



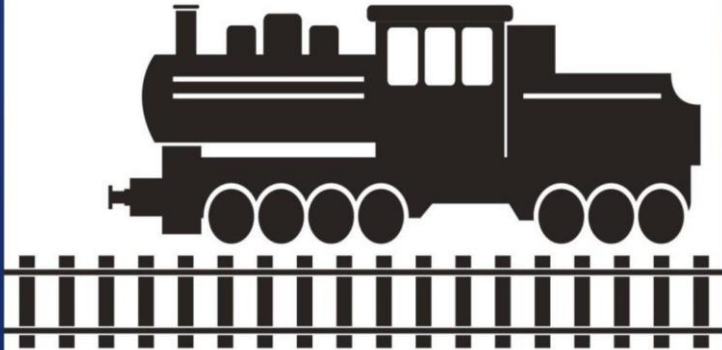
Train

for Making

Safer Mobility

Train Train Lebanon

Advocating for Lebanese railway rehabilitation and railway heritage preservation



Train-Train NGO

Speaker :

Salem CHIDIAC

BRIEF TRANSPORTATION HISTORY

Railway

- **1895:** Railway-Line **Beyrouth-Damas** inaugurated.
- **1902** Inauguration of railway-line **Rayak-Baalbak**, then in **1906** that of **Baalbak-Alep**.
- **1911:** Railway line **Homs-Tripoli** inaugurated, Then removed in **1917**
- **1941:** Installation of railway-line **Haïfa-Beyrouth**
- **1942:** Completion of the line **Beyrouth-Tripoli**
- **1975:** Railway Network stop

Connected Europe to Africa

Connected the coast and the Bekaa

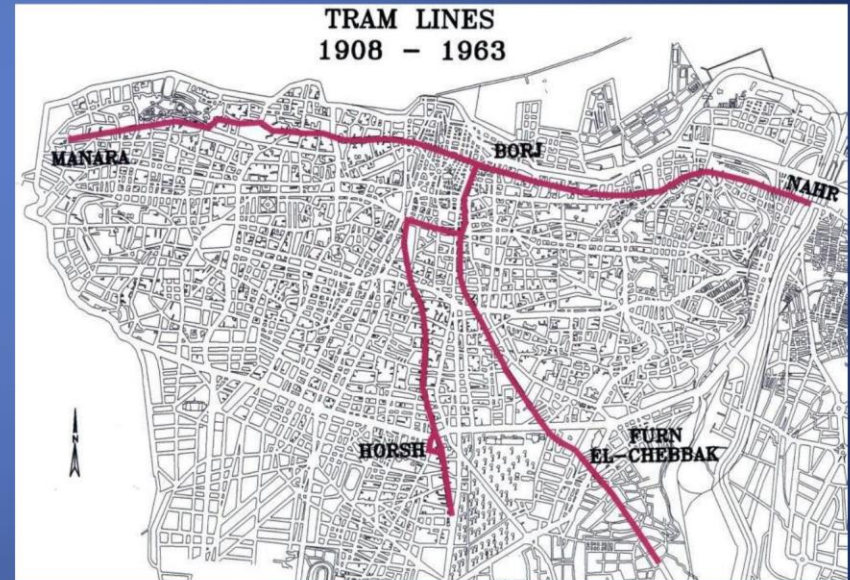


CEL - Al mashriq

BRIEF TRANSPORTATION HISTORY

Tramway

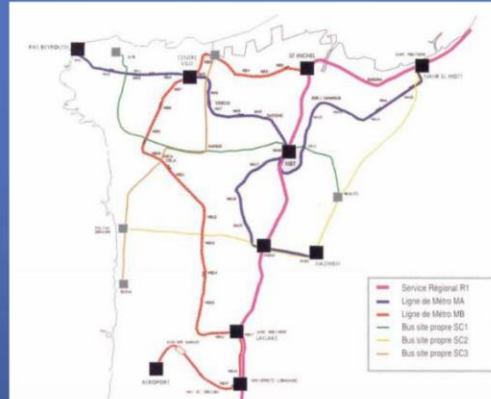
- Electrical Tramway inside Beirut
- Operational between 1908 and 1963
- 3 Main lines distinguished by the color of the tramway
 - Manara to Nahr Beirut (Red)
 - Bourj Square to Horsh Beirut (Green)
 - Bourj Square to Furn El Chebbak (Yellow)
- In the 60s, Intensive usage of private cars, and taxi-service.



