INDONESIA NATIONAL RAILWAY POLICIES & DEVELOPMENT PROGRAMS

PII (PERSATUAN INSINYUR INDONESIA)

1. EXISTING INDONESIA RAILWAY

Sumatera Railway Line:

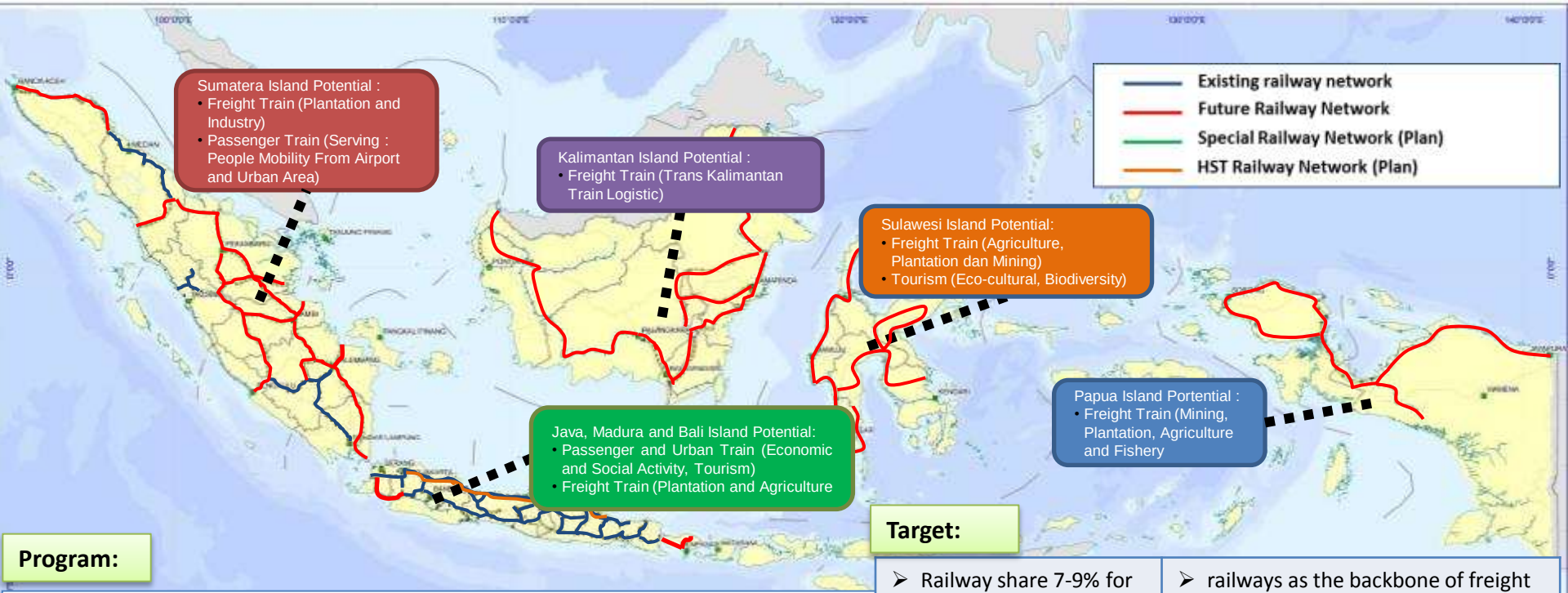
- Active line: ± 1,544 Km (including double track ± 284 Km)
- Inactive: ± 129.1 Km

Java Railway Line :

- Active line: ± 3,890.38 Km (including double track ± 1,192.6 Km)
- Inactive: ± 2,835.85 Km

1. Operator : PT. KAI, PT. KCI, PT. Railink, PT. KCIC, PT. MRT Jakarta, PT. Jakarta Propertindo
2. 356,461,000 passenger/year (2017)
3. 39,512,000 ton/year (2017)

2. NATIONAL RAILWAY MASTERPLAN



Program:

a. **10,524 Km National Railways Network in 2030** (Java-Bali Island, Sumatera, Kalimantan, Sulawesi and Papua) including **3,755 km urban railways network**.
b. Passenger Rolling stock: 2,839 unit locomotive, 34,178 unit passenger coaches.
c. Freight Trains Rolling stock: 2,475 unit locomotive and 48,364 unit freight wagons.

