



# Rail Opportunities in Horizon 2020 outside of the Shift2Rail Joint Undertaking

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| FUTURE  
| RAILWAY

# Rail Opportunities in Horizon 2020 outside of the Shift2Rail Joint Undertaking



# Horizon 2020 & Shift2Rail





Pillar 1

Excellent Science

European Research Council (ERC)  
 Future Emerging Technologies (FET)  
 Marie Curie - Training networks, Fellowships, Innovation Exchange

Research Infrastructure

Bottom up

European Institute of Technology. Euratom. JRC's

Pillar 2

Industrial Leadership

Leadership in enabling and industrial technologies

Top Down

- ICT; micro- and nanoelectronics, photonics; nanotechnology; biotechnology; advanced materials and advanced manufacturing systems

Innovation for SME's

Bottom up

Pillar 3

Societal Challenges

Societal Challenges

1. Health, demographic change and well-being
2. Food security, sustainable agriculture, marine and maritime research, and the bioeconomy
3. Secure, clean and efficient energy
4. Smart, green and integrated transport
5. Climate action, resource efficiency and raw materials
6. Inclusive, innovative societies
7. Secure societies

Top Down

SHIFT<sup>2</sup>RAIL  
 €0.92bn



# Shift2Rail update

- 3 major challenges

- ✓ **CAPACITY** (to cope with growing EU demand)

- Up to 100% increase in capacity

- ✓ **RELIABILITY** (to better satisfy users)

- Up to 50% increase of reliability

- ✓ **LIFE CYCLE COSTS** (for more competitiveness)

- Up to 50% of reduction of Life Cycle Costs

- Impacting all segments of the rail market!



- Improving mobility and making daily life easier for millions of European passengers and rail freight actors!



# Shift2Rail update

- ▶ EUR920m 7 year collaborative research & innovation programme
- ▶ NR is a S2R founder member along with Siemens, Bombardier, Alstom, Ansaldo, CAF, TrV, & Thales
- ▶ Associate Members have been selected from a second stage call and are in negotiation to join the JU - 19 candidate AMs selected
- ▶ The S2R Strategic Masterplan has been published
- ▶ S2R has 5 working themes “Innovation Programmes”
- ▶ Output will be products at TRL7/8
  
- ▶ The EC will provide 47% of the members funding, spread over up to 7 years
- ▶ 30% allocated to open calls, up to 100% funded but subject to normal H2020 rules
- ▶ MAAP and AWP 2015/16 to be completed and approved 11th Dec
- ▶ 1st Open Call for AWP 2015/16 to be issued 16th December – subject to approval
- ▶ Opportunities for sub-contracting into Network Rail