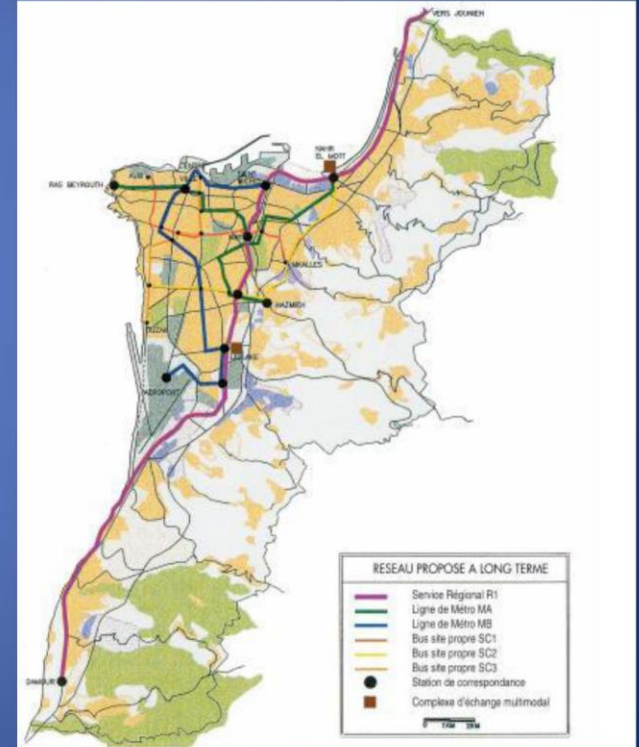
BRIEF TRANSPORTATION HISTORY

Post - War Period

- CDR Proposition for Metro, Bus and Train Network for Metropolitan Beirut.
- In 2002, agreements have been signed between Lebanon and Syria for the rehabilitation of Tripoli-Homs and Riyaq-Damas railways lines.



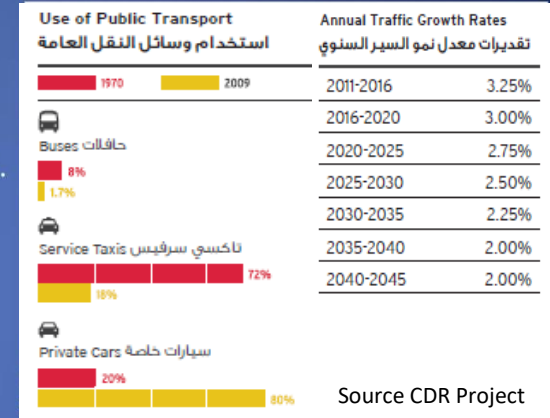
Urban Transport Development, CDR, 2013



CURRENT TRANSPORTATION SITUATION

Mobility nowadays

- Political decision-makers decided to allocate the privilege to road infrastructures by granting them a large part of their budget without thinking the public transportation.
- Lebanon has enough roads, it is not the cause of traffic jams.
- The problem is that there no alternatives to individual cars for now, Traffic is far too dense compared to the size of Beirut.
- Increase of annual car registration of 13% in average between 2007 and 2016.

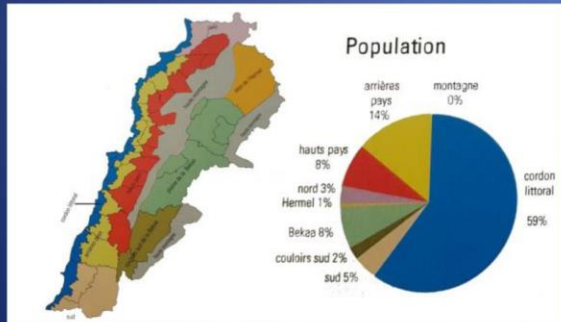


CURRENT TRANSPORTATION SITUATION

Reasons for traffic jams

Population and Congestion Rate

- Beirut contains 1/3 of the total population.
- 60% of the population resides in the littoral, which represents 8% of the surface of Lebanon



Lack of collective public transport

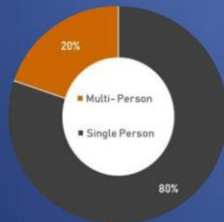
- Already saturated, Road Network is unable to support traffic growth.
- Transport in Greater Beirut is :
70% individual cars
30% public transport (Bus, Minibus, Taxi-service)
- Stop-and-go system causing traffic and accidents, despite the installation of 400 bus stops in 1994 (Team International and RATP parisienne)

CURRENT TRANSPORTATION SITUATION

Reasons for traffic jams

Car Occupancy Rate

- 1 car for approximately 3 persons, so elevated compared to Turkey ; 1 car for 7 persons, or China; 1 car for 12 persons.
- Low car occupancy rate, around 1.7 person per vehicle.



