

中国铁路网络互联互通分析

Connectivity and Interoperability of China Railway Network

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Part 01

1

铁路基础设施现状及问题

Current Situation and Problems of
Railway Infrastructure

1 铁路基础设施现状及问题

Current Situation and Problems of Railway Infrastructure

总体情况 Overall Situation

➤ 路网规模 (2017年) Railway Network Scale (2017)

全国铁路营业里程：12.7万公里，其中高铁2.5万公里，全国铁路路网密度:132.2公里/万平方公里

National Railway Operating Mileage: 127,000km, including 25,000km high-speed railway

National Railway Network Density: 132.2km per 10,000 square kilometers

➤ 移动设施 (2017年) Motor Vehicles (2017)

机车拥有量：2.1万台

客车拥有量：7.3万辆

货车拥有量：79.9万辆

Locomotive Ownership : 21,000 units

Passenger Car Ownership: 73,000

Truck Ownership: 799,000

1 铁路基础设施现状及问题

Current Situation and Problems of Railway Infrastructure

中长期铁路网规划图



中长期高速铁路网规划图



到2025年，铁路网规模达到17.5万公里（较2017年增长4.8万公里），其中高铁3.8万公里（较2017年增长1.3万公里）
By 2025, the scale of railway network reaches 175,000 km, (48,000 km increase compared with 2017), including 38,000 km expressways.

到2030年，基本实现互联互通、区际多路畅通、省会高铁连通、地市快速通达、县域基本覆盖。
By 2030, basically achieving railway connectivity and county-level coverage.

1 铁路基础设施现状及问题

Current Situation and Problems of Railway Infrastructure

到2020年，铁路网规模达到15万公里，其中高铁3万公里。
By 2020, the scale of railway network reaches 150,000 km, including 30,000 km high-speed railway



1 铁路基础设施现状及问题

Current Situation and Problems of Railway Infrastructure

存在的问题 Problems

- **区域发展仍不平衡，西部地区路网密度较低**

Unbalanced development, lower network density in the Western region.

- **干线铁路、城际铁路、市郊铁路、城市轨道交通的规划、建设、运营等主体、出发点不同，功能定位还不清晰，需进一步融合发展**

Coordination and integration needs to be strengthened in terms of planning, construction and operation of trunk railway lines, inter-city railway, suburban railway and urban rail transit.

- **资金筹集难度大，实施分类建设，干线铁路地方出资比例逐渐上升，城际铁路、市郊铁路、城市轨道交通主要由地方出资**

Difficulty in fund raising, increasing percentage of funds provided by the local level for trunk railway lines construction. Funds for inter-city and suburban railway as well as urban rail transit are mostly provided by the local level.

1 铁路基础设施现状及问题

Current Situation and Problems of Railway Infrastructure

存在的问题 Problems

- **用地、环境保护等制约因素多**
Restraints: land use, environmental protection
- **综合交通枢纽建设有待加强**
More needs to be done on integrated transport hub construction



Part 02

2

铁路运营现状及问题

**Current Situation and Problems of
Railway Operation**

2 铁路运营现状及问题

Current Situation and Problems of Railway Operation

总体情况 Overall Situation

- **铁路旅客周转量、货运量居世界第一（2015）**

In 2015, railway passenger turnover and freight volume ranked first in the world.

- **铁路货运周转量居世界第二（2015）**

In 2015, railway freight turnover ranked second in the world.

- **“春运”等节假日综合运输服务保障能力显著提升**

In the "Spring Festival" and other holidays, comprehensive transport service capacity is significantly improved.

2 铁路运营现状及问题

Current Situation and Problems of Railway Operation

存在的问题 Problems

- **运营管理模式需完善，深化铁路总公司与地方政府合作**
Operation management needs to be improved by strengthening cooperation between China Railway Corporation and local governments.
- **运营网络层次不够清晰，城市群地区城际客运系统要加强**
The network layer is not clear enough, and the intercity passenger transportation system needs to be improved.
- **运营效益要提升，西部地区铁路运营较差**
Operation benefits needs to be increased. Worse operation in the Western region.



Part 03

3

跨境铁路运营的法律框架

Legal Framework for
Cross-border Railway Operations

3 跨境铁路运营的法律框架

Legal Framework for Cross-border Railway Operations

双边协定 **Bilateral Agreements**

- 《国境铁路协定》 *Border Railway Agreement*
- 《国境铁路联合委员会议定书》
Protocol of the Joint Committee on Frontier Railways

3 跨境铁路运营的法律框架

Legal Framework for Cross-border Railway Operations

多边协定 Multilateral Agreements

- 《泛亚铁路政府间协定》 *TAR agreement*
- 《国际铁路货物联运协定》
Agreement on International Railroad through Transport of Goods
- 《国际铁路旅客联运协定》
International Railway Passenger Transport Agreement
- 《国际铁路货物联运协定办事细则》
International Railway Freight Transport Agreement Service Rules



Part 04

4

跨境铁路互联互通的挑战

Challenges of
Cross-border Railway Connectivity

4 跨境铁路互联互通的挑战

Challenges of Cross-border Railway Connectivity

➤ **对外铁路通道总体不足。** Lack of external corridor.