Target:

- Railway share 7-9% for passenger and 11-13% for freight transport
- Trans Sumatra railways network
- railways as the backbone of freight transport in Kalimantan, Sulawesi, Papua
- integrated, secured, safe, comfortable, reliable, and affordable of services

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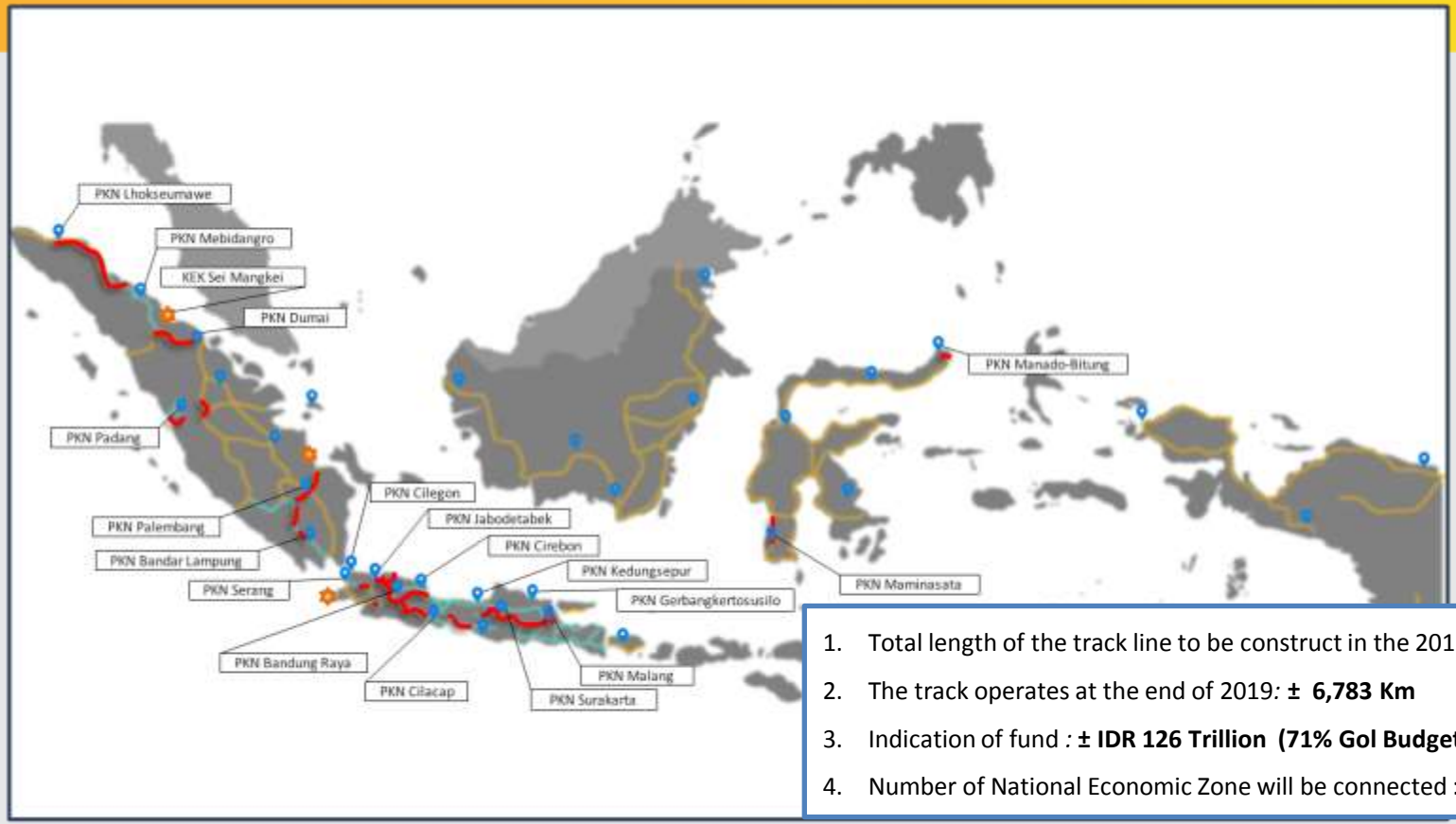
Railway Infrastructure Strategic Plan (2015 – 2019)



1. Total length of the track line to be construct in the 2015-2019 : **± 1,349 Km**
2. The track operates at the end of 2019*:* **± 6,783 Km**
3. Indication of fund *:* **± IDR 126 Trillion (71% GoI Budget : 29% Private)**
4. Number of National Economic Zone will be connected : **20 zone**

3. DEVELOPMENT STRATEGY

NATIONAL RAILWAY VISION ON 2030

Vision: Competitive, integrated, high-technology, synergize with industry, affordable, responsive to development

4. TECHNOLOGY TRANSFER & INDUSTRIAL DEVELOPMENT

A. Direction

GOALS

- Technology Transfer and Industry Development (Modern technology that is able to create an effective, efficient and environmentally friendly national railway implementation, is supported by mastery of technology that realized by national industry support)

RAILWAY INDUSTRY DEVELPMENT TARGET

- Towards industries, supporting industries, and independent and competitive national railroad supporting services industries

TARGET

- Able to reduce dependence on technology overseas facilities by a maximum of 25% while still trying to increase local content up to 85% and optimize domestic industry support.