Parking and Road Infrastructures





Train

for Making

Safer Mobility



1

Facilitates access to:

Public Institutions – Education – Jobs – Health Care – Markets – Activities



Transport is the engine to the city
Remove all the boundaries

Walkable distances between
stops, stations...

1

Facilitates access to:

Public Institutions – Education – Jobs – Health Care – Markets – Activities



- Serail
- Justice
- Internal security
- Airport



- AUB
- LAU
- LU (Hadath)
- Schools



- Offices
- Banks
- Shops



- Hospitals
- Clinics
- Pharmacies



- Shops
- Markets
- Souks



- Golf Club
- Corniche
- Horsh Beirut
- Sport Center
- Cultural Center

1

Facilitates access for:



Tourist

Social and Recreational
Occasionally
Comfortable Journey



Citizen

Travel Motive
Way of Traveling
Needs

Going From A to B
Systematically and frequently
Fast and Reliable Service

2

Learn / Respect Time:

The schedule, the arrival, the departure, organizing the whole society

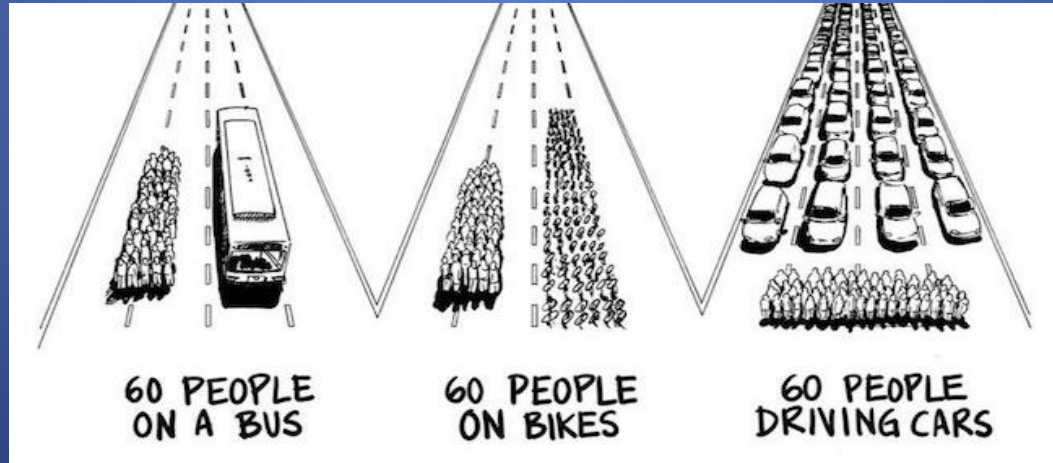
القطارات الدائمة من بيروت الى الماعلتين * قطار غير اعتيادي									
٢٠١ غمره		٢٠٣ غمره		٢٠٥ غمره		٢٠٧ غمره		٢٢١ غمره	
وصول	سفر	وصول	سفر	وصول	سفر	وصول	سفر	وصول	سفر
صباحاً ٧:٣٠	١١:٠٥	صباحاً ١١:٠٠	١١:٠٠	مساءً ٢:٣٠	٢:٣٠	مساءً ٥:٥٠	٥:٥٠	مساءً ٧:٠٠	٧:٠٠
٧:٣٥	١١:٠٥	١١:٠٥	١١:٠٥	٢:٣٥	٢:٣٥	٥:٥٥	٥:٥٥	٧:٠٥	٧:٠٥
٧:٤١	١١:١١	١١:١١	١١:١١	٢:٤١	٢:٤١	٦:٠١	٦:٠١	٧:١١	٧:١١
٧:٤٨	١١:١٨	١١:١٨	١١:١٨	٢:٤٨	٢:٤٨	٦:٠٨	٦:٠٨	٧:١٨	٧:١٨
٧:٥٢	١١:٢٢	١١:٢٢	١١:٢٢	٢:٥٢	٢:٥٢	٦:١٢	٦:١٢	٧:٢٢	٧:٢٢
٧:٥٦	١١:٢٦	١١:٢٦	١١:٢٦	٢:٥٦	٢:٥٦	٦:١٦	٦:١٦	٧:٢٦	٧:٢٦
٧:٥٨	١١:٢٨	١١:٢٨	١١:٢٨	٢:٥٨	٢:٥٨	٦:١٨	٦:١٨	٧:٢٨	٧:٢٨
٧:٥٩	١١:٢٩	١١:٢٩	١١:٢٩	٢:٥٩	٢:٥٩	٦:١٩	٦:١٩	٧:٢٩	٧:٢٩
٨:٠٤	١١:٣٤	١١:٣٤	١١:٣٤	٣:٠٤	٣:٠٤	٦:٢٤	٦:٢٤	٧:٣٤	٧:٣٤
٨:١٢	١١:٤٢	١١:٤٢	١١:٤٢	٣:١٢	٣:١٢	٦:٣٢	٦:٣٢	٧:٣٢	٧:٣٢
٨:١٨	١١:٤٨	١١:٤٨	١١:٤٨	٣:١٨	٣:١٨	٦:٣٨	٦:٣٨	٧:٣٨	٧:٣٨
٨:١٩	١١:٤٩	١١:٤٩	١١:٤٩	٣:١٩	٣:١٩	٦:٣٩	٦:٣٩	٧:٣٩	٧:٣٩

