

S2R Coordinators' Info Day Call 2020 OC & CFM

2 March 2021



1 - Introduction



Projects 2020 Overview - CFM

TOPIC	GA number	ACRONYM	COORDINATOR	COORDINATORS' CONTACTS	PROJECT OFFICER	COMPLEMENTARITY
						RECET4RAIL
						PIVOT2
S2R-CFM-IP1-01-2020	101014935	PINTA-3	Laurent Nicod	laurent.nicod@alstomgroup.com	Javier Ibáñez de	FINE-2
32K-CFIVI-IP1-01-2020	101014955	PINTA-5	Laurent Nicou	<u>laurent.mcou@aistorngroup.com</u>	Yrigoyen	LinX4Rail
						FR8RAIL-2
						FR8HUB
						Safe4Rail-3
						X2RAIL-4
S2R-CFM-IP1-02-2020	101014811	CONNECTA-3	Dr Igor Lopez	igor.lopez@caf.net	Javier Ibáñez de	FR8RAIL IV
32N-CFIVI-IF1-02-2020	101014011	CONNECTA-5	Di igoi Lopez	<u>igor.iopez@car.net</u>	Yrigoyen	CONNECTA-2
						LinX4Rail
						LINX4RAIL-2
						CONNECTA-3
						PERFORMINGRAIL
		X2RAIL-5	Dr Michael Meyer zu Hörste			AB4RAIL
					Léa Paties	FR8RAIL IV
S2R-CFM-IP2-01-2020	101014520			Michael.MeyerzuHoerste@dlr.de		LINX4RAIL
						LINX4RAIL-2
						X2RAIL-4
						X2RAIL-3
						CONNECTA-2
						LINX4RAIL
						LINX4RAIL-2
S2R-CFM-IP3-01-2020	101012456	IN2TRACK-3	Pernilla Edlund	<pre>pernilla.edlund@trafikverket.se</pre>	Sébastien DENIS	IN2ZONE
						IN2SMART2
						IN2TRACK-2
						IP4MAAS
						LINX4RAIL
S2R-CFM-IP4-01-2020	101015462	EXTENSIVE	Dr Souheir Mili	souheir.mili@csgroup.eu	Esther Bravo	LINX4RAIL-2
32N CHW 11 4-01-2020	101013402	LATEINGIVE	Di Sourieii Wiiii	<u>Journal Allin Cogroup Cd</u>	Latifier blavo	MAASIVE
						CONNECTIVE
						COHESIVE



Projects 2020 Overview - CFM

TOPIC	GA number	ACRONYM	COORDINATOR	COORDINATORS' CONTACTS	PROJECT OFFICER	COMPLEMENTARITY
						CONNECTA-3
						X2RAIL-5
						X2RAIL-4
C2D CEM IDE 01 2020	101004051	EDODAH IV	Dr Arno Honning	Arno Honning@dlr.do	Manual Alarsan Espinasa	FR8RAIL III
S2R-CFM-IP5-01-2020	101004031	FR8RAIL IV	Dr Arne Henning	Arne.Henning@dlr.de	Manuel Alarcon Espinosa	LINX4RAIL
						LINX4RAIL-2
						X2RAIL-3
						FR8RAIL II
						CONNECTA-3
				jgoikoetxea@caf.net		X2RAIL-5
S2R-CFM-IPX-01-2020	101014984	TAURO	Javier Goikoetxea		Gorazd Marinic	FR8RAIL IV
32R-CFWI-IFX-01-2020	101014984					X2RAIL-4
						LINX4RAIL
						LINX4RAIL-2
						CONNECTA-3
						X2RAIL-5
						EXTENSIVE
						FR8RAIL IV
S2R-CFM-IPX and CCA-02-2020	101014540	LINX4RAIL-2	Pierre-Etienne Gautier	pierre-etienne.gautier@reseau.sncf.fr	Gorazd Marinic	TAURO
32R-CFWI-IFA dilu CCA-02-2020	101014340	LIIVA4RAIL-2	Flerre-Etierine Gautier	pierre-etienne.gautier@reseau.snci.n	GOLAZU MATILIC	LINX4RAIL
						X2RAIL-4
						X2RAIL-3
						FR8RAIL II
						CONNECTA-2



Projects 2020 Overview - OC

TOPIC	GA number	ACRONYM	COORDINATOR	COORDINATORS' CONTACTS	PROJECT OFFICER	COMPLEMENTARITY
C2D OC 1D1 01 2020	101015422	RECET4Rail	Marta Garcia	marta garaja Qunifa arg	Javier Ibáñez de	PINTA-3
S2R-OC -IP1-01-2020	101015423	RECE 14Raii	Marta Garcia	marta.garcia@unife.org	Yrigoyen	IMPACT-2
S2R-OC-IP1-02-2020	101015405	Safe4Rail-3	Jose Bertolin	jose.bertolin@unife.org	Gorazd Marinic	CONNECTA-3
S2R-OC-IP1-03-2020	101013296	Gearbodies	Celestino Sánchez	cesama@eurnex.eu	Javier Ibáñez de Yrigoyen	PIVOT2
S2R-OC-IP2-01-2020	101015416	PERFORMINGRAIL	Dr Lei Chen	L.Chen.3@bham.ac.uk	Léa Paties	X2RAIL-5
32R-OC-IP2-01-2020	101015416	PERFORIVIINGRAIL	Di Lei Chen	<u>c.cnen.s@bham.ac.uk</u>	Lea Paties	X2RAIL-3
S2R-OC-IP2-02-2020	101014517	AB4RAIL	Prof Alessandro Neri	presidenza@radiolabs.it	Gorazd Marinic	X2RAIL-5
S2R-0C-IP3-01-2020	101014571	IN2ZONE	Dr David Connolly	D.Connolly@leeds.ac.uk	Sébastien DENIS	IN2TRACK-2
	101011371		Di Bavia comiony	<u> </u>	SEBUSTIEN BEING	IN2TRACK-3
S2R-OC-IP3-02-2020	101008913	DAYDREAMS	Stefanos Gogos	stefanos.gogos@unife.org	Sébastien DENIS	IN2SMART2
S2R-OC-IP3-03-2020	101015418	STREAM	Dr Christian Di Natali	Christian.DiNatali@iit.it	Manuel Alarcon Espinosa	IN2SMART2
						EXTENSIVE
S2R-OC-IP4-01-2020	101015492	IP4MAAS	Giuseppe Rizzi	giuseppe.rizzi@uitp.org	Esther Bravo	CONNECTIVE
						COHESIVE
S2R-OC-CCA -01-2020	101015442	SILVARSTAR	Pascal Bouvet	pascal.bouvet@vibratec.fr	Judit Sandor	FINE-2
S2R-OC-IPX-01-2020	101015145	HYPERNEX	Prof Maria Luisa Martinez Muneta	luisa.mtzmuneta@upm.es	Monique van Wortel	N/a



What is S2R

A public-private partnership, a platform for the rail sector as a whole to work together to drive innovation in the years to come until 2024

The S2R Joint Undertaking has been created in June 2014 to play a major role in rail-related research and innovation, ensuring coordination among projects and providing all stakeholders with relevant and available information on projects funded across Europe. It shall also manage all rail- focused research and innovation actions co-funded by the Union

Council Regulation (EU) No 642/2014 of 16 June 2014 (S2R Regulation)

• It has been tasked by the Union "to establish and develop a strategic Master Plan", which encompassed rail R&I until 2030, it reached autonomy in May 2016 and it is now fully operational

S2R OBJECTIVES





INCREASE RELIABILITY & PUNCTUALITY BY 50%



DOUBLERAILWAY CAPACITY



HALVE LIFE-CYCLE COSTS
OF RAILWAY TRANSPORTS



CONTRIBUTE TO **REDUCTION OF NEGATIVE EXTERNALITIES**, SUCH AS
NOISE, VIBRATIONS, EMISSIONS & OTHER
ENVIRONMENTAL IMPACTS



CONTRIBUTE TO THE ACHIEVEMENT OF THE SINGLE EUROPEAN RAILWAY AREA

S2R PROGRAMME:

About € 1BLN and a new approach to R&I in railway.

WORKING TOGETHER AND DRIVING INNOVATION



28 MEMBERS



493 PARTICIPANTS



29 COUNTRIES

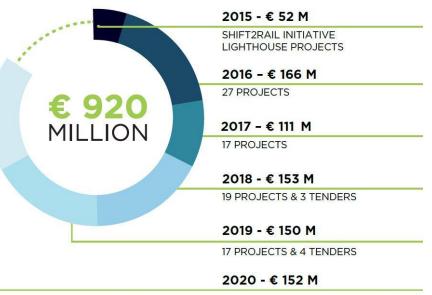


127 SMEs



128
RESEARCH CENTRES
AND UNIVERSITIES

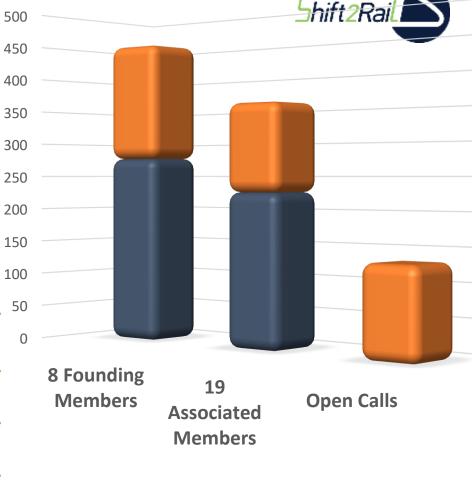
AN OPEN and ACTIVE ORGANISATION



19 PROJECTS, 3 TENDERS & 1 PRIZE

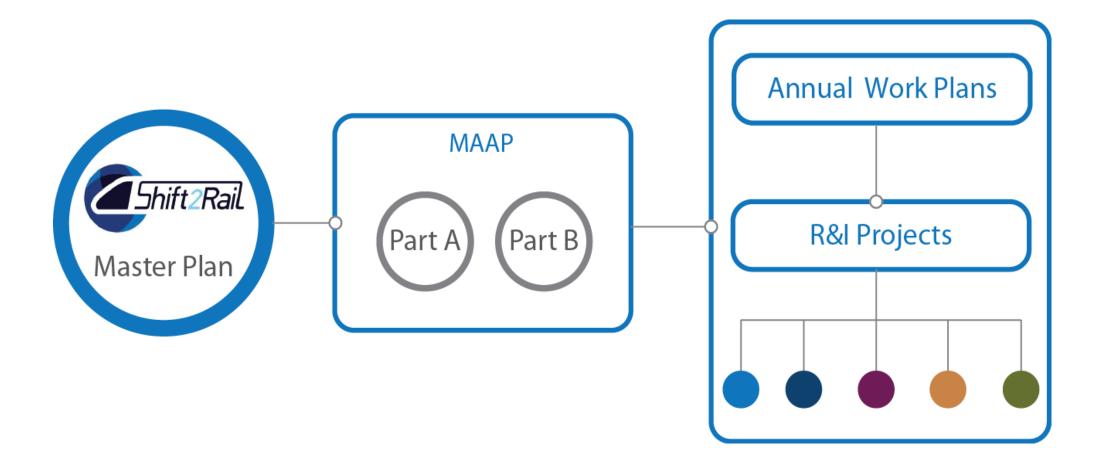
"As per AWP/award

*incl. at least 120M€ of additional activities



^{*}Data extracted from CORDA database in August 2020





Railway - System of Systems fuel traction Infrastructure Timetable Forward / backward Accelerate - brake **Rolling Stock Operation**