POLICY

- Increasing mastery of railroad infrastructure facilities and infrastructure facilities and infrastructure through research collaboration with universities and research institutitons;
- Technology transfer in high technology products through production and training cooperation from producing countries;
- Encouraging and increase in the role of the domestic railway industry including it's supporting industries to improve the competitiveness and independence of the railroad industry;
- Encourage stakeholder participation to create new innovations in railroad infrastructure and facilities.

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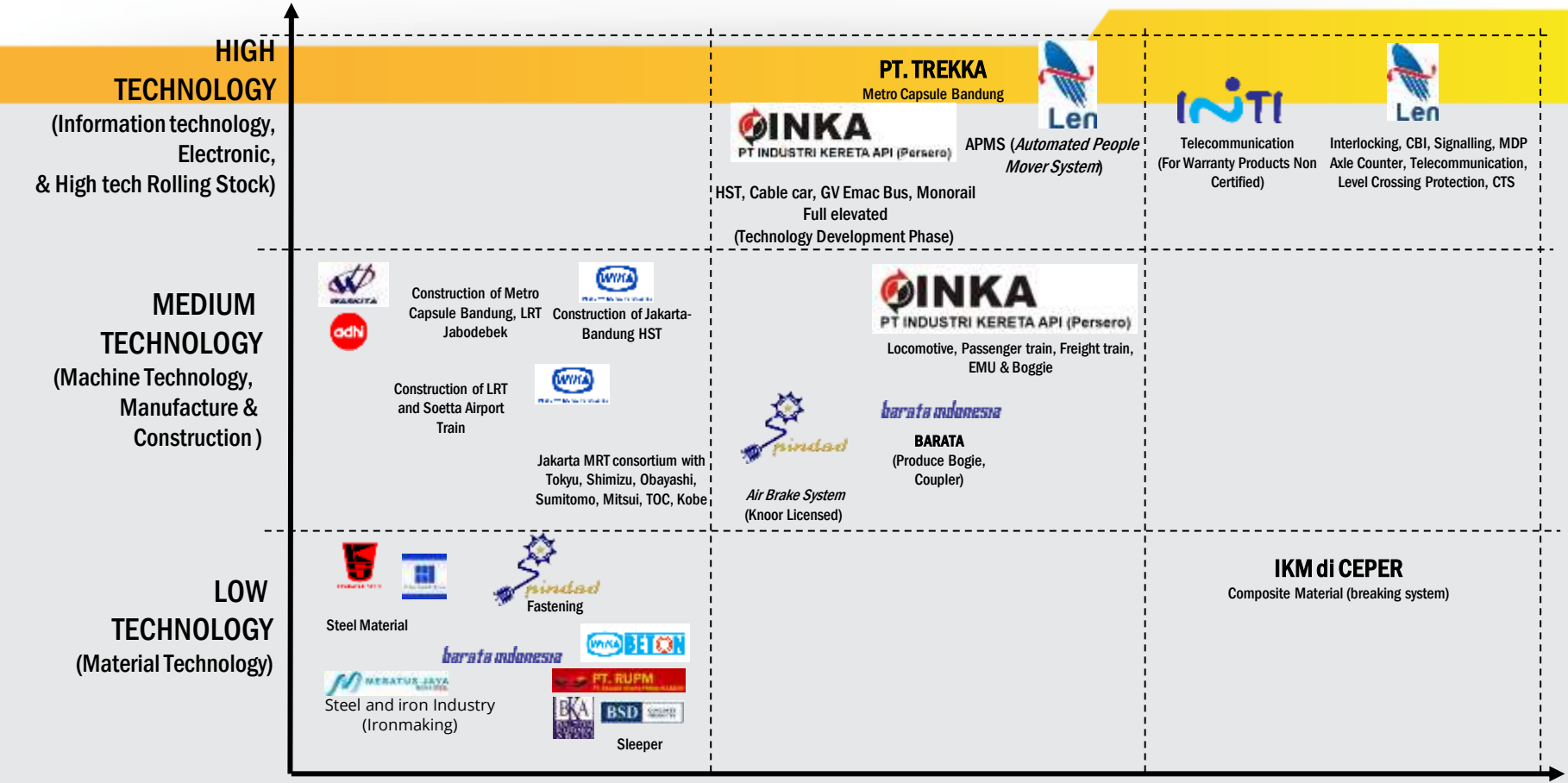
B. Current Railway Industry Map