اسامي المحطات
محطة مرفأ بيروت
محطة المدور
محطة بيروت
الدوره
نهر الموت
الفواره
انطلياس
ضبيه
نهر الكلب
عنطوره

3

Alternatives for individual cars

Less cars, less traffic, less traffic accidents, less pollution



4

Remove Trucks and Cargo from Roads

Port of Beirut receives an average of 400 000 containers per month

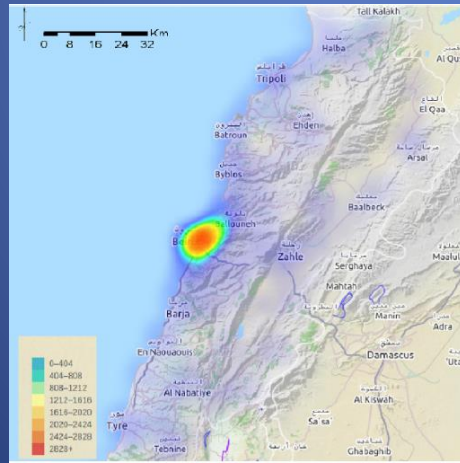
Adding 40 000 extra trucks on the roads of the city each month; A sum of 30 trains per day.



5

Reduce Traffic Accidents

Less cars, less traffic, less traffic accidents, less pollution



Spatial distribution of Lebanese car accidents from 2015 until 2018

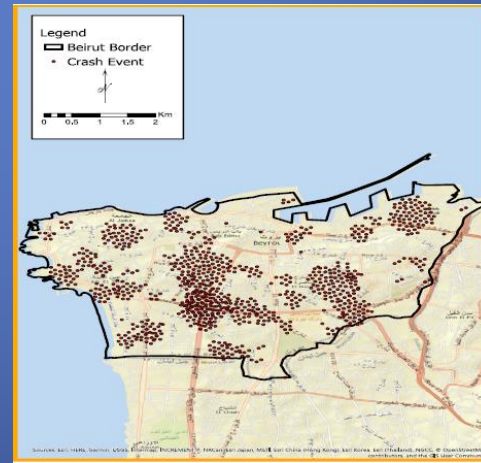


Figure shows the location of crash events in Beirut

5

Reduce Traffic Accidents

Almost 450 recorded Deaths in 80 years of Lebanese Railways.
More than 600 deaths on the Roads of Lebanon Every Year



