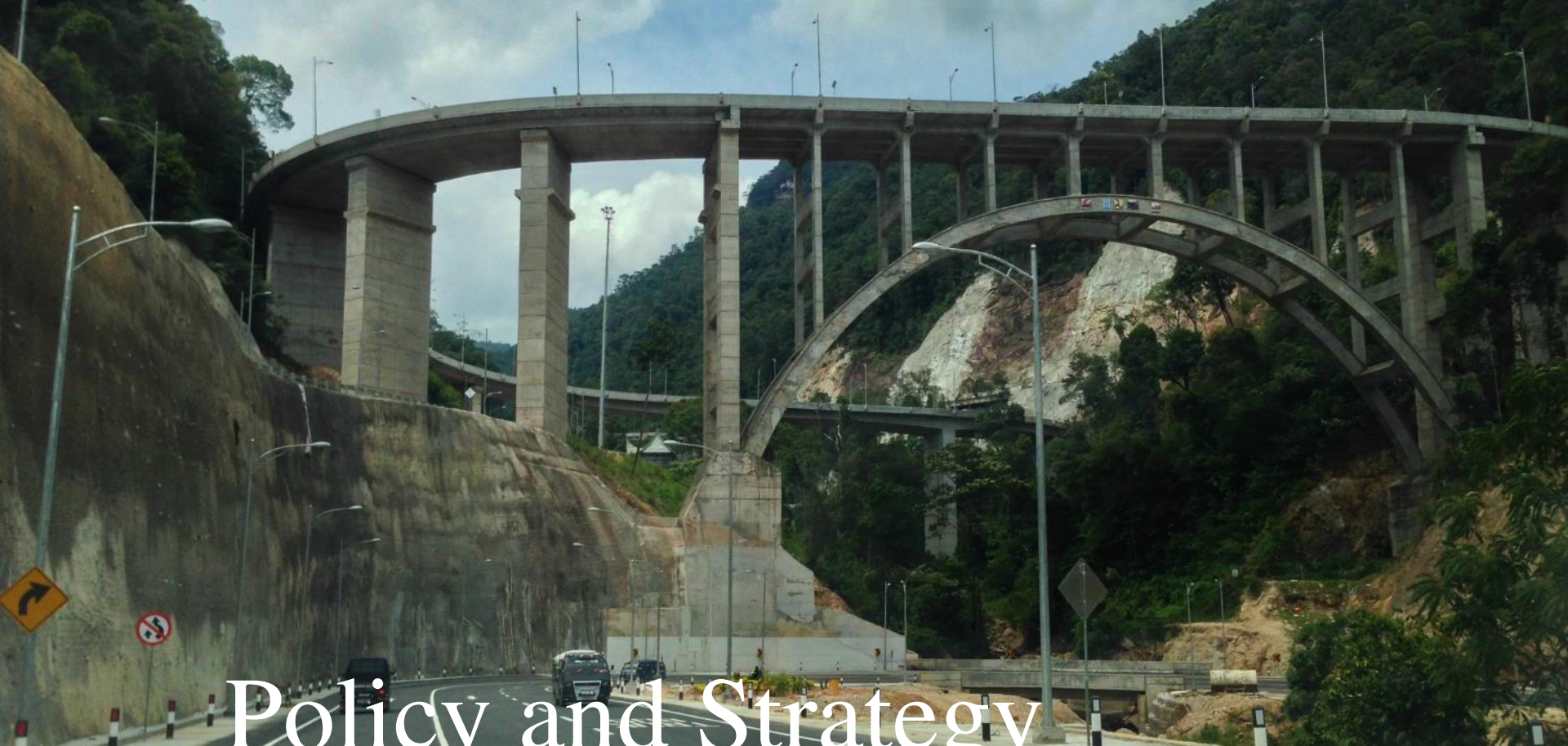




Introduction



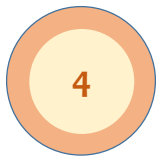
Challenges in Road Sector



Policy and Strategy



2015 – 2019 Mid Term Planning



National Road Network Preservation and Capacity Expansion 2015 - 2019



Road Preservation : 47,017 km



Road Development : 2,650 km



Bridge Preservation : 445,875 m



Bridge Development : 29,859 m



Road Capacity Expansion : 3,073 km



Expressway Development : 1,000 km



Bridge Capacity Expansion : 19,951 m



Support on Sub National Road : 500 km

National Road Network development is prioritized for:

