



RAIL: The backbone of Sustainable Transport

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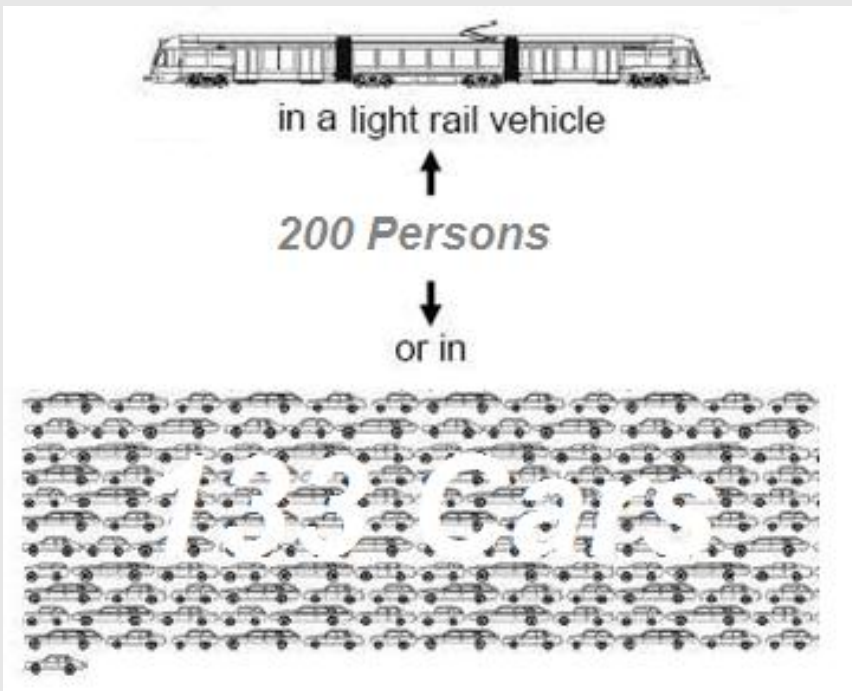
UNIFE - the European Rail (Supply) Industry

- ***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 world wide*** *(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



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

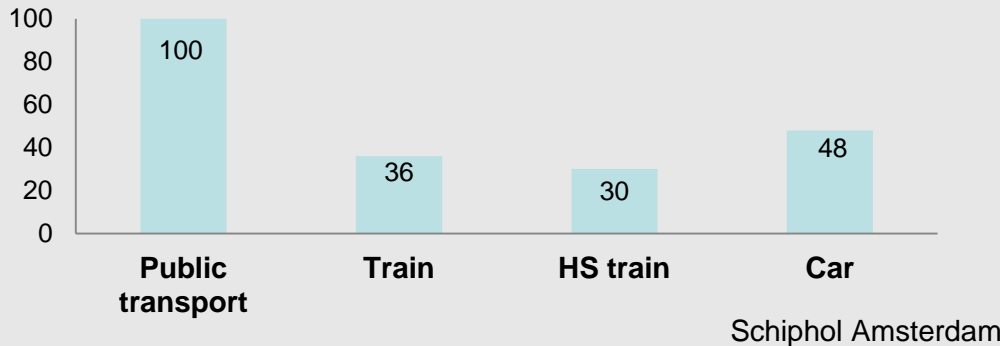
Metro:
7 times less than a car per passenger

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

Tram:
Full integration in **urban landscape**
Catenary-less solutions preserve city centres

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

Travel time by Transport modes (%)

