

Cluster Report 'Digital and Industry'

ERA-LEARN, Discussion paper

15.05.2019

Partnership analysis in relation to the cluster ‘Digital and Industry’ under Pillar II “Global Challenges and Industrial Competitiveness” of Horizon Europe (Commission proposal):

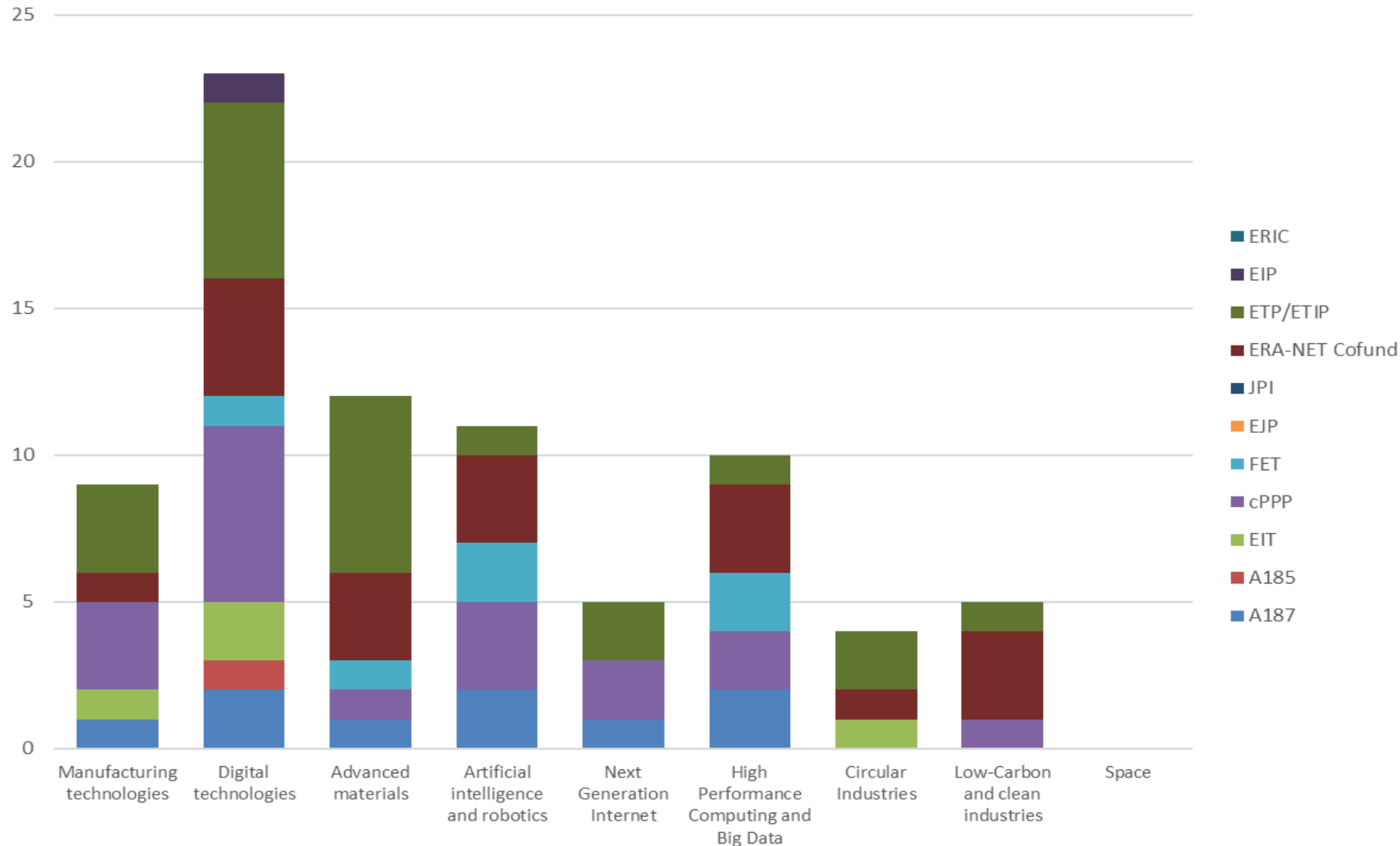
The intervention areas of the cluster ‘Digital and Industry’:

