UIC Symposium

30 November – 1 December 2021

ASIAN FOCUS
Panel 1: Connecting megacities and within the cities

- Moderator: Ms. Lucie Anderton, Head of UIC Sustainability Unit

- Ms. ZHANG Yanfang, Deputy Director General of the Passenger Department of CR, China State Railway Group Co., Ltd
- Mr. Choudhury Rudra Charan Mohanty, Environment Programme Coordinator, United Nations Centre for Regional Development UNCRD
- Mr Tom Sargant, UIC Pacific representative, on behalf of Ms. Megan Bourke-O'Neil, Deputy Secretary, Transport for New South Wales

UIC Symposium

30 November – 1 December 2021

Ms. ZHANG Yanfang, Deputy Director General of the Passenger Department of CR, China State Railway Group Co., Ltd

China on the Move: Developed HSR Network Promotes Prosperity & Vitality

Mr. HUANG Xin
Director General, Passenger Department,
China State Railway Group Co., Ltd

1. China has built the most developed HSR network in the world, contributing to its socio-economic development

- **Rapid growth of China's HSR network**
  - HSR network of "Four North-South and Four East-West Corridors" in service
  - HSR network of "Eight North-South and Eight East-West Corridors" take shape
  - China totals **37,900km** in HSR operational mileage by 2020

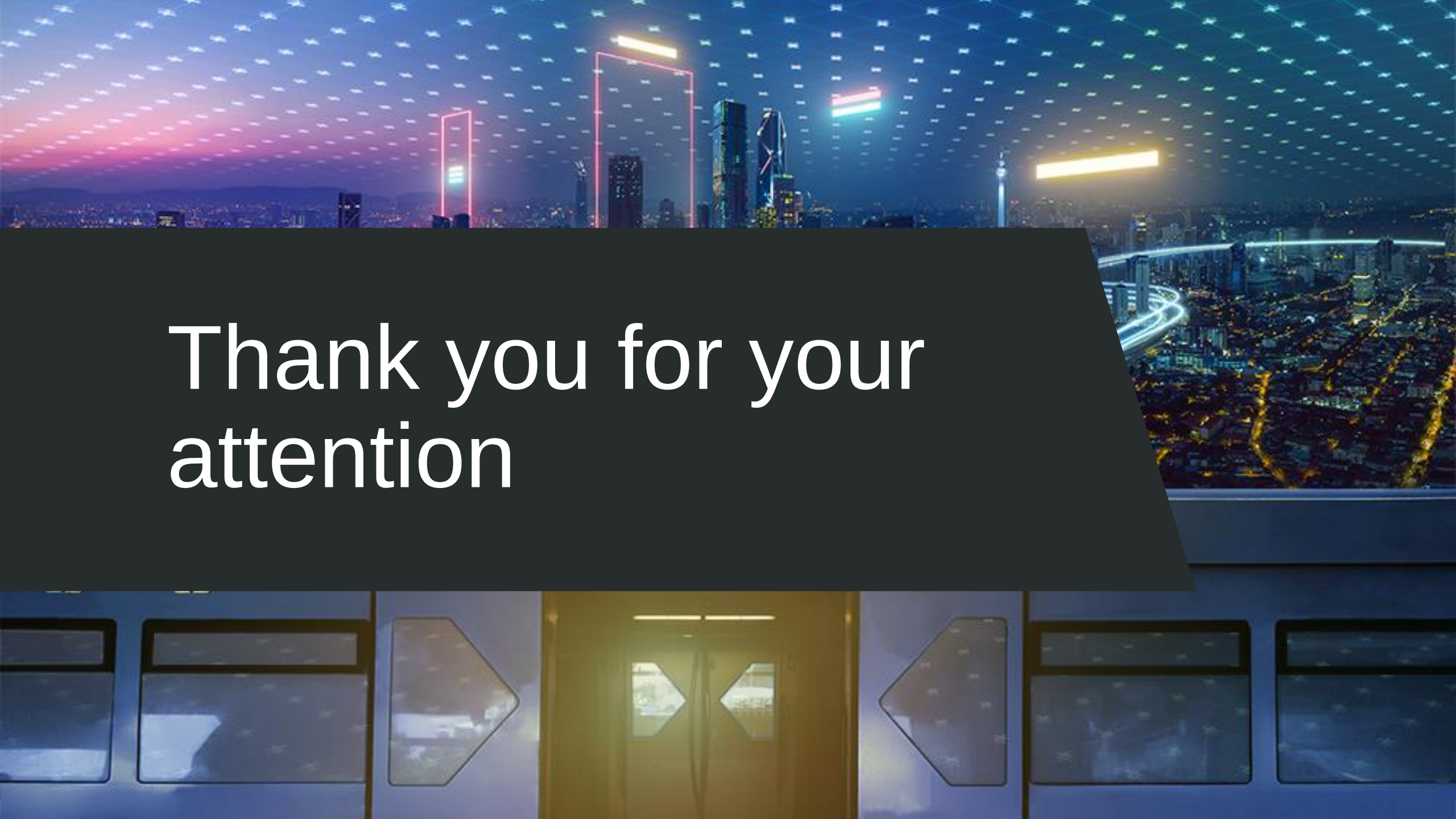
- **Rapid Development of China's HSR**
  - Shortens the travel time and distance among cities
  - Promotes coordinated economic growth along the lines
  - Contributes to building a beautiful China

2. Make good use of the world's most developed HSR network and continue to improve the quality of HSR transport services

- Optimize the structure of HSR passenger transport products
  - **Main line, intercity, suburban (urban) trains**
- Build 12306 ticketing system
  - **Nearly 600 million registered users and over 20 million daily transaction capacity**
  - **E-tickets, ticketing waitlist, seat reservation, priority seating, lower berth priority for the elderly, periodic tickets, multi-ride tickets, E-pass...**
- Promote the integration of various modes of transport
  - **HSR, aviation, metro, long-distance passenger transport, bus, taxi, private automobile**
  - **Integration of four networks - HSR, intercity railway, urban/suburban railways and urban rail transits**
- Innovate train services
  - **Online meal & specialty ordering**
  - **Quiet cars**

3. China’s HSR Outlook

- 2025
  - Railway service will hit 170,000km in length, including 50,000km of HSRs
  - Railways will reach almost all cities with an urban population of above 200,000, and HSRs will access 98% of cities with an urban population above 500,000
- 2035
  - China will record 200,000km in railway mileage, including 70,000km of HSRs
  - 1~4h travel circles among adjacent medium & large cities as well as 0.5~2h travel circles within city cluster will be taking shape
  - Smooth connectivity with civil aviation, metro and other transport modes