MOTORWAY

2 x 3 lanes

75m

1.7 passenger / car



1.7

4,500 cars per hour



2 X 7,650 PASSENGERS / H

HIGH-SPEED RAILWAY

Double track

25m



666 passengers / train



666

12 trains per hour

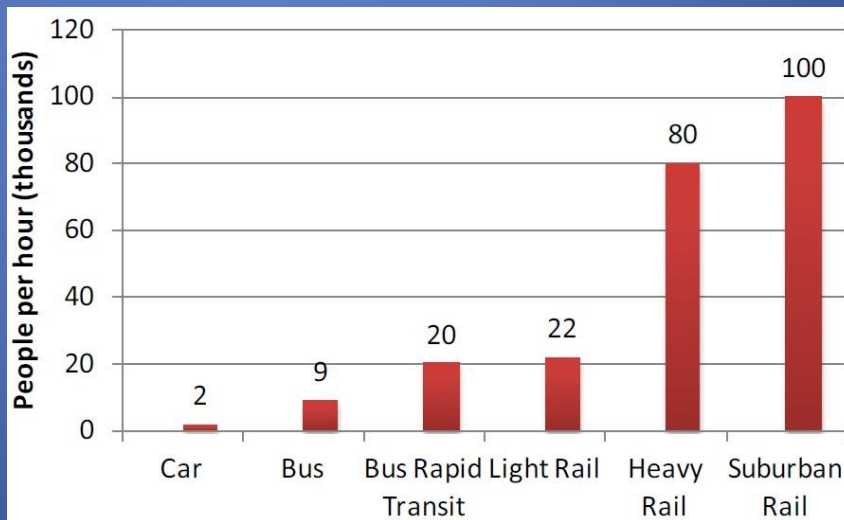


2 X 8,000 PASSENGERS / H

6

Reduce land use

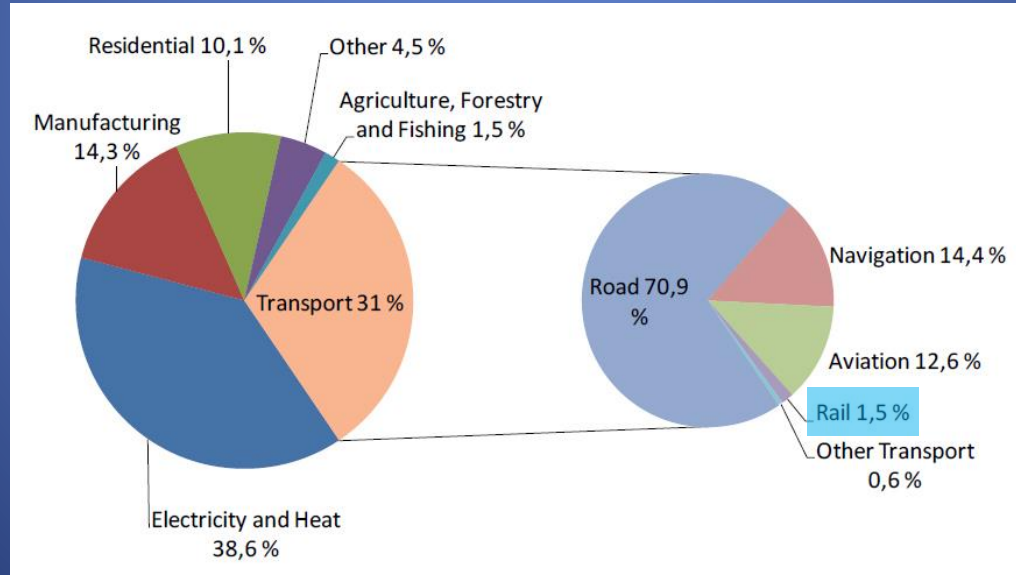
Land take for Rail is about 3.5 times lower than for cars



Capacity of
a 3.5 m wide
lane in a city

7

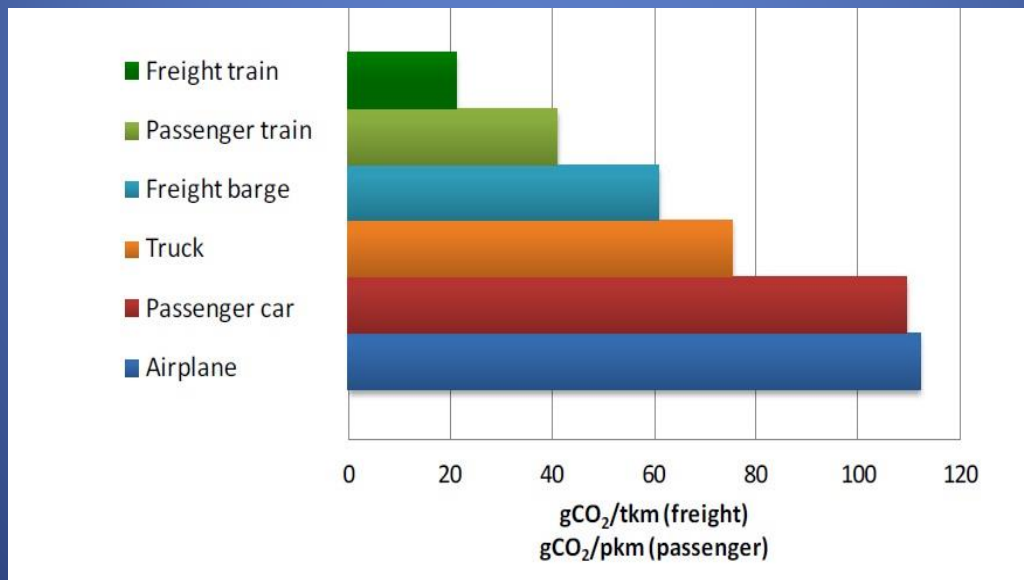
Rail is the most emissions-efficient major mode of transport



