RAIL: The backbone of Sustainable Transport

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UNIFE – the European Rail Industry
UNIFE - the European Rail (Supply) Industry

- **Mission:** Promote rail market growth for sustainable mobility

- **Members**
  - Full members: 81 of the largest and medium-sized companies in the rail supply sector
  - Associated members: 16 National Associations, EFRTC and UNISIG

- UNIFE members supply more than 50% of the worldwide production of rail equipment and services. *(source: UNIFE)*

- **Employs 400,000 people worldwide** *(source: UNIFE)*

- **Invests 1 billion euro in R&D each year** *(source: ERRAC)*
Transport one of 6 building blocks in UN post-2015 framework for sustainable development

UN Working Group now defining how to mobilise stakeholder input

“The Future We Want”:

We support the development of sustainable transport systems, including energy-efficient multimodal transport systems, notably public mass transportation systems…

MDBs announced at Rio+20 $175bn investment in sustainable transport
Due to its capacity and speed, rail transport is ideal solution for long distance travel and avoiding congestion in urban areas.

Source: UIC
Rail as truly sustainable transport

- Less energy consumption
- Less CO2 emissions
- Less noise emissions
- Less impact on landscape

**HS & VHS Trains:**
5 times less energy consumption than planes per passenger

**Metro:**
7 times less than a car per passenger

**Tram:**
Equivalent noise to a car; hardly audible in automotive traffic

**Tram:**
Full integration in urban landscape
Catenary-less solutions preserve city centres
High Speed Trains to Airports

Rail should be the preferred solution for travel to and from airports

Travel time by Transport modes (%)

- Public transport: 100%
- Train: 36%
- HS train: 30%
- Car: 48%

Present and future solutions for HS:
- Lower energy consumption
- Lower maintenance costs
Rail has a central role to play in development of smart eco-cities

- meets high, medium and low capacity traffic needs in cities:
- brings added flexibility to energy management in cities:
  - recuperative braking adds to energy supply
  - outlet for surplus intermittent micro-generation
  - integration with EV charging infrastructure
Metro as backbone of urban transport

Delhi metro – solution for mega cities

- Rapid transit
- Daily ridership 2.06 million
- Connection to airport
- 500k fewer cars on roads
- €1.13bn pa fuel savings

The Delhi Metro Rail Corporation certified by the UN as the first rail-based system in the world to get “carbon credits for reducing greenhouse gas emissions” and helping in reducing pollution levels in the city by 630,000 tons every year.
Copenhagen S-train

- public transport provider could offer a door-to-door trip?

bikes make the perfect last-mile link

The number of passengers with bicycle has more than tripled since they made bicycle carriage free of charge in 2009.
Freight connection to ports: Gothenburg

25 daily rail shuttles and 70 trains per day
### ERTMS: a global signalling system for all needs

#### HIGH SPEED
- China (High-speed program)
- Saudi Arabia (Mecca High-speed)
- Turkey
- Prospects in the US, Latin-America, Asia

#### FREIGHT
- Gulf & Middle East – Libya, Saudi Arabia, UAE, India
- Indonesia – Europe: Switzerland, The Netherlands, etc.

#### SUBURBAN
- Brazil (Rio suburban network)
- Mexico (Mexico DF network)
- Australia (Sydney suburban)
- New Zealand (Auckland)
- Europe: Madrid suburban

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*The example of ERTMS shows that railway products are increasingly designed to cover a variety of usages: one system can fit for high-speed, freight, suburban networks.*

*ERTMS currently enhanced to be suitable for urban applications – e.g. through the inclusion of Automatic Train Operation (ATO)*
Co-modality needs effective interfaces between transport modes.

For passenger transport:
- transport hubs and integrated multi-modal travel systems
- IT for fluid modal changes / integrated ticketing / smart-cards

For freight:
- modal shift from road to rail over longer distances
- local distribution e.g. in cities by road

Plus:
- environmental performance and energy efficiency standards
- better integration of external costs
In order to make mobility safer, cleaner and quicker, UNIFE believes it’s necessary to promote a modal shift to the least polluting, safest and most reliable and rapid means of transport:

= light rail, metros, conventional and high-speed trains.

UNIFE is committed to work with the UN to provide sustainable transport solutions to the world population.
Thank you for your attention!