Thank you for your attention

UIC Symposium

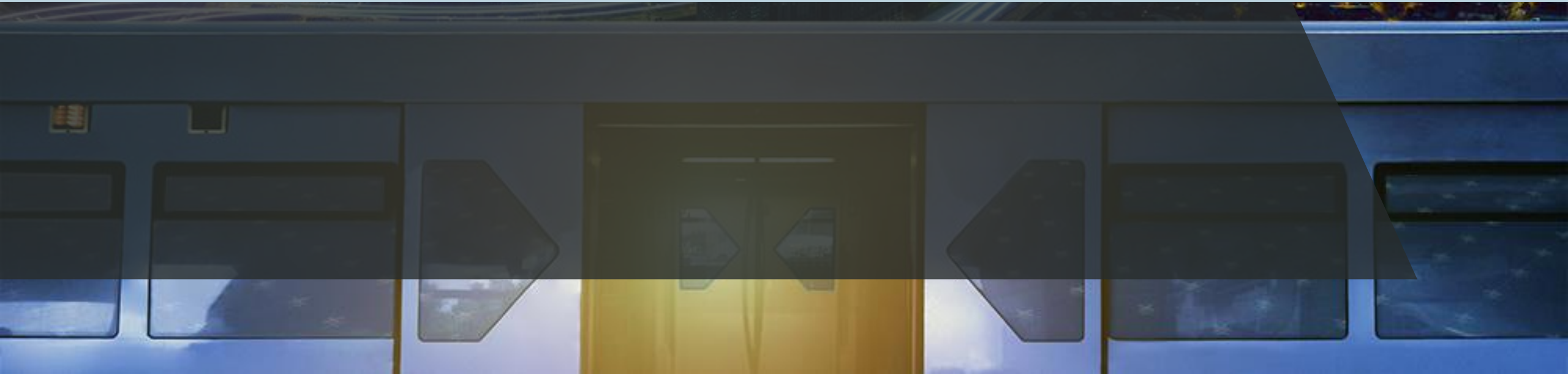
30 November – 1 December 2021

Choudhury Rudra Charan Mohanty, Environnent Programme Coordinator, UNCRD-DSDG/UN DESA Japan

UIC Symposium The Future of the Railways: Making Modal Shift Desirable, **30 November – 1 December 2021**

Connecting Megacities and within the Cities ~ Leaving No One Behind: Role of Railways

Choudhury Rudra Charan Mohanty, Environnent Programme Coordinator, UNCRD-DSDG/UN DESA Japan



Mobility Issue: Today 55% and by 2050, 68% of population live in urban areas, with close to 90% of this increase taking place in Asia & Africa. Mega-cities (with > 10 million population) – from10 in 1990 to 43 in 2030 (UN, 2018). 64% of all travel kms made are urban and the amount of travel within urban areas is expected to triple by 2050. By 2050, average time an urban dweller spends in traffic congestion will be 106 hours/ year, three times more than today (https://www.adlittle.com/sites/default/files/viewpoints/adl_the_future_of_urban_mobility_report.pdf).

Air Pollution: air pollution [indoor & outdoor (ambient)] kills **more than 7 million people each year worldwide; Asia accounts for one third** (WHO, 2019).

Connectivity Issue : Over a billion people still lack access to an all-weather road, and only about half the world's urban population have convenient access to public transport. An estimated 400 million people of the Asia Pacific region lack direct access to all-season road (ATO/ADB, 2020)

Issues related to connectivity

An estimated **700 million people** (40% of the Asia Pacific region) lack direct access to **all-season road** (ESCAP, 2015)

Poor rural transport condemns the poor to stay disconnected and poor

"Jugaad",a popular mode for rural transport in Gujarat, India. This mode is only transport service available to many villages. Picture source:Asia Lite

Limited transport connectivity is a critical constraint to access markets and other economic opportunities

- **Isolation of rural communities due to lack of transport infrastructure**
- **Reduced access economic and social opportunities for rural communities**

Restricted access to markets: In developing countries, 40% of **food losses** occur post-harvest due to poor transport conditions (World Bank, 2017)

Amul India produces about 10.16 million liters of milk daily, which is collected from 2.7 million farmers, processed through 30 dairy plants, and distributed through 500,000 retail outlets across the country (http://seasofchange.net) This is possible only because of better connectivity.

Regional connectivity in Asia and the Pacific: Role of Railways

Railway can play significant role for socio- economic benefits- It is

- cost effective/lower the cost
- time and energy saving
- increasing the land value
- reduction of the land occupancy
- reducing the traffic congestions
- improve transport safety
- reduction of air, water and soil pollution,
- increase industrial production and trade along the railway corridors
- improve productivity and resilience
- decrease environmental degradation
- reduction of greenhouse gas emissions

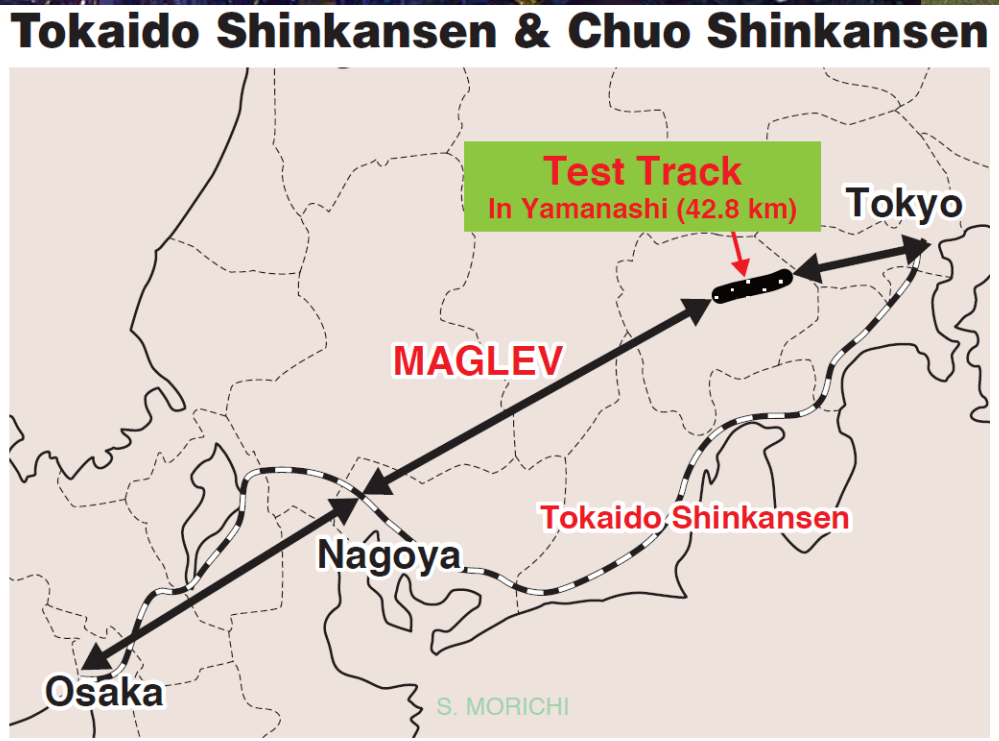
Passenger rail activity increases in the High Rail Scenario to 15 trillion passenger-kilometres in 2050 (The Future of Rail, IEA, 2019)

https://iea.blob.core.windows.net/assets/fb7dc9e4-d5ff-4a22-ac07-ef3ca73ac680/The_Future_of_Rail.pdf

Connecting Megacities by Magnetic-levitation train line between Tokyo and Osaka : Japan case

Estimated construction cost is 9 trillion yen for the Tokyo-Osaka (Source: asia.nikkei.com)

It will take only 67-minute by Magnetic-levitation train compared to 2 hr & 22 minutes to travel the 515 km from Tokyo to Osaka on the existing Shinkansen, which have significant socioeconomic implications.



