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#S2RCall2020

Wi-Fi Login: **S2R Info Day**
Wi-Fi Password: **S2RCall2020**



Opening Address

John CLEUREN

Senior Expert, Future Urban & Mobility Systems
DG Research and Innovation
European Commission

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Questions?

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Dialogue between the Executive Directors of Shift2Rail JU and the European Union Agency for Railways

Carlo BORGHINI

Executive Director, Shift2Rail Joint Undertaking

Josef DOPPELBAUER

Executive Director, European Union Agency for Railways



Questions?

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Annual Work Plan 2020 Topics and S2R Programme Specificities

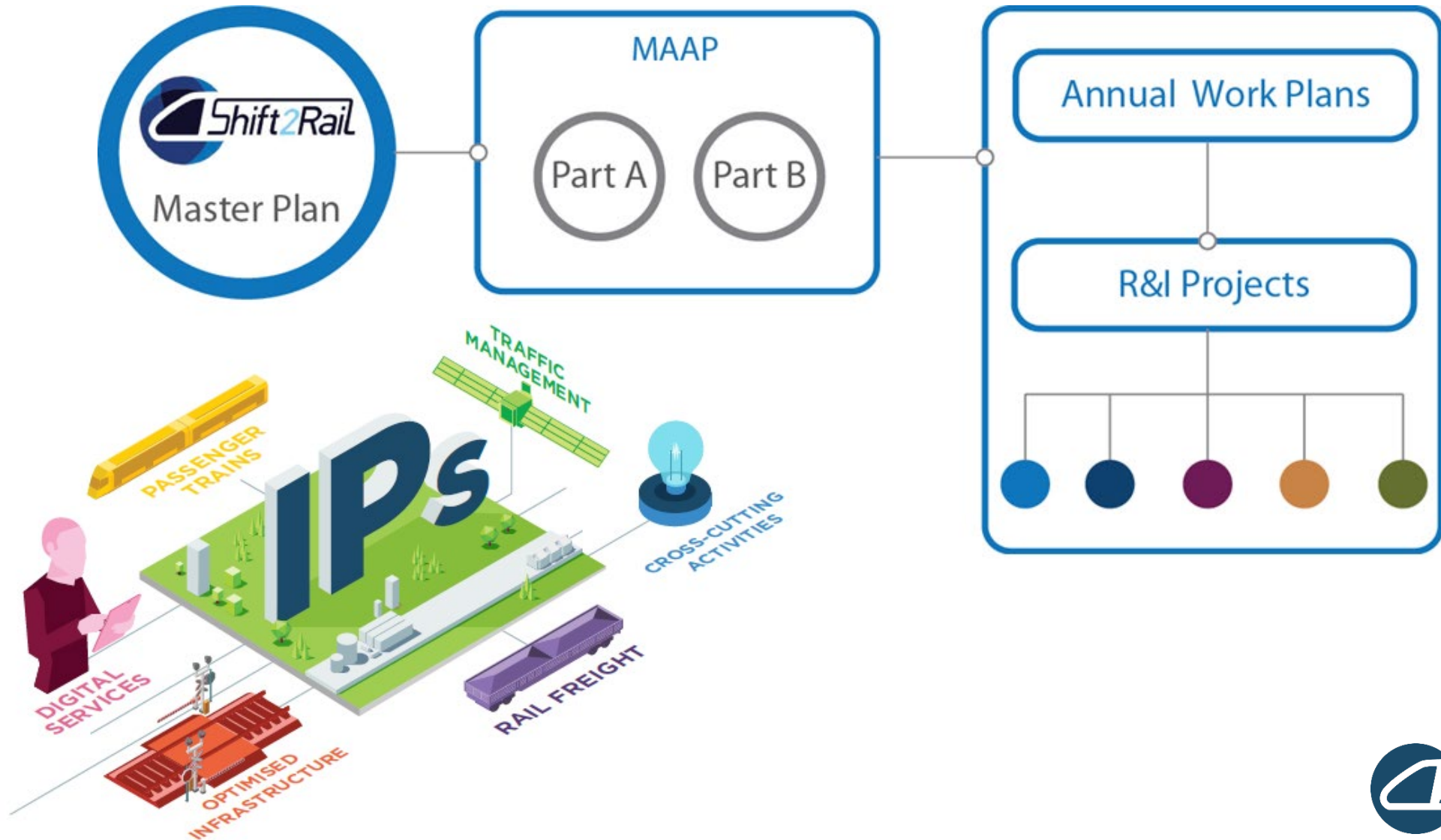
Giorgio TRAVAINI

Head of Research and Innovation
Shift2Rail Joint Undertaking

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The S2R Programme implementation



The S2R MAAP*

- Is a collaborative long-term investment planning document, which now also contains an Executive View (**Part A**) providing the **S2R vision and Capabilities**
- Translates strategic R&I priorities for the Railway sector – as per S2R Master Plan - into **concrete R&I activities, milestones and deliverables**
- Contains the description of R&I activities worth an estimated **value of about EUR 777 million**
- **Is a living document** (new version for **Part B**)
- Enables the preparation of result-oriented **Annual Work Plans** and **Calls for Proposals or Tenders**
- **Grants awarded** for the actions(Projects) should aim to implement part(s) of the MAAP

* multi-annual action plan



AWP 2020 S2R Programme specificities

Million of EUR	Total	Members only	Open to non-Members
Value of the Call for Proposals R&I	146.6	123.8	22.8
<i>S2R Maximum Co-funding</i>	75.4	55.4	20
<i>In-Kind Contribution</i>	71.2	68.4	2.8
No of topics	19	8	11
Value of Call for tender R&I	4.4	0	4.4
No of topics	3	0	3
Value of Prizes	0.5	0	0.5
No of topics	4	0	4

FOUNDING MEMBERS



ALSTOM

BOMBARDIER

CAF

Hitachi Rail STS

NetworkRail

SIEMENS

THALES

TRAFIKVERKET

ASSOCIATED MEMBERS

amadeus



DIGINEXT
be visionary

Faiveley Transport
A Wabtec Company

HaCon

indra



KNORR-BREMSE

kontron
S&T Group

mermec
AN ANGEL COMPANY



Talgo

Virtual Vehicle Austria consortium+
(VVAC+)

European Rail Operating
community Consortium (EUROC)