- 24 new seaports access
- 60 new ferry crossing access
- 15 new airports access
- 15 industrial area access
- 25 tourism area access
- 3 border areas

- **Trans Java** and **Trans Sumatera** Expressways as well as expressways in Kalimantan and Sulawesi
- Focus preservation in 4 main logistical trunk routes: **Sumatera Eastern Corridor, Java Northern Corridor, Kalimantan Southern Corridor and Sulawesi Western Corridor**



Public Investment Allocated in National Mid Term Planning: **US\$ 20.6 Billion**



Main Logistic Corridor



There are **4** main trunk road corridor that is vital to Indonesia logistical route:

- Sumatera Eastern Corridor : **2,741** km
- Java Northern Corridor : **1,341** km
- Kalimantan Southern Corridor : **3,316** km
- Sulawesi Western Corridor : **2,165** km

At least **21** major cities are served by this trunk routes such as: Medan, Pekanbaru, Lampung, Jakarta, Semarang, Surabaya, Banjarmasin, Balikpapan, Makassar etc.



National Road Network Development



Inline with the President mission to develop Indonesia from the border, DGH main focus on road development for the term 2015 – 2019 is in border areas such as:

- 1,920 km Kalimantan border road
- 176 km NTT border road
- 1,098 km Papua border road
- 4,330 km Trans Papua
- 1,597 km South – South Java Corridor

New Road Network Currently Under Development



Kalimantan Border Road



Trans Papua



Papua Border Road



NTT Border Road

New Long Span Bridge Constructed



Tayan Bridge, West Kalimantan, Open in 2016



Merah Putih Bridge, Maluku, Open in 2016



Holtekamp Bridge, Papua, Currently Under Construction



Expressway Development 2015 – 2019



Indonesia plan to develop **1,060** km of expressways for the period of 2015 – 2019:

- **192** km of Sumatera Expressways
- **830** km of Java Expressways
- **33** km of Kalimantan Expressways
- **14** km of Sulawesi Expressways

As of December 2016, **989** km of Toll Road has been operated

Expressway Under Development Financing through Public Budget



Medan – Kualanamu Toll Road



Cileunyi – Sumedang – Dawuan Toll Road (Phase I)



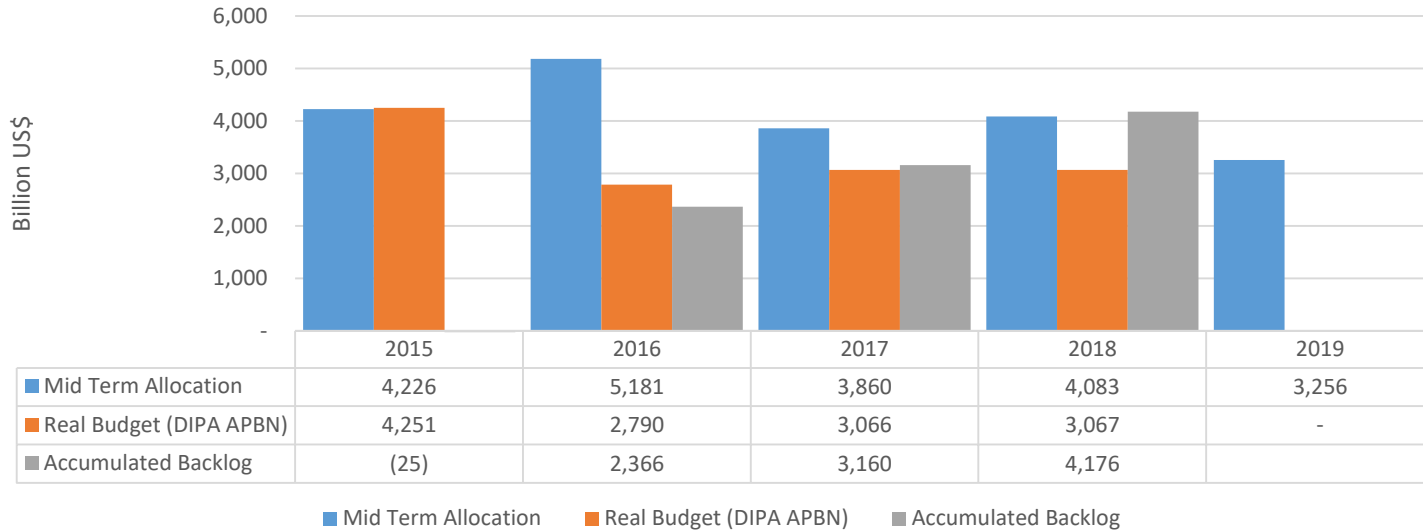
Solo – Kertosono Toll Road (Colomadu – Karanganyar)