Source: Compiled by Author

After the completion of the project the great metropolitan areas of Tokyo, Nagoya, and Osaka will function as one metropolitan area, and with a population of 75 million and travel time of one hour, it will become the world's largest economic area with great economic impacts (Shigeru Morichi -Japan SPOTLIGHT May / June 2015)

Six Goals of the Aichi 2030 Declaration (2021-2030) on Sustainable Transport

Goal 1 – Environment sustainability (low carbon, resilience (adaptation), air pollution)

Goal 2 – Road safety

Goal 3 – Economic sustainability

Goal 4 – Rural access

By 2030 secure accessible, inclusive, safe, affordable, and resilient rural transport infrastructure and services, thus facilitating improved access to markets, basic utilities and services including health and education by the rural poor, farmers, agricultural workers, girls and women, youth, and physically disabled and vulnerable groups (SDG 2 and SDG 9.1)

Goal 5 – Urban access

Goal 5 - Urban access: By 2030, provide access to accessible, inclusive, safe, affordable, and sustainable transport systems for all, with special attention to the needs of those in vulnerable situations, urban poor, women, children, persons with disabilities and older persons (SDG 11.2)

Goal 6 – National access & connectivity

By 2030 facilitate inclusive national development and regional connectivity by the provision of sustainable multi-modal freight and passenger transport infrastructure services. (SDG 9.1)

Thank you for your attention

UIC Symposium

30 November – 1 December 2021

Mr Tom Sargant, UIC Pacific representative, on behalf of Ms. Megan Bourke-O'Neil, Deputy Secretary, Transport for New South Wales

Context

- What is happening across Greater Sydney?
- Over arching vision of “a Metropolis of Three cities”
  - The Western Parkland City
  - The Central River City
  - The Eastern Harbour City
- From a transport perspective
  - Transition to Zero Emission Busses
  - Achieve Net Zero Emissions Electricity for Electric Train Network by 2025
  - Multi Modal Initiatives and service offerings Post COVID
  - Creation of more sustainable travel choices

What is the response for rail

- Sydney Trains carries half of the PT load across Sydney
  - Major investments in improving efficiency
  - Digitialisation of the railway
    - Signaling improvements –ETCS
    - Simplify systems – provide for more agile workforce
    - Wider deployment of systems that allow for better response to demand
- Sydney Metro Deployment
  - Initial development in Northwest of Sydney – currently operating
  - Chatswood to Central and then Bankstown – Under Construction
  - Metro West and Western Sydney Aerotropolis currently in planning

Environment and Sustainability

- Future Energy Strategy – Net Zero Emissions
- Sustainability Plan
- Sydney Trains Energy Management Program
  - Installing a number of large behind-the-meter solar photovoltaic (PV) installations
  - Developing and implementing a plan to make electricity net-zero emissions
    before 2025
  - Implementing an enterprise-wide energy data management system
  - Trialling enhancements to the Heating Ventilation and Air Conditioning (HVAC)systems on certain fleet types to energy efficiency

Thank you for your attention

UIC Symposium

30 November – 1 December 2021

ASIAN FOCUS

Panel 2: Freight corridors: connecting continents through intermodal logistic chains

- Moderator: Ms. Lucie Anderton, Head of UIC Sustainability Unit

- Mr. DONG Hui, Deputy Director General of the Freight Department, China State Railway Group Co., Ltd
- Mr Vyacheslav Pavlovskiy, Deputy CEO, JSC “Russian Railways”
- Mr. Miroslav Antonovich, Chairman, OSJD (video message)
- Dr. Ivan Petrov, President, FIATA
- Mr. Pranab Kumar Das, Director, Compliance and Facilitation, World Customs Organisation

UIC Symposium

30 November -1 December 2021

Mr. DONG Hui, Deputy Director General of the Freight Department, China State Railway Group Co., Ltd

Jointly Build the Belt and Road and Promote Railway Connectivity to Build Smooth, Convenient and Fast China-Europe Railway Corridors

Dong Hui, Deputy Director General, Freight Department, China State Railway Group Co., Ltd.

