Electronic information exchange among railways and between railways and control agencies

Sandeep Raj Jain
Transport Division

ESCAP
Economic and Social Commission for Asia and the Pacific

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- ✓ ESCAP initiatives
- ✓ Way Forward

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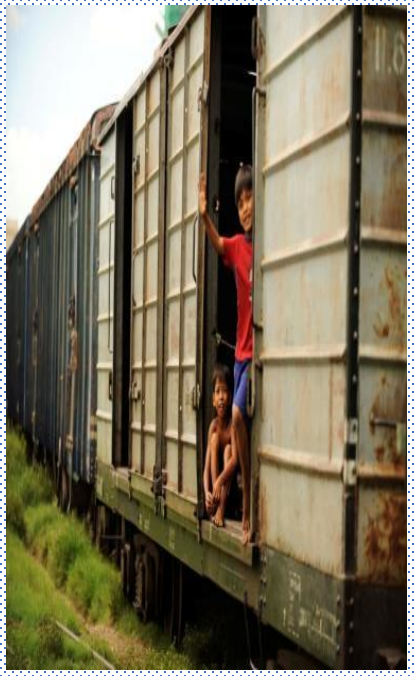
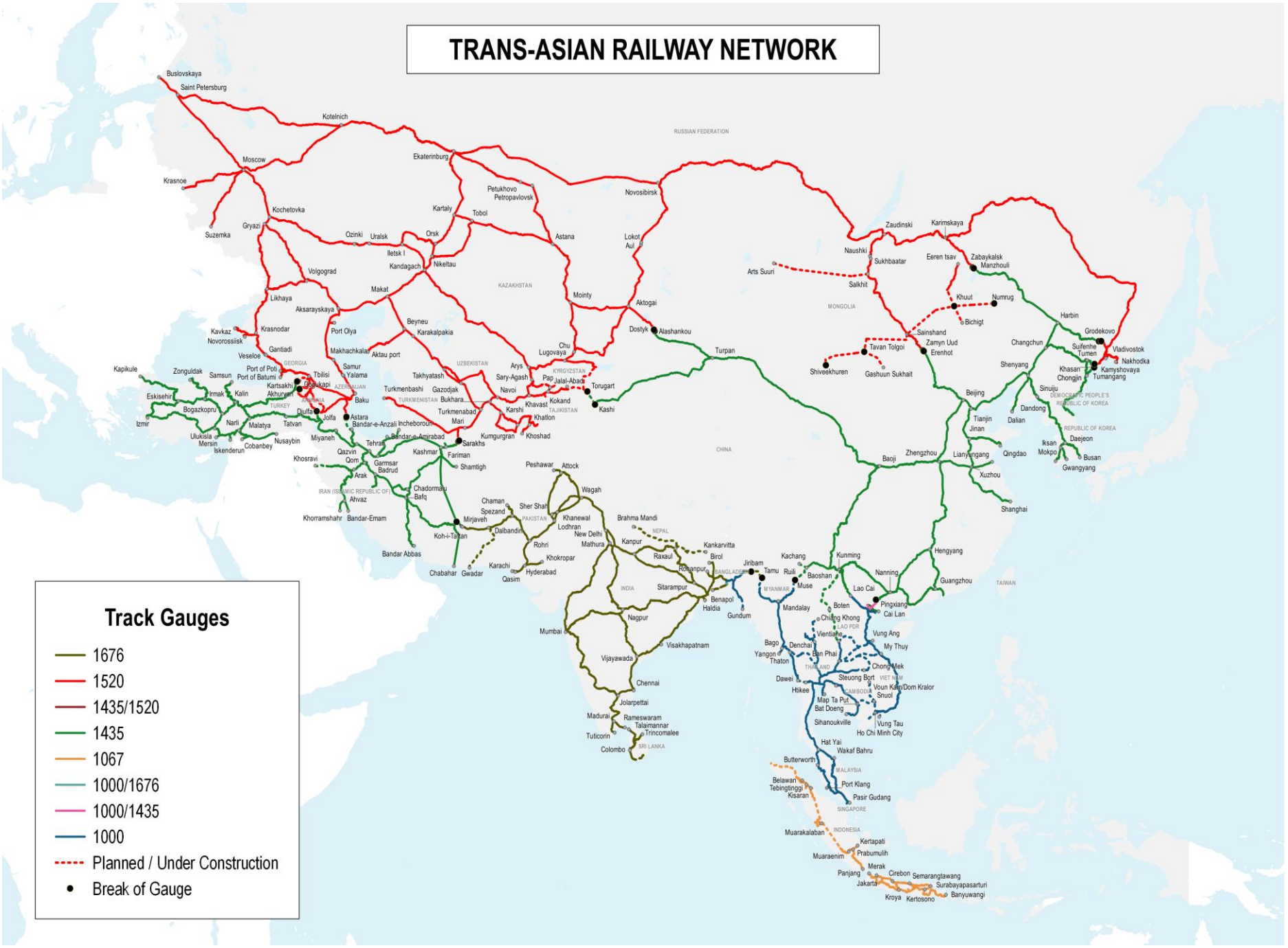
Trends in transport connectivity