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

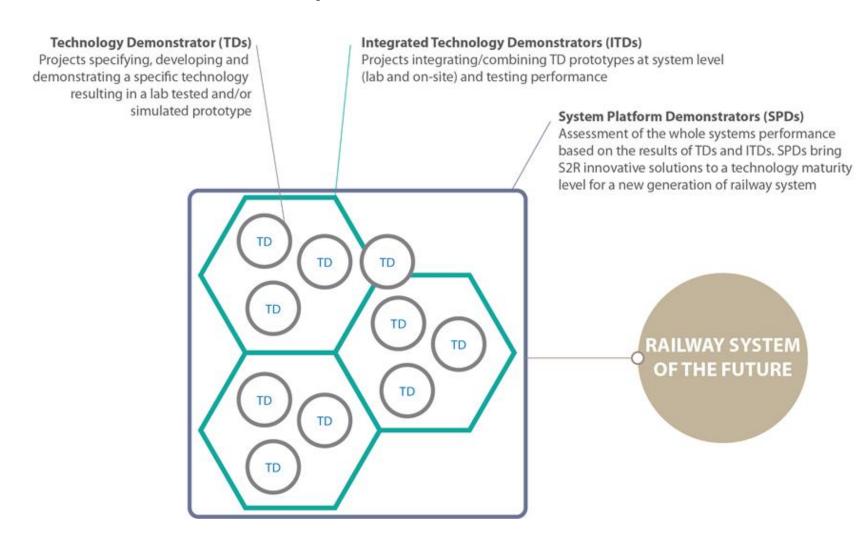
IP4 IT Solutions for Attractive Railways Services

IP5 Technology for Sustainable and Attractive European Rail Freight

CCA Cross Cutting Activities

From TRL0 to TRL6/7





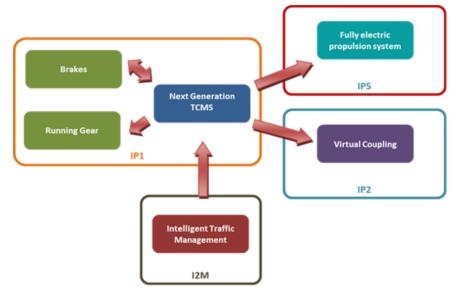
Example of a Technology Demonstrator



Final Demos of TD 1.2 TCMS:

	Specific	Specification	Demonstra	ator	Form of oaklyiky
Research Area	Techn. objective	Activities	Market	TRL	Focus of activity
	Wireless TCMS	Radio techn., architecture and protocols	Metro Regional	6/7 6/7	Incorporate wireless technologies to the train communication network solutions (i.e. train backbone, consist network and train to ground communication).
Train Control & Monit. System	Drive-by-data	Architecture, protocols	Metro Regional	6/7 5	Provide a train-wide communication network for full TCMS support including the replacement of train lines, connecting safety functions up to SIL4 (incl. signalling).
	Functional distribution	Specification, architecture and interface	Metro	6/7 5	New architectural concept based on standard framework & application profiles, distributed computing to allow execution of compliant functions on end devices distributed along the vehicle meeting different safety & integrity requirements
		definition	Regional	6/7	Support the Functional Open Coupling
	Virtual Placing on the Market	Technology definition, protocols and procedures	Generic	6/7	Standardised simulation framework in which all subsystems of the train will be simulated, allowing remote and distributed testing including hardware in-the-loop through heterogeneous communication networks.

Interaction with other TDs and IPs:



Planning (budget estimated at 48,8M€):

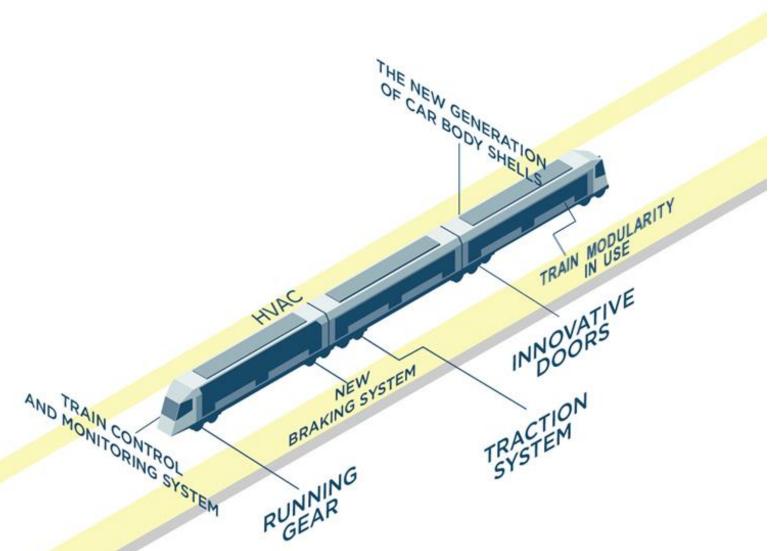
	TASKS	TRL	2015	2016	2017	2018	2019	2020	2021
TD1.2	TCMS					I		_	
	1.2.0 General specification	-				T.		-	
	1.2.1Wireless TCMS	6/7							
	1.2.2 Drive-by-data	6/7				T			
	1.2.3 Functional distribution architect.	6/7				1			
	1.2.4 Virtua I placing on the market	5				T			
	1.2.5 Integration, demo & assessment	6/7				I			
	1.2.6 Technical coordination	-							

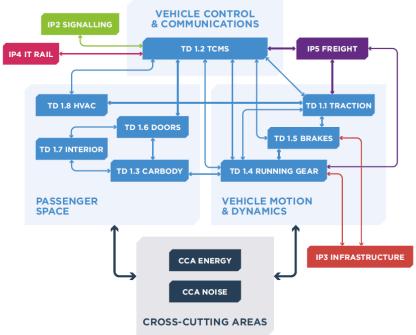


2 – Programme progress and relation with current call activities

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











		TD	1.1 Tractio	n Systems	demonstra	itor					
2015	2016	2017	2018	2019	2020	2021	2022	2023			
	Finished:	Roll2Rail, PIN	TA								
				On	going: PINTA2	, PINTA3, REC	ET4Rail				

	TD	1.2 Train (Control and	Monitorin	g System [Demonstrat	tor	
2015	2016	2017	2018	2019	2020	2021	2022	2023
Fini	shed: Roll2Rai	I, CONNECTA,	SAFE4RAIL					
			Oı	ngoing: CONNI	ECTA-2, SAFE4	RAIL-2, CONNE	CTA-3, SAFE4	RAIL-3

TD1.3 Carbody Shell Demonstrator										
2015	2016	2017	2018	2019	2020	2021	2022	2023		
	Finished	d: Roll2Rail, M	at4Rail, PIVOT							
				C	ngoing: CARB	ODIN, PIVOT2,	, Gearbodies			

	TD1.4 Running Gear Demonstrator										
2015	2016	2017	2018	2019	2020	2021	2022	2023			
	Finished: Roll2Rail, Run2Rail, PIVOT										
				0	ngoing: PIVO <mark>1</mark>	<mark>72, NEXTGEAR</mark> ,	Gearbodies				
					1, 1						



	TD1.5 Brake Systems Demonstrator									
2015	2016	2017	2018	2019	2020	2021	2022	2023		
Finis	shed: Roll2Rail	, CONNECTA,	PINTA, SAFE4F	RAIL, PIVOT						
	Ongoing: PINTA2, PIVOT2									

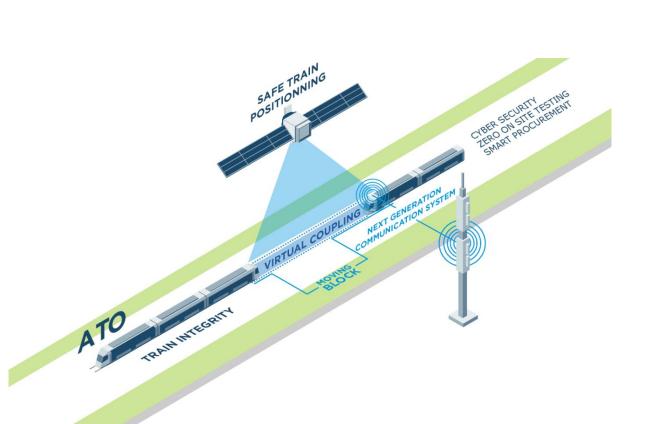
	TD1.6: Doors and Access Systems Demonstrator										
2015	2015 2016 2017 2018 2019 2020 2021 2022 2023										
			Finished: Mat4	Rail, PIVOT							
	Ongoing: PIVOT2, CARBODIN										

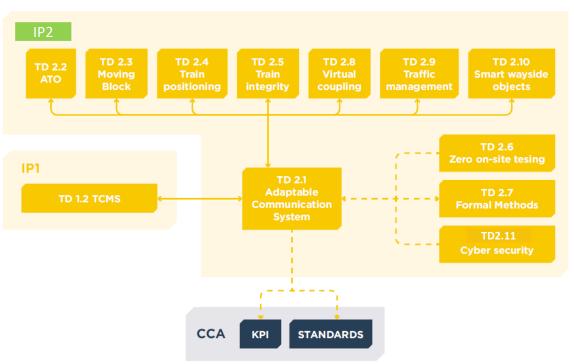
	TD1.7: Train Modularity In Use (TMIU)									
2015	2016	2017	2018	2019	2020	2021	2022	2023		
	Finishe	d: Roll2Rail, M	at4Rail, PIVOT	•						
	Ongoing: PIVOT2, CARBODIN									

			T	D1.8: HVA	С			
2015	2016	2017	2018	2019	2020	2021	2022	2023
					Ongoin	g: PIVOT2, PIN	TA3	

IP2: Advanced Traffic Management and Control System









	TD2.1: Ada	ptable comi	nunications	s for all rails	ways (qualit	ty of service	e, interfaces	;
			t	o signalling)			
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finish	ed: MISTRAL, E	MULRADIO4RA	AIL			
			Ongoi	ng: X2Rail-1, X	Rail-3, AB4Rai	l, X2Rail-5		

	TD2.	2: Railway i	network cap	pacity increa	ase (ATO up	to GoA4 –	UTO)	
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Finished: AS	TRail				
				Ongoing: X2R	ail-1, X2Rail-4			

			TD2.	3 Moving B	lock			
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Finished: A	ASTRail, MOVIN	IGRAIL			
	Ongoing: X2Rail-1, X2Rail-3, PERFORMINGRAIL							

	TD2	.4: Fail-Safe	Train Posit	tioning (incl	uding satel	lite technol	ogy)	
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Finished: AS	TRail				
				Ongoing: X2Rai	I <mark>-2, GATE4Rail</mark> ,	, PERFORMING	RAIL	



			TD2.5: On-	-board Trai	n Integrity			
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Finished:	ETALON				
				Ongoi	ng: X2Rail-2, X2	2Rail-4		

	TD2.	6: Zero on-si	te testing (d	control com	mand in lal	demonstr	ators)	
2015	2016	2017	2018	2019	2020	2021	2022	2023
Finished: VITE								
			Ongoing: X2R	ail-1, X2Rail-3, (GATE4Rail			

	TD2.7: F	ormal me	thods and sta	andardisati	on for smar	t signalling	systems		
2015	2016	2017	2018	2019	2020	2021	2022	2023	
	Finished: ASTRail								
	Ongoing: X2Rail-2, 4SECURAIL								
							_		