Contents

01 Development of China-Europe Railway Corridors and CHINA RAILWAY Express Trains

02 Main Work Carried Out by CR

03 Suggestions

CR express 中欧班列 CHINA RAILWAY Express

I. Development of China-Europe Railway Corridors and CHINA RAILWAY Express （CRE）Trains

China
89 cities

Europe
23 countries
175 cities

Over 46,000
CRE trains operated

Over 4.18 million
TEUs delivered

China
74 cities

Asia
11 countries
79 cities

Over 27,000
CRE trains operated

Over 2.04 million
TEUs delivered

Total Epidemic prevention supplies delivered

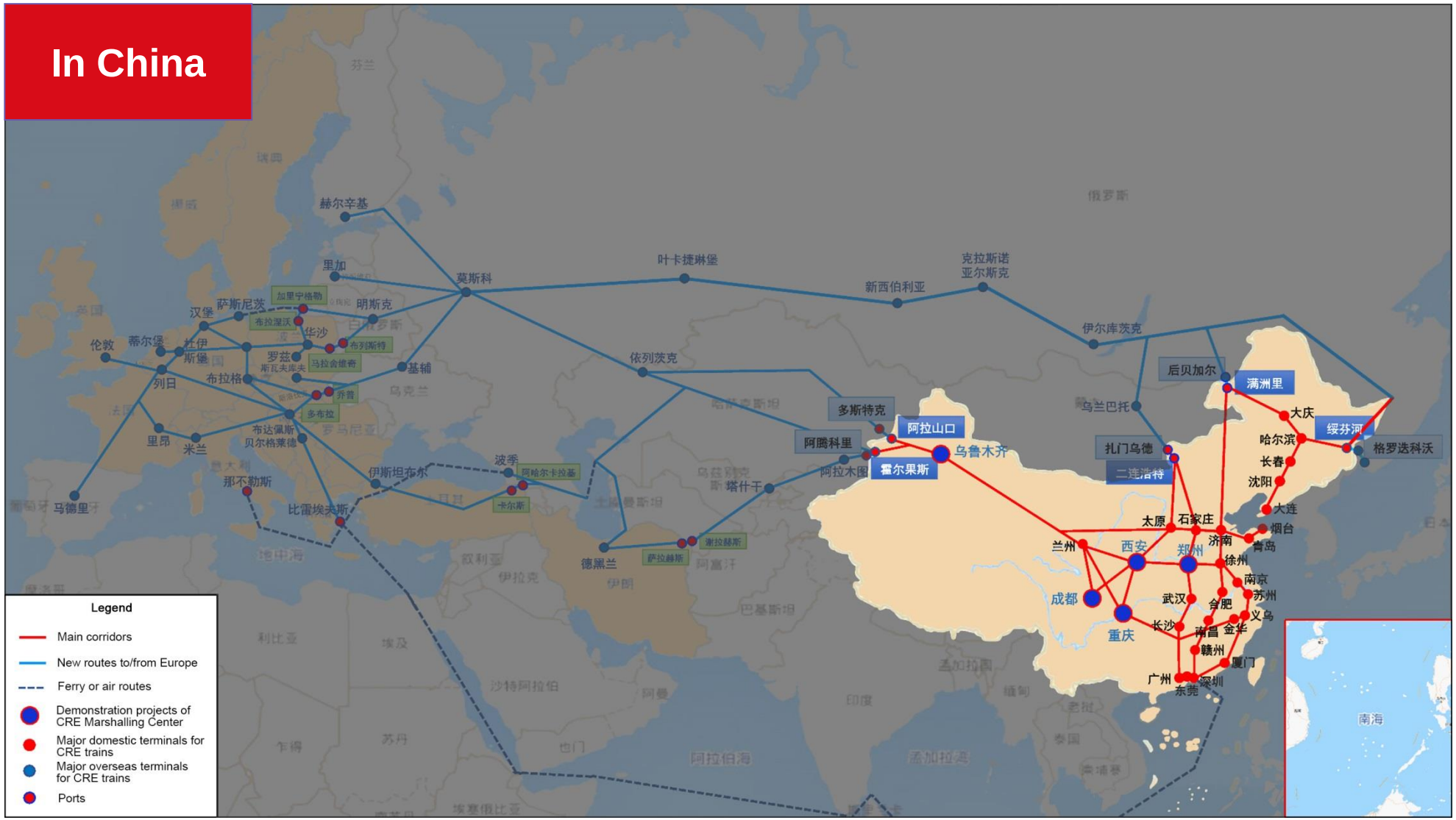
13.25 million pieces

Over 100,000 tons

“Life channel” and “destiny bond” for countries to jointly fight the epidemic

I. Development of China-Europe Railway Corridors and CHINA RAILWAY Express (CRE) Trains

In China



I. Development of China-Europe Railway Corridors and CHINA RAILWAY Express (CRE) Trains

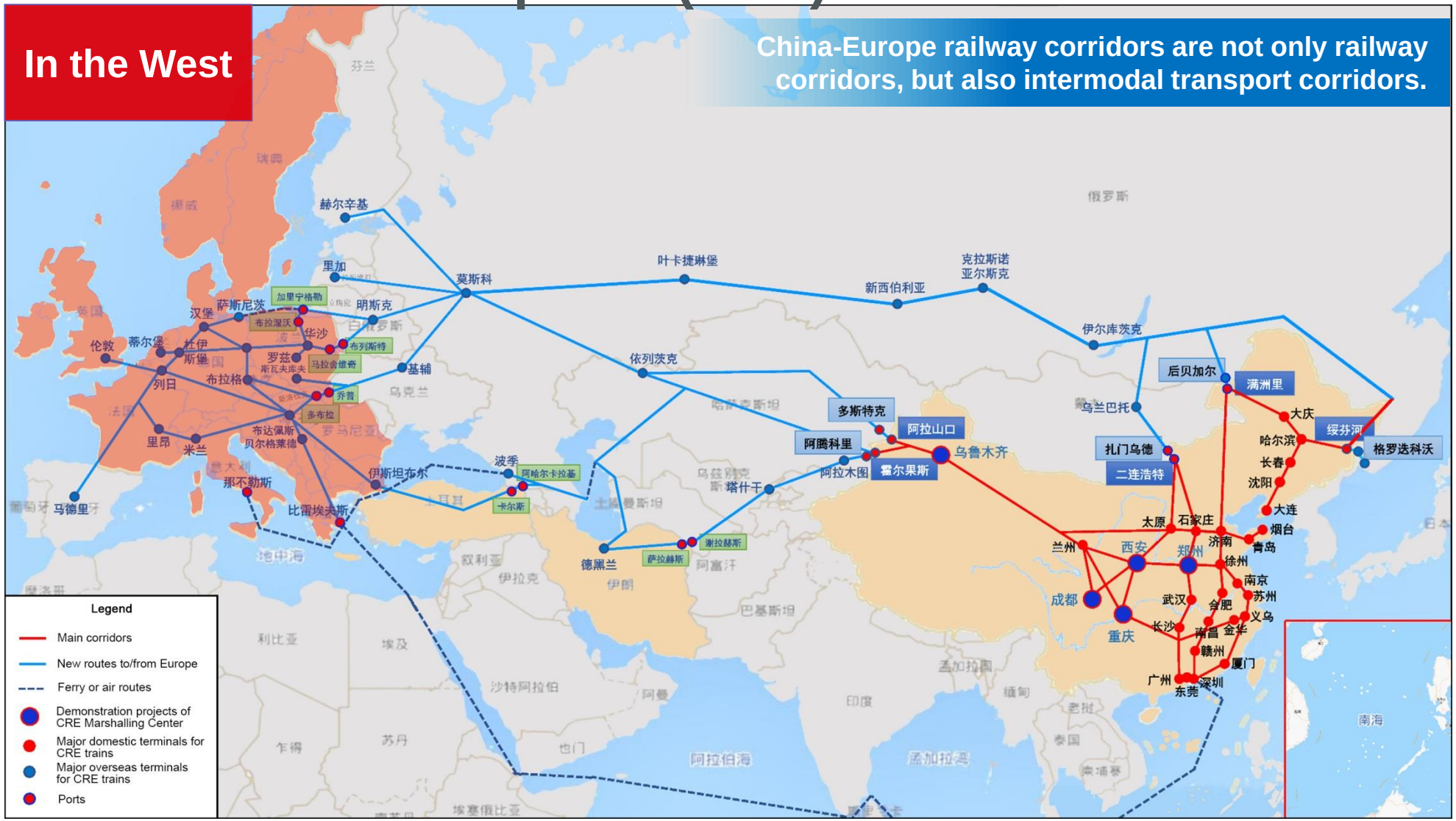
I. Development of China-Europe Railway Corridors and CHINA RAILWAY Express (CRE) Trains

In the East

I. Development of China-Europe Railway Corridors and CHINA RAILWAY Express (CRE) Trains

In the West

China-Europe railway corridors are not only railway corridors, but also intermodal transport corridors.



II. Main Work Carried Out by CR

Since the launch of CRE service, CR has formed a systematic, complete, smooth and efficient operation mode, providing cross-border whole-process logistics services for domestic and foreign customers.