Rail is now established mode of interregional transport

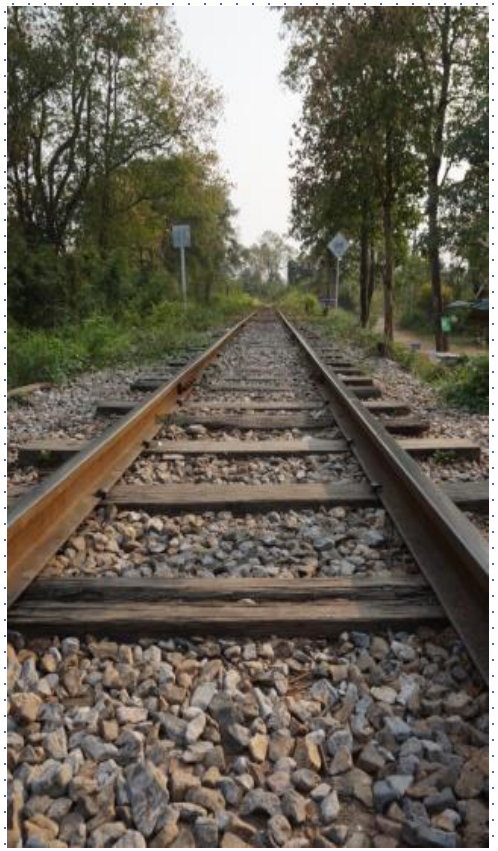


- ✓Exponential increase in Eurasian rail traffic in last decade
- ✓Rail proved to be reliable transport means during pandemic- as the rail freight avoided major restrictions and kept international supply chain functioning- (pre-pandemic, pandemic acceleration and post-pandemic stabilization)
- ✓Geopolitical challenges has further fortified role of rail in international transport as countries look to de-risk their transport connectivity
- ✓Rail, therefore, is now established as sustainable, reliable and a competitive mode of transport between Asia and Europe and vice versa
- ✓Opportunity for rail to garner more share, reduce emissions, provide LLDCs with better connectivity, however, to harness them, it needs to be more competitive-,

TRANS-ASIAN RAILWAY NETWORK



Intergovernmental Agreement on Trans-Asian Railway Network



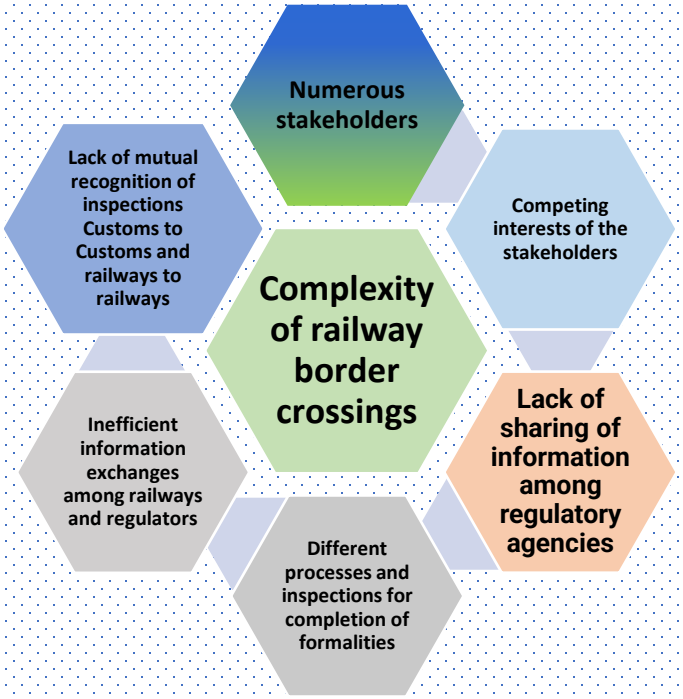
Trans-Asian Railway Network was developed by ESCAP members as a coordinated plan to develop a regional railway network to meet the growing needs of intra and interregional trade and transport.

