

Shift2Rail  
R&I



**TRAFIKVERKET**  
**SWEDISH TRANSPORT ADMINISTRATION**



# EU - HORIZON 2020

❑ MFF is totally 959 988 M €

❑ Horizon 2020 budget is 79 271 M EUR in 2011 prices,

*thereof:*

-Smart, green and integrated transport 6802 M €

❑ Horizon 2020 has:

- Open calls
- Joint Undertakings
  - Contractual (European Green Vehicle Initiative, ... )
  - Institutional/JTI

# EU - HORIZON 2020

➤ Institutional PPP – JTI  
(Clean Sky, SESAR, FCH, Shift2Rail...)

7 in total for Horizon 2020,

3.5 for transport

One for rail -





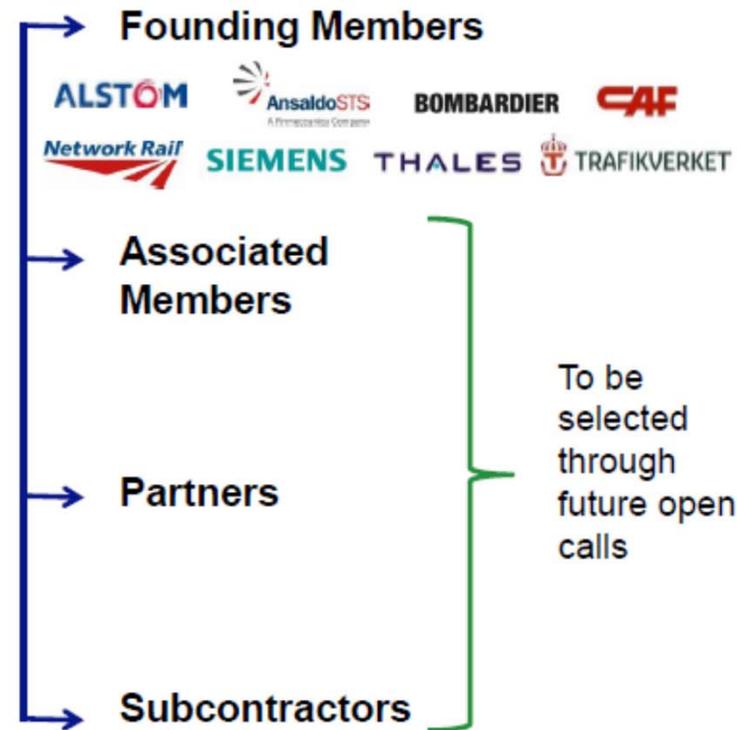
## Current preparatory phase

vs

## Future operational phase (for R&D activities)



Signature of a specific MoU with the commitment to bring expertise in the phase of technical preparation





## S2R is and can:

Is a unique opportunity to develop a common agenda that meets substantial mid and long term needs of the sector

Can create a joint R&I knowledge

Can drive the results toward higher TRL levels (e.g. demos)

Can give a better process to utilize R&I results (better market uptake).

- Requires effective cooperation to manage the volumes not previously dealt with
- Must optimize the allocation of R&I resources
- May require new skills and resources, also from outside of the rail sector.



## Summing it up ...

### Project volume:

- Totally 800 M €, out of 1.3 Bn €
- Additional funding? CEF, mid-term review, S2R II
- Founding Members (FM)
  - In total 380 M €
  - Thereof Trafikverket and Network Rail each 40,7 M €
- Associate Member (AM)
  - In total 285 M €
  - At least 4.75 % within an IP
  - Alternative for RU 22.8 M€ in several IPs, consortia RU/IM 27 M€
- Open Calls
  - 135 M € (including first call 52 M €)



## Results

### KPIs:

- a 50% reduction of the life-cycle cost of railway transport, through a reduction of the costs of developing, building, maintaining, operating and renewing infrastructure and rolling stock, as well as through increased energy efficiency;
- a 100% increase in the capacity of the railway transport system to meet increased demand for passenger and freight railway services;
- a 50% increase in the reliability and punctuality of rail services; measured as 50 % reduction of unreliability and late arrivals
- Removal of remaining technical obstacles (close TSÍs)
- Reduce negative externalities (N&V, emissions, ...)

## SHIFT2RAIL 5 Innovation Programs

- IP1: Cost-efficient and Reliable Trains, including high capacity trains and high speed trains;
- IP2: Advanced Traffic Management & Control Systems;
- IP3: Cost-efficient, Sustainable and Reliable High Capacity Infrastructure;
- IP4: IT Solutions for Attractive Railway Services;
- IP5: Technologies for Sustainable & Attractive European Freight.

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- **IP2: Advanced Traffic Management & Control Systems-  
Capacity and Efficiency Surge**
- Shift2Rail activities should support the rapid and broad deployment of advanced traffic management and control systems, by offering improved functionalities and standardised interfaces, based on common operational concepts, facilitating the migration from legacy systems, decreasing overall costs, adapting it to the needs of the different rail segments as well as to the needs of a multimodal smart mobility system.
- **TD9 - Traffic Management System**

The increase in traffic intensity and complexity of the railway system demands new methods for real-time traffic control. The new system focus on new Driving Modes and related functionalities, shall integrate Real-Time Status Parameter from other Subsystems.

**Thank you for your interest!**