II. Main Work Carried Out by CR

Freight source organization

- Preferential freight rates
- Safe and punctual operation
- Whole-process service

Transport organization

- Drawn diagrams for over 70 dedicated CRE train routes at 120 km/h
- Joint formulation of CRE train working diagrams with railways in other countries underway

Competitive freight rate

- Price coordination mechanism established
- Whole-process logistics cost of CRE trains reduced

Customer service

- Documentation center
- Customer service center
- Railway-customs information exchange mechanism for CRE trains
- Whole-process insurance service

Coordination and cooperation

- In-depth cooperation on transport organization and marketing, information sharing, etc.

III. Suggestions

As a new, green, environmentally friendly, safe and efficient way of international logistics, CRE train has attracted wide attention of and become popular in the world. It has become an important choice of international logistics supply chain in Eurasia, and has strongly promoted the infrastructure connectivity among countries along the routes. The China-Europe railway corridors have been continuously expanded and extended on the Eurasian continent. However, there are also **problems such as insufficient port capacity, inefficient customs clearance, unbalanced freight volumes for bi-directional trips, insufficient information sharing, etc.**, which need to be solved by all parties through close cooperation. To this end, the following suggestions are proposed:

III. Suggestions

01 Improve railway port capacity

02 Expand Sea-rail intermodal transport corridors

03 Attract eastbound freight sources

04 Strengthen international customs cooperation


Thank you for your attention

UIC Symposium

30 November – 1 December 2021

Mr Vyacheslav PAVLOVSKIY Deputy CEO JSC «Russian Railways»

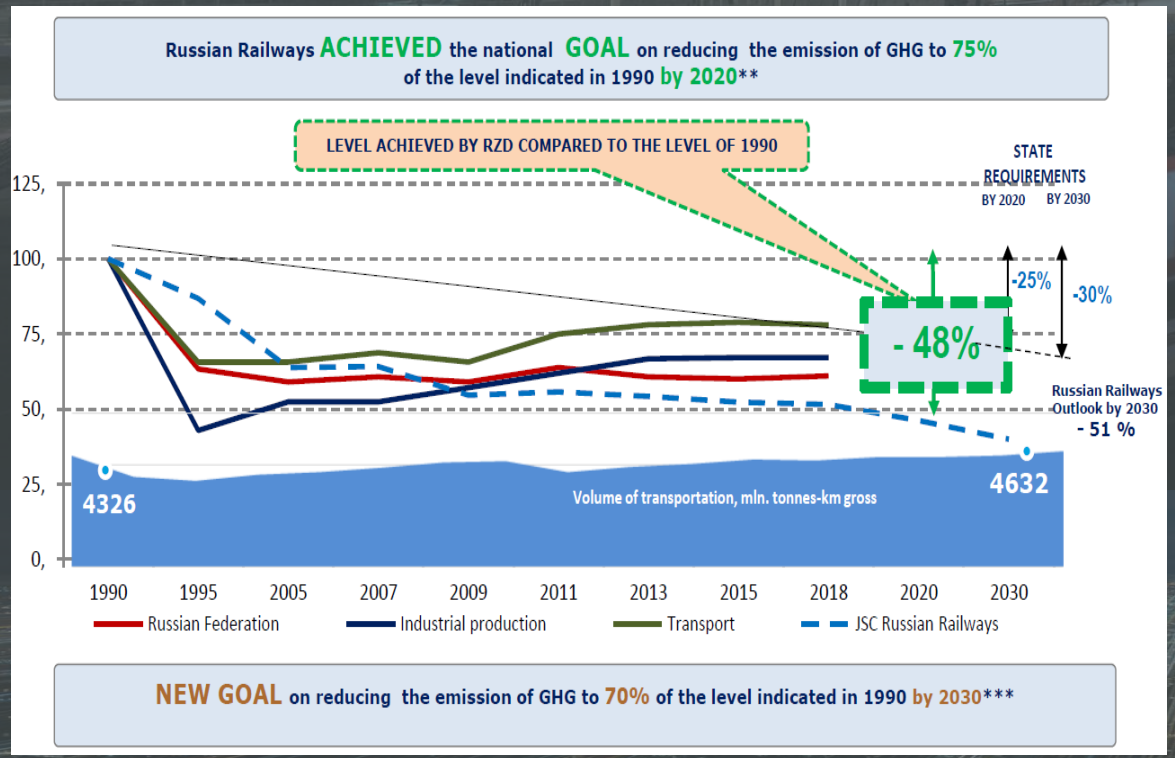
Development of freight corridors

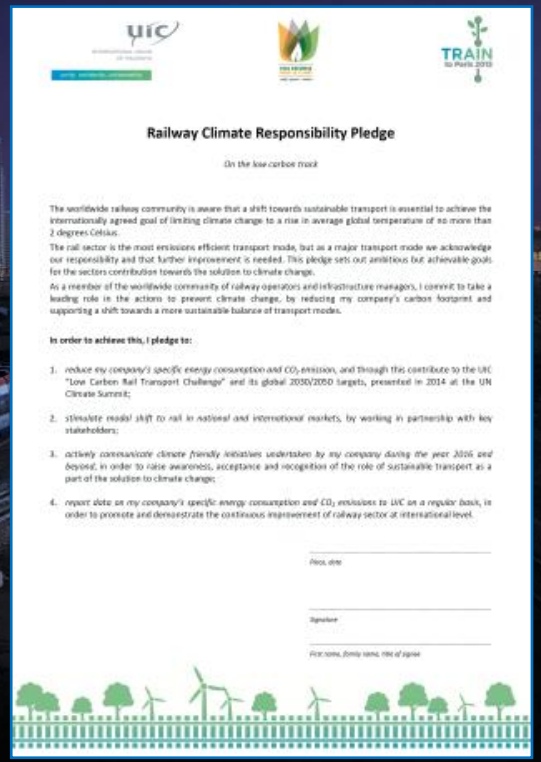
Deputy CEO JSC «Russian Railways»
Vyacheslav PAVLOVSKIY

GLOBAL TRENDS

- Growth in trade and transportation between China and Europe
- Modal Shift from sea to railways
- 'Green Agenda' and carbon neutrality
- Digital technologies in transport and logistics
- Rapid growth of e-commerce

Reduction of the carbon footprint





Railway Climate Responsibility Pledge

On the low carbon track

The worldwide railway community is aware that a shift towards sustainable transport is essential to achieve the internationally agreed goal of limiting climate change to a rise in average global temperature of no more than 2 degrees Celsius.

The rail sector is the most emissions efficient transport mode, but as a major transport mode we acknowledge our responsibility and that further improvement is needed. This pledge sets out ambitious but achievable goals for the sectors contribution towards the solution to climate change.

As a member of the worldwide community of railway operators and infrastructure managers, I commit to take a leading role in the actions to prevent climate change, by reducing my company's carbon footprint and supporting a shift towards a more sustainable balance of transport modes.