CO2 emissions from
fuel combustion by
sector, 2011

7

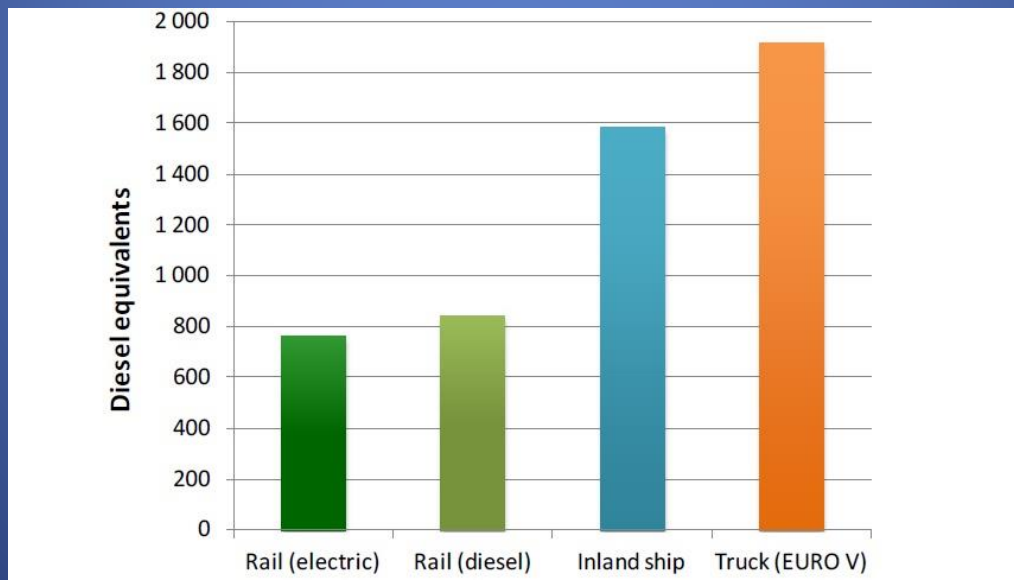
Rail is the most emissions-efficient major mode of transport



CO₂ emissions from
fuel combustion by
sector, 2011

8

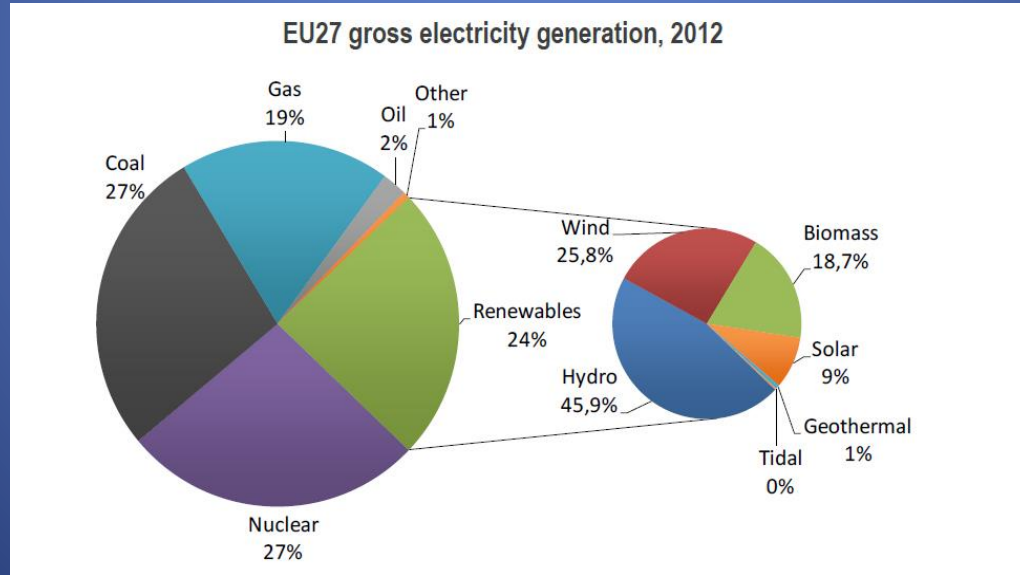
Rail's energy efficiency is always improving



Primary energy
consumption:
100 tonnes cargo,
Rotterdam-Basel
(700 km by land)