Manado – Bitung Toll Road

Funding Challenge

Planned Funding vs Real Budget 2015 - 2019 for National Road Sector

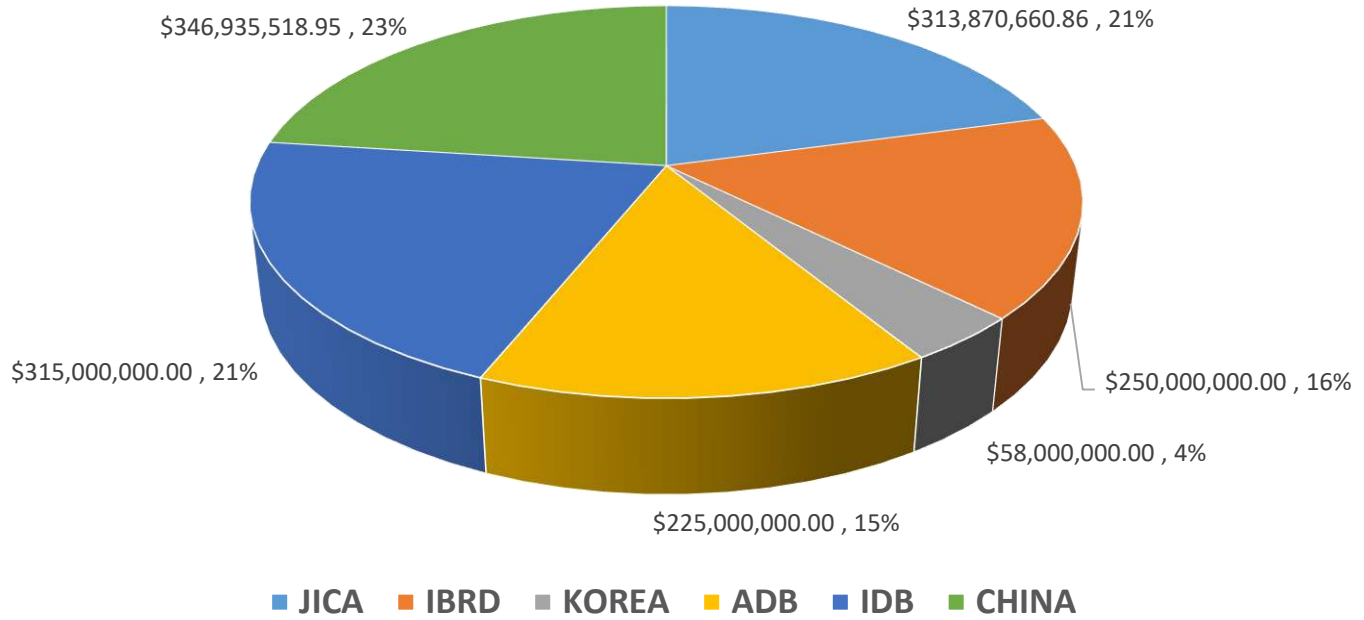


- In the National Mid Term Plan 2015 – 2019, the Government allocated **US\$ 20.6 Billion** for national road preservation and development.
- As it turns out, the Government funding capacity is not sufficient to fully finance infrastructure development, resulting in a backlog of **US\$ 4.17 Billion** for road sector development by the year 2018.
- To overcome this challenge, the Government must optimize budget to maintain road condition and focuses on priority projects, and also look for other sources of funding such as loan and PPP financing.