In order to achieve this, I pledge to:

1. *reduce my company's specific energy consumption and CO_2 emission, and through this contribute to the UIC "Low Carbon Rail Transport Challenge" and its global 2030/2050 targets, presented in 2014 at the UN Climate Summit;*
2. *stimulate modal shift to rail in national and international markets, by working in partnership with key stakeholders;*
3. *actively communicate climate friendly initiatives undertaken by my company during the year 2016 and beyond, in order to raise awareness, acceptance and recognition of the role of sustainable transport as a part of the solution to climate change;*
4. *report data on my company's specific energy consumption and CO_2 emissions to UIC on a regular basis, in order to promote and demonstrate the continuous improvement of railway sector at international level.*

Place, date

Signature

First name, family name, role of signee

RAILWAY CLIMATE DECLARATION

New 2019 Pledge

According to the Paris Agreement, countries must renew or increase their commitments by the end of 2020, by amending their Nationally Determined Contributions submitted in 2015. They must correspond to the highest level of ambition possible. Therefore, UIC is committed to go further.

The Railway Climate Responsibility Pledge 2019 is an extension to the Pledge signed in 2015.

As an official representative of a UIC Member, I acknowledge the critical importance to take immediate action for a more sustainable future.

I recognise the central role of railways in the fight against climate change.

As a member of the worldwide community of railway operators and infrastructure managers, I commit to take a leading role in the actions to mitigate climate change, by reducing my company's carbon footprint and supporting a shift towards a more sustainable balance of transport modes.

In order to achieve this, I commit to:

1. Reduce my company's specific energy consumption and CO_2 emission, and through this contribute to the UIC "Low Carbon Rail Transport Challenge", presented in 2014 at the United Nations Climate Summit, and to the Rail Climate Responsibility Pledge, signed in 2015;
2. Carbon Neutrality by 2050.
3. Contribute to United Nations Sustainable Development Goals (SDGs).

Disclaimer to the Pledge, Point 2:

"Companies with the potential to adapt their electricity supply in order to contain renewable sources of energy, proven by means of guarantees of origin (GOs) or renewable energy certificates (RECs), or via dedicated power plants, have the means required to achieve carbon neutrality by 2050.

However, companies bound by specific national regulations preventing decarbonisation such as, but not limited to, regulations making them dependent on their country's electricity supply mix, should not be precluded from striving towards the objectives of points 1 and 3 of this pledge. Progress under point 2 will be monitored taking each country's specific circumstances into account."

Place, date

Signature

Company name

Name, title of signee

Development of the international transport corridors

New directions

205 Routes in transit services

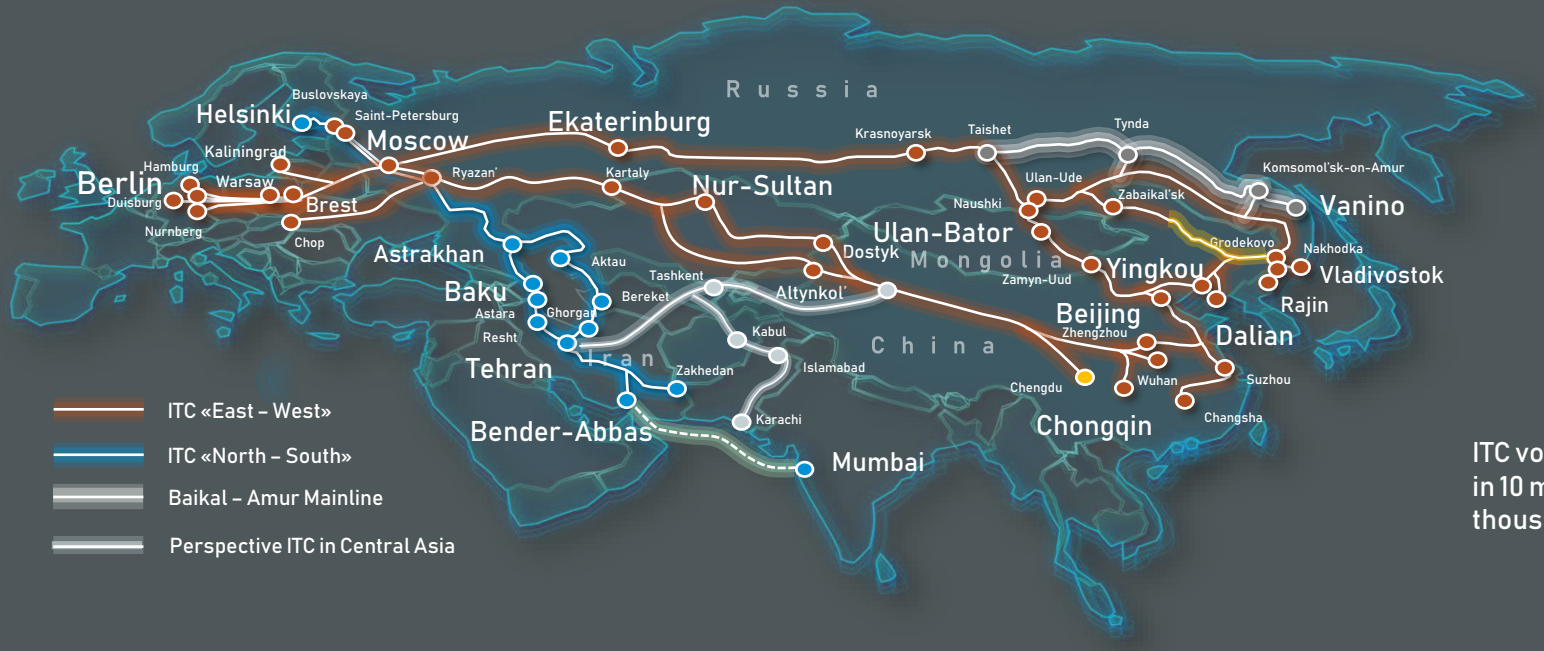
Maximum speed

1 394 km per day

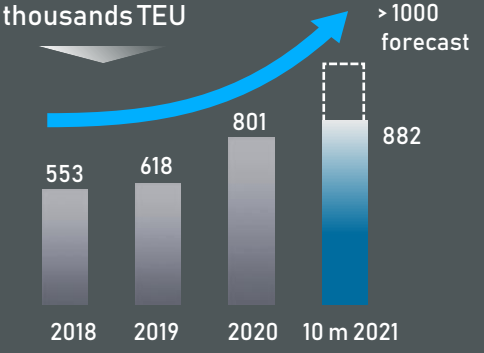
MAIN TASK

Increase of the transit container transport volume by 2024 in **4** times

414 thousands TEUs In 2017 → **1,656** thousands TEUs In 2024



Dynamics of the transit transport on the JSC "RZD" network, thousands TEU



ITC volumes in 10 m 2021, thousands TEU

China – Europe – China **647**

Other transit routes **235**

Master Plan of Modernization and Development of the Mainline Infrastructure till 2024