Formalized through intergovernmental agreement entered into force in 2009. Has now 22 contracting parties

The Working Group under the agreement provides a regional platform for the member countries to address persistent challenges and harness emerging opportunities in international railway transport along the network.

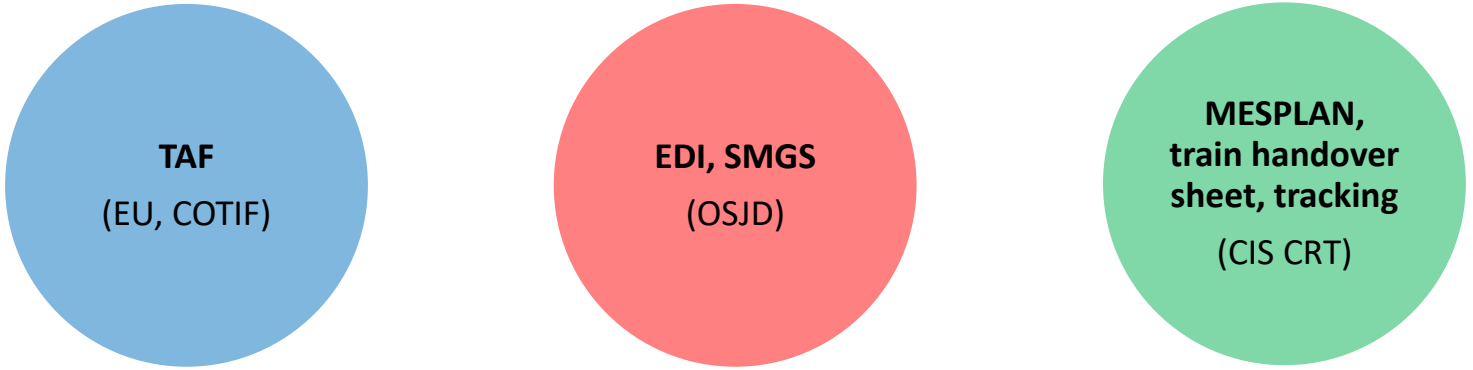
Nine meetings- focus on operational issues