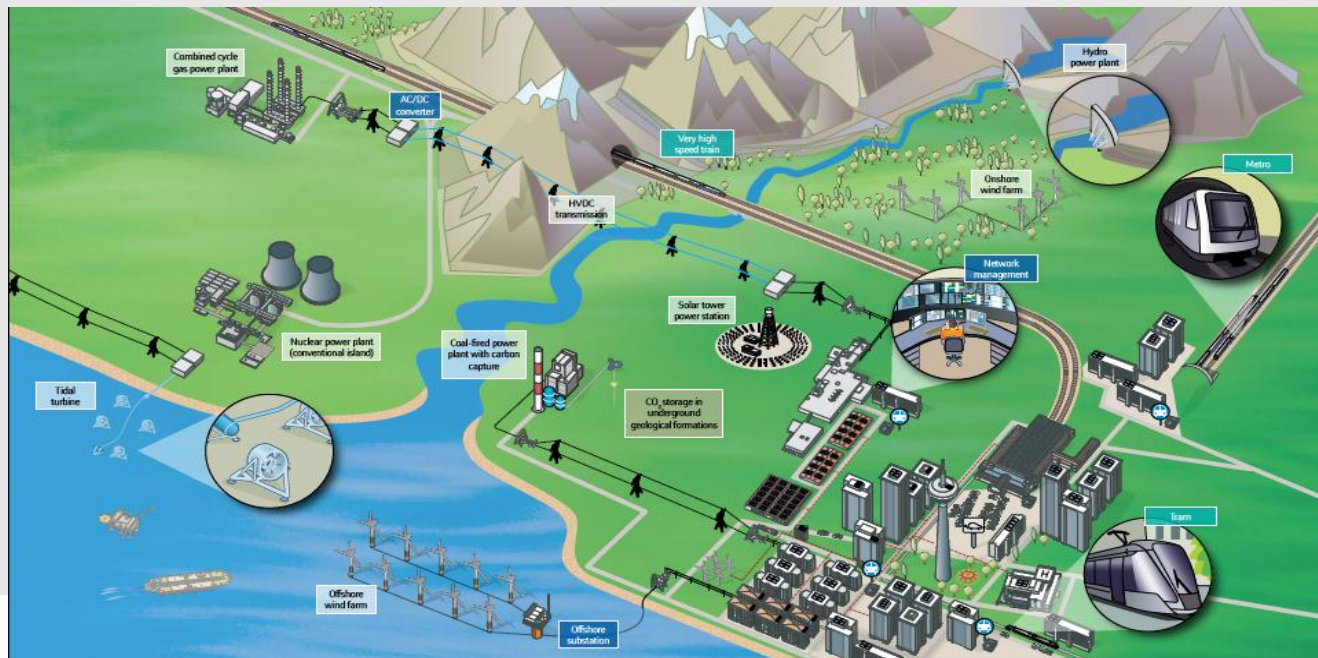


Present and future solutions for HS:

- Lower energy consumption
- Lower maintenance costs

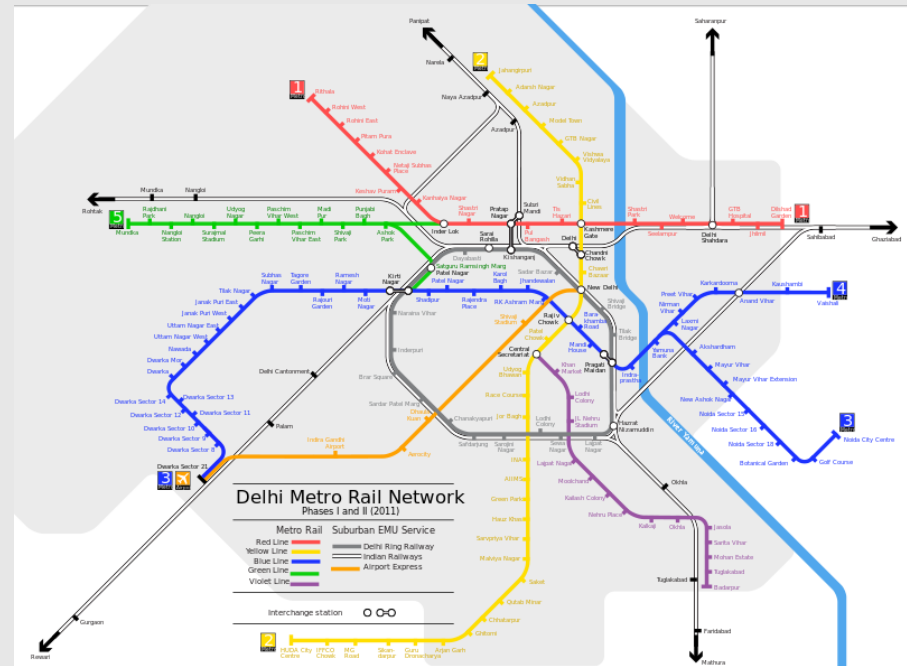
Rail has a central role to play in development of smart eco-cities