Swi'Tracken consortium

Smart DeMain (SDM) consortium

virtual vehicle

SENER LINEN

ÖBB
Immer in Bewegung

bls

RAILNIUM

Universitat
do Pais Vasco
Euskal Herria
Unibertsitatea

Strukton
Rail

cemusa

FCP
getzner
engineering a quiet future

TATRAVAGÓNKA
POPIŠAD

CP
COMBOIOS DE PORTUGAL

Lok
erine
vita
sto

U.PORTO

University of
Wales

Fraunhofer
IVI

acciona

KIRCHDORFER
CONCRETE SOLUTIONS

ACT

PKP
POLSKIE KOLEJE PAŃSTWOWE
Silesia Region

SBB CFF FFS

TATA STEEL

vossloh

TRONICO
PILSEN

DLR

Plasser & Theurer

MCL

ProRail

Infraestruturas
de Portugal

izt
Institut für
Infrastruktur und
Technologiebewertung

egis

voestalpine
ONE STEP AHEAD

PIM

TCDD

Slovenske železnice

EURO
TUNNEL

AVL

AERFITEC

Competitive Freight Wagon
Consortium (CFW)

Smart Rail Control
(SmartRaCon) consortium

AERnova

ConTraffic
Consulting Network for Traffic Systems

DLR

DLR

RAILNIUM

FIDAMC

DIE BAHNINDUSTRIE.
VON VERBAND DER BAHNINDUSTRIE IN DEUTSCHLAND E.V.

ceit
Research Institute

ceit
Research Institute

NSL

tecnalia
Inspiring
Business

WBN
Research Institute

AWP S2R Programme specificities

How to read the topic acronyms

Topic number - IP	Topic name	Type of action and expected TRL	Value of action (*) EUR	Maximum S2R co-funding (*) EUR	Other contributions from non-Members (*) EUR
S2R-OC-CCA-01-2020	Noise & Vibration	RIA TRL 3/4	950,000	950,000	0

Number of topic

Who can apply
OC (open call)
CFM (call for member)

Which area
(IP/CCA)

Technology
Readiness
Level

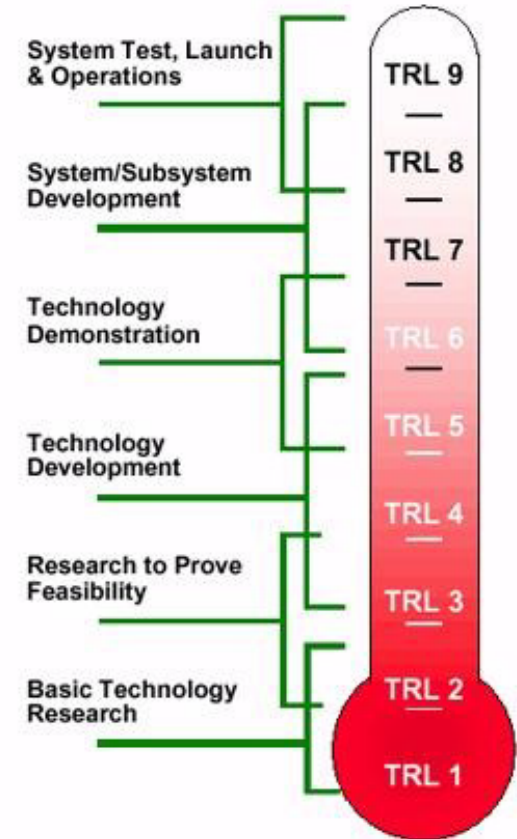
RIA – Research & Innovation Action (100%)
Innovation Action (70%)

Number	IP1	IP2	IP3	IP4	IP5	CCA	IPX
CFM topic	2	1	1	1	1	1	1
OC topic	3	2	3	1		1	1
Linked tender topic		1				1	1

Technology Readiness Levels definition

Where a topic description refers to a TRL, the following definitions apply, unless otherwise specified:

- TRL 1 – basic principles observed
- TRL 2 – technology concept formulated
- TRL 3 – experimental proof of concept
- TRL 4 – technology validated in lab
- TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7 – system prototype demonstration in operational environment
- TRL 8 – system complete and qualified
- TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)



Programme approach, future/current projects

- EACH PROJECT contributes to the **achievement of the Master Plan and the MAAP objectives**
- EACH PROJECT is part of a programme and **cooperation with other projects** must be ensured
 - Through the **collaboration and input to the JU Members**, EACH PROJECT will support the realization of **long-term S2R technological demonstrations or innovative break-through**
- Particular attention is given to ensure that there is **no duplication of work** between EACH PROJECT and current/future R&I activities
- EACH PROJECT results are taken into consideration for the next annual work plans to ensure sufficient **complementarity** and **coherence**

Complementarity & Collaboration Agreement

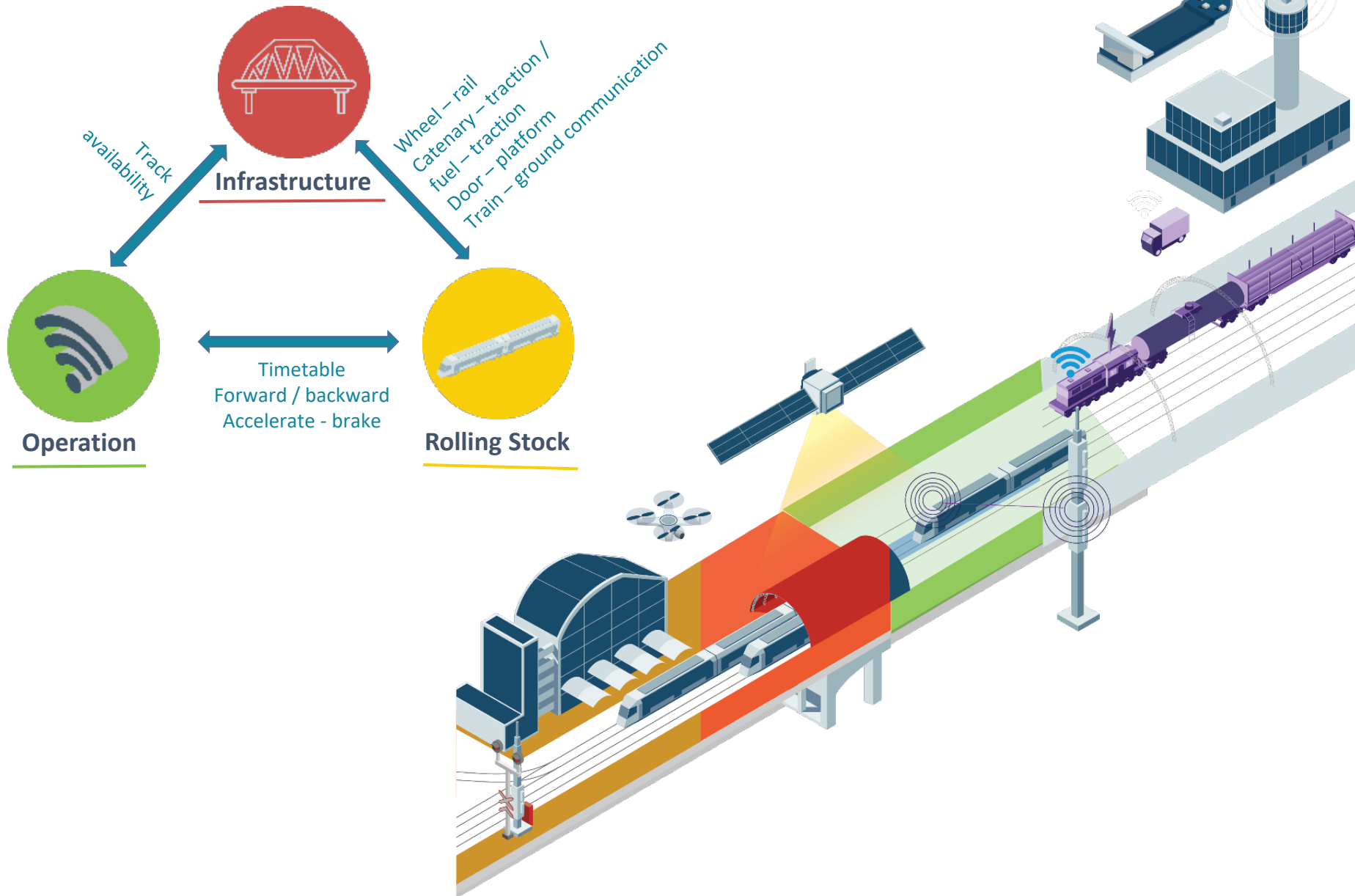
1. Complementary is **defined at topic level**
2. Complementarity between topics is **compulsory established in the Grant Agreement** (need for a Collaboration Agreement)
3. IP/CCA SteCos, high level synchronization points: Project Coordinators may attend the SteeCo meetings as observer and IP Coordinators cooperate with project coordinator to **foster/promote synergies**
4. S2R Programme Managers: Central Contact Point for both projects

