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

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.

- **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

**Program:**

- **Java, Madura and Bali Island Potential:**
  - Passenger and Urban Train (Economic and Social Activity, Tourism)
  - Freight Train (Plantation and Agriculture)

- **Sumatera Island Potential:**
  - Freight Train (Plantation and Industry)
  - Passenger Train (Serving: People Mobility From Airport and Urban Area)

- **Kalimantan Island Potential:**
  - Freight Train (Trans Kalimantan Train Logistic)

- **Sulawesi Island Potential:**
  - Freight Train (Agriculture, Plantation dan Mining)
  - Tourism (Eco-cultural, Biodiversity)

- **Papua Island Potential:**
  - Freight Train (Mining, Plantation, Agriculture and Fishery)
Cont’d

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% Gol Budget: 29% Private)
4. Number of National Economic Zone will be connected: 20 zone
3. DEVELOPMENT STRATEGY

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 DEVELOPMENT 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 institutions;
- 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.
Cont’d

B. Current Railway Industry Map

**HIGH TECHNOLOGY**
(Information technology, Electronic, & High tech Rolling Stock)

**MEDIUM TECHNOLOGY**
(Machine Technology, Manufacture & Construction)

**LOW TECHNOLOGY**
(Material Technology)

**RAIL ROAD INFRASTRUCTURE**

- Steel Material
- Fastening
- Steel and iron Industry (Ironmaking)

**ROLLING STOCK**

- Steel Material
- Sleeper
- Barber Indonesia

**OPERATION FACILITY & SUPPORT**

- PT. TREKKA
  - Metro Capsule Bandung
  - Construction of Metro Capsule Bandung, LRT Jabodebek
  - Construction of Jakarta-Bandung HST
  - Full elevated (Technology Development Phase)

- INKA
  - PT INDUSTRI KERETA API (Persero)
  - APMS (Automated People Mover System)
  - HST, Cable car, GV Emac Bus, Monorail

- Len
  - Interlocking, CBI, Signalling, MDP Axle Counter, Telecommunication, Level Crossing Protection, CTS

- INTI
  - Telecommunication (For Warranty Products Non Certified)

- IKM di CEPER
  - Composite Material (breaking system)

- BARATA
  - (Produce Bogie, Coupler)

- PT. TREKKA
  - Metro Capsule Bandung
  - Construction of Jakarta-Bandung HST
  - Full elevated (Technology Development Phase)

- APMS (Automated People Mover System)

- Telecommunication
  - HST.

- Steel and iron Industry (Ironmaking)

- Sleeper

- Barber Indonesia

- PT. KUMP

- BSD

- Steel Material

- Fastening

- Steel and iron Industry (Ironmaking)
Cont’d

C. Roadmap

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<tr>
<td></td>
<td>Railroad infrastructure for conventional railway, LRT, MRT and HST can be produce and constructed by domestic industry player</td>
<td>Domestic infrastructure industry can rule domestic market for railroad infrastructure development and maintenance</td>
<td>Become one of the countries with infrastructure industry (especially railroad construction and maintenance) that is world class and considered in the world market</td>
</tr>
<tr>
<td>ROLLING STOCK INDUSTRY</td>
<td>Domestic rolling stock industry can produce and assemble railway rolling stock with international quality/certification standards</td>
<td>National railway rolling stock needs (product or maintenance) can be fulfill by domestic industry</td>
<td>• Become one of the providers that considered in the provision of railway rolling stock, especially for developing countries</td>
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<td></td>
<td>• Has a rolling stock industry that has high technology (LRT &amp; HST) results of research</td>
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<tr>
<td>SUPPORTING INDUSTRY</td>
<td>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</td>
<td>Domestic railway industry has used raw materials/components that are mostly produced domestically</td>
<td>Domestic supporting industries have been able to support the national railway industry, and reduce dependence on foreign countries</td>
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5. FUNDING AND INVESTMENT

A. Funding Needs

- **Long term Development Plan (until 2030)**
  - (National Railway Masterplan – PM 43 / 2011)
  - Invest: ± USD. 67 Billion
  - Portion of Funding:
    - 70% Invest, Private, PPP
    - 30% Government Fund

- **Long Term Development Plan (Based On Final Draft Review PM 43/2011)**
  - Invest: ± USD. 63 Billion
  - Portion of Funding:
    - 36% Invest, Private, PPP
    - 64% Government Fund

  - (Railway Strategic Plan – KP 881 /2018)
  - Invest: ± USD. 12.6 Billion
  - Portion of Funding:
    - 21% Invest, Private, PPP
    - 79% Government Fund

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

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

C. PPP Scheme on railway sector

Reference: Regulation of The President Of The Republic Of Indonesia Number 67 of 2005 concerning Cooperation Between Government and Business Entities in The Provision of Infrastructure
D. Potential Development Programs With Alternative Funding
6. Railway Development Program

A. Development Program on 2018 by GoI Budget

**Sumatera Corridor:**
- Construction of Krueng Mane-Kuta Blang (13 Km’sp)
- Construction 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 Corridor:**
- 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 Corridor:**
- Construction of Palanro-Barru –MYC2018 (44 Km’sp)
DESCRIPTION

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

Total Length : ± 42 Km
Progress : 48.158%
Cont’d
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%
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%
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%
Cont’d
F. TRANS SUMATERA RAILWAY

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

Fund Scheme:
- APBN (RUPIAH MURNI & SBSN)
- APBN (RUPIAH MURNI & SBSN)
- APBN (RUPIAH MURNI & SBSN)

INFORMATION
Priority 1 (2015-2019)
Existing Railway Track
Cont’d
G. TRANS SULAWESI RAILWAY

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

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

TECHNICAL SPECIFICATION

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