- Manufacturing technologies
- Key digital technologies
- Advanced materials
- Artificial intelligence and robotics
- Next Generation Internet
- High Performance Computing and Big Data
- Circular Industries
- Low-Carbon and clean industries
- Space

The cluster includes 28 fully relevant partnerships and 17 other fully relevant networks and governance structures (ETPs and EIPs):

- 12 P2Ps (11 ERA-NET Cofunds, 1 Art 185 initiative)
- 8 cPPPs
- 2 Art 187
- 16 ETPs
- 3 EIT-KICs
- 1 EIPs
- 3 FET Flagships

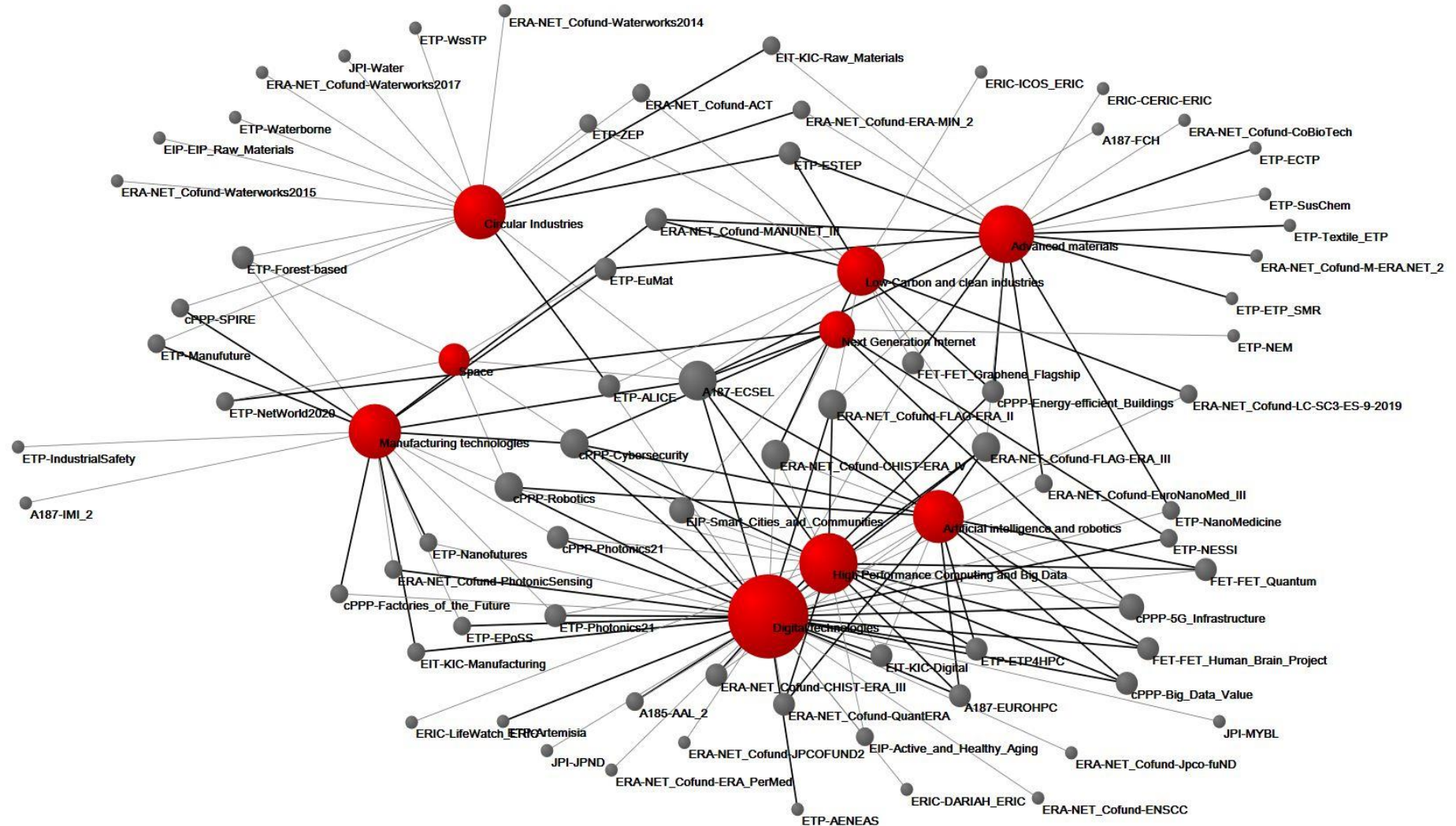
Nr. and Type of Fully Relevant Networks per Intervention Area