Complementarity & Collaboration Agreement

Issues to be tackled in the Collaboration Agreement (COLA) (examples/non-exhaustive list)

- Rules for collaboration, “who does what?”; Point of Contacts etc.
- Handling review of documents
- Agreement on action to be performed by both sides + linked timing (e.g. project A provides “user requirements” by M6 to project B; project B provides input by M18 to project A → project A uses input for deliver their deliverable 2.3).
- Participation to restricted meetings (for specific purpose) or to public meetings (including Advisory Groups, etc...).

Railway - System of Systems



IP1 Cost-efficient and Reliable Trains, including high-capacity trains and high speed trains

IP2 Advanced Traffic Management and Control System

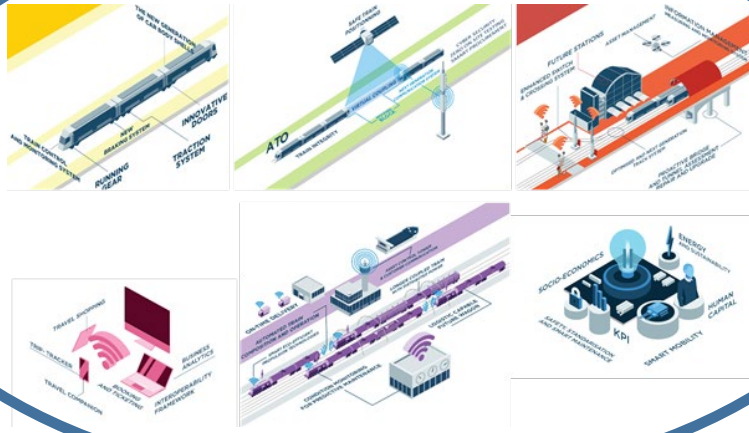
IP3 Cost-efficient, Sustainable and Reliable High Capacity Infrastructure

IP4 IT Solutions for Attractive Railways Services

IP5 Technology for Sustainable and Attractive European Rail Freight

CCA Cross Cutting Activities

IPx: looking beyond S2R currently planned technology applications and integrating them with disruptive innovations



Going for global performance definitely requires to master, design and simulate the Railway System as a whole → definition of an overall architecture

Activities just launched

- Concepts for the autonomous railway vehicles “train-centric”
- Disruptive technologies impacting automation systems and maintenance
- industry 4.0 (automated industry and industry as a service), railway clouds and decentralised ownership
- A.I. for railways Digital solutions

✓ S2R System Architecture and Conceptual Data Model :

1. comprehensive model/architecture, technologies and strategy for implementation of a new encompassing railway system approach
2. aligning all ongoing modelling initiatives in terms of modelling principles and digital data integration



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COFFEE BREAK

11:00 – 11:30

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Shift2Rail Programme Sessions