		TD2.8	8: Virtually	– Coupled 1	Train Sets (V	/CTS)		
2015	2016	2017	2018	2019	2020	2021	2022	2023
				Finished: MOV	INGRAIL			
				On	going: X2Rail-3			



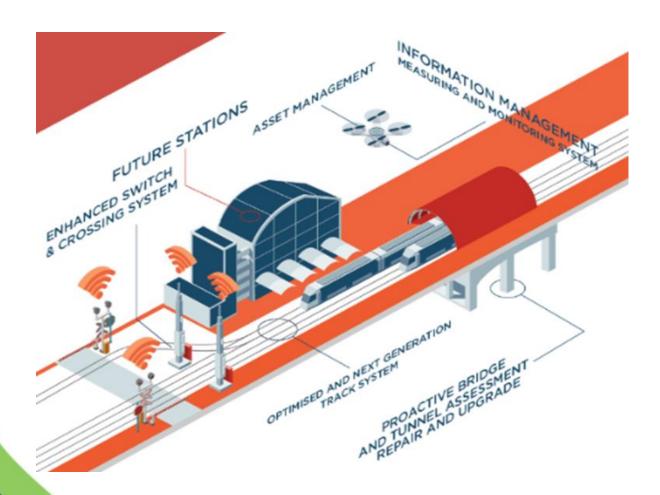
		7	TD2.9: Traffic	managem	ent evolutio	on		
2015	2016	2017	2018	2019	2020	2021	2022	2023
				Ongoing: X	2Rail-2, X2Rail-	4, OPTIMA		

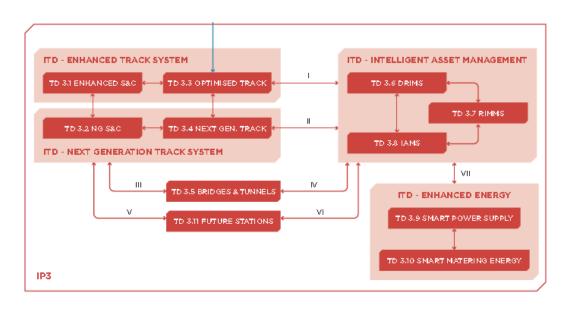
		TD2.10: Sm	art radio-co	nnected all	l-in-all way	side objects		
2015	2016	2017	2018	2019	2020	2021	2022	2023
			Finished:	ETALON				
			Ong	going: X2Rail-1,	OPTIMA, X2Ra	ail-4		

			TD2.1	1: Cyber Se	curity			
2015	2016	2017	2018	2019	2020	2021	2022	2023
		Finished: CYRAIL						
			Ongoing: X2R	ail-1, X2Rail-3,	4SECURAIL			

IP3: Cost-Efficient and Reliable High-Capacity Infrastructure









TD3.1 Enhanced Switch & Crossing System										
2015	2016	2017	2018	2019	2020	2021	2022	2023		
	Finished: In2Rail, IN2TRACK									
Ongoing: IN2TRACK2										

TD3.2 Next Generation Switch & Crossing System										
2015	2016	2017	2018	2019	2020	2021	2022	2023		
	Finished: In2Rail, S-CODE									
	Ongoing: IN2TRACK2									

TD3.3 Optimised Track System											
2015	2016	2017	2018	2019	2020	2021	2022	2023			
	Finished: In2Rail, IN2TRACK										
	Ongoing: IN2TRACK2										

TD3.4 Next Generation Track System											
2015	2016	2017	2018	2019	2020	2021	2022	2023			
	Finished:	In2Rail									
	Ongoing: IN2TRACK2, IN2ZONE										



TD3.5 Proactive Bridge and Tunnel Assessment, Repair and Upgrade

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: In2Rail, IN2TRACK

Ongoing: IN2TRACK2, Assets4Rail

TD3.6 Dynamic Railway Information Management System (DRIMS)

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: IN2SMART, IN2DREAMS

Ongoing: IN2SMART2, DAYDREAMS

TD3.7 Railway Integrated Measuring and Monitoring System (RIMMS)

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: In2Rail, IN2SMART, MOMIT

Ongoing: IN2SMART2, Assets4Rail

TD3.8 Intelligent Asset Management Strategies (IAMS)

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: In2Rail, IN2SMART

Ongoing: IN2SMART2, STREAM



	TD3.9 Smart Power Supply										
2015	2015 2016 2017 2018 2019 2020 2021 2022 2023										
	Finished: In2Rail										
	Ongoing: IN2STEMPO, FUNDRES										

TD3.10 Smart Metering for Railway Distributed Energy Resource Management System											
2015	2016	2017	2018	2019	2020	2021	2022	2023			
	Finished: In2Rail, In2Dreams										
	Ongoing: IN2STEMPO										

TD3.11 Future Stations											
2015 2016 2017 2018 2019 2020 2021 2022 2023											
	Finished: FAIR Stations										
Ongoing: In2Stempo											





IP4: IT Solutions for Attractive Railway Services



		TD	4.1 Intero	perabilit	y Framew	ork .		
2015	2016	2017	2018	2019	2020	2021	2022	2023
F	inished: IT2R/	AIL, GOF4R, S	ST4RT					
			Ong	oing: CONNI	ECTIVE, SPRI	NT, RIDE2RAII		
			TD4.2	ravel Sh	opping			
2015	2016	2017	2018	2019	2020	2021	2022	2023
	Finished:	IT2RAIL, Co-	Active					
					Ongoing: Ma	aaSive, Extens	Sive	
		•	TD4.3 Boo	king and	Ticketing	5		
2015	2016	2017	2018	2019	2020	2021	2022	2023
	Finished:	IT2RAIL, Co-	Active					
					Ongoing: Ma	aaSive, Extens	ive	
			-					
			TD4.	4 Trip Tra	cker			
2015	2016	2017	2018	2019	2020	2021	2022	2023
		d. ITADAIL /	ATTD A CLTIVE	NAV TDAC				
	Finishe	ed: IT2RAIL, A	ATTRACKTIVE,	IVIY-I KAC				



TD4.5 Travel Companion										
2015	2015 2016 2017 2018 2019 2020 2021 2022 2023									
	Finishe	ed: IT2RAIL, A								

Ongoing: MaaSive, RIDE2RAIL, ExtenSive

TD4.6 Business Analytics
2015 2016 2017 2018 2019 2020 2021 2022 2023

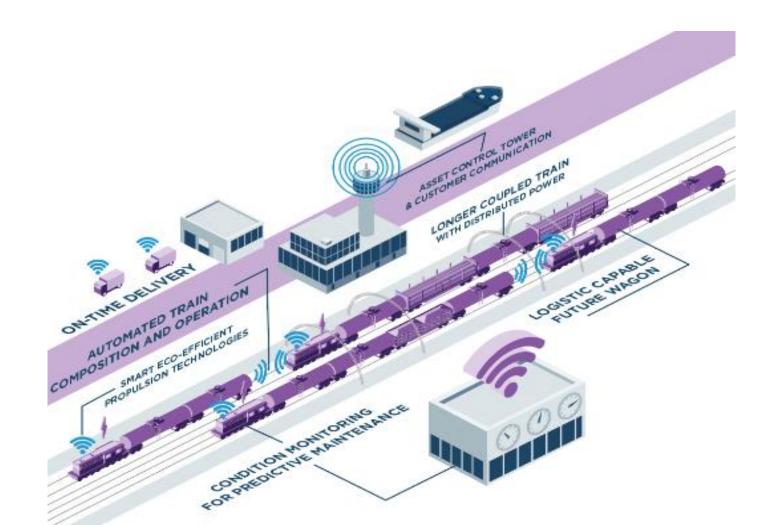
Finished: IT2RAIL

Ongoing: CONNECTIVE, ExtenSive

iTD4.7 Integrated Technical Demonstrator
2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: IT2RAIL, Co-ACTIVE

Ongoing: Shift2MaaS, COHESIVE, RIDE2RAIL, MaaSive, ExtenSive, IP4MaaS





IP5:
Technologies
for
Sustainable &
Attractive
European Rail
Freight



TD5.1 Fleet Digitalisation and Automation

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: SMART, FR8RAIL, INNOWAG, ARCC

Ongoing: FR8RAIL II, LOCATE, SMART2, FR8RAIL IV

	TD5.2 Digital Transport management											
2015	2015 2016 2017 2018 2019 2020 2021 2022 2023											
		Finished: S	MART, OPTI	YARD								
	Ongoing: FR8HUB, ARCC, FR8RAIL II, FR8RAIL III											

TD5.3 Smart Freight Wagon Concepts											
2015	2016	2017	2018	2019	2020	2021	2022	2023			
Finished: FR8RAIL, INNOWAG											
Ongoing: FR8HUB, FR8RAIL II, FR8RAIL III, FR8RAIL IV											



TD 5.4 New Freight Propulsion Concepts

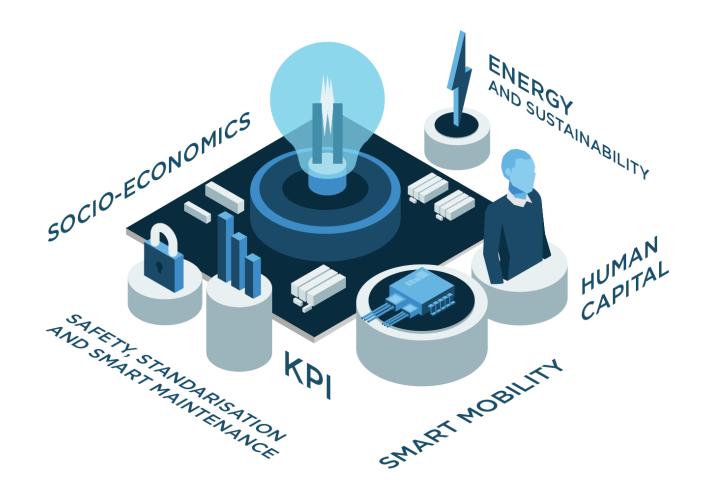
2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: DYNAFREIGHT, FFL4E, M2O

Ongoing: FR8HUB, FR8RAIL II, FR8RAIL III, FR8RAIL IV

	TD 5.5 – Business analytics and implementation strategies											
2015	2015 2016 2017 2018 2019 2020 2021 2022 2023											
Fi	Finished: SMART-RAIL, FR8RAIL, INNOWAG											
Ongoing: FR8HUB												





Cross
Cutting
Activities
(CCA)

@Shift2Rail_JU
#Horizon2020





 WA1 Long-term needs and socio-economic research & SPD's

 2015
 2016
 2017
 2018
 2019
 2020
 2021
 2022
 2023

 Finished: IMPACT-1, NEAR2050, OPEUS, TER4RAIL

 Ongoing: IMPACT-2, FLEX-RAIL

WA2 KPI method and integrated assessment

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: Roll2Rail, IMPACT-1, SMaRTE, GOSAFERAIL

Ongoing: IMPACT-2

WA3 Safety, Standardisation, Maintanance, Materials, Virtual Certification

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: PLASA, GoSAFE RAIL, SMaRTE, PLASA-2
Ongoing: IMPACT-2



 WA4 Smart Planning, I2M

 2015
 2016
 2017
 2018
 2019
 2020
 2021
 2022
 2023

 Finished: Roll2Rail, PLASA, GoSAFE RAIL, PLASA-2

 Ongoing: IMPACT-2, FINE-2

WA5 Energy and sustainability

2015 2016 2017 2018 2019 2020 2021 2022 2023

Finished: Roll2Rail, DESTINATE, FINE 1, OPEUS

Ongoing: FINE-2, TRANSIT, SILVARSTAR

WA6 Human Capital										
2015	2016	2017	2018	2019	2020	2021	2022	2023		
	Finished: SMaRTE									
Ongoing: IMPACT-2										



IPX - Blockchain and Artificial Intelligence										
2015	2016	2017	2018	2019	2020	2021	2022	2023		
Ongoing: B4CM, MVDC-ERS, RAILS, Translate4Rail										

IPX - System Architecture									
2015	2016	2017	2018	2019	2020	2021	2022	2023	
Ongoing: LinX4Rail, LinX4Rail-2									

IPX - Exploratory research and Disruptive Innovation									
2015	2016	2017	2018	2019	2020	2021	2022	2023	
				Finished: T	ER4RAIL				
				Ongoing: F	LEX-RAIL, H	YPERNEX			



3 - Programme approach: complementarity concept + internal JU processes



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...).