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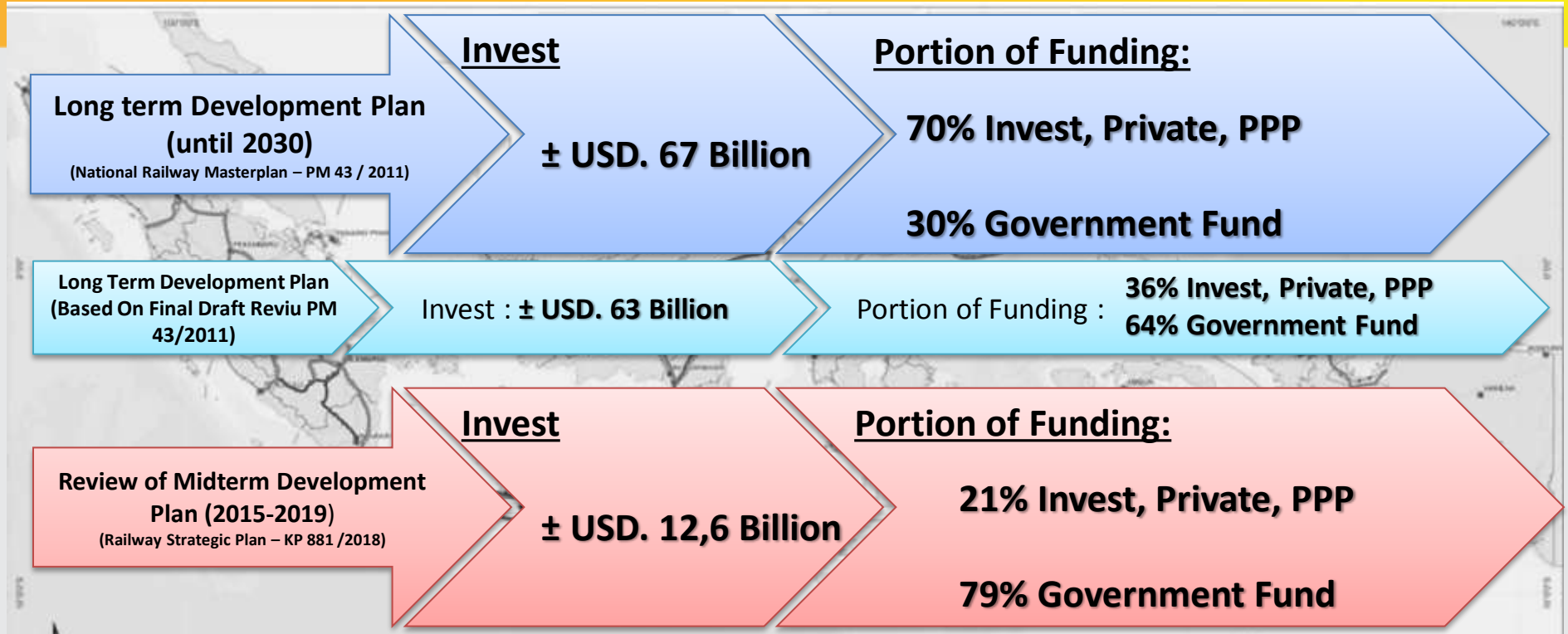
C. Roadmap

	SHORT TERM (2018-2019)	MID TERM (2020-2024)	LONG TERM (2025-2045)
INFRASTRUCTURE INDUSTRY	Rail road infrastructure for conventional railway, LRT, MRT and HST can be produce and constructed by domestic industry player	Domestic infrastructure industry can rule domestic market for railroad infrastructure development and maintenance	Become one of the countries with infrastructure industry (especially railroad construction and maintenance) that is world class and considered in the world market
ROLLING STOCK INDUSTRY	Domestic rolling stock industry can produce and assemble railway rolling stock with international quality/ certification standards	National railway rolling stock needs (product or maintenance) can be fulfill by domestic industry	• Become one of the providers that considered in the provision of railway rolling stock, especially for developing countries • Has a rolling stock industry that has high technology (LRT & HST) results of research
SUPPORTING INDUSTRY	Raw materials for railway infrastructure and rolling stock can be produced by domestic industrial actors in accordance with international standards and certification with production capacity as normal as market demand	Domestic railway industry has used raw materials/components that are mostly produced domestically	Domestic supporting industries have been able to support the national railway industry, and reduce dependence on foreign countries