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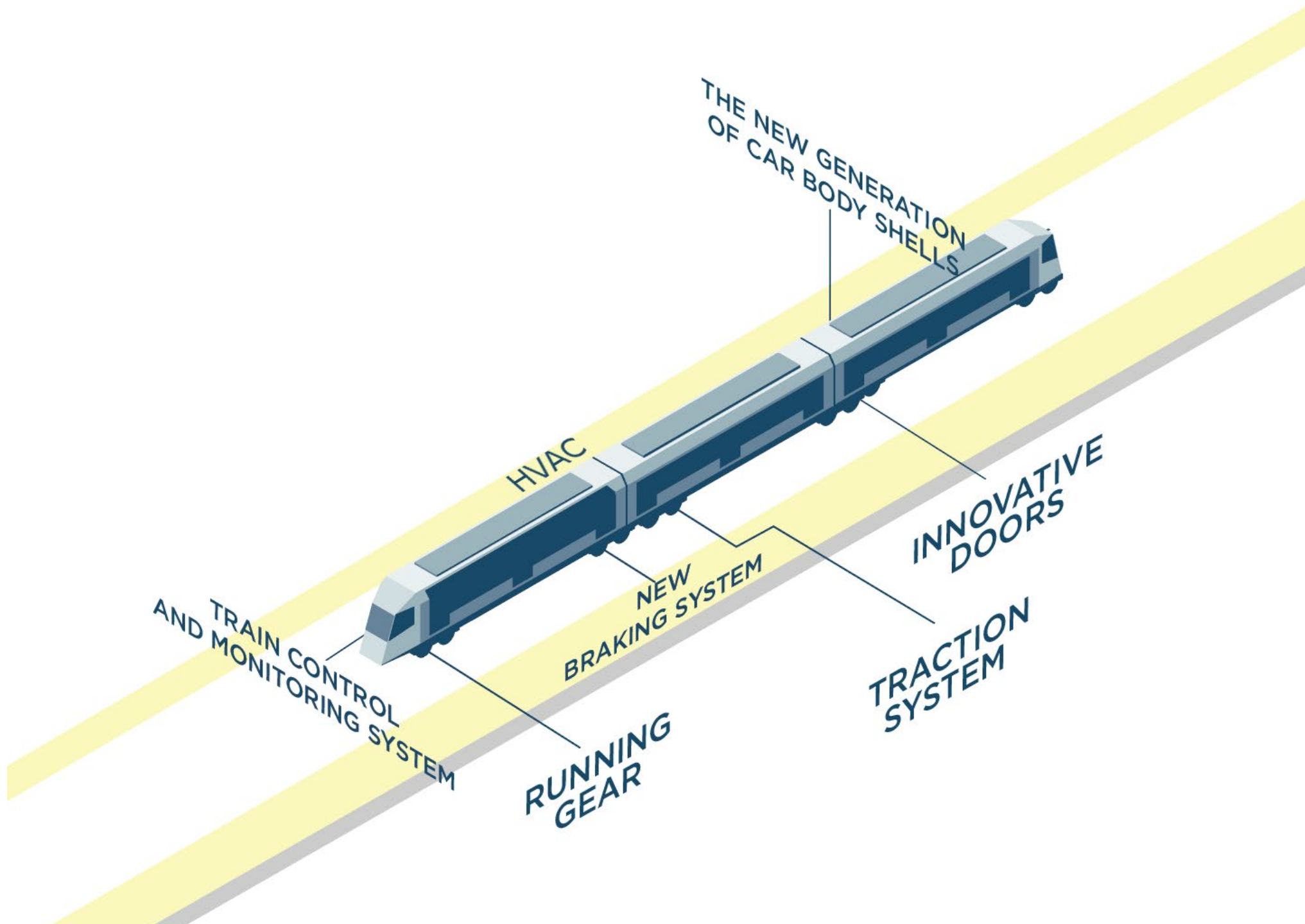
IP1: Cost-efficient and reliable trains, including high-capacity trains and high-speed trains

Sébastien DENIS

Programme Manager
Shift2Rail Joint Undertaking

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IP1: Planning of activities per TD

TD1.1 Traction Systems demonstrator								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, PINTA				Ongoing: PINTA2		AWP 2020: CFM, OC		

TD1.2 Train Control and Monitoring System Demonstrator								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, CONNECTA, SAFE4RAIL				Ongoing: CONNECTA-2, Safe4RAIL-2		AWP 2020: CFM, OC		

TD1.3 Carbody Shell Demonstrator								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, Mat4Rail				Ongoing: PIVOT, PIVOT2, CARBODIN		AWP 2020: OC		

TD1.4 Running Gear Demonstrator								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, Run2Rail				Ongoing: PIVOT, PIVOT2, NEXTGEAR		AWP 2020: OC		

IP1: Planning of activities per TD

TD1.5 Brake Systems Demonstrator								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, CONNECTA, SAFE4RAIL, PINTA			Ongoing: PIVOT, PIVOT2					

TD1.6: Doors and Access Systems Demonstrator								
2015	2016	2017	2018	2019	2020	2021	2022	...
			Finished: PIVOT		Ongoing: PIVOT, PIVOT2, CARBODIN			

TD1.7: Train Modularity In Use (TMIU)								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, Mat4Rail				Ongoing: PIVOT, PIVOT2, CARBODIN				

TD1.8: HVAC								
2015	2016	2017	2018	2019	2020	2021	2022	...
					Ongoing: PIVOT2			
					AWP 2020: CFM			

IP1: Open Calls 2020

Topic number - IP	Topic name	Expected TRL	Type of action	Maximum S2R Co-funding EUR	Complementarity
S2R-OC-IP1-01-2020	Support to Development of next generation of Traction systems	3	RIA	2,300,000	<ul style="list-style-type: none"> S2R-CFM-IP1-01-2020: Demonstrators for the next generation of traction systems, smart maintenance, virtual validation and eco-friendly Heating, Ventilation Air conditioning and Cooling (HVAC) and Technical research on battery and hydrogen powered regional trains IMPACT-2 (GA 777513)
S2R-OC-IP1-02-2020	Network and end-device equipment for the validation of the next generation of TCMS	6/7	IA	4,600,000	<ul style="list-style-type: none"> S2R-CFM-IP1-02-2020: Validation of new technologies for the TCMS X2RAIL-3 (GA 826141)
S2R-OC-IP1-03-2020	Innovative technologies for Carbodies and Running Gear of the future	5/6	RIA	2,420,000	<ul style="list-style-type: none"> PIVOT2 (GA 881807)



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IP2: Advanced Traffic Management and Control Systems