Collaboration Agreement

Tips/lessons learnt:

—COLA establish the relation between OC Projects with CFM Projects, to ensure and results and adequate dealing with know-how (if any) → alignment, agreement on tasks, background annexes should have meaningful content and ensure OC Projects duly provide to the CFM Projects input when so defined!

-Start discussions with complementary project(s) as soon as possible

- Anticipate as much as possible issues (timing discrepancy, possible duplication, etc...)
- Inform the S2R PM should any major difficulties encountered
- However... COLA's signature cannot be a barrier to collaborate!

-Changes in your own project may be needed as a result:

- assess the need for an amendment within the consortium
- Inform the S2R PM as soon as possible → JU assessment



IPRs Collaboration Agreement

1. Access rights to background to beneficiaries of complementary grants

According to article 25.5: The rules on access to background (including conditions and scope of access) are generally the same as for results. *However*, for background there is NO (or a more limited) obligation to give access, if there are restrictions or limits (legal or otherwise) and the beneficiary has informed the others — before acceding to the GA (or immediately when additional background is agreed on) — e.g. a pre-existing agreement (e.g. an exclusive licence) which precludes the granting of access rights.

2. Access rights to results to beneficiaries of complementary grants

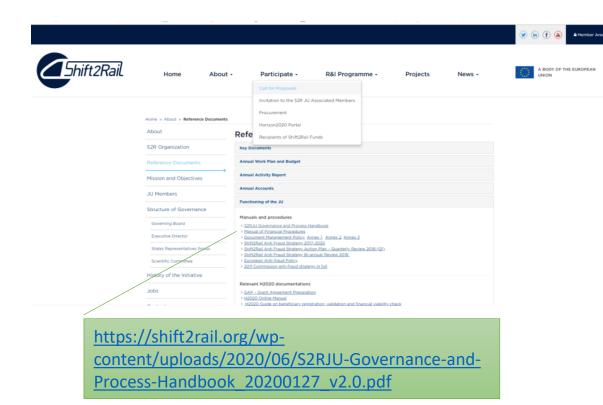
According to article 31.6: access rights to results must be granted to the beneficiaries of complementary.



Internal JU processes

Governance and process handbook ("PM Handbook", available on the S2R website)

- The handbook defines and documents the Programme governance and relevant business processes, including relevant templates and guidelines.
- → Provides the Coordinator with useful reporting templates and guidelines (deliverable template, collaboration agreement, technical report, reporting to the SteCo, etc...)





Internal JU processes

S2R Projects official reporting

Technical reporting

Deliverables and Technical reports must be submitted in the appropriate template given in the PM handbook

Financial reporting

All project reporting must use the appropriate template

Project reporting to the Steering Committee

Each Committee meets every three months to handle disputes, propose possible budget re-allocations and check the implementation of detailed plans.

The project coordinators carry out the day-to-day project management, technical oversight and administration of the funded activities related to TDs and ITDs.

→ The project coordinators are expected to report to the SteCo the status of their project (using the appropriate template: "Project reporting to the IP SteCo")

Interactions & roles



Role of the Coordinator

YOUR PROJECT

- > Central Contact Point for the S2R JU.
- Administers the S2R financial funding.
- Reviews the reports to verify consistency.
- Monitors the compliance under the GA.

S₂R

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SIWG / EDPB*

Inform the S2R JU of any event that might affect the implementation.

Carry out the work as identified in

Provide all data (financial and technical) requested by the S2R JU.

Role of beneficiaries

the Annex 1.

Ensuring continuity/synchronicity with IPs/CCAs.

IP SteeCo

- > Ensuring contribution to MAAP.
- Project Coordinator may attend the SteeCo meetings as observer
- IP Coordinator cooperate with Project Coordinator to foster/promote synergies between TDs and CCA Area, different Activities of other IPs and CCA, running projects.

- Ensuring with the SteCo the fullfilment of the Master Plan
- Central Contact Point for the Project.
- Supervise the project and the fulfilment of contractual obligations
- Check, deliverables, periodic reports, perform on-site reviews, etc.
- Check financial statements.

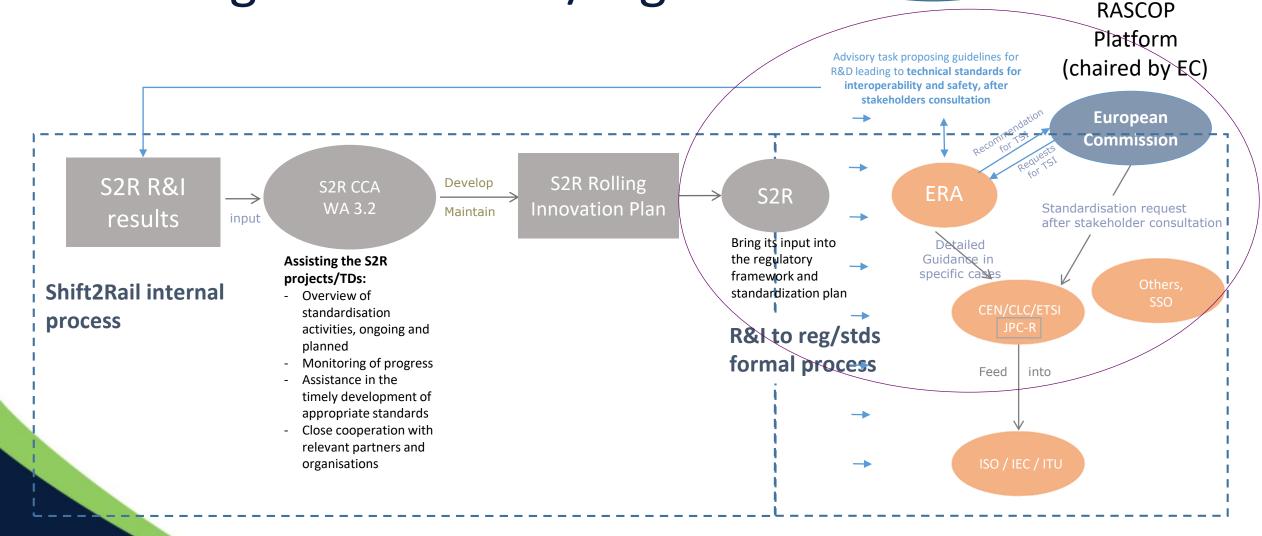
- Support the Executive Director in steering the Programme R&I activities
- Discuss processes in the context of Calls, Annual Reviews and S2R documentation
- Report on project's status and collaboration agreements
- Ensure alignment on crosscutting themes

*Programme management setup / Change Management



S2R R&I results and process leading to standards/regulation

Stakeholders e.g. ERRAC



Projects results and process to standards / regulation

Relation with European Agency for Railways (ERA) relevant to the Projects:

To ensure that successful results do not encounter a regulatory blocking point because of their novelty, the S2R JU has defined with ERA and DG Move a process for collaboration at project level:

- 1. ERA could attend the evaluation of the call proposals as observer;
- 2. ERA will provide to the S2R JU the "the level of desired involvement" in those projects within the scope of its activities;
- 3. The S2R JU will discuss the involvement of ERA in the indicated projects with the relevant Project Coordinator to ensure their participation as appropriate. This should be defined during the Grant Agreement Preparation (GAP) phase, as far as possible;
- 4. ERA will communicate to the S2R JU the name of the ERA representative who will be following up the indicated projects;
- 5. S2R will provide the possibility to the ERA representative(s) to attend the respective Project Kick-off meeting and may involve him/her as observer during the Review meetings or Projects checks and may request ERA to provide written advice on specific Project deliverables or reports.



How to ensure that YOUR PROJECT will be successful?

- Delivering on time the expected results in accordance to the plan
- Regular dialogue with the S2R Programme Manager to ensure a good flow of information about the project and its progress.
- Collaboration with the bodies of the Joint Undertaking (in particular the IP Steering Committee or other working groups set up by the Governing Board) will be important.
- Coordination and cooperation with the complementary grants (and other ongoing research projects) will be essential.
- Coordination and communication among the different WPs.
- Collaboration to S2R KPIs and Standardization activity (CCA)



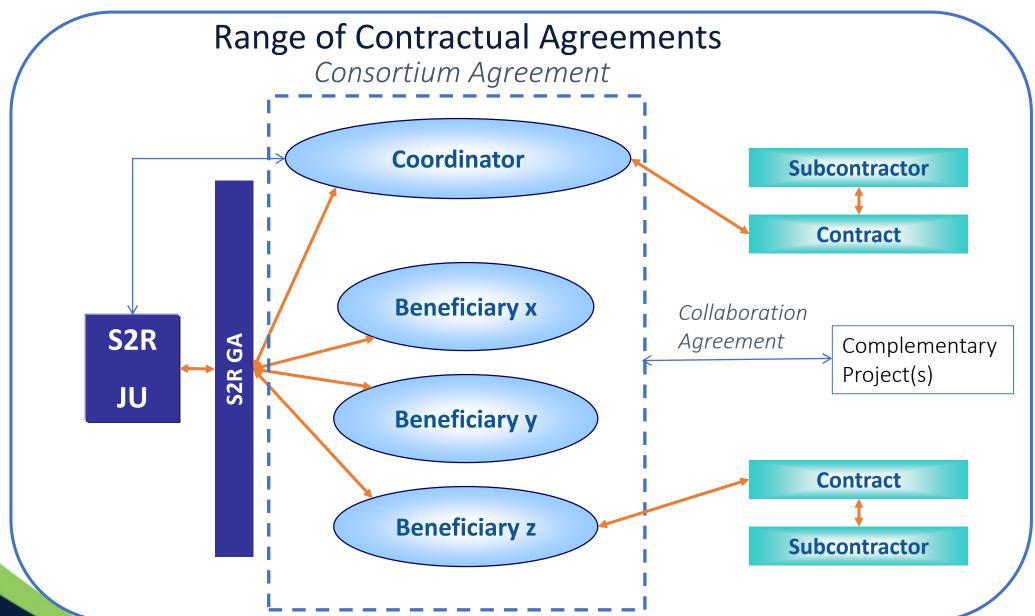
4 - Manage your project: Legal Aspects

Attention: The Following Sections Apply to

Open Call Grant Agreement

Grant Agreement Structure





Grant Agreement Structure



H2020 Grant Agreement

Annex 1: Description of the action part A & B

Annex 2: Estimated budget

Annex 3: Accession forms of beneficiaries

Annex 3a: Declaration joint liability of third parties

Annex 4: Model financial statements

Annex 5: Model certificate on financial statements

Annex 6: Model certificate on the methodology



AMGA V.5.2 JUNE 2019

This table gives an **overview** of the different kinds of **third parties**:

TYPE	CHARACTERISTICS						
	Works on action tasks?	Provides resources or services for action?	What is eligible?	Must be indicated in Annex 1?	Indirect costs?	Selecting the third party	GA articles
Linked third party	YES	NO	Costs	YES	YES	Must be affiliated or have a legal link and be eligible for funding	Article 14
International partners	YES	NO	N/A	YES	N/A	Must not be eligible for funding	Article 14a
Subcontractor	YES	NO	Price	YES	NO	Must be best value for money, avoid conflict of interest	Article 13
Third party providing in-kind contribution	NO	YES	Costs	YES	YES	May not be used to circumvent the rules	Articles 11 and 12
Contractor (selling, equipment, good or service)	NO	YES	Price	NO	YES	Must be best value for money, avoid conflict of interest	Article 10
Third parties receiving financial support ³³	The third parties participate in the action as recipients.		Amount of support given	YES	NO	According to the conditions in Annex 1	Article 15



Linked third parties (Art. 14) (1)

Affiliated entities (capital link) are:

- under the direct or indirect control of the beneficiary or
- under the same direct or indirect control as the beneficiary or
- directly or indirectly controlling the beneficiary.