Complex environment of railway border crossing

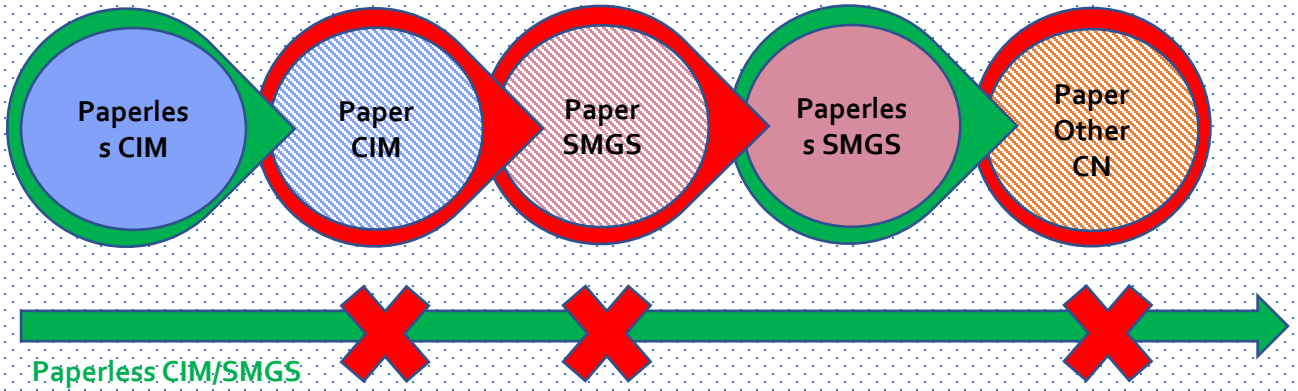


Existing situation on electronic information exchange between railways

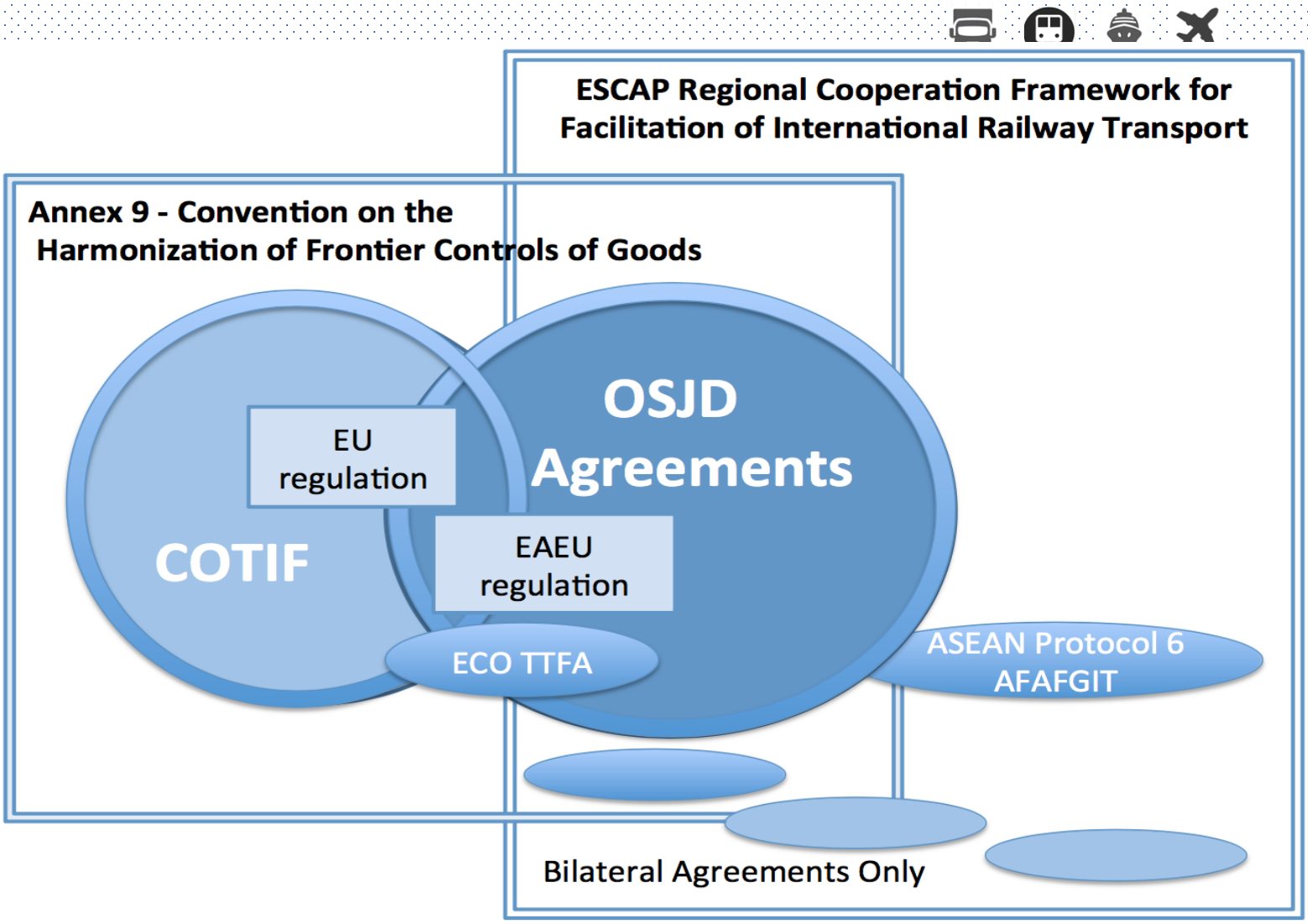
Three electronic exchange systems have been developed by **EU, OSJD and CIS** railway organizations that are being used to support Eurasian rail traffic