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SAFE TRAIN
POSITIONING

CYBER SECURITY
ZERO ON SITE TESTING
SMART PROCUREMENT

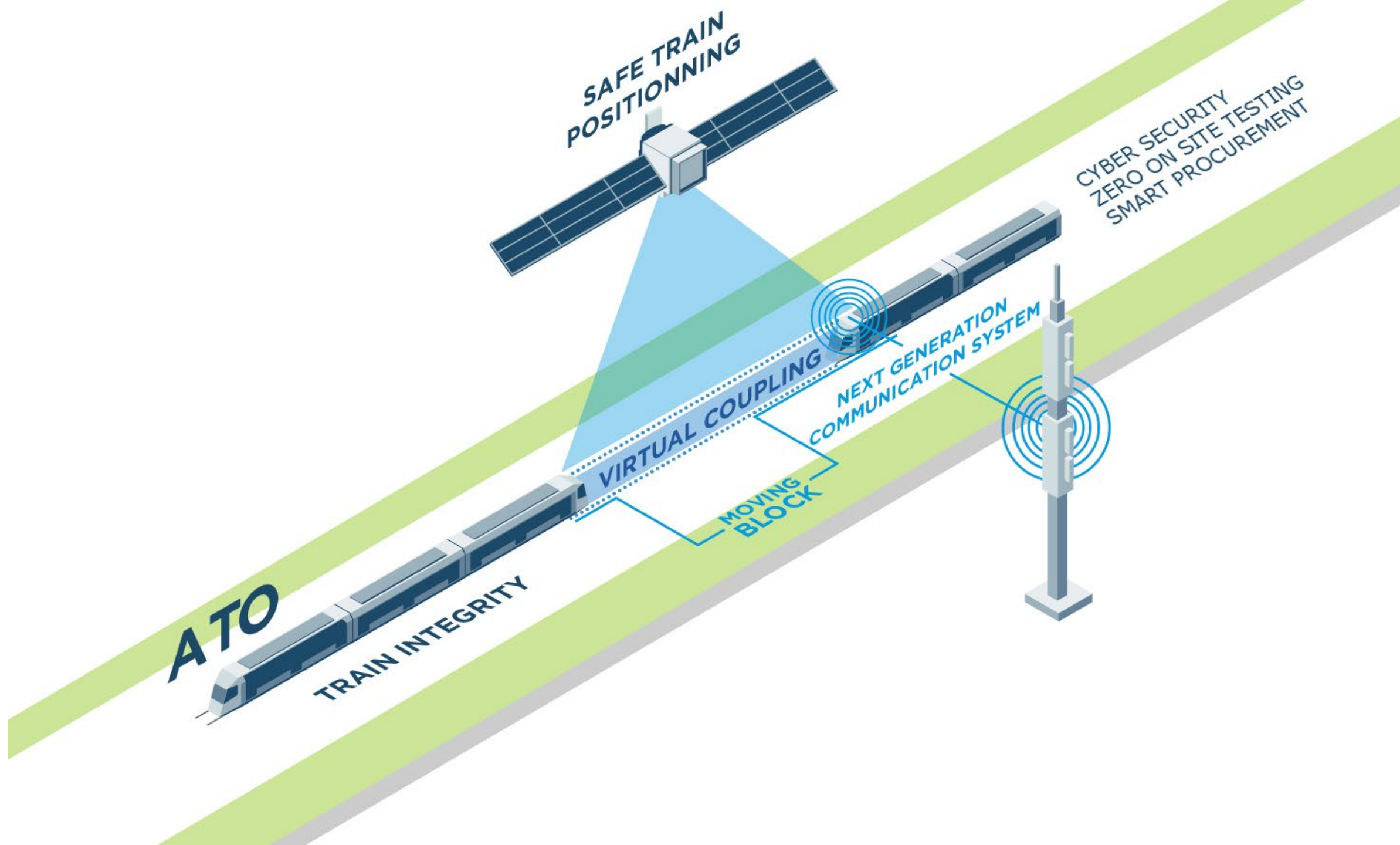
ATO

TRAIN INTEGRITY

VIRTUAL COUPLING

MOVING
BLOCK

NEXT GENERATION
COMMUNICATION SYSTEM



IP2: Planning of activities per TD

TD2.1: Adaptable communications for all railways (quality of service, interfaces to signalling)								
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finished: MISTRAL						
		Ongoing: X2Rail-1, X2Rail-3, EMULRADIO4RAIL						
						AWP 2020: CFM, OC		

TD2.2: Railway network capacity increase (ATO up to GoA4 – UTO)								
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finished: ASTRail						
		Ongoing: X2Rail-1, X2Rail-4, SMART2						

TD2.3 Moving Block								
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finished: ASTRail						
		Ongoing: X2Rail-1, X2Rail-3, MOVINGRAIL						
						AWP 2020: CFM, OC		

TD2.4: Fail-Safe Train Positioning (including satellite technology)								
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finished: ASTRail						
		Ongoing: X2Rail-2, GATE4Rail						
						AWP 2020: CFM, OC		

IP2: Planning of activities per TD

TD2.5: On-board Train Integrity								
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Ongoing: X2Rail-2, ETALON, X2Rail-4					

TD2.6: Zero on-site testing (control command in lab demonstrators)								
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finished: VITE						
		Ongoing: X2Rail-1, X2Rail-3, GATE4Rail						
						AWP 2020: CFM		

TD2.7: Formal methods and standardisation for smart signalling systems								
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Finished: ASTRail					
			Ongoing: X2Rail-2, 4SECURAIL					
						AWP 2020: CFM		

TD2.8: Virtually – Coupled Train Sets (VCTS)								
2015	2016	2017	2018	2019	2020	2021	2022	2023
				Ongoing: X2Rail-3, MOVINGRAIL				

IP2: Planning of activities per TD

TD2.9: Traffic management evolution								
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Ongoing: X2Rail-2, X2Rail-4, OPTIMA					

TD2.10: Smart radio-connected all-in-all wayside objects								
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Ongoing: X2Rail-1, ETALON, X2Rail-4						

TD2.11: Cyber Security								
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finished: CYRAIL						
		Ongoing: X2Rail-1, X2Rail-3, 4SECURAIL						
						AWP 2020: CFM		

IP2: Open Calls 2020

Topic number - IP	Topic name	Expected TRL	Type of action	Maximum S2R co-funding EUR	Complementarity
S2R-OC-IP2-01-2020	Modelling of the Moving Block system specification and support for Railway Minimum Operational Performance Standards	3/4	RIA	1,340,000	<ul style="list-style-type: none"> ▪ S2R-CFM-IP2-01-2020: Completion of activities for Adaptable Communication, Moving Block, Fail safe Train Localisation (including satellite), Zero on site Testing, Formal Methods and Cyber Security ▪ X2RAIL-3 (GA 826141)
S2R-OC-IP2-02-2020	Study on alternative bearers and on communication protocols	4/5	RIA	350,000	<ul style="list-style-type: none"> ▪ S2R-CFM-IP2-01-2020 ▪ X2RAIL-3 (GA 826141)



Questions?