- large variety of partnerships - except from ERICs, JPIs and EJPs all types of partnerships are fully relevant for this cluster.
- The cluster has the highest number of ETP/ETIPs, cPPP and FET flagships in comparison with the other clusters.
- Overall, the number of P2P (11 ERA-NET Cofunds, 1 Art. 185 initiative) is relatively small compared to other clusters
- The most populated area is 'digital technologies'

Overview current partnerships related to the interventions areas

- central position of ECSEL - fully or partly relevant to all intervention areas
- the most populated sub-areas are 'digital technologies', 'high performance computing and Big Data', 'AI and robotics' and 'advanced materials'.
- In particular, 'digital technologies' has a very high number of fully relevant networks.



Connections between partnerships and networks to the sub-cluster 'Digital'

Formal Connection:

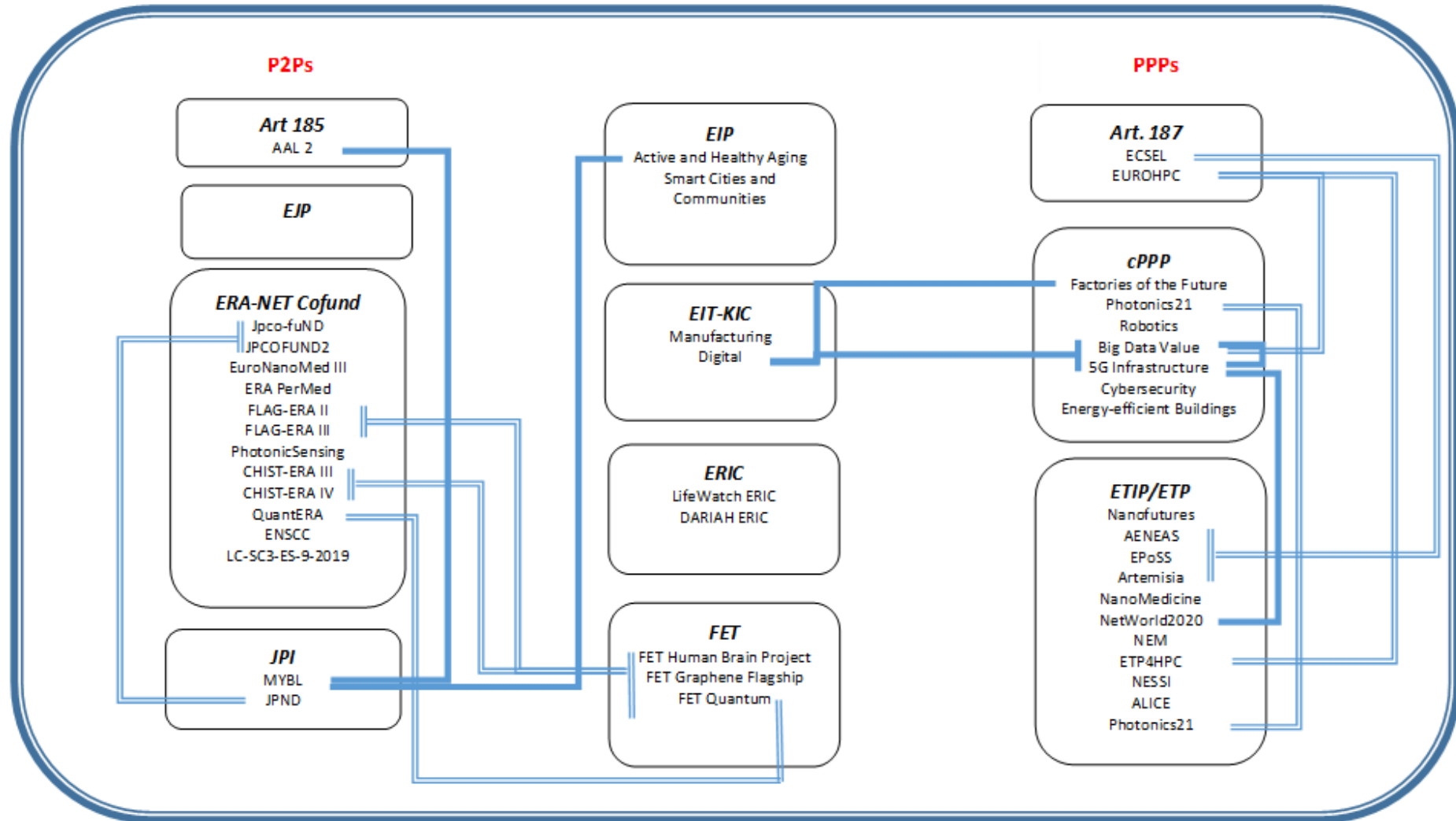
e.g. cPPPs and EIPs, JPND and its Cofunds, FET initiatives and their Cofunds