Increase of the capacity of EAST-WEST Corridor

to **180 mln. tons**

Increase of the transit container traffic volume

in **4 times**

Reduction of the transit delivery time along EAST-WEST Corridor

to **7 days**

Coordination of corridors management

1. Monitoring the functioning of the corridor and its branches
2. Identification of existing and assessment of the potential bottlenecks
3. Proposals for the development of the corridor infrastructure and facilitation of border crossing procedures
4. Improvement of transport tariff policies
5. Proposals for the digitalization of procedures and implementation of the electronic data exchange
6. Proposals on the improvement of the transport corridor environmental friendliness

VISION - FUTURE OF TRANSPORT

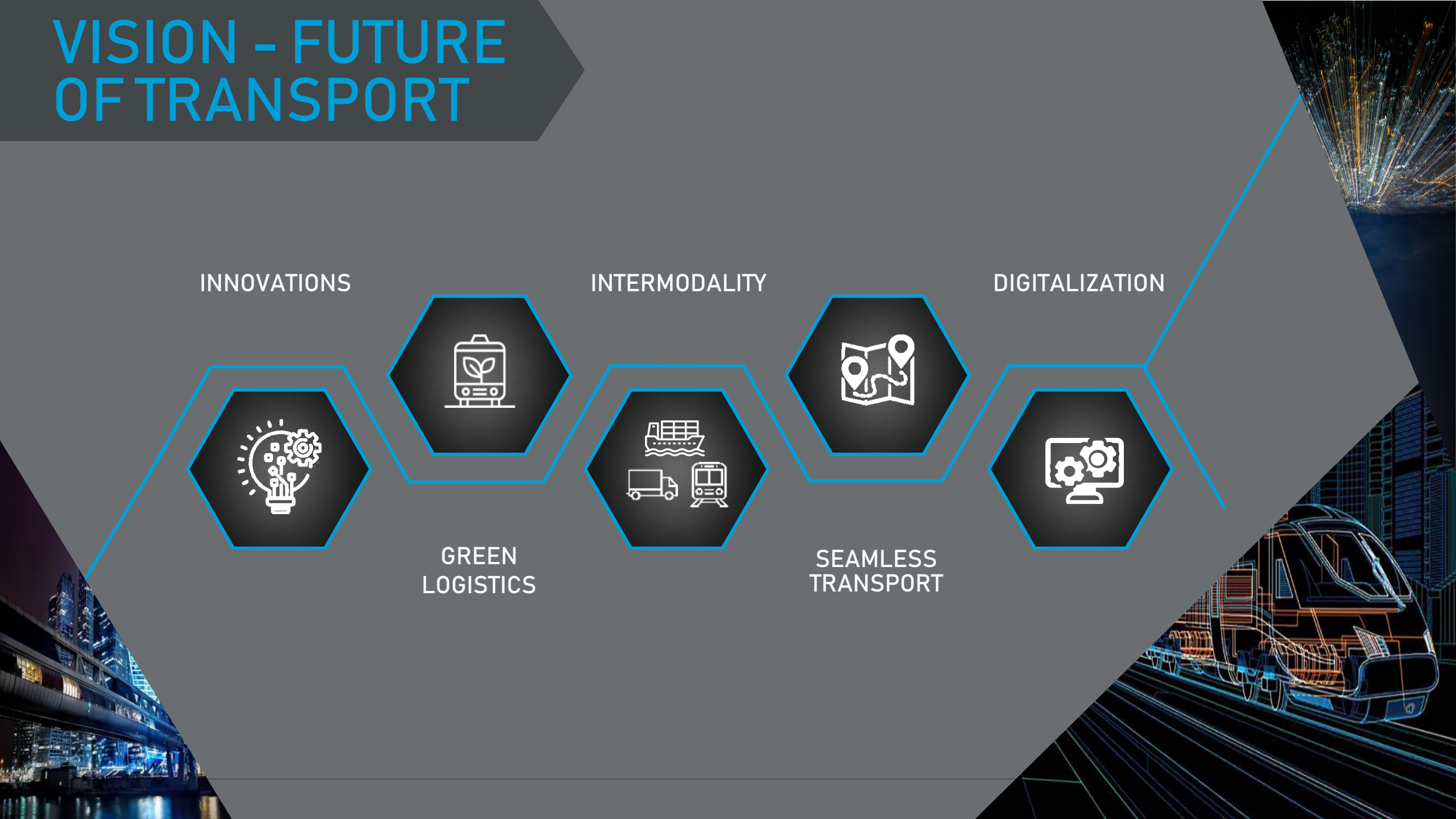
INNOVATIONS

GREEN LOGISTICS

INTERMODALITY

SEAMLESS TRANSPORT

DIGITALIZATION

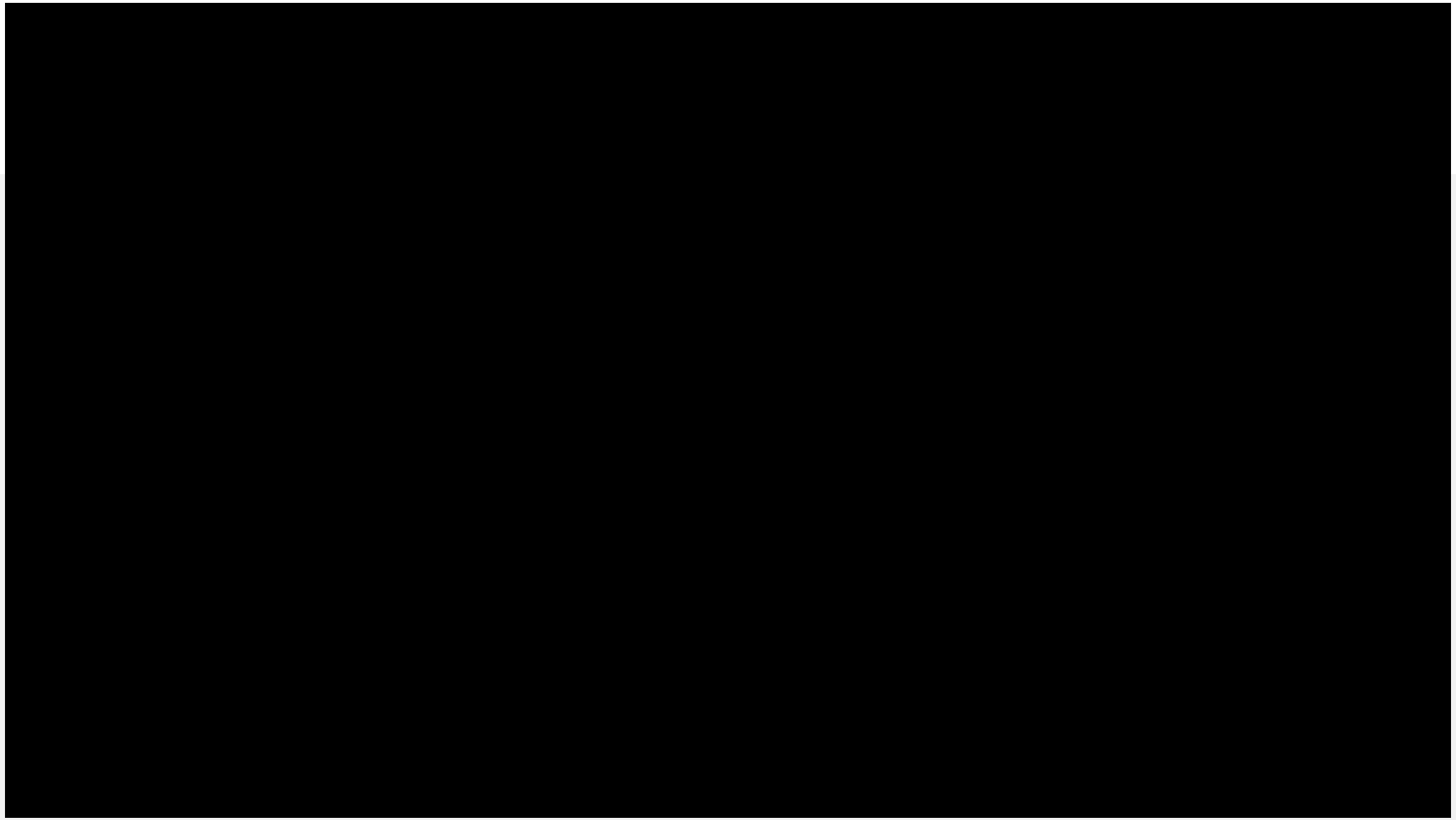


Thank you for your attention

UIC Symposium

30 November -1 December 2021

Mr. Miroslav Antonovich, Chairman, OSJD (video message)



UIC Symposium

30 November – 1 December 2021

Dr. Ivan Petrov, President, FIATA

Multimodality; the future of rail freight

Development of freight corridors

- Improves cross-border interconnectivity while remaining an attractive and reliable alternative to supply chains congestion
- Addresses new flow patterns and improve cost competitiveness of rail freight industry
- Exploits potential of automation and digitalization

Multimodality for efficient movement of goods

- Core of sustainable development of transport systems (tool to reduce carbon emission, improved cross-border connectivity)
- Important tool to improve logistics efficiency
- **but** requires digitalization and interoperability of standards

Linking physical and documentary processes

- Need to support physical movement of goods with accessible, acceptable and facilitated documentary processes, covering the last mile (from rail to road to consignee)
- Importance of uniformity and consistency in documentary interpretation and usage
- Key acceptance by financial institutions, insurers, carriers, regulatory agencies and business standards

→The solution? The **FIATA Multimodal Transport Bill of Lading**

Reputable, trustworthy, only true multimodal negotiable trade document, known by banking institution and endorsed by the ICC.

FIATA digital strategy; fostering interoperability through collaboration

The eFBL in multimodal transport

- Issued by MTO (Multimodal Transport Operator) for the whole stretch of transport