- 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



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

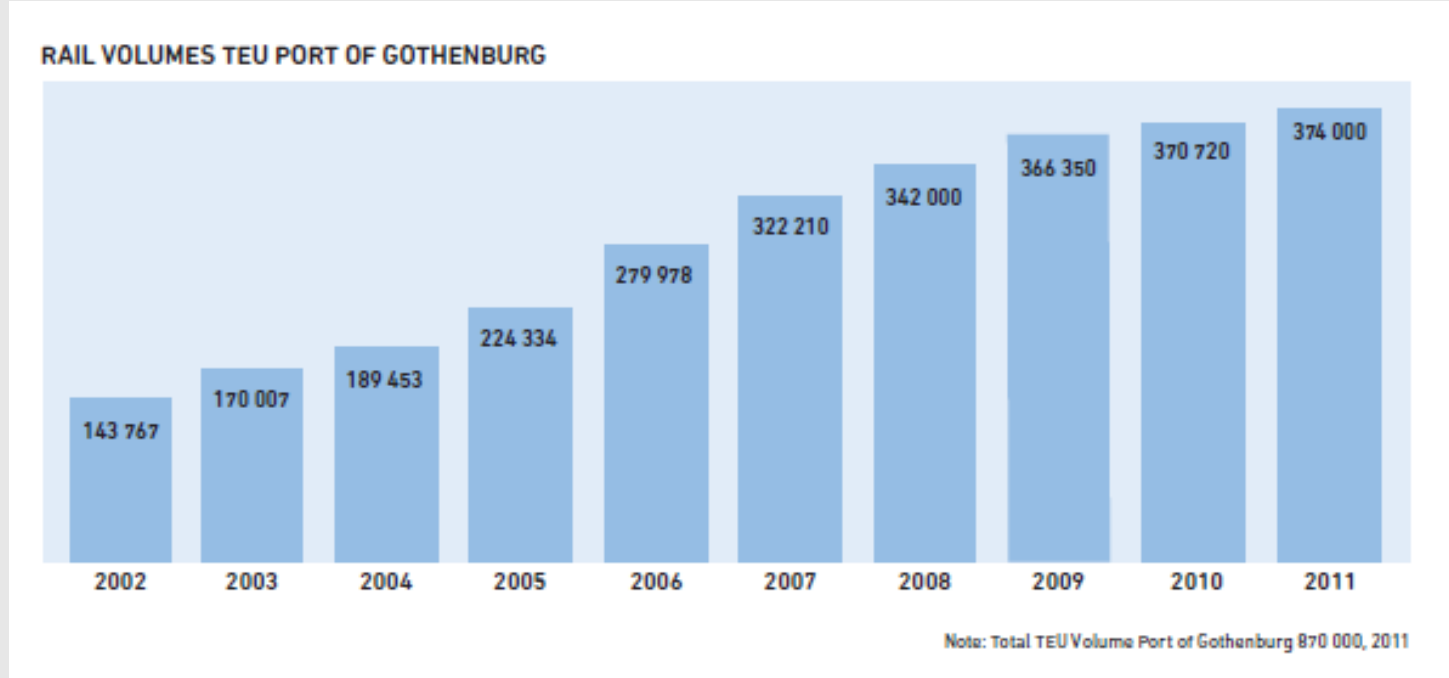
- public transport provider could offer a door-to-door trip?



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.





25 daily rail shuttles and 70 trains per day

HIGH SPEED



Examples:

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

FREIGHT



- *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)*

SUBURBAN



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

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**

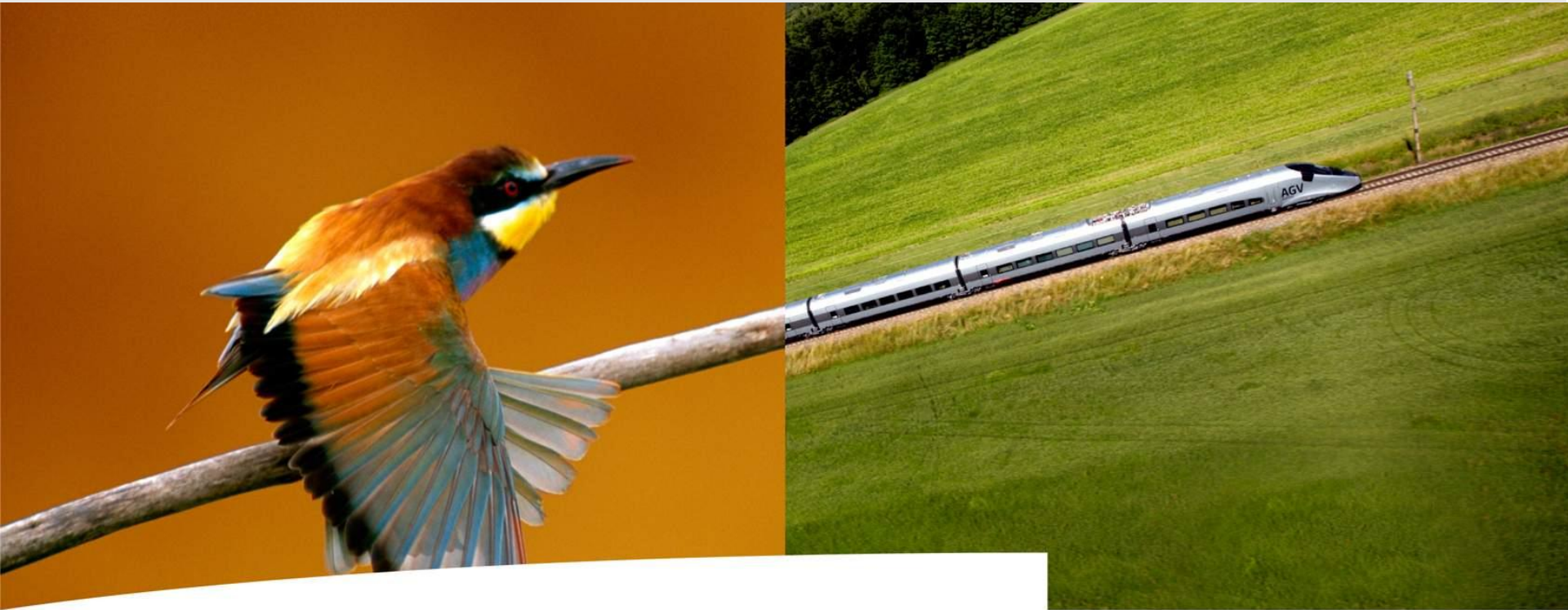
In order to make mobility safer, cleaner and quicker, UNIFE believes it's necessary to promote a modal shift to the

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!