Entities with a legal link:

• Broad and legal relationship not specifically created for the work in the GA (no ad hoc collaboration agreements).



Linked third parties (Art. 14) (2)

- The beneficiary remains responsible towards the JU for the work carried out by the linked third party.
- Do NOT sign the GA
- Must fulfil the same conditions for participation and funding under H2020 as beneficiaries
- Does not charge a price, but declares its own costs for implementing the action tasks



Purchases (Art.10)

Purchases of goods, works or services (Art.10)

- If necessary to implement the action and limited in cost and scope.
- Based either on the best value for money or the lowest price.
- "Contracting authorities" (Directive 2014/24/EU) or "Contracting entities" (Directive 2014/25/EU) must comply with the applicable national law on public procurement.

Subcontracting (Art. 13)(1)



- If necessary to implement the action.
- Only limited to certain tasks and parts of the action.
- Based on business conditions, entailing profit.
- Work without the direct supervision of the beneficiary and it is not hierarchically subordinate to it.
- Responsibility towards the JU lies fully on the beneficiary.
- Based either on the best value for money or on the lowest price
- "Contracting authorities" (Directive 2014/24/EU) or "Contracting entities" (Directive 2014/25/EU) must comply with the applicable national law on public procurement.



Subcontracting (Art. 13)(2)

Subcontracting (Art.13) versus Purchases (Art.10) (Page 127 AMGA):

- Implementation of action tasks vs necessary to the implementation of action tasks (auxiliary tasks).
- Need to be indicated in Annex 1 vs No need to be indicated.
- Best value for money/national law on public procurement in both cases.



Subcontracting (Art. 13)(3)

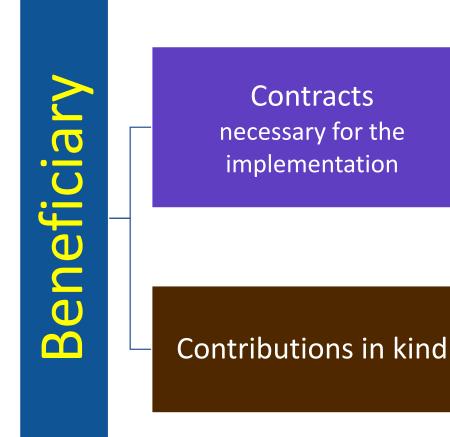
• New subcontracts: If not foreseen at the moment of the signature of the GA, the coordinator must request an amendment. They can be exceptionally approved during reporting time without an amendment (the beneficiary bears the risk of rejection).

• Specific cases:

- Framework contracts (E.g. services, furniture). If this is the usual practice of the beneficiary. Best value for money and no conflict of interest.
- Coordination tasks of the Coordinator cannot be subcontracted or outsourced to a third party (including linked third parties)

Summary: Third parties (1)

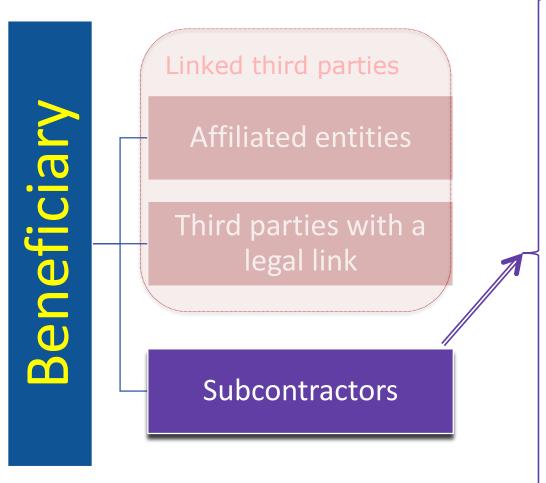




- For the purchase of goods, works or services
- Ensure best value for money and avoid any conflict of interests
- Article 10 GA
- Free of charge or <u>against</u>
 <u>payment</u> are eligible costs if
 they meet the eligibility
 conditions (Art. 11 & 12 GA)
- Must be set out in Annex 1
- New in-kind contributions: if not identified in Annex 1, an amendment is needed. Exceptionally the JU may approve them during reporting without an amendment (beneficiary bears the risk of rejection)

Summary: Third parties (2)



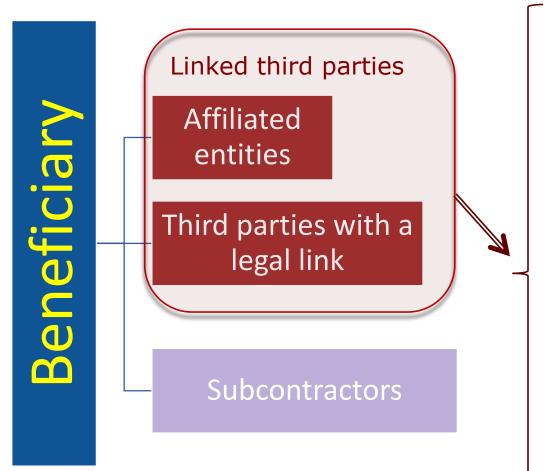


- Ensure best value for money and avoid any conflict of interests
- Estimated costs and tasks must be identified in the budget and Annex 1
- the Coordinator must request an amendment. The JU may still exceptionally approve them without amendment if specifically justified in the periodic technical report and not entailing changes to the Agreement (beneficiary bears the risk of rejection).

Article 13 GA

Summary: Third parties (2)





- Must be identified in the GA PIC
- Separate tasks / budget
- Same <u>cost</u> eligibility criteria as beneficiaries
- NEW: S2R JU may request them to accept joint and several liability with the beneficiary in order to protect the EU's financial interests.
- Article 14 GA



Consortium Agreement (1)

The S2R JU is NOT part of it.

Key issues addressed in the Consortium Agreement (Indicative list):

- Internal organisation of the consortium.
- Management of access to the electronic exchange system.
- Distribution of EU funding.
- Settlement of internal disputes.
- Additional rules on rights and obligations related to background and results
- Risk management / collective responsibility
- Liability, indemnification and confidentiality arrangements between the beneficiaries.



Consortium Agreement (2)

- Mandatory unless exceptionally provided otherwise in the work programme/call.
- Must not contradict the GA.
- Should be negotiated and concluded before the signature of the GA (or serious risk that prolonged disagreement jeopardises the action).
- Costs related to the preparation of the Consortium Agreement are not eligible.



Ethics and Security

- Ethics review is conducted in order not to fund proposals that contravene ethical principles. Proposals that are security sensitive must undergo a security screening
- 1. Self-assessment at the stage of proposals submission
- 2. Ethics review during the selection procedure
 - Clearance
 - Conditional clearance (Ethic issues to be addressed in Annex 1)
 - definition of ethics requirements
 - > Ethics deliverables
 - Recommendation for ethics checks. In parallel with GAP
- 3. Ethics checks, review and audits
- Common ethics issues (1) participation of humans in research, (2) protection of personal data,
 (3) participation of third countries, (3) dual use





Access Rights to Background

- The beneficiaries must identify and agree on what constitutes background for their action.
- The agreement may take any form (e.g. positive list, negative list). It may be a separate agreement or may be part of the consortium agreement (article 41).
- If access to background is subject to **legal restrictions or limits**, the beneficiary must inform the other beneficiaries before signing the GA
- Access must be given:
 - For the implementation of action tasks: the default rule is royalty-free.
 - For the exploitation of results: under fair and reasonable conditions.





Ownership of Results

- Results normally belong to the beneficiary that produced them.
- Automatic joint ownership If beneficiaries have jointly generated results and it is not possible to establish their respective contribution (or to separate them for protection), the beneficiaries automatically become joint owners. The beneficiaries concerned must conclude a joint ownership agreement.
- The beneficiaries must ensure that they can fulfil their obligations under the GA regarding results, by making arrangements with any third parties that could claim rights to them

IPR (3)



Access to Results

- The beneficiaries must provide access to results, if it is needed:
 - by another beneficiary, for implementing action tasks or exploiting results
 - by an affiliated entity of another beneficiary, to exploit the results produced by the beneficiary to which it is affiliated unless otherwise provided for in the consortium agreement.
- Access rights are not automatic; they must be requested (in writing).
- The agreement by the beneficiary owning the results (on the request for access) may be in any form (tacit, explicit, in writing or oral).



Suspension of the GA

Costs incurred during the suspension period are NOT eligible.

By the beneficiaries (Art. 49.1):

• Exceptional circumstances (e.g ''force majeure'') makes implementation impossible.

By the JU (Art.49.2 GA):

• For the reasons listed in Article 49.2 GA (including cases where a beneficiary has committed or is suspected of having committed substantial errors, irregularities, or fraud, or serious breach of obligations under the GA).



Manage your project: Legal Aspects

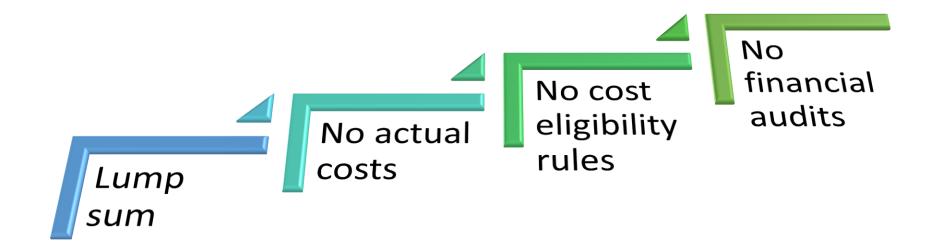
Attention: The Following Sections Apply to

CFM Grant Agreements Lump Sum Specificities



The grant agreement will set out the lump sum (EU funding) corresponding to the **full accomplishment of the work committed in Annex 1.**

The lump sum for the grant is set out at its signature, the costs actually incurred are not relevant.