Existing collaboration:

e.g. AAL2 and relevant JPIs, HDHL and MYBL

e.g. cPPPs collaborating with each other through joint calls

e.g. EIT-KIC Digital with cPPPs



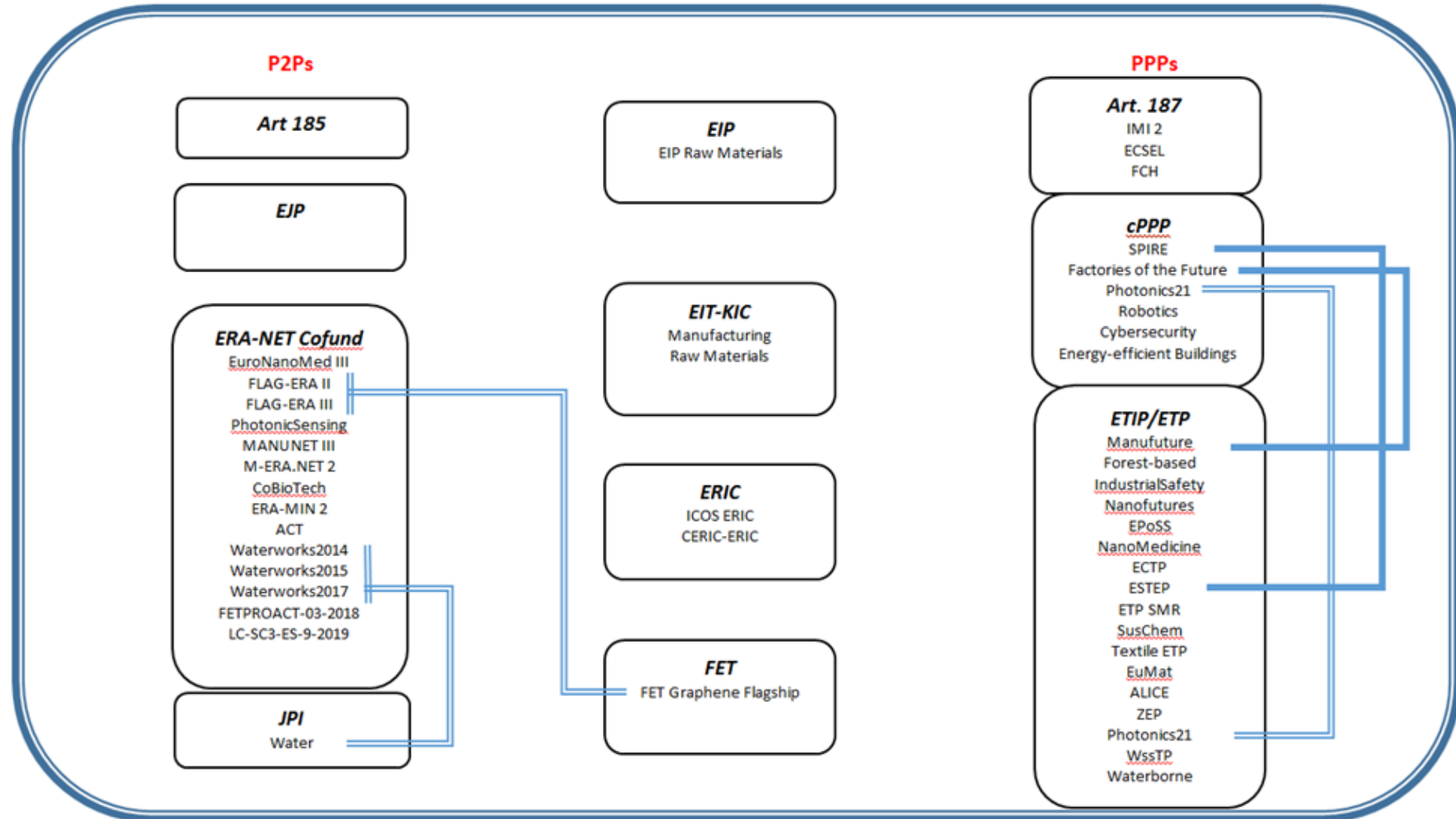
Connections between partnerships and networks to the sub-cluster 'Industry'