Loan Funding

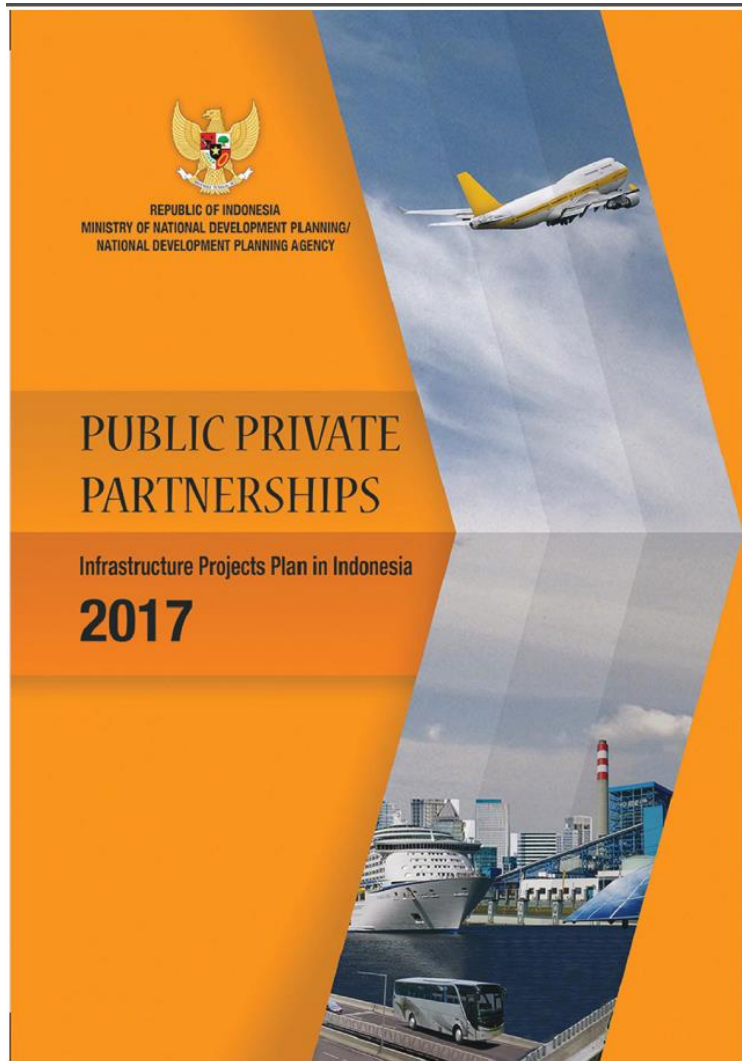
Proportion of Loan (US Dollar)



- Indonesia has borrowed more than **US\$ 1.5 Billion** to finance road sector development.
- These loan funding is used for road improvement and capacity expansion at road corridors deemed important for national interests, and also for the development of toll roads.

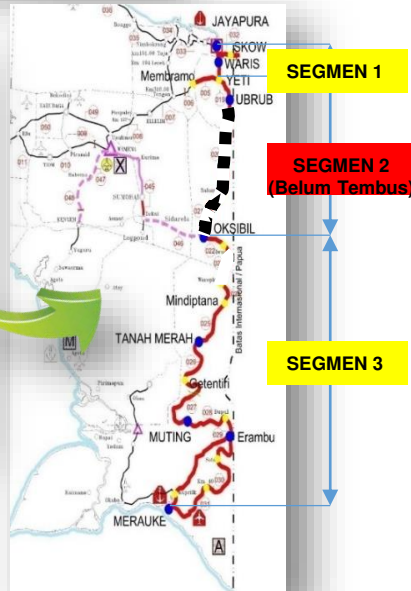
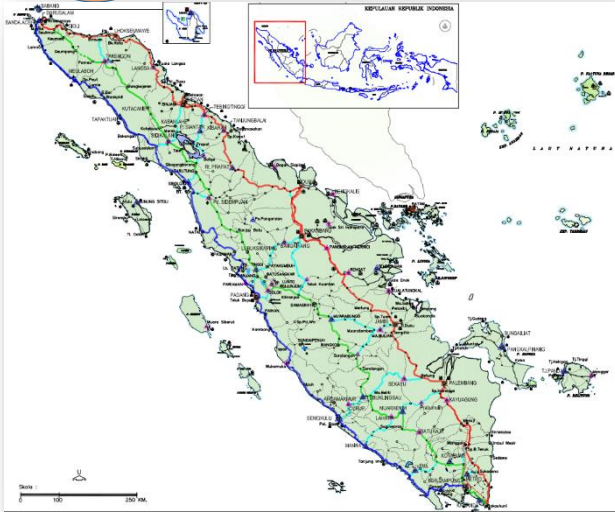


PPP Funding



- Aside from public financing, the Government of Indonesia is encouraging Private Sector to invest in infrastructure Development in Indonesia.
- Each year the Government publishes PPP book which showcases lists of infrastructure projects deemed attractive for private sector to invest.
- PPP scheme has been successfully implemented for many toll road projects. The Government is now considering PPP scheme for non-toll road projects through Availability Payment (AP) scheme.