- Liability of the contractual carriers from end-to-end transport
- Can be used as a second lawyer of transport document by MTO; transport contracts with individual carriers in parallel to eFBL to the owner of goods

Building trust and security through digitalization

- Allowing freight-forwarders to issues eFBLs through their everyday tools
- Strengthening of compliance control over the issuers of the document
- Preventing fraud and ensuring full traceability of the document
- Ensuring interoperability with all modes of transport and different actors of the supply chain

Current stage and foreseen future of the eFBL project

- Started with a 7 month Proof of Concept, involving 7 software providers and 19 freight-forwarding companies – both technical and operational feasibilities were confirmed
- Launch planned for early 2022 with a progressive roll-out is planned, starting with direct FIATA members and then National Associations
- Continue to contribute to the work undertaken by the UN on negotiable transport documents
- Possible extension of the FIATA document tracking solution to other FIATA documents and non-FIATA documents (House BL)

Thank you for your attention

UIC Symposium

30 November – 1 December 2021

Mr. Pranab Kumar Das, Director, Compliance and Facilitation, World Customs Organisation

World Customs Organization

WCO Railway Guidance

Mr. Pranab Kumar DAS
Director, Compliance and Facilitation

WCO Railway Project

4. WCO Railway Guidance with harmonized datasets (by June 2022)
3. Launch of the WCO Railway Project (2019)
2. Discussions on ‘Customs - Railway Cooperation’ in the Permanent Technical Committee (2017 to 2019)
1. MOUs with OTIF (10. 2017) and OSJD (3. 2018)

WCO Instruments and Tools

Railway Guidance

Compendium of Best practices in the area of Transit

Transit Guidelines / Transit Handbook

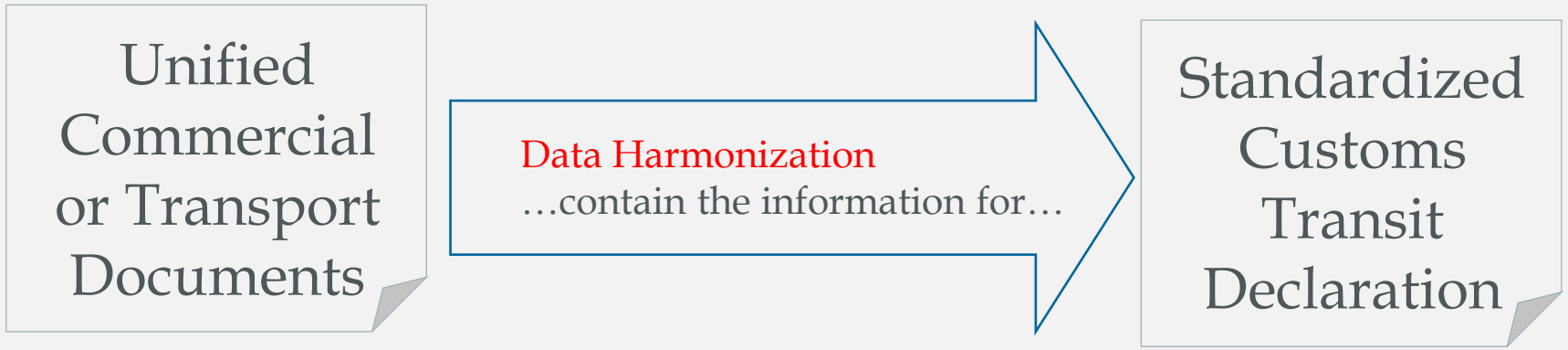
Revised Kyoto Convention
(Specific Annex E)

WCO Railway Guidance

- Objectives of WCO Railway Guidance
- 6 Areas of Guidance for Railway transportation
  - ✓ Electronic Customs transit procedures
  - ✓ Customs control in railway transportation
  - ✓ Railway Postal procedures
  - ✓ Passenger Control
  - ✓ Cooperation with private sector, governmental agencies
  - ✓ Cooperation among Customs administrations
- Annexes

Data Harmonization

- Basic Concept: Accept commercial or transport documents as a transit declaration to save time, money and administrative efforts for railway transportation



Thank you for your attention