我国黑河等口岸多有铁路连通，但境外衔接铁路多数处于研究阶段，或者建成铁路时间久、设施老化，影响了跨境通道的形成。

Railway connections exist in borders like Heihe River Port, but most connecting railways overseas are still in the research or ageing stage, which impedes the progress of cross-border corridors.

➤ **轨距标准不统一。** Lack of unified standards.

铁路轨距不同，我国是1435mm标轨，周边存在1520mm、1000mm等，增加了换装、换轨环节，降低了整体服务水平。

Difference in track gauge. 1435 mm in China, 1520mm and 1000mm in neighboring countries.

4 跨境铁路互联互通的挑战

Challenges of Cross-border Railway Connectivity

- **运输便利化水平有待提升** Convenience of transportation needs to be further improved.

中欧铁路班列涉及《国际铁路货物联运协定》和《国际铁路货物运送公约》。需沿线各国铁路、海关等部门加强沟通合作，提高通关效率，保障货物安全，降低物流成本。

The Sino-European railway cargo transport mainly involves the *International Railway Freight Transport Agreement* system and the *International Railway Freight Transport Convention* system. The involved countries shall cooperate to improve the clearance efficiency, cargo safety and reduce the logistics cost.

- **铁路相关复合型、国际化人才队伍建设有待进一步加强**
Capacity building needs to be strengthened.



Part 05

5

未来铁路发展方向及考虑

Prospects of
Railway Development in Future

5 未来铁路的发展方向及考虑 Prospect of Railway Development in Future

我国基础设施建设和运营 Infrastructure Construction and Operation

- 根据中长期铁路规划，加快建设，完善铁路网络。

Improve railway network
Construction.



5 未来铁路的发展方向及考虑

Prospect of Railway Development in Future

我国基础设施建设和运营 Infrastructure Construction and Operation

- **加强干线铁路、城际铁路、市郊铁路、城市轨道交通“四网融合”。统筹规划城际铁路。**
Improve integration of trunk railway lines, inter-city railway, suburban railway and urban rail transit. Integrate the planning of inter-city railways.
- **健全技术标准体系，包括设计、施工、竣工验收标准办法等。**
Improve the technical standard system, including design, construction and project completion approval.
- **进一步研究支持政策，包括拓展投融资渠道、土地综合开发等。**
Further study on supporting policies, including financing channels and integrated land use development.

5 未来铁路发展方向及考虑

Prospect of Railway Development in Future

我国基础设施建设和运营 Infrastructure Construction and Operation

➤ **打造一体化的综合交通枢纽** **Build integrated transportation hubs**

客运换乘 “零距离” Passenger transfer——zero distance

物流衔接 “无缝化” Logistics convergence ——seamless

运输服务 “一体化” Transportation service——integration

➤ **推进铁路智能化** Promote intelligence and modernization

加强信息化智能化建设 Strengthen informatization and intelligence construction

推进信息综合集成应用 Advance information integration application

➤ **改善铁路运输服务** Improve railway transportation services

提升客运服务水平 Improve passenger transport service level

拓展铁路货运市场 ，提高铁路货运比重 Expand the railway freight market

5 未来铁路发展方向及考虑

Prospect of Railway Development in Future

跨境互联互通 Connectivity & Interoperability

- 建立国际协调机制，共同处理互联互通铁路建设和运营中的重大问题。推动各国海关合作，完善“一次报关、一次查验、全程放行”的跨国海关协作机制，降低关税和物流成本。

Establish a coordination mechanism between different countries to deal with together key issues of connectivity of railway construction and operation. Promote the cooperation of customs and improve the cross-border customs cooperation mechanism to reduce the tariff and logistics cost.

- 共同制定跨境互连互通铁路规划，推进重点路段扩通改造。按照规划做好实施，协调衔接好建设时序，尽快形成运输大通道。

Jointly develop the cross-border railway planning connectivity and promote the expansion and reconstruction of key sections. Promote the establishment of international transport corridors according to planning and priorities.