Availability Payment (AP)



- Looking at the successful implementation of PPP scheme in toll road projects, the Government intend to **expand private investments** in non toll road projects.
- A particular scheme that is being seriously considered is **Availability Payment (AP)** scheme.
- Implementation of an AP scheme is considered for the **preservation of Sumatera Eastern Corridor** and the **development of Papua border road**.
- Those two corridors are considered because of the high cost required for the Government to preserve and develop them although the two corridors would provide huge benefit to cities and communities around them.



Cooperation Opportunity



Infrastructure Investment

- As the backlog for road network is still at large in Indonesia, a wide range of opportunities is available for private sector investments.
- On the other side many Indonesia's enterprises have international recognition in completing public infrastructure projects and have even handled infrastructure projects abroad such as in the ASEAN, Africa and in the Middle East areas.



East – West way Algeria developed by Wijaya Karya



Metro Manila Skyway

(Investor by PT Citra – Stage 1 constructed by
Hutama Karya JO)



Technology Sharing



Utilization of Corrugated Steel in the construction of Overpass Antapani, West Java



Sosrobahu technology to allow traffic flow during elevated structure construction (will be used in Jakarta – Cikampek Elevated Toll Road)



Floating Bridge (*Jembatan Apung*) technology in Cilacap, Central Java

DG of Highways welcome any REAAA members who would like to exchange information and technology in road sector.

Joint Academic Research



The Institute of Road Engineering (*PUSJATAN*) is Indonesia's leading research center in road sector technology. Along with road / transport research center in Indonesia's reputable universities, we are open for any joint research in road engineering from any institutions around the world.



Intelligent Transport System



Overloading Prevention System

Roads in Indonesia deteriorate faster than its planned life cycle due to overloading. Up till now, no technology / system seems effective enough to prevent overloading on our roads.

Real-time Road Condition Monitoring

Cutting edge technology is require to accurately monitor road condition in real time. High traffic load makes it more important for DGH to act swiftly responding to road damage or accident.



Road Network Management System

A center for road network management system is quite common in toll road network. Management of National road network by DGH is still using the conventional way. Advances to Intelligent Management System is becoming urgent to cope with the current traffic demand.

Pipeline Road Projects with ICB (1)



Development of Cisumdawu Toll Road Phase III

- A continuation of Cisumdawu Toll Road construction Section I in the province of West Java
- Cost Estimate : US\$ 156 Million
- Lender : China Export Import Bank (CEXIM)



Development of Trans South – South Java

- Road construction and realignment of South – South Java corridor in the province of Central Java, DI Yogyakarta, and East Java
- Cost Estimate : US\$ 250 Million
- Lender : Islamic Development Bank



Accelerating Infrastructure Delivery through Better Engineering Service Project (ESP)

- Engineering Service in Road Project Preparation
- Cost Estimate : US\$ 45 Million
- Lender : Asian Development Bank

Pipeline Road Projects with ICB (2)



Bandung Intra Urban Toll Road

- Improvement of Inner Bandung Arterial Road in the province of West Java
- Cost Estimate : US\$ 121 Million
- Lender : Japan International Cooperation Agency



Patimban New Port Development (Phase I)

- Patimban New Port Access Road Construction
- Cost Estimate : US\$ 103 Million
- Lender : Japan International Cooperation Agency

Renown Indonesian Firm in Road Construction Services (1)



- PT Wijaya Karya Beton Tbk (WIKABeton), as one of subsidiaries of PT Wijaya Karya (Persero) Tbk (WIKABeton) is part of corporate expansion that specializes in precast concrete industry.
- PT WIKABETON excellent products: pre-stressed concrete poles for power distribution lines and PC piles, concrete open channels, concrete railways sleepers, bridges girders, sheet piles, pipes, platform slabs and building components which have been implemented in various range of projects.



PT Citra Marga Nusaphala Persada Tbk
Infrastructure Solution Enterprise

- PT Citra Marga Nusaphala Persada (CMNP) is a renown Indonesian Toll Road Company. Several toll roads developed by them are Cawang – Tj. Priok Toll Road, and Tj. Priok – Jembatan Tiga/Pluit Toll Road.
- Currently, CMNP has 5 subsidiary companies: PT Citra Margatama Surabaya, PT Citra Wasputowa, PT Citra Persada Infrastruktur, PT Citra Marga Nusantara Propertindo, and PT Citra Marga Lintas Jabar.
- CMNP has also participated in the Development of Metro Manila Skyway. It is currently one of the largest Toll Road operator in Manila.