5. FUNDING AND INVESTMENT

A. Funding Needs



Development costs include the construction of infrastructure ,railway facilities and rollingstock

Based on:
Regulation of MoT number PM 43 / 2011 and KP. 881 /2018

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B. Cooperation opportunity with private sector

TRADE COOPERATION

1. Railway material trade opportunity (track, turn out)
2. Railway rollingstock trade opportunity (coach, locomotive, wagon)

INFRASTRUCTURE FINANCING

1. Financing on airport link railway, special-railway and urban railway

RESEARCH AND DEVELOPMENT

1. Development of railway research institute
2. Research on railway technology and the pattern of rail operations

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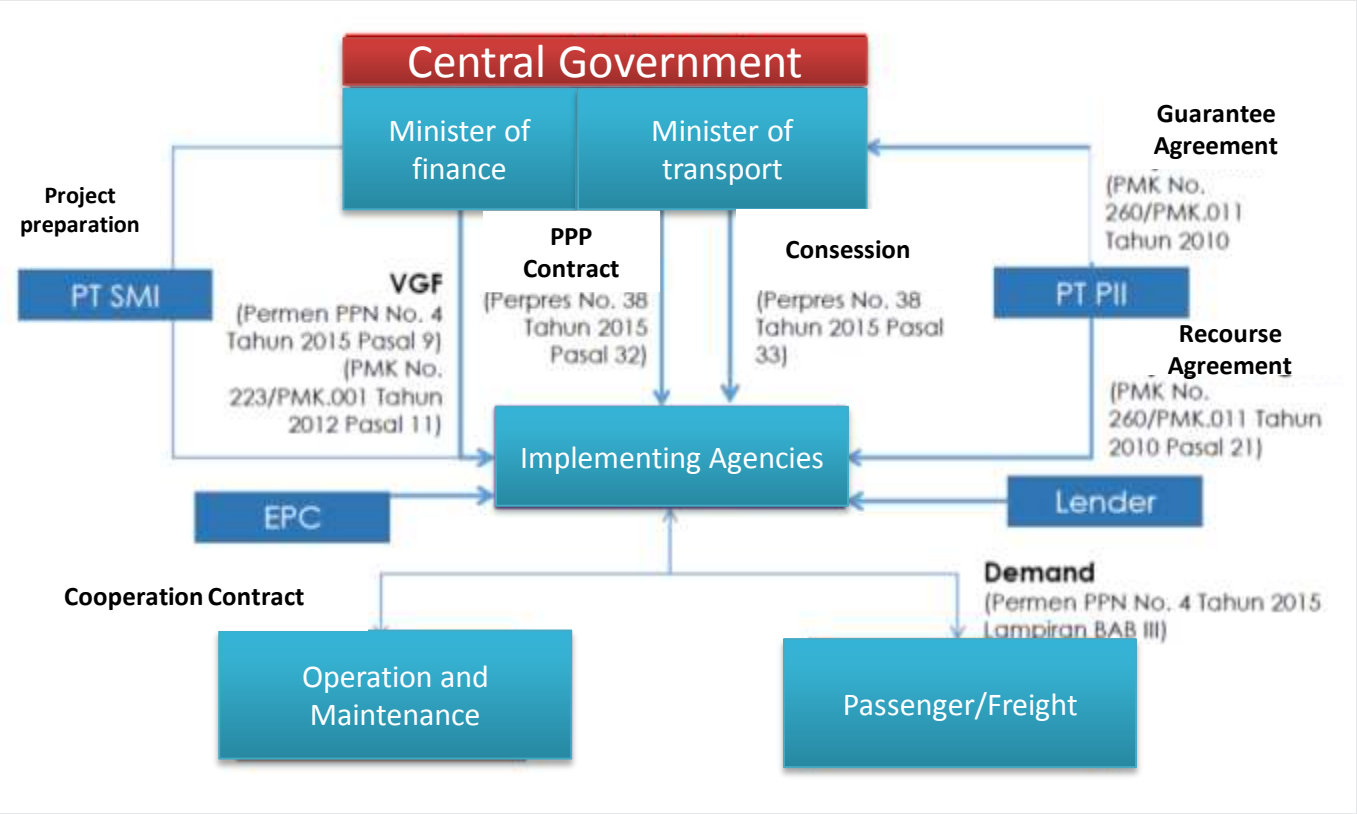
C. PPP Scheme on railway sector