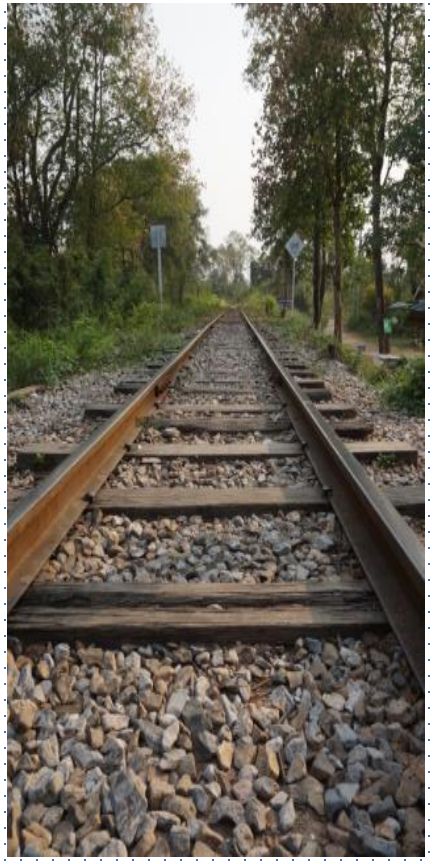
Lack of seamless information flow along the international railway corridors



Fragmented legal environment along Eurasian rail corridors



New Annex to intergovernmental agreement on Trans-Asia Railway network



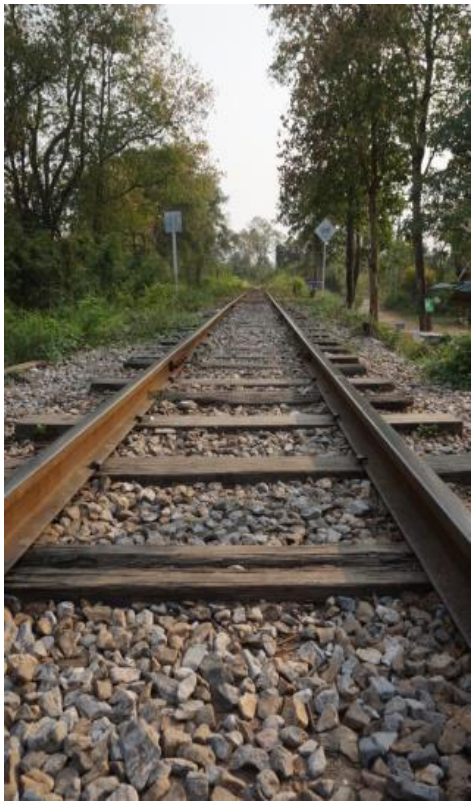
Proposed at the seventh meeting in 2021 and adopted at the eighth meeting held in 2023

Annex on Guiding principles on electronic information exchange among railways and between railways and control agencies

Encourages contracting parties to electronically exchange data required for completion of rail border crossing

Aims to encourage compatible electronic information exchange practices so that the information flows seamlessly among the rail stakeholder for completion of regulatory formalities and operational requirements