Formal Connection:

e.g. FLAG ERA – FET Flagship

Existing collaboration:

e.g. cPPPs and ETPs



Main observations:

- Connections between the P2P and non-P2P world are limited even in areas that are addressed by both communities.
- PPP world seems to be more inter-connected. ETPs providing strategic orientations are directly connected to suitable 'implementation' channels
- Non-P2P networks dominate both the 'digital' as well as the 'industry' sub-clusters.
- Certain formal links can be identified and there are existing collaborations across some networks. Surely there are many more (informal) collaborations that can be strengthened and new ones that can be created.

Further reflections:

- How can future partnerships benefit from already well-established advocacy groups such as ETPs/ETIPs?
- How can future partnerships create synergies and avoid overlaps with well-established networks?
- How are the networks in this cluster connected to related areas in other clusters? How should the cross-cluster connections among partnerships be addressed in the future?

Questions for discussion at the workshop

Part I:

- Are there any important aspects missing in the report?
- What have been the main strengths and achievements of the existing partnership landscape?
- What have been the main challenges?

Part II:

- What kind of interactions did/do you have with other (P2P, PPP) networks and which are these networks?
- How did/does this contribute to achieving your partnership's objectives and/or improve performance?
- What are the challenges of the new partnership proposal?
- How could the cooperation between different types of partnerships be improved to support the reformation of the partnership landscape?
- How can your partnership contribute to increase coherence in the partnership landscape?
- Which actions need to be taken? By whom?