Reference: Regulation of The President Of The Republic Of Indonesia Number 67 of 2005 cencerning Cooperation Between Government and Business Entities in The Provision of Infrastructure

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D. Potential Development Programs With Alternative Funding

6. Railway Development Program

A. Develpoment Program on 2018 by GoI Budget

Sumatera Coridor:

- ✓ Construction of Krueng Mane-Kuta Blang (13 Km'sp)
- ✓ Constructon of Elevated Track Medan-Bandar Khalipah - MYC2018(8 Km'sp)
- ✓ Construction of Besitang-Sei Liput – MYC2019(35 Km'sp)
- ✓ Construction of Binjai-Besitang (phase II) – MYC2018 (2,8 Kmsp)
- ✓ Construction of Bandar Tinggi-Kuala Tanjung – MYC2018 (21 Km'sp)
- ✓ Construction of Rantauprapat-Pondok S3 – MYC2019 (33 Km'sp)
- ✓ Construction of Muara Kalaban-Muaro (1 Km'sp)
- ✓ Construction of Kotabumi-Cempaka (phase II) (9 Km'sp)

Java Coridor:

- ✓ Construction of DDT (A&B Package)
- ✓ Construction of doubletrack Maja-Rangkasbitung (17 Km'sp)
- ✓ Construction of double track Cigombong-Cicurug (4,5 Km'sp)
- ✓ Construction of Cianjur-Ciranjang (Reactivation)
- ✓ Construction of Kedungjati-Tuntang (reactivation)
- ✓ Construction of Adi Soemarmo airport train (13 Km'sp)
- ✓ Construction of double track Purwokerto-Kroya – MYC2018 (27 Km'sp)
- ✓ Construction of doubletrack Solo-Kedungbanteng –MYC2018 (41,56 Km'sp)
- ✓ Construction of Kroya-Kutoarjo –MYC2019
- ✓ Construction of doubletrack Kedungbanteng-Madiun – MYC2018 (57 Km'sp)
- ✓ Construction of doubletrack Madiun-Jombang –MYC2018 (86 Km'sp)
- ✓ Construction of doubletrack Jombang-Wonokromo

Sulawesi Coridor:

- ✓ Construction of Palanro-Barru –MYC2018 (44 Km'sp)

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B. LRT Jabodebek

DESCRIPTION

Jabodebek LRT Development is to connected urban area between Jakarta, Bogor, Depok and Bekasi.

Total Length	: ± **42** Km
Progress	: **48.158%**

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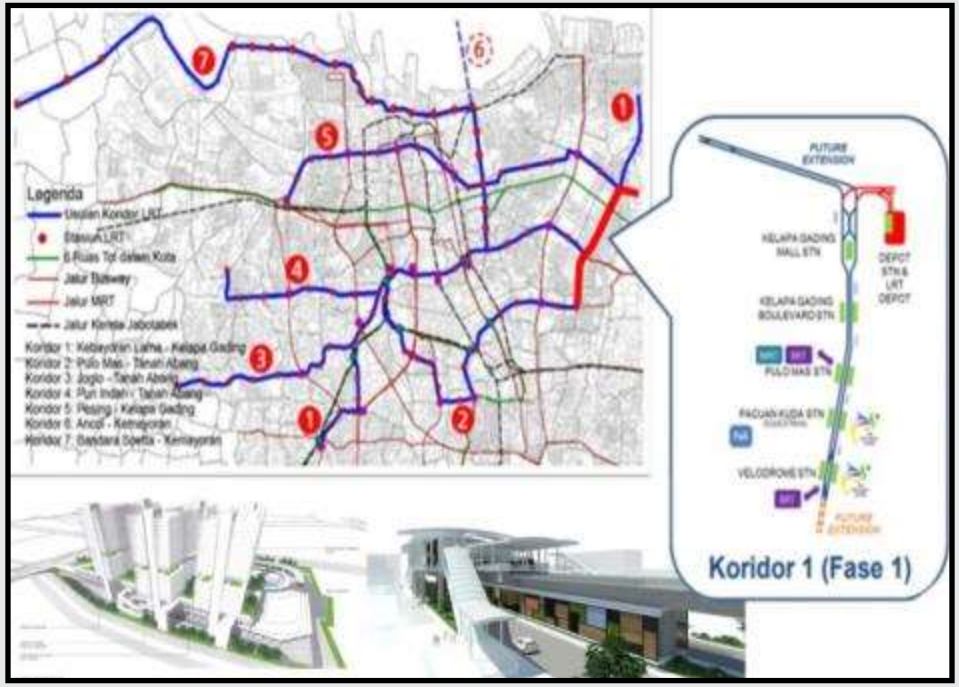
C. DKI Jakarta LRT Development (Jakpro)