New Annex to intergovernmental agreement on Trans-Asia Railway network



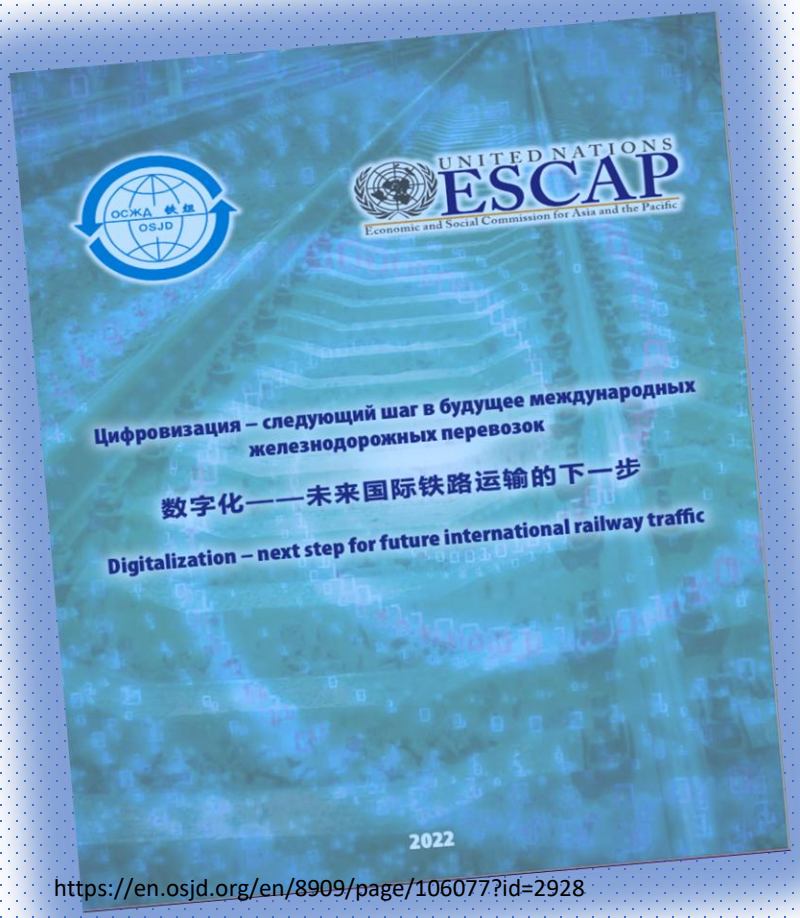
Next steps for entry into force on new annex

- ✓Annex Adopted at the eighth meeting of the Working Group
- ✓As per article 7, paragraph 5 of the Intergovernmental Agreement on the Trans-Asian Railway Network, the annex shall enter into force twelve (12) months after they have been *accepted* by two-thirds of the Parties.
- ✓An instrument of acceptance has been sent as enclosure to NV issued by secretariat in December 2023

New Annex to intergovernmental agreement on Trans-Asia Railway network

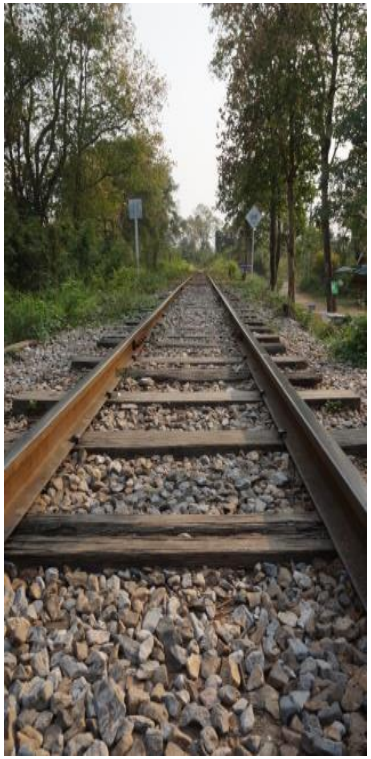
- ✓Aim to provide grounds for the further harmonization of electronic information exchange/data interchange among railways and between railways and control agencies
- ✓Main objective of the principles is to provide general guidance to the Parties
- ✓Encourage use existing standards and practices on electronic information exchange/data interchange
- ✓Could also serve as a basis for developing plurilateral, multilateral and regional agreements

ESCAP-OSJD Joint document on potential of electronic information exchange to streamline customs formalities in international railway transport



https://en.osjd.org/en/8909/page/106077?id=2928

Potential of electronic exchange of information for streamlining customs formalities for rail



1. Recognition of railway consignment note as customs transit declaration
2. Use of new technologies in collecting information required for regulatory controls and increased cooperation among border agencies behind the border and across the border
3. Implementation of joint control measures customs and other regulatory controls
4. Electronic pre- arrival intimation can facilitate integrated risk assessment
5. Electronic interface between railway and border agencies for streamlining customs formalities
6. Facilitated customs formalities for rail transit including simplified procedures for authorized rail operators (AROs)

Promoting cross-border electronic information exchange for efficient railway transport and transit in East and North-East Asia (2022-2024)

Study on status of electronic exchange between railways of three countries to identify gaps