*Citra Metro Manila Tollways Corporation and
Skyway Operation and Maintenance*



Renown Indonesian Firm in Road Construction Services (2)



- PT Jaya Konstruksi Manggala Pratama, Tbk has operated more than four decades developing major infrastructure projects in Indonesia.
- PT Jaya Konstruksi Manggala Pratama, Tbk, is an integrated infrastructure development company with core capabilities in the infrastructure and building construction sector, asphalt and liquefied petroleum gas (LPG) trading, precast concrete manufacturing and specialized mechanical and electrical engineering and maintenance services.
- Several road projects that was developed by PT Jaya Konstruksi are Cikarang Utama Toll Gate, Tj. Priok Toll Road, and Dukuh Atas Underpass.



- PT Brantas Abipraya started as the result of Kali Brantas River Development back in 1980. Initially the company specializes in Water Infrastructure Development including the development of Major Water Dam.
- Within time, the company expand to other field of work such as road and bridge construction, transportation, electricity, building thus transforming into General Contractor.
- Several road projects that was developed by PT Brantas Abipraya are Bukit Tinggi Flyover, Yos Sudarso Fly Over, Permata Hijau Flyover, and Dekai – Oksibil Road.



Renown Indonesian Firm in Road Construction Services (3)



- On March 1st 1978, Government of Indonesia established PT Jasa Marga (Persero) TBK
- Jasa Marga main core business is toll road development and operation. It is currently Indonesia's largest toll road company, operating 593 km of toll roads. It is currently developing 731 km new toll roads.
- Several toll road concession under Jasa Marga operation are Jagorawi, Jakarta – Cikampek, JORR and Palikanci.
- PT Pembangunan Perumahan (Persero) TBK, shortened PT PP (Persero), is a state-owned company which focuses on planning and construction services.
- The company was founded on August 26th 1953 originally named NV Pembangunan perumahan. For more than five decades, PT PP (Persero) has become one of the main players in national construction business.
- Several national major projects were managed and built by PT PP (Persero) such as the construction of Jembatan Siak and Bareleng, and a main contractor in WINRIP, a World Bank Funded Project.



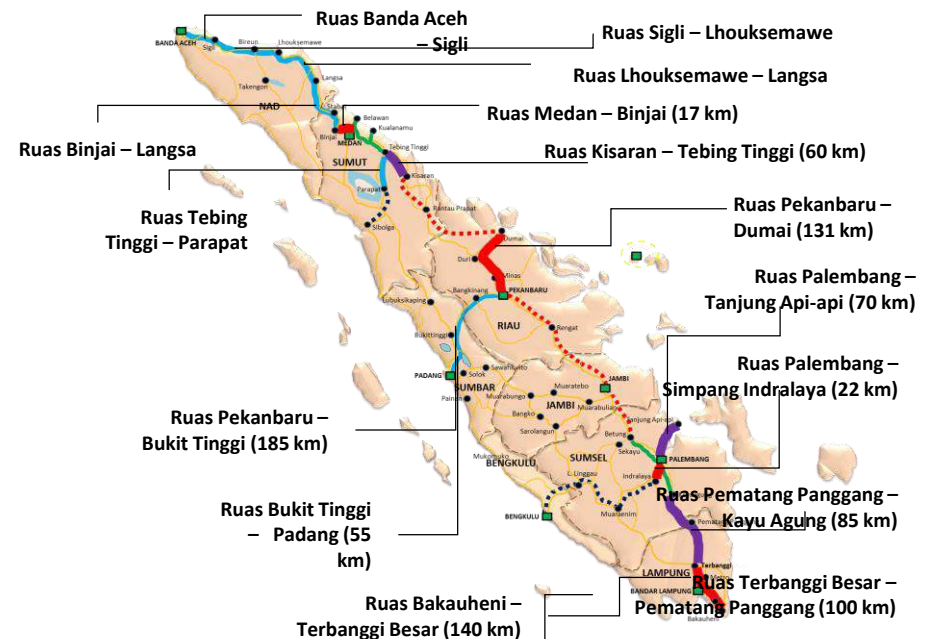
Renown Indonesian Firm in Road Construction Services (4)



Inovasi Untuk Solusi

- PT Hutama Karya is a State Owned Company specializes in construction services and property.
- They have a long history in Indonesia's infrastructure development including road construction and toll road development. Along with PT CMNP, HK take parts in the development of Manila Skyway back in 1997.
- Today, they were given a monumental task to develop 1,453 km of the Trans Sumatera Expressway. Around 645 km of it, is expected to be completed by 2019.
- Economic and traffic load in Java is hopefully to be disperse to Sumatera by operating the Trans Sumatera Expressway.