DESCRIPTION

DKI Jakarta LRT Development is located in the city of Jakarta and was built in order to housing the ASIAN GAMES 2018

Total Length	: ± **11.5** Km
Progress	: **89.71%**

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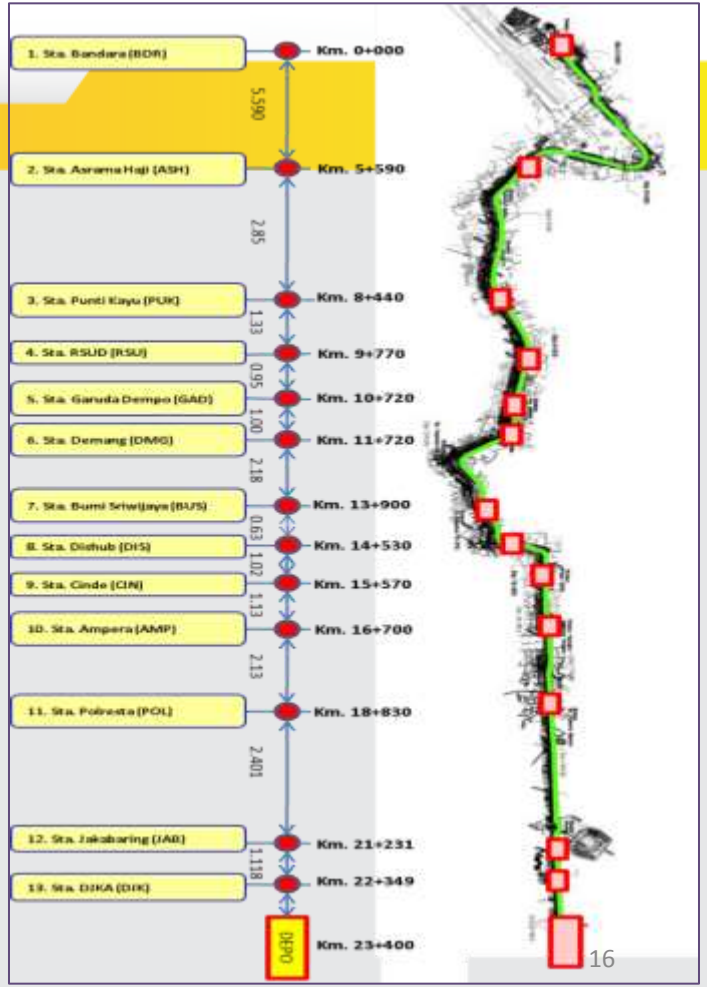
D. South Sumatera LRT Development



DESCRIPTION

Sumatera Selatan LRT Development is located in the city of Palembang and was built in order to housing the ASIAN GAMES 2018

Total Length : **22.9** Km

Progress : **98.09%**

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E. Jakarta MRT (North-South Corridor)

DESCRIPTION

Jakarta MRT North-South is expected to divert private vehicle users shift into using rail-based mass transit, so that the level of vehicle density in Jakarta Business area can be reduced.

Total Length	: ± **24.7** Km
	Phase 1 (**15.7** Km)
	Phase 2 (**9** Km)
Progress	: **94.3**%

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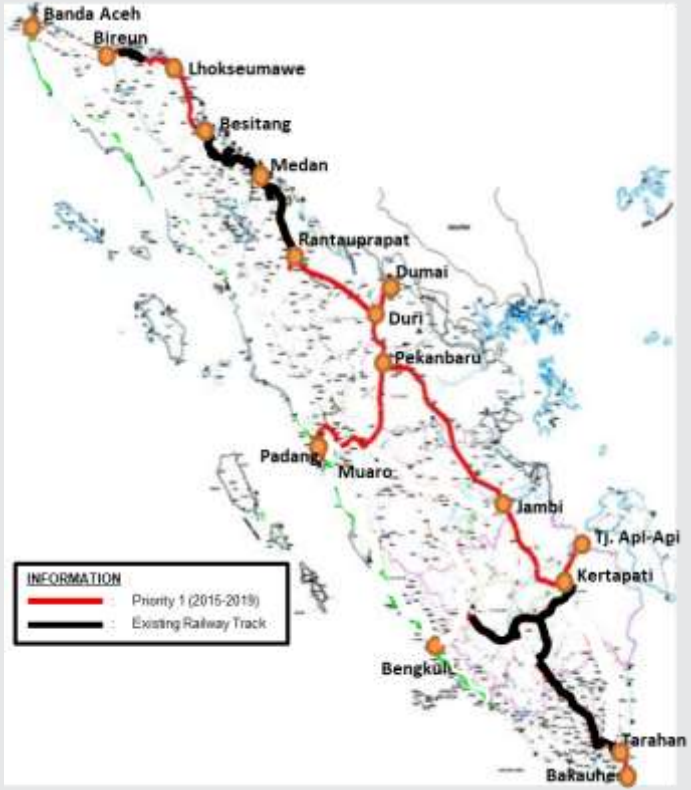
F. TRANS SUMATERA RAILWAY