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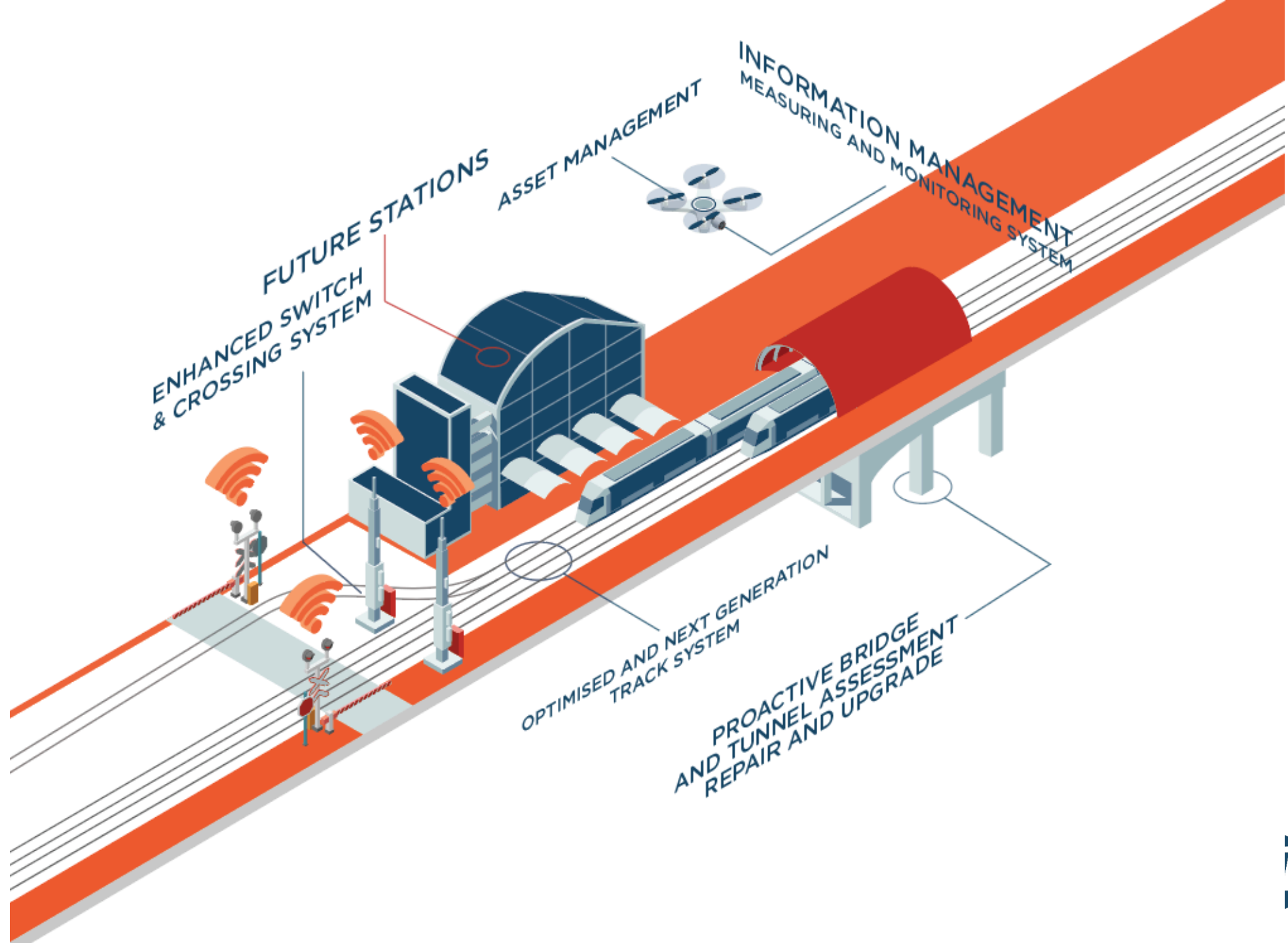
IP3: Cost-Efficient and Reliable High-Capacity Infrastructure

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IP3: Planning of activities per TD

TD3.1 Enhanced Switch & Crossing System								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail, IN2TRACK				Ongoing: IN2TRACK2		AWP 2020: CFM		

TD3.2 Next Generation Switch & Crossing System								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail, S-CODE				Ongoing: IN2TRACK2		AWP 2020: CFM		

TD3.3 Optimised Track System								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail, IN2TRACK				Ongoing: IN2TRACK2		AWP 2020: CFM		

TD3.4 Next Generation Track System								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail			Ongoing: IN2TRACK2		AWP 2020: CFM, OC			

IP3: Planning of activities per TD

TD3.5 Proactive Bridge and Tunnel Assessment, Repair and Upgrade								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail, IN2TRACK				Ongoing: IN2TRACK2, Assets4Rail			AWP 2020: CFM	

TD3.6 Dynamic Railway Information Management System (DRIMS)								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IN2SMART, IN2DREAMS				Ongoing: IN2SMART2			AWP 2020: OC	

TD3.7 Railway Integrated Measuring and Monitoring System (RIMMS)								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail, IN2SMART, MOMIT				Ongoing: IN2SMART2, Assets4Rail				

TD3.8 Intelligent Asset Management Strategies (IAMS)								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail, IN2SMART				Ongoing: IN2SMART2			AWP 2020: OC	

IP3: Planning of activities per TD

TD3.9 Smart Power Supply								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail				Ongoing: IN2STEMPO, FUNDRES				

TD3.10 Smart Metering for Railway Distributed Energy Resource Management System								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: In2Rail, In2Dreams					Ongoing: IN2STEMPO			

TD3.11 Future Stations								
2015	2016	2017	2018	2019	2020	2021	2022	...
					Ongoing: FAIR Stations, In2Stempo			

IP3: Open Calls 2020

Topic number - IP	Topic name	Expected TRL	Type of action	Maximum S2R Co-funding EUR	Complementarity
S2R-OC-IP3-01-2020	Next Generation Track Transition Zones	5/6	RIA	1,350,000	<ul style="list-style-type: none">▪ S2R-CFM-IP3-01-2020: Research into optimised and future railway infrastructure▪ IN2TRACK-2 (GA 826255)
S2R-OC-IP3-02-2020	Technology Development for Railway Systems Asset Management	4/5	RIA	1,710,000	<ul style="list-style-type: none">▪ IN2SMART-2 (881574)
S2R-OC-IP3-03-2020	Advanced tools and equipment: collaborative robots & wearable mobile Machines	5/6	RIA	2,700,000	<ul style="list-style-type: none">▪ IN2SMART-2 (881574)



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IP4: IT Solutions for Attractive Railway Services

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IP4: Planning of activities per TD

TD 4.1 Interoperability Framework								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IT2RAIL, GOF4R, ST4RT				Ongoing: CONNECTIVE, SPRINT, RIDE2RAIL			AWP 2020: CFM	

TD4.2 Travel Shopping								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IT2RAIL, Co-Active				Ongoing: MaaSive, RIDE2RAIL			AWP 2020: CFM	

TD4.3 Booking and Ticketing								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IT2RAIL, Co-Active				Ongoing: MaaSive, RIDE2RAIL			AWP 2020: CFM	

TD4.4 Trip Tracker								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IT2RAIL, ATTRACKTIVE				Ongoing: My-TRAC, MaaSive, RIDE2RAIL			AWP 2020: CFM	

IP4: Planning of activities per TD

TD4.5 Travel Companion								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IT2RAIL, ATTRACKTIVE				Ongoing: My-TRAC, MaaSive, RIDE2RAIL			AWP 2020: CFM	

TD4.6 Business Analytics								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IT2RAIL			Ongoing: CONNECTIVE				AWP 2020: CFM	

iTD4.7 Integrated Technical Demonstrator								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: IT2RAIL			Ongoing: COHESIVE, SPRINT, Shift2MaaS				AWP 2020: CFM, OC	

IP4: Open Calls 2020

Topic number - IP	Topic name	Expected TRL	Type of action	Maximum S2R Co-funding EUR	Complementarity
S2R-OC-IP4-01-2020	Supporting the implementation of the IP4 multimodal transport ecosystem	6/7	IA	2,000,000	<ul style="list-style-type: none"> ▪ S2R-CFM-IP4-01-2020: Enhanced end-user centric travel ecosystem ▪ COHESIVE (GA777599) ▪ CONNECTIVE (GA 777522)



Questions?