TRANS SUMATERA TOLL ROAD





THANK YOU



**DIRECTORATE GENERAL OF HIGHWAYS
MINISTRY OF PUBLIC WORKS AND HOUSING
REPUBLIC OF INDONESIA**

Government Priority Programs

The acceleration of infrastructure development has been the main agenda of President Joko Widodo, clearly stated in two agenda of his *nawa cita* (nine priority programs):



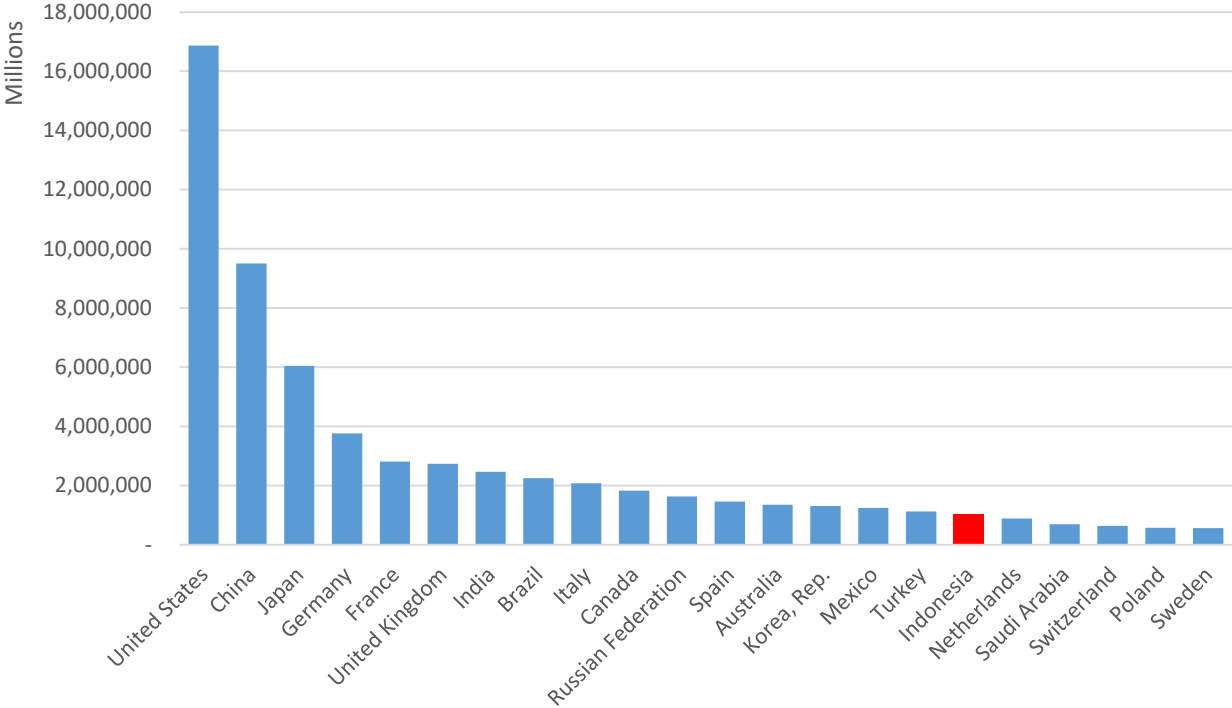
Build Indonesia from the border by strengthening regions and rural areas in the form of a unitary state