Obligation to Keep Records

Article 18 Lump Sum Pilot MGA provides that:

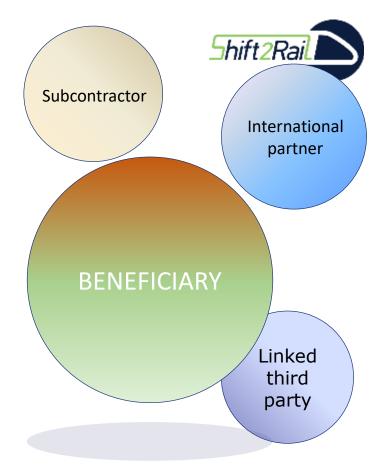
Beneficiaries do not need to keep record about the costs actually incurred for implementing the action

HOWEVER:

- Beneficiaries must keep original (incl. digital) documents on record for a period of 3-5 years.
- This includes all documents supporting the proof that an action was properly implemented.
- If a beneficiary breaches its obligations under Article 18, the grant may be reduced.

Linked Third Parties

- Linked Third Parties (LTPs) must be named in the Grant Agreement
- Annex 1 must detail the tasks attributed to each
 LTP
- LTPs may receive Lump Sum Shares
- Records must be kept!
- A beneficiary remains liable for its LTP





Subcontracting

- The rules on subcontracting are similar to the General MGA (see Article 10 & 13 H2020 General MGA):
- Subcontracting may cover only a limited part of the action
- Tasks to be implemented by subcontracting must be set out in Annex I
- The JU may however approve subcontracts not set out in Annex I without amendment (cf Art.55), if:
- ✓ Specifically justified in periodic technical report
- ✓ Does not entail changes to the GA questioning decision awarding the grant
- ✓ Does not breach principle of equal treatment of applicants
- Still applicable: ensuring best value for money, no Col



Subcontracting



- The principles of subcontracting (ensuring best value for money, no Col, subcontracting of only a limited part of the action, etc.) are still compulsory BUT are not considered to be additional cost eligibility conditions
- Consequence: in case of breach, S2R JU may reduce the grant in proportion to the seriousness of the breach instead of rejecting costs.
- The estimated costs for each subcontract DO NOT have to be included in Annex 1 and the total estimated costs of subcontracting per beneficiary are not displayed in Annex 2.
- Nevertheless, costs of subcontracting MUST BE indicated in the "Financial Excel table" and are part of the lump sum.



Liability for Third Parties

- Collective Implementation Liability in accordance with Article 41.1
 - the beneficiaries are jointly and severally liable for the technical implementation of the entire action.
 - If a beneficiary or its LTP or an international Partner fails to implement its part of the action, the other beneficiaries become responsible for implementing this part (without being entitled to any additional JU funding for doing so), unless the JU expressly relives them from this obligation.
- Individual Financial Liability in accordance with Article 44.1
 - in case of recovery of undue amounts, each beneficiary is only liable limited to its own Lump Sum share AND the shares attributed to its Linked Third Party.
 - That is, other beneficiaries will not have to repay amounts owed by another beneficiary's LTP from their own Lump Sum share.



5 – Amendments, legal basis





5.1 – Legal Basis

Amendments General (1)



Article 55 AGA

WHAT?

An amendment to the grant agreement is necessary to change GA specific data, GA options, **Annexes 1 and 2**

Consequences

The amended provisions **become** an integral part of the GA

other provisions remain unchanged and have full effect

Amendments General (2)



- An amendment is necessary whenever there is a need to change the GA
- Amendments may NOT result in changes that would impact the award decision.
- The general terms and conditions of the GA can NOT be changed via amendment.
- The amendment will take effect either on the day of its entry into force or on the specific date(s) indicated in the amendment.

Amendments: When?



Requests will be introduced **before the end of the action** (i.e. date set out in Article 3)

Exception: After the end of the action in exceptional cases (e.g. change of coordinator/bank account to make the payment of the balance)

Requests will be submitted **sufficiently in advance** (to allow preparation and proper analysis before the changes are due to take effect)

Amendments: Who?



Coordinator submits & signs amendments on behalf of the consortium

Exception: if change of coordinator without his/her agreement, request must be done by another beneficiary (acting on behalf of the other beneficiaries)

Coordinators must ensure internally the agreement of the consortium based on their internal decision-making processes

(e.g. unanimity, simple or qualified majority etc. set out in the consortium agreement)

Amendments: How?



H2020 Amendments are PAPERLESS

Prepared electronically

Requesting party will encode the amendment request

- * Indicate the reasons
- * Upload the supporting documents
- * Get validations done before submitting the request

(e.g. new legal entity, new bank account validations)

Submitted & signed electronically (by PLSIGN) **Counter signed electronically** by receiving party (by PLSIGN)





5.2 - Cases where an amendment is necessary (some examples)

Beneficiaries - changes



1. Removal of a beneficiary whose participation is terminated (Article 50.2 and 50.3)

- ➤ If it never became a beneficiary:
 - o non-accession to GA, or
 - o non-provision of requested declaration on joint and several liability Beneficiary is removed from the beginning
- For other reasons (Article 50.2 and 50.3)

Annexes 1 and 2 will be changed.

If the coordinator is removed, the amendment has to propose a new coordinator.

LTPs participating with the beneficiary will be automatically removed.

Beneficiaries - changes



2. Adding a new beneficiary

- New beneficiary must be validated and have a PIC before the submission.
- New beneficiary and accession date are added to the Preamble of GA. It is possible to choose between the date of the signature of the accession form, the date of entry into force of the amendment or a fixed date (future or retroactive).
- Annexes 1 and 2 will be changed.
- Depending on type of beneficiary (e.g. JRC, IO), and if it was/was not receiving EU funding, options will be added/modified/become applicable

Coordinator - changes



3. Change of coordinator

- 'Handover date' will be added in the Preamble of the GA
- There is NO need for an amendment to change the *person* in charge of the coordination of the project.
- Amendment request <u>can be</u> submitted after the end date of the action (e.g. coordinator in bankruptcy)

4. Change of bank account for payments

Banking information must be validated before submitting the request

5. Change of the option for 'authorisation to administer'

• Option in Article 41.2 is added/removed/modified (e.g. change of name of the entity with an 'authorisation to administer')

Action or action implementation - changes



6. Change to Annex 1 (description of the action)

- Significant change of the action tasks (e.g. if tasks are added/removed) or their division among the beneficiaries
- Changes concerning in-kind contributions provided by third parties (against payment or free-of-charge) or subcontracts
- Changes concerning the tasks to be carried out by linked third parties and related costs
- Changes to the options in the GA (e.g. options are removed or added)

Financial Aspects - Changes



7. Change to Annex 2 (estimated budget)

- Budget transfer between beneficiaries or budget categories (or both) due to a significant change of Annex 1
- Budget transfer to a form of costs that is not provided for in Annex 2

Examples: from actual costs to the unit costs for SMEs owners from actual costs to average personnel costs

8. Change of Annex 2a: 'Additional information on the estimated budget'

If the calculation of the unit costs needs to be provided or updated

No Amendment



Certain budget transfers

Budget transfers and re-allocation	Amendment needed?
From one beneficiary to another	NO
From one budget category to another	NO
Re-allocation of Annex 1 tasks	YES
Transfers between forms ofcosts (actual costs, unit costs, etc.)	YES if the 'form' receiving thetransfer was not included in the budget (example a new unit cost)
Transfers within personnel costs	NO ^
New subcontracts	YES (strongly advised)

No Amendment



Some exemples:

- 1. Change of name, address, or other legal entity data of the beneficiary, linked third party
- 2. Change of beneficiary due to universal takeover (In FP7: 'universal transfer of rights and obligations')
- 3. Changes to name of the bank, address of branch and name of account holder (validation of this data on the PP by the S2R JU is sufficient)

No Amendment



- Beneficiaries must keep **information stored in the 'Beneficiary Register' up to date** via the Participant Portal (Article 17.2)
- The LEAR of the beneficiary updates this information
- Beneficiaries also have to inform the coordinator (offline)
- Validation Services validate the information in the IT system(s)
- The validated changes will be notified via the Participant Portal (to ensure an appropriate record of the modifications and to avoid uncertainties)

Note: If S2R JU considers change affects the implementation of the action, it will inform the coordinator *Example:* beneficiary changes its legal address to a third country



Transfer of Lump Sum Shares

 Unlike in the General MGA, transfers of Lump Sum Pilot shares are only possible via a formal <u>amendment</u> AND if not against the awarding decision

HOWEVER:

- Transfers to or from <u>COMPLETED & PAID</u> Work packages are not possible
- Transfers <u>between work packages</u> can only be accepted in exceptional circumstances
- Lump sum shares of a <u>terminated beneficiary</u> cannot be changed without amendment.
- Partial lump sum shares in the last reporting period are an exception i.e. for technical reasons



Partial Lump Sum Shares

- Partial work packages are NOT allowed after the end of each reporting period
 - For General rule: Any WP which is not completed in the reporting period in which it is due, cannot be claimed in that reporting period. Hence it will be postponed to the following reporting period provided that the WP is finally completed (all deliverables and milestones associated to it are accomplished).
 - Example: The consortium argues that they did not have enough time to complete the WP. The duration of the action could have been extended via an amendment for the consortium to have enough time.
 - Exception: at the end of the action, beneficiaries may exceptionally declare partial shares for work packages that were not completed due to technical reasons.





5.3 – Amendment procedure

Amendment Procedure (1)



After submission of request the receiving party has 45 days for 'evaluation and validation' (may exceptionally be extended)

Chorounol

Agreement

Rejection

Request for additional information

Extension of the deadline for assessment

If no reaction within deadline, tacit rejection

Amendment Procedure (1)



A request containing several changes to the GA will be considered as a package and:

- it cannot be divided into several requests;
- request will be agreed or rejected as a whole;
- cannot be modified.

If there is **no reaction** within this deadline the request is considered to have been rejected

There is no tacit approval of amendments (contrary to FP7)

Entry into force and taking effect



- An amendment enters into force and is binding from the moment the receiving party signs it (in the electronic exchange system)
- An amendment takes effect (the changes will start to apply):
 - when the amendment enters into force, or
 - on the date agreed by the parties

This date should normally be after the entry into force

If an amendment request involves several changes, they could take effect on **different** dates (e.g. addition of beneficiary and change of bank account)

Depending on the type of change, the date of taking effect may have an **impact on the eligibility of costs**



6 – Manage your project:

Financial aspects Reporting, payments,
budget and cost categories



6.1 - Reporting & payments





• The S2R JU will undertake regular review for each of the funded project to ensure the Deliverables are on-track and of the necessary quality





S2R Governance Handbook: Project awarded through Open Calls, the cycle is in line with the usual practice applied within H2020 projects. Consequently, the reporting period for interim payment ends is not combined with the annual cycle but has been set every 12 months after the start of the project, for projects between 18 to 24 months, and every 18 months for longer life projects.

ARTICLE 20 — REPORTING — PAYMENT REQUESTS

ARTICLE 20 — REPORTING — PAYMENT REQUESTS

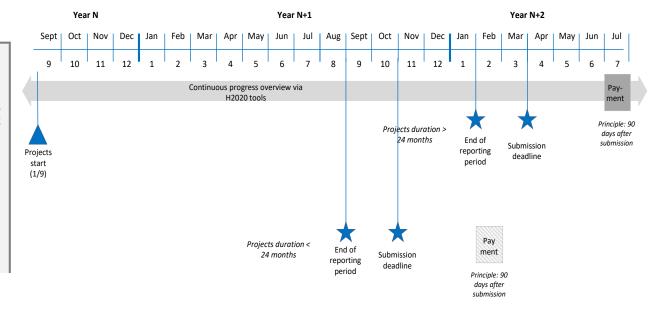
20.1 Obligation to submit <u>reports</u>

The coordinator must submit to the [Commission][Agency] (see Article 52) the technical and financial reports set out in this Article. These reports include the requests for payment and must be drawn up using the forms and templates provided in the electronic exchange system (see Article 52).