LHOKSEUMAWE
248 km
BESITANG
85 km
BINJAI

RANTAUPRAPAT
249 km
DURI-DUMAI
90 km
PEKANBARU
409km
JAMBI
233 km
KERTAPATI
80 km
PRABUMULIH

DESCRIPTION

Trans Sumatera was built as a backbone to transport passenger and freight

Total Length : ±**1,394** Km
Fund Scheme : GoI / PPP

TECHNICAL SPECIFICATION

Standard Gauge (1067 mm)	Max Speed (Operational) 100 km/h	Max Speed (Design) 120 km/h	Right of Way/ ROW : 40 meter
Track Type: R.54	Axle Load: 18 ton	Min Curved Radius : 1000 meters	Total Railway Track Length : ± 1,394 Km

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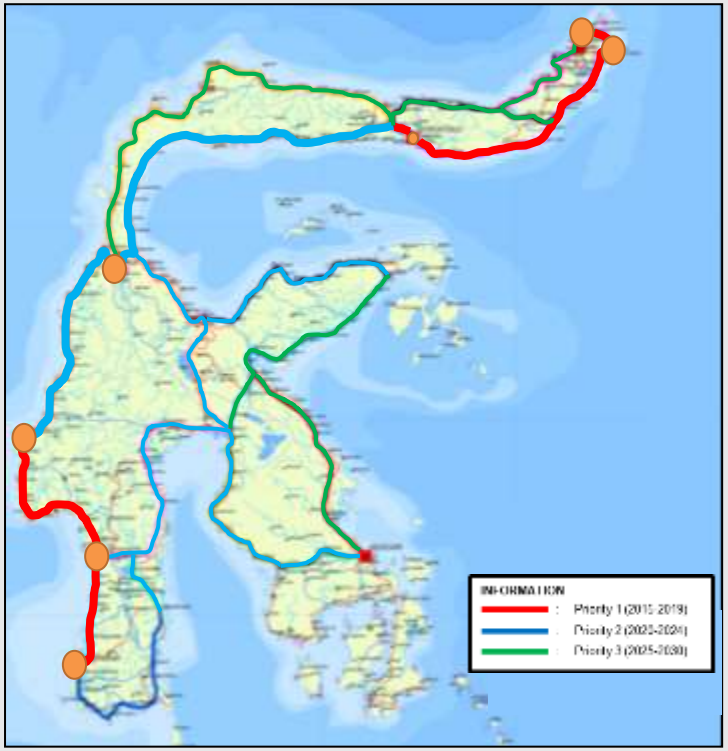
G. TRANS SULAWESI RAILWAY



MANADO
48 km
BITUNG
340 km
ISIMU/ GORONTALO
460 km
PALU
295 km
MAMUJU
225 km
PARE-PARE
145 km
MAKASSAR

DESCRIPTION

Trans Sulawesi was built as a backbone to transport passenger and freight.

Total Length : ± **1,513** Km
Fund Scheme : GoI / PPP

TECHNICAL SPECIFICATION

Standard Gauge (1435 mm)	Max Speed (Operational) 150 km/h	Max Speed (Design) 200 km/h	Right of Way/ ROW : 50 meter
Track Type: R.60	Axle Load: 22-25 ton	Min Curved Radius : 2500 meters	Total Railway Track Length : ± 1,513 Km

7. CONCLUSION

- Railway share 7-9% for passenger and 11-13% for freight transport.
- The vision of the national railway mandates increasing the amount of infrastructure, rolling stock and human resources more than double the current conditions.
- The National Railway Regulation opens up opportunities for investors to be involved in the development of national railways.
- Indication of the scheme of the government's financing portion of 36% while the private sector/PPP is 64%.

Thank You