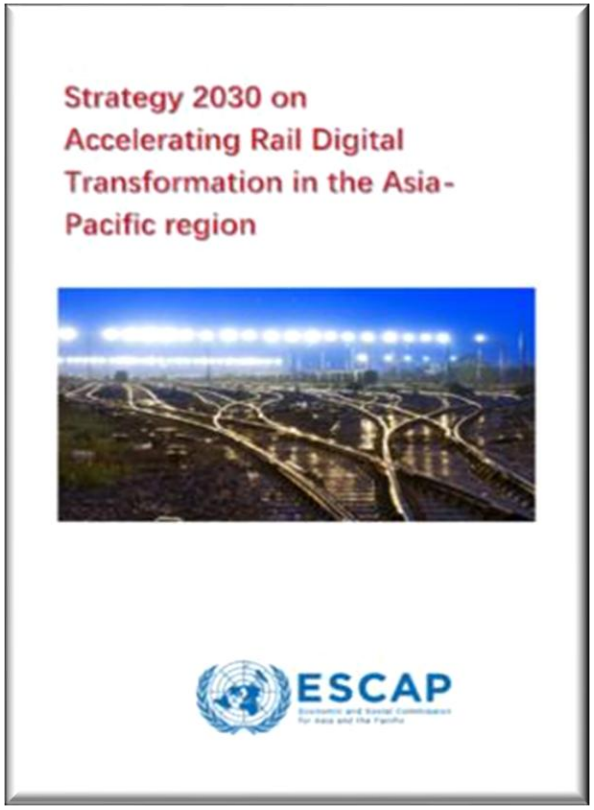
- ✓ While rail-to-rail electronic data interchange exists, the initiatives appear to be fragmented and there seems gaps in rail-to-third parties and rail-to-customs data interchange, especially for the cargo in transit.
- ✓ Several initiatives as well legal instruments at international, trilateral, and bilateral level on electronic data interchange between railways of three countries there was no common legal document on electronic data interchange among railways and between railways and customs that all stakeholders could refer to
- ✓ For some countries, gaps were also found at national level for electronic information exchange between railways and customs due to supporting legal and regulatory framework

Good practices on electronic information exchange among railways and between railways and control agencies

Proposed outline to be presented at interagency meeting to held in Georgia in September 2026

1. Background
2. State of electronic information exchange between railways among OSJD and ESCAP members
3. Recent developments and initiatives on electronic information exchange between railways among OSJD and ESCAP members
4. Experience with recent pilot application(s) of electronic consignment note,
5. Good practices on electronic information exchange among railways and between railways and customs
6. Gaps /challenges in electronic information exchange among railways and between railways and customs
7. Recommendations to strengthen electronic information exchange along the international rail corridor

Strategy 2030 on Accelerating Rail Digital Transformation in Asia-Pacific



Vision

Enhance sustainability of transport to support realization of Agenda 2030 on Sustainable Development

Outcome

- Increase in freight and passenger transport by rail
- Reduce green house gas emission from transport

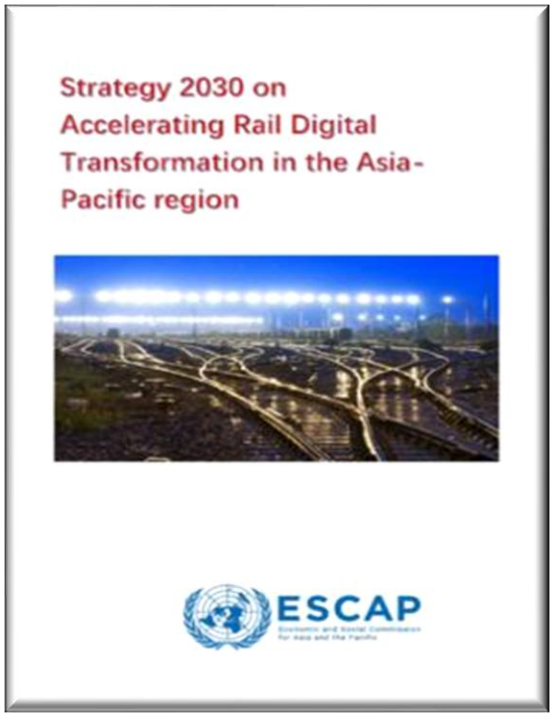
SDG supported directly

Target 9.1; 9a quality, reliable, sustainable, and resilient infrastructure

Target 3.6 Road traffic accident

Target 7.3 Energy efficiency

Objectives (Six)