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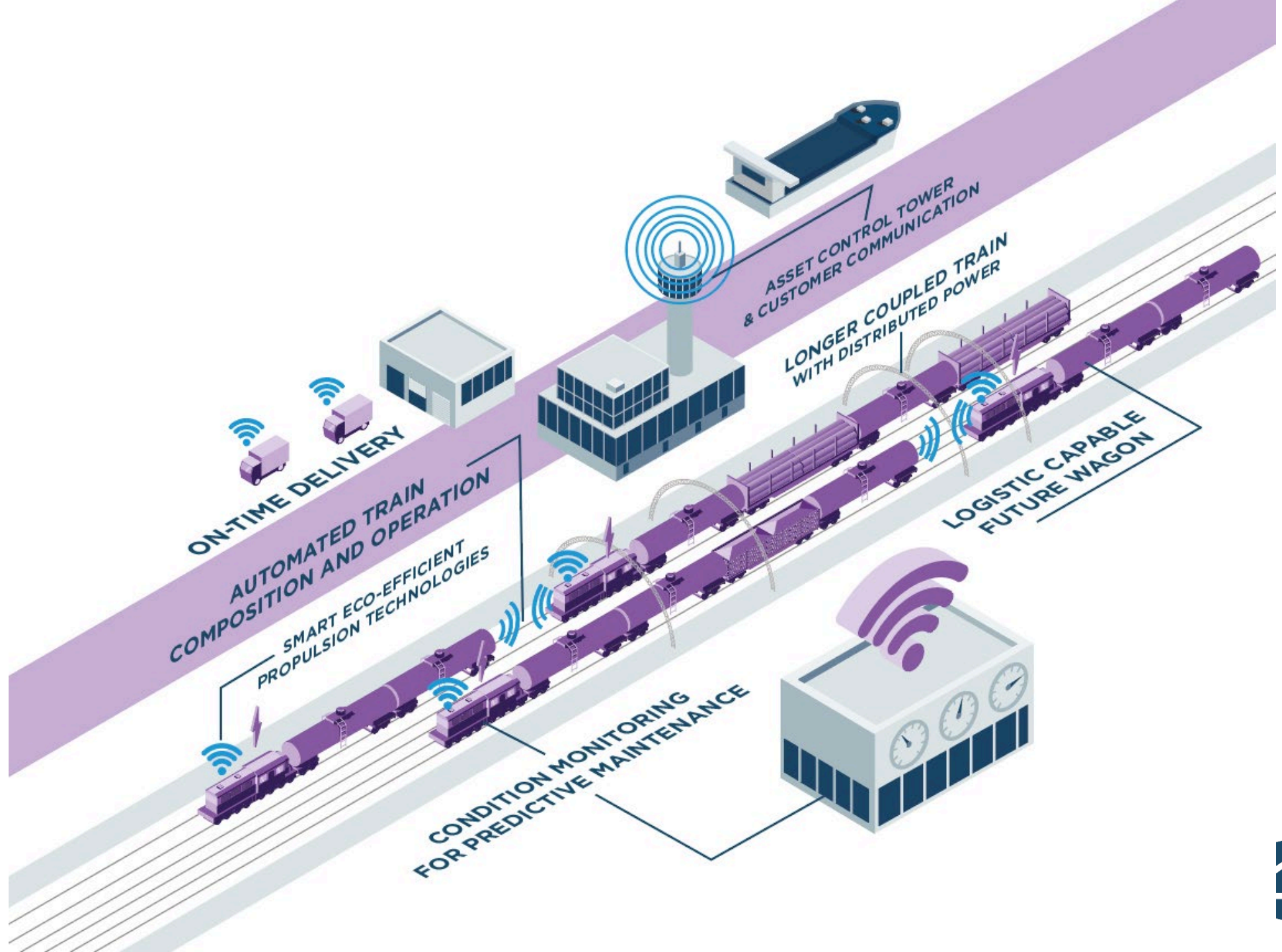
IP5: Technologies for Sustainable & Attractive European Rail Freight

Manuel ALARCÓN ESPINOSA

Programme Manager
Shift2Rail Joint Undertaking

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IP5: Planning of activities per TD

TD5.1 Fleet Digitalisation and Automation								
2015	2016	2017	2018	2019	2020	2021	2022	...
		Finished: SMART, FR8RAIL, INNOWAG						
		Ongoing: ARCC, FR8HUB, FR8RAIL II, FR8RAIL III, LOCATE, SMART2						
					AWP 2020: CFM			

TD5.2 Digital Transport management								
2015	2016	2017	2018	2019	2020	2021	2022	...
		Finished: SMART, OPTIYARD			Ongoing: ARCC, FR8HUB, FR8RAIL II, FR8RAIL III			

TD5.3 Smart Freight Wagon Concepts								
2015	2016	2017	2018	2019	2020	2021	2022	...
		Finished: FR8RAIL, INNOWAG						
			Ongoing:, FR8HUB,FR8RAIL II, FR8RAIL III					
					AWP 2020: CFM			

IP5: Planning of activities per TD

TD 5.4 New Freight Propulsion Concepts								
2015	2016	2017	2018	2019	2020	2021	2022	...
		Finished: DYNAFREIGHT, FFL4E						
		Ongoing: FR8HUB, FR8RAIL II, M2O, FR8RAIL III						
						AWP 2020: CFM		

TD 5.5 – Business analytics and implementation strategies								
2015	2016	2017	2018	2019	2020	2021	2022	...
				Finished: SMART-RAIL, FR8RAIL, INNOWAG				
			Ongoing: FR8HUB					