8

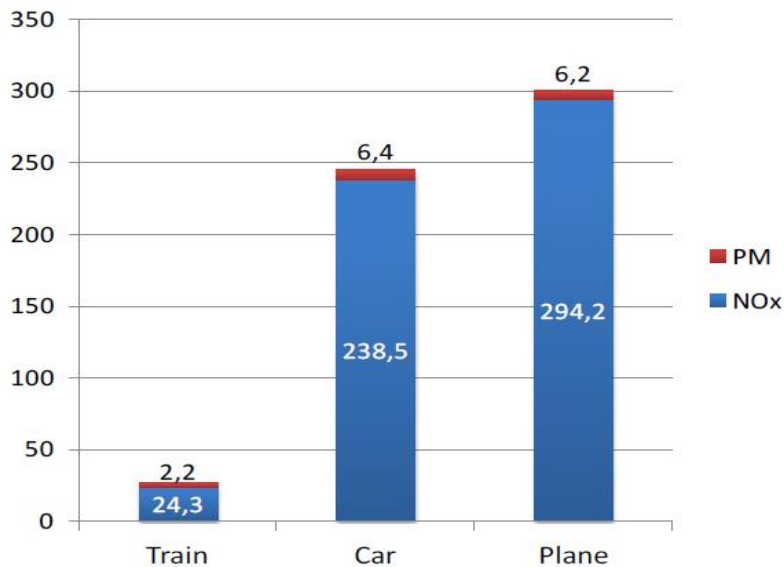
Rail the only major transport capable of shifting from fossil fuels to renewable energy, without the need for further major technological innovation



Primary energy consumption:
100 tonnes cargo,
Rotterdam-Basel
(700 km by land)

9

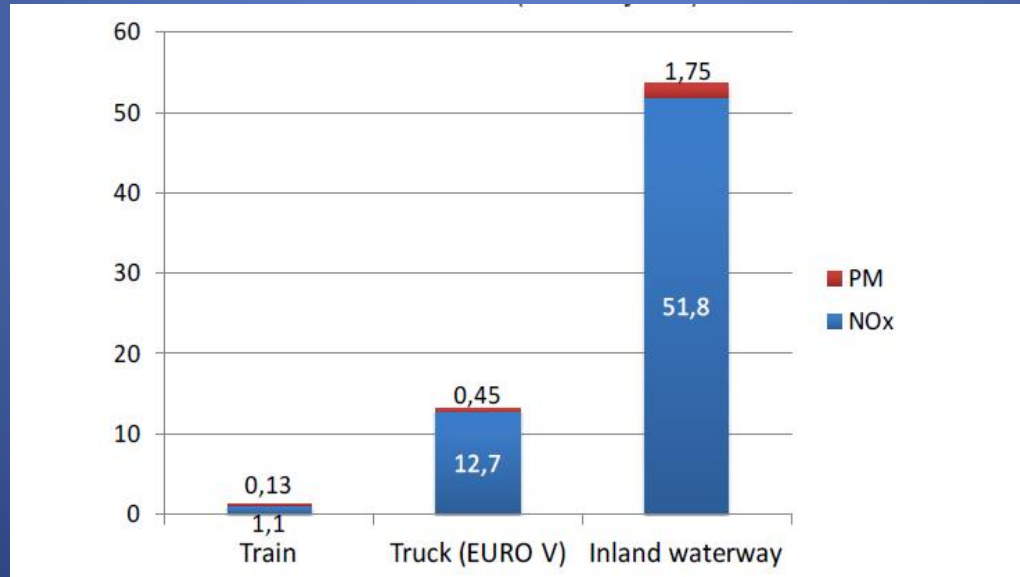
Reduce Local Air Pollution



NO, and PM generated
by passenger transport,
Brussels – Berlin
(780 km by land)