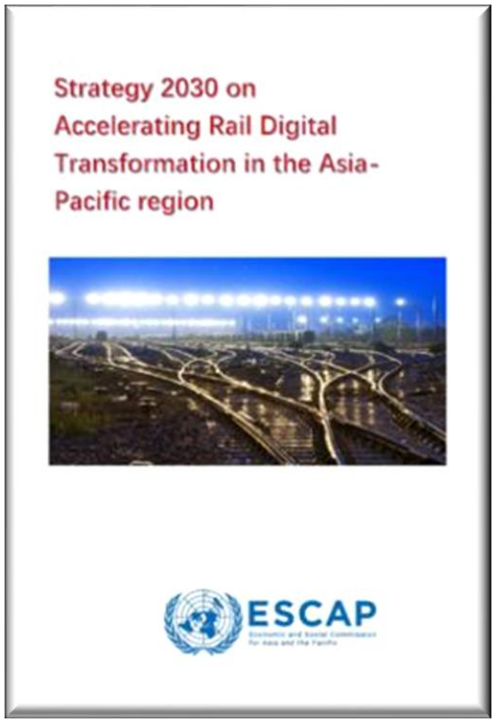


1. Provide coherence and momentum to rail digitalization initiatives
2. Foster an ecosystem to harnesses full potential of rail digitalization
3. Augment the operational performance, capacity, reliability, safety, and security of rail assets
4. Enhance customer experience including ease of doing business
5. Create synergies through partnerships to digitalize rail
6. Ensure high level political support on rail digitalization

Priority Areas (eight)

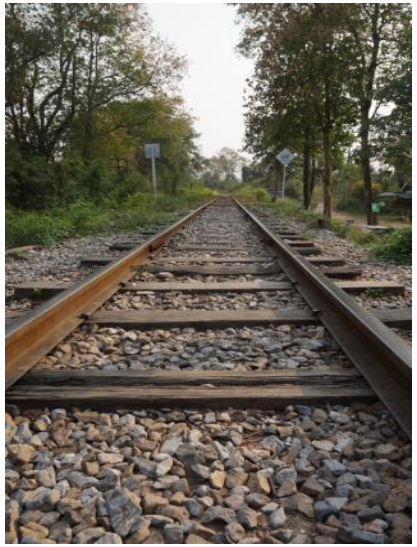
1. Digital communication technologies for rail
2. Digital customer services
3. Digital platforms for rail operations
4. Digital rail asset management including maintenance
5. Digital traffic management including signaling
6. Digitally integrated rail services
7. Digital rail business process
8. **Digital rail border crossing**

Enablers (five)



1. Enhance digital skills of rail officials
2. Increase investment in rail digitalization **Establish a rail digital and innovation fund**
3. Strengthen rail cyber security including data protection **develop a regional framework for rail cybersecurity**
4. Use data analytics to support optimal decision making for planning and operating the rail network
5. Heighten engagement with private sector develop supportive legal and regulatory framework

Implementing and monitoring



Creating implementation mechanism/arrangements-formulate national and sub-regional strategies on rail digitalization

Measuring progress in rail digitalization- develop a **rail digital index** and a three- level maturity profile for rail

Challenges for rail cybersecurity in Asia-Pacific

- ✓Longevity and legacy of rail assets
- ✓Prevalence of wide range of stakeholders
- ✓Analyzing rail safety due to cyber threats
- ✓Wide geographical spread of rail assets
- ✓Low capacity of rail officials
- ✓Financing constraints

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Regional framework on strengthening rail cybersecurity in Asia-Pacific

1. Develop a comprehensive policy for rail cybersecurity that is aligned to national cybersecurity policy

2. Consider developing subregional/regional standards/regulations on rail cybersecurity

3. Enhance capacity for rail cybersecurity

4.Establish regional rail cybersecurity task force

5. Engage public private partnership to foster innovation and reduce costs

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for
your attention

http://www.unescap.org/our-work/transport