5 未来铁路发展方向及考虑

Development Direction of Railway in the Future

跨境互联互通 Connectivity & Interoperability

- 加强建设运营标准衔接，支持按照国际标准轨距建设互联互通大通道。

Actively participate in the formulation and revision of construction and operation standards, and build the international transport corridor by following the international track gauge standard.

- 完善运输协定体系，提升国际联运服务水平。加强国际化、复合型铁路人才培养。

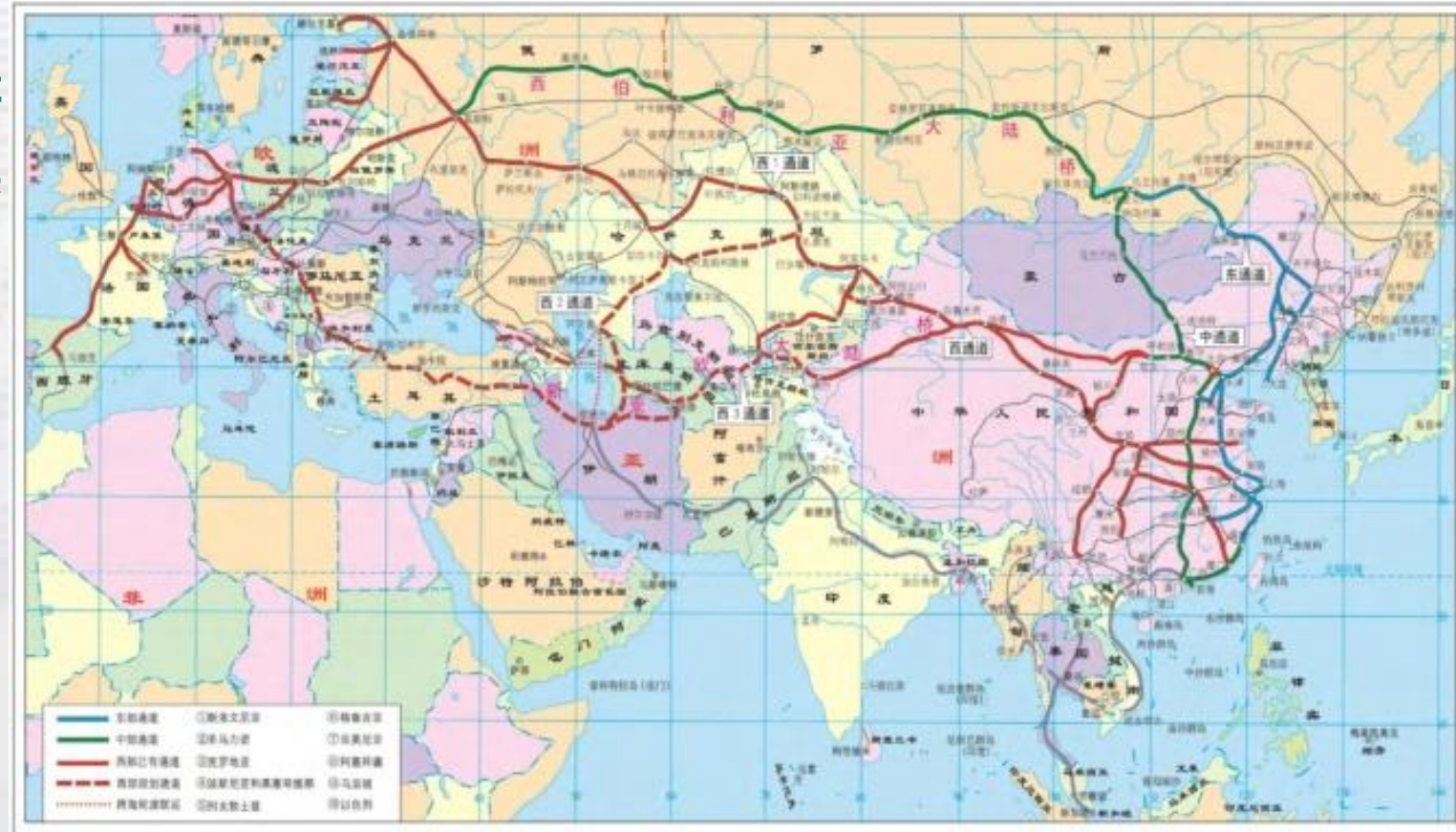
Improve the transport agreement system to raise the international transport service level. Strengthen the personnel capacity building.

5 未来铁路发展方向及考虑 Prospect of Railway Development in Future

跨境互联互通 Connectivity & Interoperability

- 优化运营组织模式，打造中欧班列等物流品牌，加强运输组织力度。拓展国际邮件运输。

Improve the operation and organization mode. Expand the international mailing transport.





谢谢
Thanks