20.2 Reporting periods

The action is divided into the following '**reporting periods**':

- RP1: from month 1 to month [X]
 [- RP2: from month [X+1] to month [Y]
 RP3: from month [Y+1] to month [Z]
- [same for other RPs]
- RPN: from month [N+1] to [the last month of the project].]





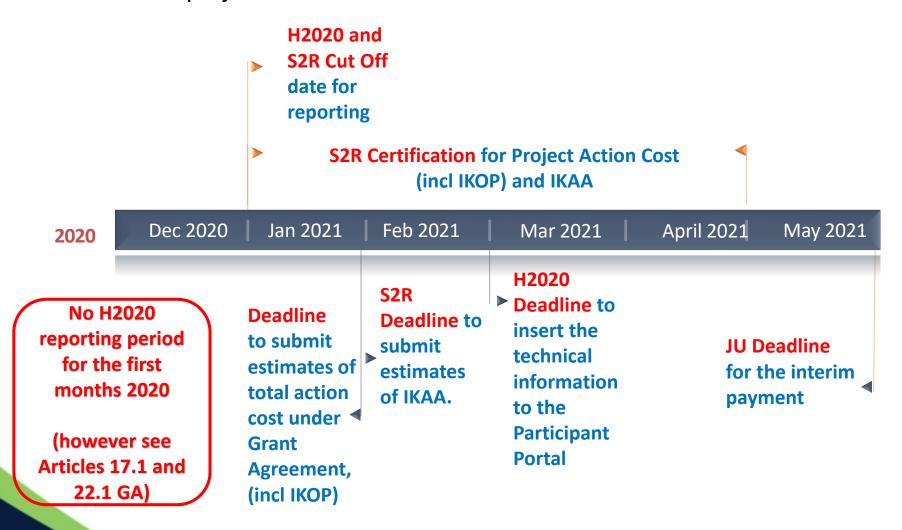


- Cost recognition will be assessed during the reporting periods set in the GA
- •Overall technical assessment considering as well the Technical Report, will be performed during the reporting periods



Reporting Periods CFM

Official Reporting Periods are stated in Article 20.2 of the GA Tentative Schedule of project review are stated in section 1.3.7. of Annex I







- •WP completion (including of all deliverables and milestone and of objectives, etc. set in the DoA) will be assessed during the yearly "investment gate controls" which for CFM are set in the GA as Annual review meetings > indicatively month of April, before payments
- Overall technical assessment considering as well the Technical Report, will be performed during the yearly "investment gate controls" which for CFM are set in the GA as Annual review meetings

 indicatively month of April, before payments

Types of payments (Article 21)







One payment of the balance

Payments



- Payments will be made to the coordinator to the bank account established in the grant agreement
- Coordinator must distribute the payments to the beneficiaries without unjustified delay
- The coordinator will inform about the **distribution of the payments**: if the S2R JU requires it, in the event of a recovery at payment of the balance, if the participation of a beneficiary is terminated
- If the S2R JU does not pay within the deadline, the beneficiaries are entitled to a late-payment interest

Pre-financing



One pre-financing payment*

When

 Within 30 days from the signature of the grant or 10 days before the starting date, whichever is latest

How much

- Usually = maximum grant amount / number of periods
- Retention 5 % of maximum grant for Guarantee
 Fund

Characteristics

• It remains the property of the EU until the payment of the balance



Guarantee Fund

- Participant's Guarantee Fund is established amounting to
 5% of total funding contribution
- The Guarantee Fund **belongs to all beneficiaries** of grant agreements under H2020
- Financial interests generated by the Guarantee Fund will serve to cover against financial risks
- The amount contributed to the Fund will be reimbursed at the end of the final payment after the end of the project

After the end of each interim period



Periodic report ⇒ submitted by coordinator 60 days after end of reporting period

Periodic Technical Report

- ✓ explanation of the work carried out
- ✓ overview of progress (milestones and deliverables)
- ✓ summary for publication
- ✓ plan for the exploitation and dissemination of results (if required)
- ✓ answers to the questionnaire

Periodic Financial Report

- ✓ Financial Statement (individual & summary) / For CFM: no cost categories; only LS shares
- ✓ Explanation of the use of the resources / For CFM: only to report subcontracts not in A1

After the end of each interim period



An interim payment

When

• 90 days from reception of periodic reports

How much

- EU contribution corresponding to the eligible costs incurred in the reporting period
- Limit = 90 % of the maximum grant amount

Characteristics

• Ineligible costs will be rejected and not taken into account for the payment

After the end of the last period



Final report ⇒ submitted by coordinator 60 days after end of last reporting period

In addition to the periodic report Final Technical Report ✓ summary for publication ✓ overview of results and their exploitation & dissemination ✓ conclusions of the action and socioeconomic impact Final Financial Report ✓ Summary Financial Statement / CFM: no cost categories; only \$\square\$ shares ✓ Certificate on Financial Statement (if needed) / CFM: no CFS in LS projects

After the end of the last period



A payment of the balance

When

• 90 days from reception of final reports

How much

Reimburses the remaining part of the eligible cost incurred

 Includes the release of the Guarantee Fund (GF)

Characteristics

- If Σ payments made < final grant amount : payment
- If Σ payments made > final grant amount : recovery → first by offsetting with GF released, if not enough, by a recovery order
- If applicable: receipts & reduction of the grant will be taken into account to determine the final grant amount

Financial Aspects: CFM and Lump Sum



 Periodic financial report simplified (lump sum share per WP only) and final payment with possible partial release of the lump sum share.

Financial audits:

- No Certificate of Financial Statements (CFS), covering the co-funded H2020 part, to be produced at final payment anymore
- No reporting on actual costs BUT keep records in your systems in accordance with your accounting practice on documents relevant to prove the proper implementation of the action to be stored like you would do for any project you run
- Checks, reviews, audits and investigation conducted by JU or ECA, OLAF under exceptional circumstances (fraud?)

Reporting: what if...?



(Article 20.8)



The consortium is late: no reports on time





If still not submitted after 30 days, the S2R JU may terminate the grant agreement!



One beneficiary is late: its report is not ready

The Coordinator may decide to submit the reports without that beneficiary

Beneficiary's costs will be considered 'zero' for this reporting period, but it can declare its costs with the next reporting period

Reporting



The S2R JU analyses the reports and:



The reports are complete and satisfactory, so it pays



The reports are incomplete / further information is needed:







In exceptional cases the S2R JU may:

- Reject the reports giving justification
- Suspend the payments for one or more beneficiaries
- Terminate the grant



6.2 - Budget and cost categories

Budget Transfers



				Est	timated eligible* cost	s (per budget	t category)				
	A. Direct personnel costs				B. Direct costs of subcontracting	[C. Direct costs of fin. support]	D. Other direct costs	E. I ndirect costs	[F. Costs of]		
	A.1 Personnel		A.4 SME owners without salary				D.1 Travel				
	A.2 Natural persons under direct contract		A.5 Beneficiaries that are natural persons without salary			D.2 Equipment			1 1		[F.2 Coss of]
	A.3 Seconded persons [A.6 Personnel for providing access to research infrastructure]						D.3 Other goods and services		[F.1 Cost of]	st ofJ	"
							D.4 Costs of large research infrastructure				
Form of costs****	Actual	Unit a	Unit 0		Actual	Actual	Actual	Flat-rate	Unit		Unit
			XX EUR/	hour					xxx EU	IR/unit	
	(0)	Total (b)	No hours	tal (c)	(d)	(e)	(f)	(g)	No units	Total	Total
Beneficiary 1	500.000	o	100	3.213	150.000	0	325.000	207.053	0	0	0
Beneficiary 2	0	300.000	0	0	> 0	0	125.000	106.250	0	0	0

Budget Transfers



Budget transfers and re-allocation	Amendment needed?	
From one beneficiary to another	NO	
From one budget category to another	NO	
Re-allocation of Annex 1 tasks	YES	
Fransfers between forms ofcosts (actual costs, unit costs, etc.)	YES if the 'form' receiving thetransfer was not included in the budget (example a new unit cost)	
Transfers within personnel costs	NO A	
New subcontracts	YES (strongly advised)	

Eligibility



- Subject to approval of technical reports
- Stated costs must be reasonable compared to work
- Actual (or follow the rules e.g. unit costs)
- Incurred during duration of project
- In accordance with **beneficiary's usual accounting** and management principles
- Recorded in the accounts of beneficiary
- Used for the sole purpose of achieving the objectives of the project

Eligibility



- Staff working on the project must keep time records (hours they spend on the project; regularly (daily, weekly); countersigned by a supervisor
- You must declare costs based on the actual amounts spent (AGA Article 5, Article 6(1)): Personnel Costs based on actual staff costs; Other direct costs based on actual costs for the project (AGA Article 6,2 D); Depreciation costs for assets; Real costs of consumables
- You cannot, under any circumstances, sub-contract to a project partner (AGA Article 13)

Eligibility



Forms of costs

Actual costs

• Costs actually incurred, identifiable and verifiable, recorded in the accounts, etc. see **Article 6** GA



NEW: non-deductible VAT is now eligible

Unit costs

- A fixed amount per unit determined by the Funding Authority Example: for SME owners not receiving a salary
- For average personnel cost (based on the usual accounting practices with possible certificate on the methodology)

Flat rate

• A percentage to be calculated on the eligible costs Example: 25% flat rate for indirect costs

Personnel Costs



✓ Less requirements for time records

Example: No time records for researchers working exclusively on the project.

✓ Wider acceptance of average personnel costs

Broadening the acceptance of usual cost accounting practices (including cost-centre approaches) as unit costs.