9

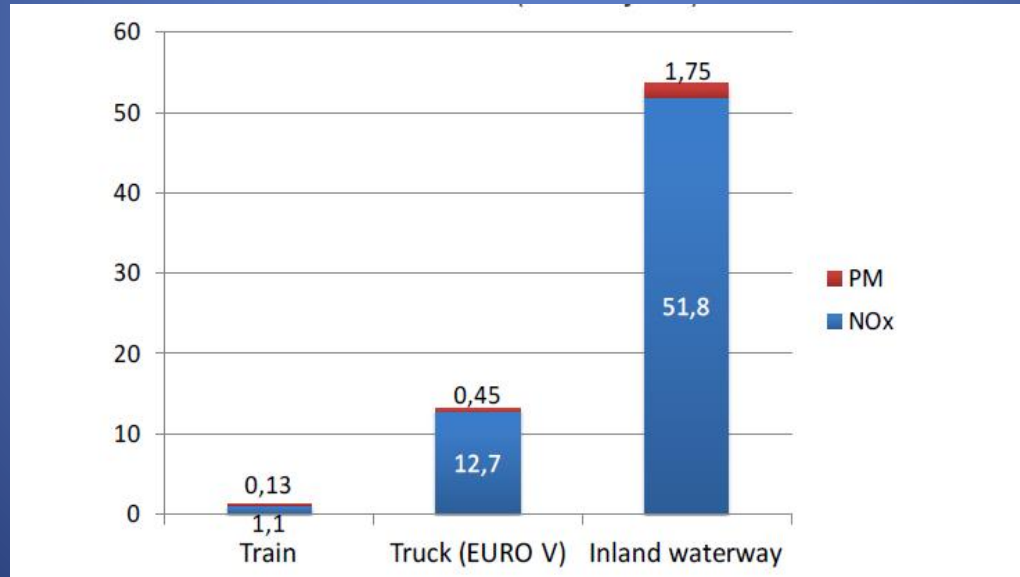
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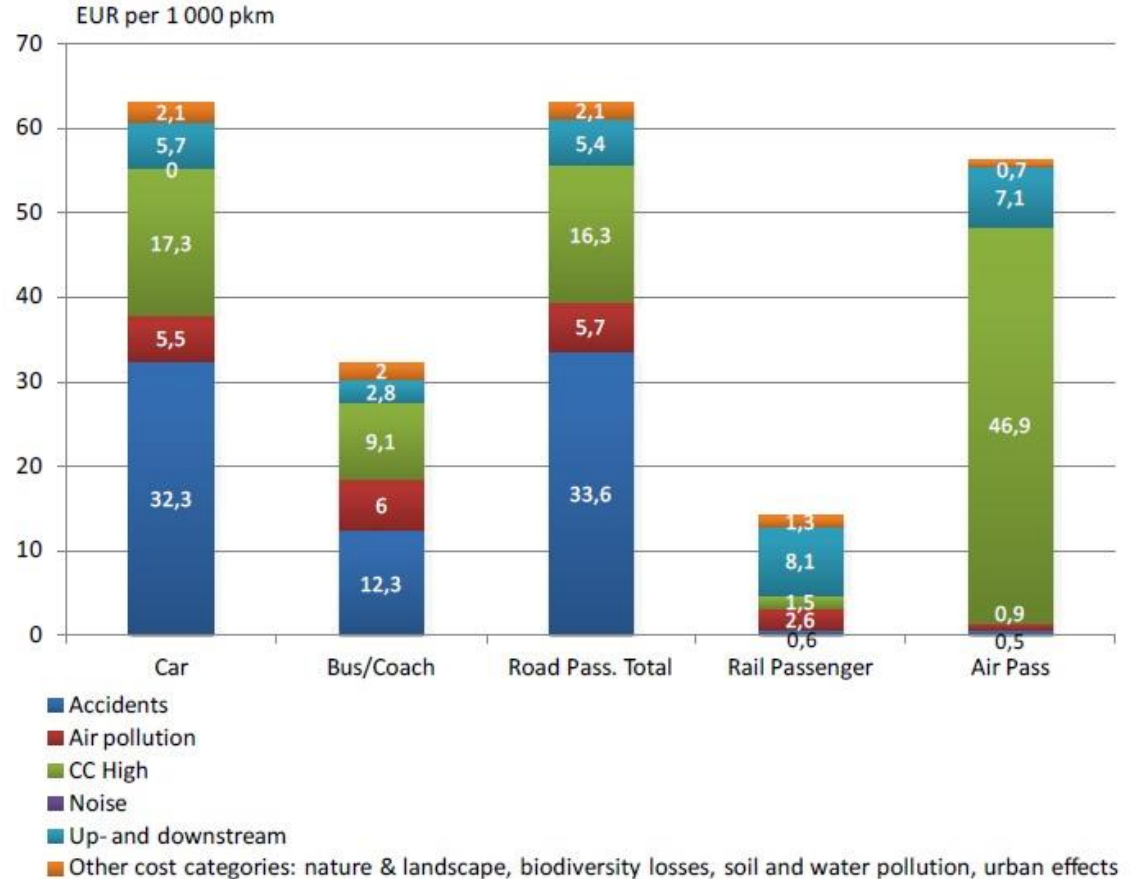


NO, and PM generated
by 100 tonnes cargo,
Rotterdam - Basel
(700 km by land)

Average EU27 external costs (excluding congestion)

passenger

External costs



Average EU27 external costs (excluding congestion)

Freight transport

External costs