Annex

Subject	Fit with Intervention Areas								Start	End	Members	Subject	Fit with Intervention Areas								Start	End	Members		
	Manufacturing technologies	Digital technologies	Advanced materials	Artificial intelligence and robotics	Next Generation Internet	High Performance Computing and Big Data	Circular Industries	Low-Carbon and clean industries					Space	Manufacturing technologies	Digital technologies	Advanced materials	Artificial intelligence and robotics	Next Generation Internet	High Performance Computing and Big Data	Circular Industries				Low-Carbon and clean industries	Space
A187												JPIs													
ECSEL	Electronic components & systems	●	●	●	●	●	○	○	2014	2024	33	MYBL	demographic change	○									2013	2022	15
IMI2	Manufacturing for personalised medicines	○							2014	2024	30	Water	sustainable water systems for a sustainable economy in Europe and abroad						○				2011	2022	30
FCH	Fuel cell and Hydrogen							○	2014	2024	2	JPND	Neurodegenerative Diseases	○									2011	2022	27
EUROHPC	High Performance Computing in Europe		●	●	●				2019	2026	31	ETP													
A185												Manufature	Future in manufacturing	●					○				2007	2022	
AAL 2	Active Assisted Living		●	○					2014	2024	22	Forest-based	forest-based bioeconomy	○					○	○			2007	2022	
EIT-KIC												IndustrialSafety	Industrial safety	○									2007	2022	
Manufacturing	Manufacturing	●	●						2014	2024	50	Nanofutures	Nanotechnologies	●	○								2007	2022	
Digital	Digital technologies		●	○	○				2010	2022	>190	AENEAS	micro and nanoelectronics		●								2007	2022	
Raw Materials	Raw Materials			○			●		2014	2020	>120	EPOSS	Smart Systems Integration; Micro- and Nanosystems	○	●								2007	2022	
cPPP												Artemisia	systems, Internet of Things and Digital Platforms		●								2007	2022	
SPiRE	Sustainable process industry, resource/ energy effic.	●	○				○		2014	2020	>150	NanoMedicine	NanoMedicine	○	●								2005	2022	
Factories of the Future	Factories of the Future	●	○						2008	2020	161	ECTP	Innovative Built Environment		●								2007	2022	
Photonics 21	Photonics technologies	○	●			○			2014	2020	>15	ESTEP	Steel technology		●				●	●			2007	2022	
Robotics	Robotics	○	●			○		○	2013	2020	261	ETP SMR	Sustainable Mineral Resources		●								2007	2022	
Big Data Value	Big Data Value creation and Artificial Intelligence		●	●	●				2014	2020	>200	SusChem	Sustainable Chemistry		○								2007	2022	
5G	5G Infrastructure		●	○	●	○			2014	2020	>50	Textile ETP	Textiles		●								2007	2022	
Energy-efficient Buildings	Energy-efficient Buildings		●	●	●		●		2008	2020	30	EuMat	Advanced Engineering Materials and Technologies	●	●								2007	2022	
Cybersecurity	Cyber Security	●	●	●	●	●			2014	2020	>20	NetWorld2020	communication networks and services					●		○			2007	2022	
FET												NEM	New European Media					○					2007	2022	
FET Human Brain Project	Human Brain		●	●	●				2013	2023	>100	ETP4HPC	supercomputing systems		●	●		●					2007	2022	
FET Graphene Flagship	Graphene research		○	●			○		2013	2023	>150	NESSI	software, systems, data, cloud, cyber physical sys		●		●						2007	2022	
FET Quantum	Quantum technologies		○	●	●				2018	2028	>100	ALICE	Logistics		○				●	○			2007	2022	
ERA-NET Cofund												ZEP	Zero Emission Fossil Fuel Power Plants - Capture and Storage (CCS)							○	○		2007	2022	
FLAG-ERA II	FET flagships; Graphene; Human Brain; ICT; Rob		●	○	●	●	○		2016	2021	21	Photonics21	photonics technologies	○	●				○				2007	2022	
FLAG-ERA III	FET flagships; Graphene; Human Brain; ICT; Rob		●	○	●	●	○		2019	2023	23	WATERBORNE	WATERBORNE INDUSTRIES							○			2007	2022	
PhotonicSensing	photonic sensing tech	○	●						2016	2021	10	WssTP	Water Supply and Sanitation							○			2007	2022	
MANUNET III	Advanced manufacturing	●	●						2016	2021	12	EIP													
CHIST-ERA III	Long-term ICT		●	○		○			2017	2022	18	Active and Healthy Aging	Aging		○				○				2011	2020	
CHIST-ERA IV	Long-term ICT		○		○	○	●		2019	2024	23	Smart Cities and Communities	Smart communities & cities		●		○	○			○		2011	2021	
M-ERA.NET 2	materials science and engineering			●					2016	2021	33	Raw Materials	Raw Materials							○			2013	2020	
CoBioTech	Cofund on Biotechnologies		○						2016	2021	27	ERIC													
QuantERA	Quantum technologies		○	●	●				2016	2021	26	LifeWatch ERIC	Biodiversity, Ecosystem functions and services							○			2017	2022	
ERA-MIN 2	Raw Materials			○		●			2016	2021	17	ICOS ERIC	carbon cycle and greenhouse gas								○		2008	2022	
ACT	CO2 Capture and Storage (CCS) technology						○	○	2016	2021	12	DARIAH ERIC	arts and humanities -computational methods		○								2014	2022	
ENSCC	Smart Cities		○			○			2014	2019	28	CERIC-ERIC	materials, biomaterials and nanotechnology			○							2014	2022	
Jpco-fuND	Neurodegenerative Diseases		○						2015	2019	26														
JPCOFUND2	Neurodegenerative Diseases		○						2019	2023	29														
EuroNanoMed III	Nanomedicine		○	●					2016	2021	25														
ERA PerMed	Personalised Medicine		○						2017	2022	32														
LC-SC3-ES-9-2019	Energy Systems, Digitalisation					○	●																		
Waterworks2015	water use efficiency						○		2016	2020	33														
Waterworks2014	European water challenges						○		2015	2020	25														
Waterworks2017	closing the water cycle gap						○		2018	2022	23														



Thank you.