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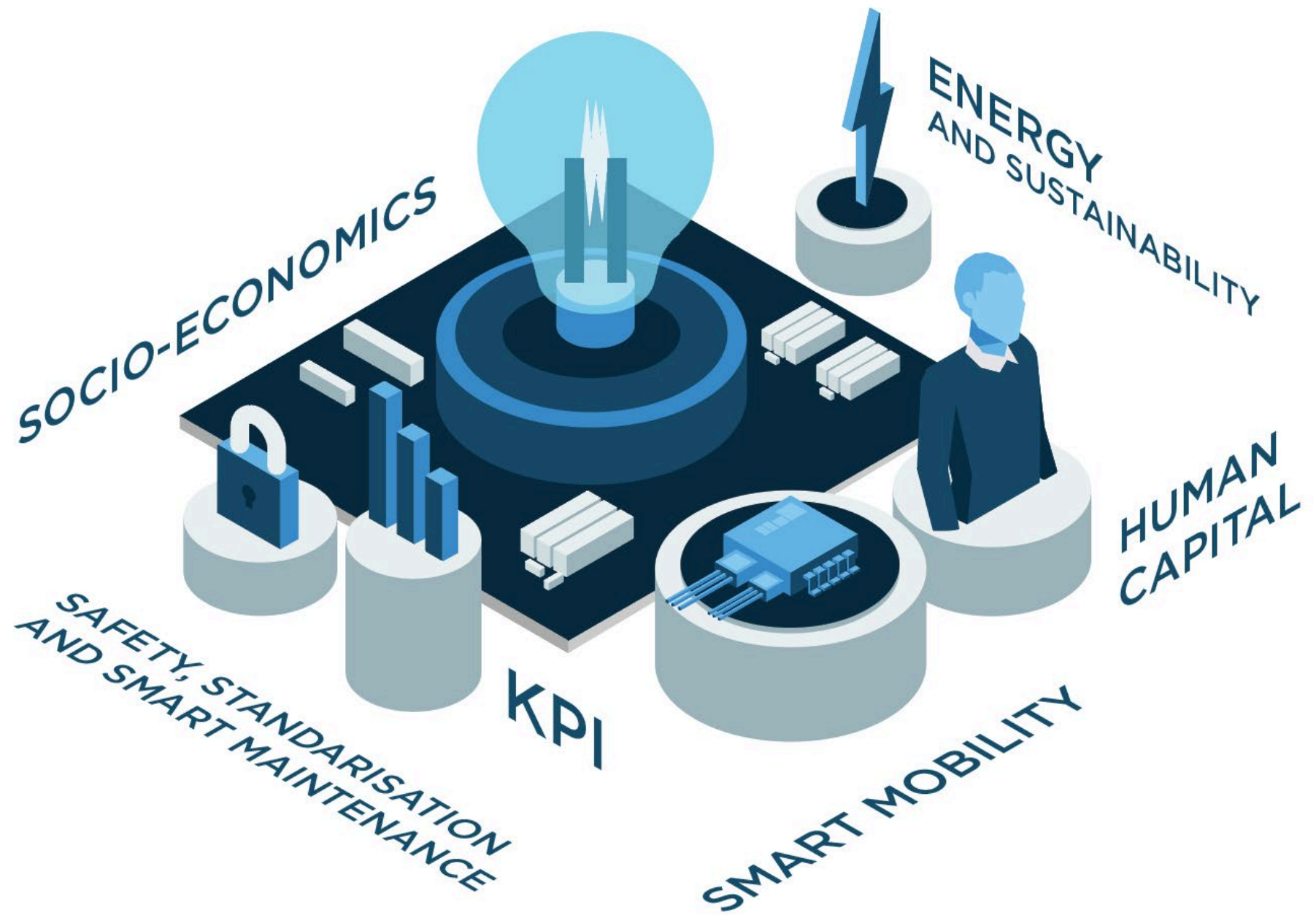
Cross Cutting Activities (CCA)

Judit SANDOR

Programme Manager
Shift2Rail Joint Undertaking

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CCA: Planning of activities per TD

WA1 Long-term needs and socio-economic research & SPD's								
2015	2016	2017	2018	2019	2020	2021	2022	...
<div> <div>Fin: IMPACT-1, NEAR2050</div> <div>Ongoing: IMPACT-2</div> <div>AWP 2020: Tender</div> </div>								

WA2 KPI method and integrated assessment								
2015	2016	2017	2018	2019	2020	2021	2022	...
<div> <div>Finished: Roll2Rail, IMPACT-1</div> <div>Ongoing: Tender KPIs, IMPACT-2</div> </div>								

WA3 Safety, Standardisation, Maintenance, Materials, Virtual Certification								
2015	2016	2017	2018	2019	2020	2021	2022	...
<div> <div>Finished: PLASA, GoSAFE RAIL, SMaRTE</div> <div>Ongoing: IMPACT-2, PLASA-2</div> </div>								

CCA: Planning of activities per TD

WA4 Smart Planning, I2M								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, PLASA, GoSAFE RAIL					Ongoing: IMPACT-2, PLASA-2, FINE-2			

WA5 Energy and sustainability								
2015	2016	2017	2018	2019	2020	2021	2022	...
Finished: Roll2Rail, DESTINATE, FINE 1, OPEUS					Ongoing: FINE-2, TRANSIT		AWP 2020: OC	

WA6 Human Capital								
2015	2016	2017	2018	2019	2020	2021	2022	...
			Tender HC, SMaRTE		Ongoing: IMPACT-2			

CCA: Open Calls 2020

Topic number - IP	Topic name	Expected TRL	Type of action	Maximum S2R co-funding EUR	Complementarity
S2R-OC-CCA-01-2020	Noise & Vibration	3/4	RIA	950,000	▪ FINE-2 (881791)



Questions?

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IPX

Gorazd MARINIC

Programme Manager
Shift2Rail Joint Undertaking

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IPX: Ongoing activities (1)

2018:

- (OC) **FLEX-RAIL** forecast **evolution** of key fundamental technologies & technical risks
- (OC) **MVDC-ERS** next generation **DC power electrification** systems, **renewable sources**
- (OC) **B4CM** develop **blockchain** testbed for rail
- (OC) **TER4RAIL** investigate new opportunities for **innovative research**, cross-fertilization from other disciplines

2019:

- (OC) **Translate4Rail** braking **language** barriers, predefined standardised messages driver-traffic manager
- (OC) **RAILS** investigating **Artificial Intelligence** for rail automation, predictive maintenance and defect detection, traffic planning and capacity optimisation
- (CFM) **LinX4Rail** develop a railway **Functional System Architecture** and **Conceptual Data Model (CDM)**

IPX: Open Calls 2020

Topic number - IP	Topic name	Expected TRL	Type of action	Maximum S2R co-funding EUR	Complementarity
S2R-OC-IPX-01-2020	Innovation in guided transport	-	CSA	250,000	-



Questions?

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Lunch at the Riverside

	Auditorium	Riverside
14:15-17:30	Presentation of a new mobility idea (14:15-14:30)	Shift2Rail Market Place
		Video Presentations on Legal and Financial Guidelines
	Pitch Sessions (14:30-17:30)	Shift2Rail Publications & Projects Stand
		Research Enquiry Service Stand