Acceptance of additional remuneration

- → Limited to non-profit legal entities
- → Up to 8000 Euro/year/person working full-time exclusively in the action
- → Subject to specific conditions



Personnel Costs



CALCULATING PERSONNEL COSTS

ACTUAL PERSONNEL COSTS

Calculation method defined in the model GA

UNIT COSTS



V

Calculated by the beneficiary in accordance to its usual accounting practices

(Average personnel costs)

Fixed by the Commission

for the owners of SME beneficiaries without a salary and natural persons without a salary

Personnel Costs





Other Direct Costs



- Cost must be actual, identifiable and verifiable (Art. 6 AGA)
 - No estimation of costs
 - No budgeted costs
- May include energy and power supply if can be measured and if it is the general practice to include actual cost to a project and not include it to the overheads
- Spare part may be included but only from the portion of actual consumption
- Contracts when they do not cover the implementation of action task but they are necessary (audit certificate, translation, consultant, setting up a website if not identified in Annex 1 as a task to the project) Art. 10 AGA
- Depreciation of equipment only in case directly used in projects, otherwise subject to timesheets (No % approach)

Subcontracting – Art.13

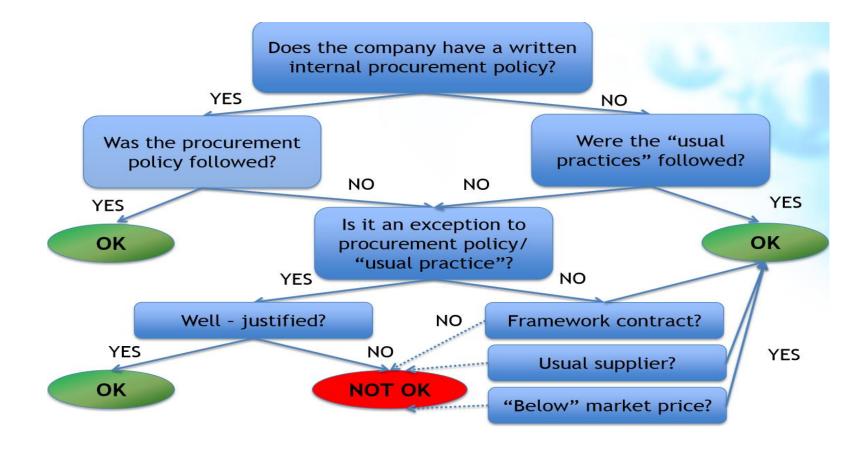


- Subcontracts cover the implementation of action task as described in Annex 1 (Website, testing, building a prototype or any other defined in Action tasks)
- Not covered by the flat rate of indirect cost
- Subcontracting between beneficiaries in the same project is not allowed (p. 133 AGA)

Best Value for Money



Decision tree...
a possible
approach
but refer always
to the AGA
principles



Controls and audits: ex-ante



- Financial viability
 - Most beneficiaries exempt from detailed analysis; only systematic check for coordinators when requested EU funding for the action is ≥ EUR 500 000
- Certificates
 - Certificate on the financial statements: Only for final payments when total EU contribution claimed by the beneficiary on the basis of actual costs + unit costs for average personnel ≥ EUR 325.000 (excluding e.g. flat rates!)
 - Certificate on the methodology: Optional for average personnel costs (now under unit costs)

Controls and audits: ex-post



"Ex-post" controls

- Audits of the S2R performed by EC services on behalf of S2R JU limited to two years after the payment of the balance
- Audits performed by the European Court of Auditors
- OLAF Investigations....

Extension of audit findings

- Former "extrapolation" now included in the AGA
- In the case of systemic or recurrent errors, irregularities, fraud or breach of obligations

CFM & LS: obligation to keep records



Article 18 Lump Sum Pilot MGA provides that:

"Beneficiaries do not need to keep record about the costs actually incurred for implementing the action"

HOWEVER:

- Beneficiaries must keep original (incl. digital) documents on record for a period of 3-5 years.
- This includes all documents supporting the proof that an action was properly implemented.
- If a beneficiary breaches any of its obligations under Article 18, the grant may be reduced.



7 - Manage your project: Financial Aspects Do's and Dont's

Please help us to help you to avoid errors!



Consequences of errors

Controls and audits are undertaken by the S2R JU (AGA Article 22) and the European Court of Auditors ... OLAF

Identified errors could lead to:

- Recovery of the undue amount (some time after you have received the money!)
- Penalties
- Reputational damage
- Financial losses
- etc



Time records

Staff working on the project must keep time records (AGA Article 18)

- staff must record the hours they spend on the project
- regularly (daily, weekly)
- countersigned by a supervisor



Actual Costs

You must declare costs based on the actual amounts spent (AGA Article 5, Article 6(1))

- Personnel Costs based on actual staff costs
- Other direct costs based on actual costs for the project (AGA Article 6,2 D):
 - Depreciation costs for assets
 - Real costs of consumables
- Please declare all your costs (guidance to AGA Article 20) to mitigate potential disallowance



Best Value

You must demonstrate "best value" in purchasing (AGA Article 10) and sub-contracting (AGA Article 13)

- some level of tendering to demonstrate "best value" e.g. tender, three offers, market survey
- We will normally accept your standard practices, when properly used
- We will normally accept commercial agreements already in place
- Naming the supplier in the contact does not mean that you do not have to demonstrate best value
- Keep documentation

5 most common errors



- 1. Direct costs apportioned, not measured
 - 2. Time sheets
- 3. Best value for money (subcontracting and purchase of goods)
 - 4. Basic vs additional remuneration
- 5. In-house, near off-site, semi-permanent, teleworking consultants

5+. Same old friends: no papers, depreciation "in one shot"





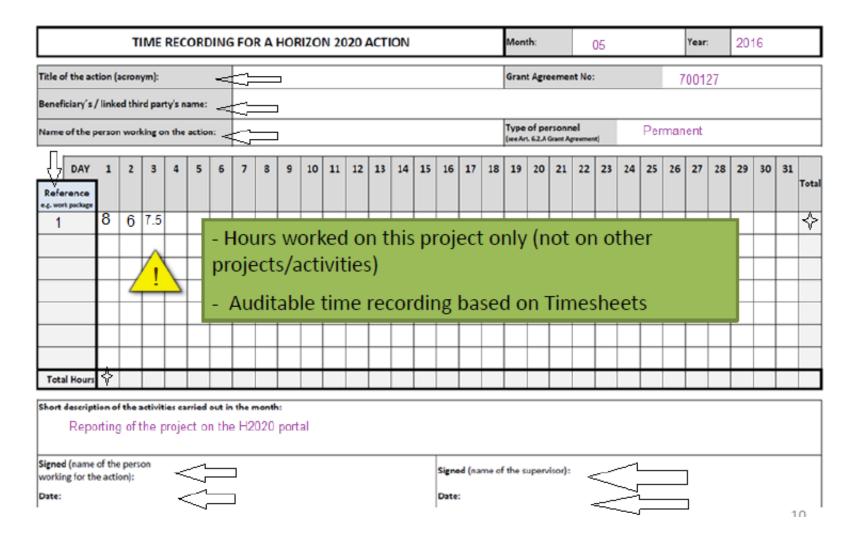
I work 100% on the project so I don't have to fill in TS, correct?

Correct, but pay attention:

- Did I spend a significant part of my time building up a network with other entities or other laboratories of my company, for future projects?
- Did I spend time in writing proposals for the next calls?
- Did I give lectures for the University?
- Did I travel for other unforeseen activities?
- What do I have to indicate in the box of the self-declaration requesting an indication of the activities carried out, per work package?

Timesheets examples





Timesheets examples



Electronic timesheet:

- 1. Electronic signature linking the electronic identity data with the electronic validation data require a password and user name
- 2. There is a documented secure process for managing user rights
- 3. An auditable log of all electronic transactions

Version 1.1 - December 2014

Model available in the AGA (version 19/12/2014)

the whole reporting period
from/



Only one declaration can be made per < reporting period for each person



	Action						
Title of the action (acronym)		nt Agreement aber					
Beneficiary's/linked third party's name							
	Reporting period covered by this	declaration ¹					
Reporting period number	from (date)	to (date)					
	es thatparty exclusively on the above-ment						
the whole re	porting period						
from/							
Short description o	f the activities carried out during the	period covered by this declaration					
Reference (e.g. work package)	Activities						
SIGNATURES							
For the beneficiary/link (supervisor) Name:	the ac	For the person working exclusively on the action					
Date:/	Date:	/					
Signature:	Signa	ture:					
Only one declaration can Insert name of the person. Insert date. Insert date.	be made per reporting period for each perso	n working in the action.					



Basic vs Additional Remuneration

A bonus scheme can be discretionary, yet based on objective conditions (merit, performance, potential – no matter how these are assessed by the boss - but as part of the usual remuneration policies, and documented). The scheme cannot be arbitrary or discriminatory, i.e. a bonus paid only if and when a researcher works on a H2020 project.



8. Communication and Dissemination Guidelines for Shift2Rail Projects

Coordinators Info Day

2 March 2021



Communication and dissemination

Important for S2R! (and an obligation in the GA)

- Design a thorough communication plan (part of your proposal and the grant agreement)
- Promote your project and its results beyond the project's own community
- Communicate your research in a way that is understood by non-specialists, e.g. to the media and the public
- Inform us in advance of communication activities, especially those expected to have a major media impact





Communication Planning Googlesheet

- S2R **Projects Communication Planning GoogleSheet** is a tool to effectively disseminate the work Shift2Rail projects are doing
 - Link to S2R Projects Communication Planning
- Please fill in the Googlesheet at least once a month:
 - S2R Newsletter sheet material for inclusion in the monthly Shift2Rail newsletter
 - **S2R Social Media sheet** content that S2R can directly post about through its own accounts or re-share from your accounts
 - **S2R Project Mid-Term/Final Events sheet** information that S2R can use to promote projects' mid-term/final events
- Let's help each other: Increased project visibility for you and greater overall impact for Shift2Rail!



Shift2Rail communication channels

- Shift2Rail uses a variety of channels to communicate project updates/results:
 - <u>Newsletter</u> published at the end of each calendar month. Includes information about EU level news, project news, upcoming and past events, dedicated section on project results, and press mentions
 - Social Media Channels Shift2Rail uses <u>Twitter</u>, <u>LinkedIn</u> and <u>Facebook</u> to communicate about corporate and project news and results. We post organic content and re-share news coming from project accounts. It is important to always tag our account: @Shift2Rail_JU
 - **Website Banner** possibility to advertise important project news on the main Shift2Rail <u>website slider</u>. Previously, we have included banners for final/mid-term events and important press mentions;
 - **Events Calendar** possibility to include project events in the Shift2Rail calendar.



Promotion of project deliverables

- A dedicated web page on the S2R website called <u>Latest Results</u> featuring our most interesting project deliverables each month;
- This web page is promoted through:
 - Shift2Rail monthly newsletter
 - Each deliverable featured benefits from a dedicated post on Shift2Rail social media accounts

Better visibility for our projects and concrete results for our audience!





Communication and Dissemination

See article 29 and 38 of the GA

European Union / S2R support shall be highlighted

- JU logo and the EU emblem to be displayed
- Disclaimer:

"This project has received funding from the Shift2Rail Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No [number]"

to be added on any communication (publicity reflects the author's view and the JU is not liable for any use)

- Right for the S2R JU to publish information on the project
 - The consortium shall ensure that all necessary authorisations for such publications have been obtained



Visual identity

- All communication outputs: In order to harmonise the visual ID of S2R projects, the Shift2Rail logo and EU emblem should be added to all communication outputs, in addition to the disclaimer (as per the GA);
- Video material: Shift2Rail video intro/outro should be added to all video material produced by the projects;
- All project coordinators will receive the Communication Guidelines for projects + assets (logos + video intro/outro) by email



Communication and Dissemination

Communication ≠ dissemination:

Dissemination is a separate obligation (e.g. through scientific articles and conferences)

Conferences:

- The planning of mid-term conference and final conferences need to be agreed with the S2R JU, so that we can achieve a Programme approach
- Try already to check with your complementary project for synergies in this respect
- Possibility to present project results at Shift2Rail Innovation Days (9-10 December 2021)

Please note that if the dissemination/communication actions foreseen by the Grant Agreement or requested by the S2R JU in the points above are not implemented, the S2R JU will reduce the S2R JU contribution to the project accordingly to art.29.6 of the GA (reduction can reach 100% of GA contribution)



Staying in touch with us

Please give regular input to our Communication Planning Googlesheet

Write to us at communication@s2r.europa.eu



Thank you for your attention





Founding Members



















Associated Members





















@egis

TATA STEEL



Swi'Tracken Consortium

BURD

TRONICO



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Income in Nevergoing

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Smart DeMain(SDM) Consortium







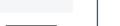














ceit



Competitive Freight Wagon

Consortium(CFW)



Smart Rail Control (SmartRaCon) consortium