# Shift2Rail Research Priorities



**IP1: Cost-efficient and Reliable Trains, including High Capacity Trains and High Speed Trains**



**IP2: Advanced Traffic Management & Control Systems**



**IP5: Technologies for Sustainable & Attractive European Freight**



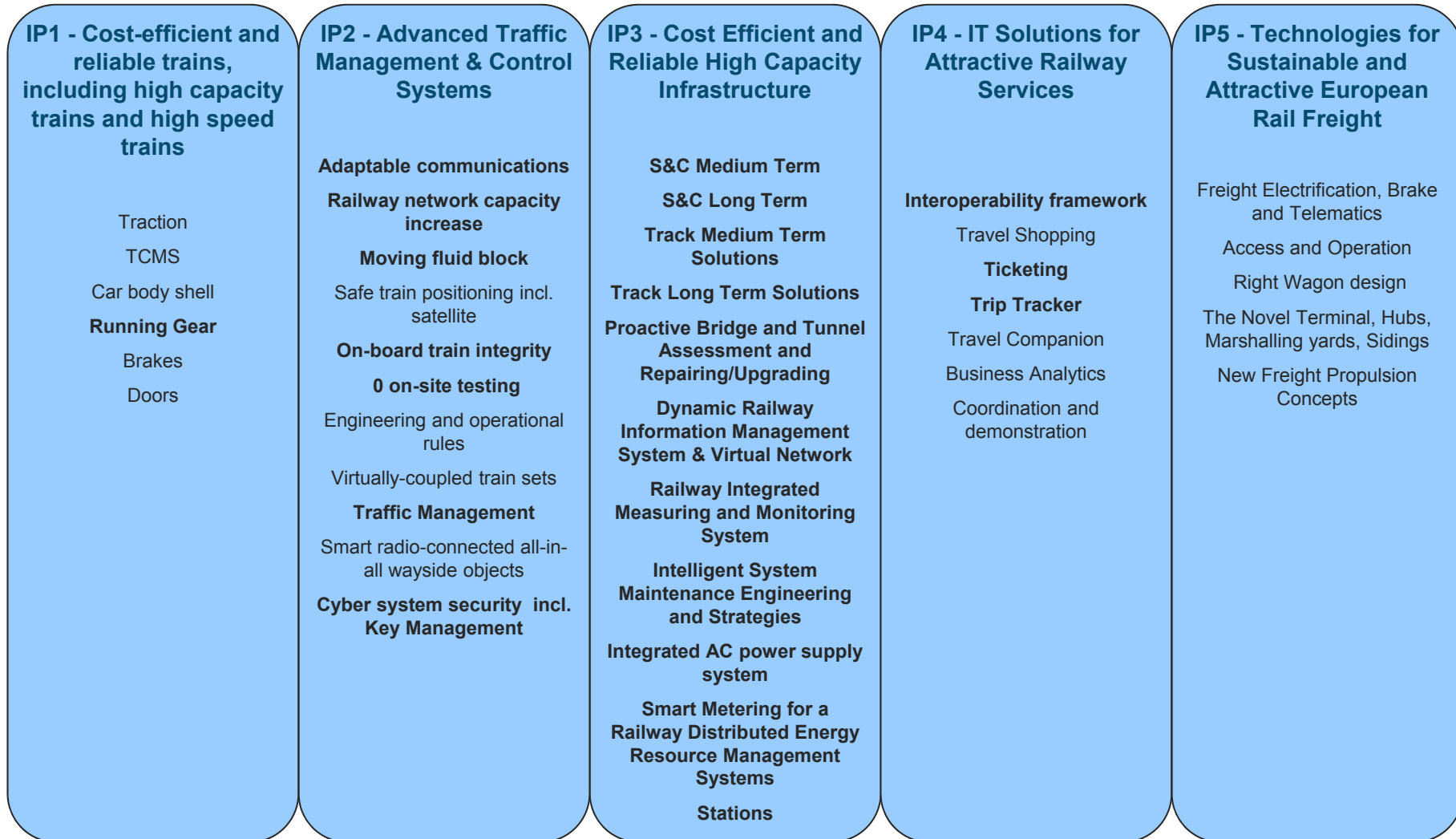
**IP4: IT Solutions for Attractive Railway Services**



**IP3: Cost-efficient and Reliable High Capacity Infrastructure**



# Shift2Rail Research Priorities





# H2020 Lighthouse projects



Horizon'2020: MG-2.1-2014 - **IN2Rail** (635900)  
*Innovative Intelligent Rail*



Horizon'2020: MG-2.3-2014 - **Roll2Rail** (636032)  
*New dependable rolling stock for a more sustainable, intelligent and comfortable rail transport in Europe*



Horizon'2020: MG-2.2-2014 – **IT2RAIL** (636078)  
*Information Technologies for Shift to Rail*



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Innovation for SME's



Pillar 3

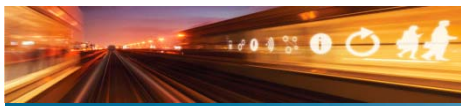
Societal Challenges

Societal Challenges

1. Health, demographic change and well-being
2. Food security, sustainable agriculture, marine and maritime research, and the bioeconomy
3. **Secure, clean and efficient energy**
4. **Smart, green and integrated transport**
5. Climate action, resource efficiency and raw materials
6. Inclusive, innovative societies
7. **Secure societies**



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# 2016 call topics to be announced

Horizon 2020 section	No of Topics / ranking		
	High	Med	Low
<b>Leadership in enabling and industrial technologies - Information and Communication Technologies</b> Advanced computing and cloud computing, Future Internet, Content, Robotics and Autonomous Systems, Internet of Things, Security, International Collaboration: EU-Japan	4	4	5
<b>Societal Challenges - Transport</b> Safety, Logistics, Intelligent Transport Systems, Infrastructure, Socio-economic and Behavioural and Forward Looking Activities for Policy Making	5	1	3
<b>Societal Challenges - Secure Societies</b> Critical Infrastructure Protection, Security, SME instrument topic, 2016 and 2017 Fast track to Innovation – Pilot, Digital Security	1	4	-
<b>Societal Challenges - Secure, Clean and Efficient Energy</b> Energy Efficiency	-	1	1



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# Thank you



Thank you