Improving the people's productivity and competitiveness in international market

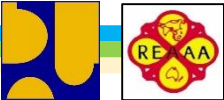
Economic Strength

2016 Top 20 largest GDP (constant 2010 US\$)



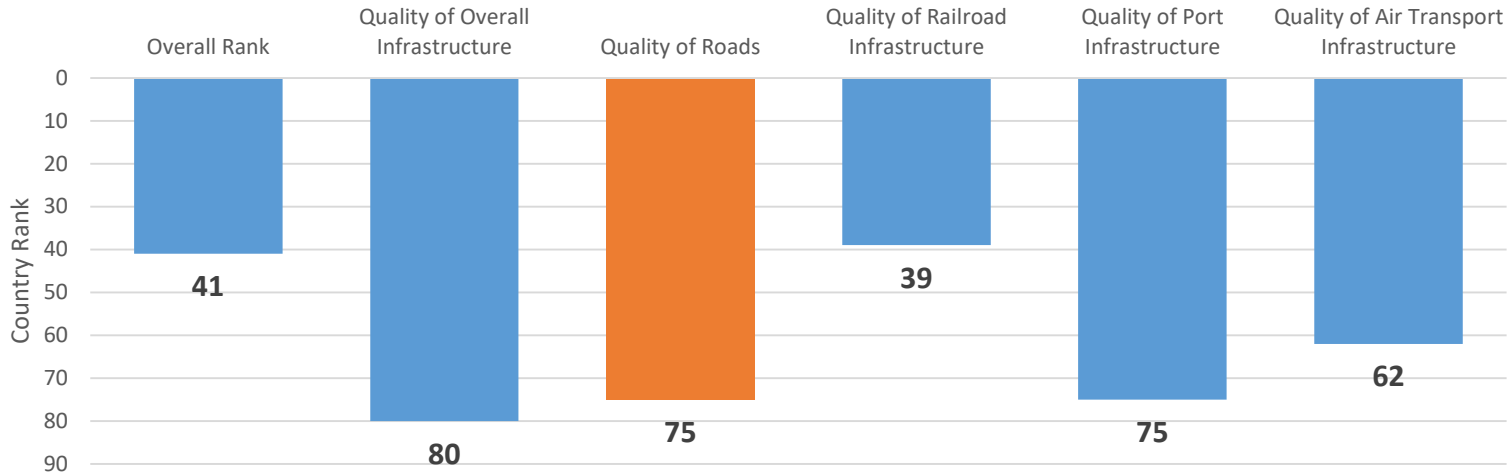
Source: databank.worldbank.org

With an average of **5.6%** annual GDP growth since 2010, Indonesia has shown its economic resilience during global economic uncertainty



Infrastructure Challenges

Global Competitiveness Index 2016 - 2017



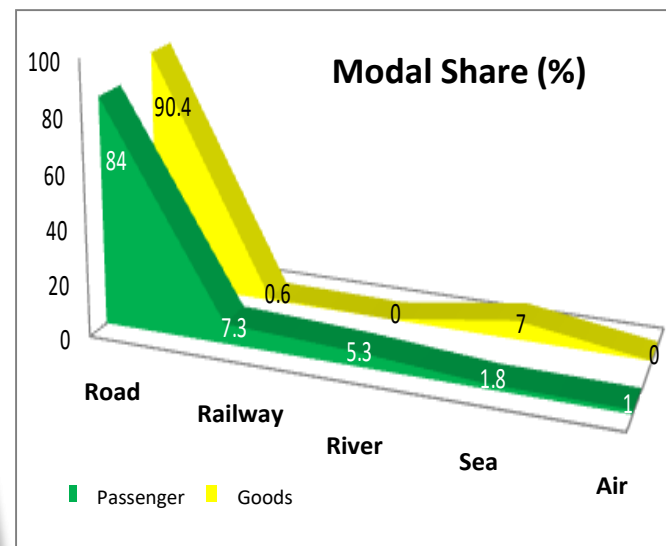
GCI rank from 138 countries

Source : The Global Competitiveness Report 2016 - 2017

- Despite its strong economy, Indonesia faces a major infrastructure challenge. It is lagging behind other ASEAN countries such as Singapore, Malaysia, and Thailand in terms of infrastructure capacity. Backlog in infrastructure capacity has created bottlenecking in optimizing Indonesia’s economic potential.
- Therefore, the accelerity of Infrastructure expansion and development is at the topmost priority of the current Government to improve regional competitiveness.



Road Sector Challenges



Status	Length (km)	Proportion (%)	Condition (% Stable)
National Road	47,017	9.20	89.38
Provincial Road	48,374	9.46	69.81
Regency/Municipal Road	415,709	81.34	58.55
Total	511,100	100	

- With its vast size, Indonesia has one of the longest road networks in the world stretching more than **500,000 kilometres**.
- It is not easy however to maintain all of it in good condition. As the government funding capacity is limited, main priority for preservation is for **roads that serves logistic routes**.
- Most Indonesians also travel more by roads rather than with other modes accounting on average by **90%** of all transport modes.

