

Horizon Europe: A practical insight Part I.

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SPEAKER

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Your partner in EU funding went fully ONLINE





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TRAININGS

INNOVATIONS

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What we do

 Develop and manage research and innovation projects under the EU programmes since 2000.

 Design and deliver practice-driven training programmes since 2004.

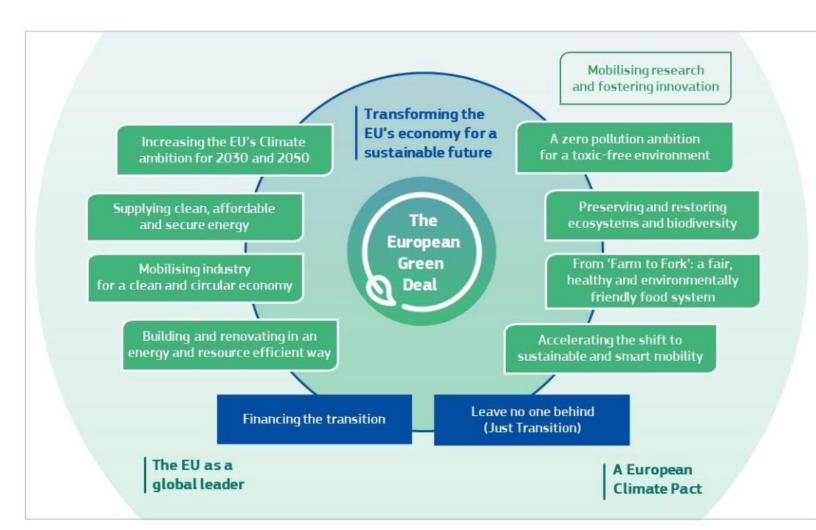




EU budget 2021-2027

		MFF	NGEU	TOTAL
1.	Single Market, Innovation and Digital	149.5	11.5	161.0
2.	Cohesion, Resilience and Values	426.7	776.5	1203.2
3.	Natural Resources and Environment	401.0	18.9	419.9
4.	Migration and Border Management	25.7	-	25.7
5.	Security and Defence	14.9	-	14.9
6.	Neighbourhood and the World	110.6	-	110.6
7.	European Public Administration	82.5	-	82.5
	TOTAL	1210.9	806.9	2017.8
	TOTAL expressed in 2018 prices	1074.3	750.0	1824.3

EU projects are about EU policies Example: Green Deal



- 35% of the budget of Horizon Europe
- 60% of the CEF2 budget
- LIFE
- Digital Europe Programme
- Requirements in Recovery
 Plans of the Member
 States
 - Recovery and Resilience Facility
 - Cohestion Fund
 - EFRD
- 40% of CAP sources
- Just Transition Fund
- InvestEU

European Education Area by 2025

https://ec.europa.eu/education/sites/educ ation/files/document-library-docs/eeafactsheet-sept2020_en.pdf

Quality in education and training

- Boost basic and transversal skills
- More mobility and cooperation opportunities
- Support lifelong acquisition of language competences
- Develop a European perspective in education

Inclusion and gender equality

1122

- Pathways to School Success
- 50 centres of excellence for VET
- European Approach to micro-credentials
- Gender-sensitive teaching

Green and digital transitions

- Education for Climate Coalition
- Greening of education infrastructure
- Council Recommendation on education for environmental sustainability
- Digital Education Action Plan

Digital Education Action Plan 2021-2027

Teachers and trainers

- 25 Erasmus Teacher Academies
- European guidance for national career frameworks
- European Innovative Teaching Award

Higher education

- European Universities full roll-out
- Development of a European Degree
- Legal statute for alliances of universities
- Erasmus+ Mobile App

Geopolitical dimension

- Team Europe approach
- Strengthen cooperation with strategic global partners
- Expand international dimension of Erasmus+



European Research and Innovation Area

ERA - 3 objectives

- 1.Prioritise investments and reforms in research and innovation towards the green and digital transition, to support Europe's recovery and increase competitiveness.
- 2.Improve access to excellent facilities and infrastructures for researchers across the EU.
- 3.Transfer results to the economy to boost business investments and market uptake of research output, as well as foster EU competitiveness and leadership in the global technological setting.

EIA - 4 areas

- Market, with the aim to accelerate connectedness between global StartupCities, led by top startups and SMEs. The actions under this priority relate to engaging market innovation, address climate change and health innovation, and driving the demand of training courses for global-EU startups and SMEs.
- Young, where StartupVillages will engage young entrepreneurs and innovators from rural and urban areas, in synergy with Erasmus+ programme. This priority is set to drive inclusive growth with young entrepreneurs and innovators, especially from rural and remote areas, as well as intensify the cooperation and exchange between rural and urban areas via Erasmus+.
- Women, with the aim to accelerate the support of venture capital for women entrepreneurs and innovators. With less optimistic numbers and only 5% of the leadership positions in tech sectors lead by women, this priority is set to drive change by bringing more women leadership in local ecosystems and also more venture capital support for women entrepreneurs and innovators. It is not enough to bring women to build startups but to keep them going and growing in their careers.
- **Talent**, to drive new workforce and employment, as well as productivity and competitiveness, via reskilling and upskilling entrepreneurs and innovators. This will be reflected in the Next Generation EU.





Horizon Europe Budget

• Additional EUR 2,65 billion is proposed for research within the new European Defence Fund

million EUR in current prices

				Addition from margins		Addition through										
	Base MF	Fb	udget	and cor	and competition fines			decommitments			Addition from NGEU			TOTAL		
Pillar I Excellent and Open science																
of which	27%	€	23.192	43%	€	1.713	0%	€	-	0%	€	-	26%	€	24.906	
European Research Council (ERC)	17%	€	14.956	29%	€	1.142	0%			0%			17%	€	16.099	
Marie Skłodowska-Curie actions	7%	€	6.087	8%	€	314	0%			0%			7%	€	6.401	
Research infrastructures	3%	€	2.148	6%	€	257	0%			0%			3%	€	2.405	
Pillar II 'Global Challenges and																
European Industrial Competitiveness' of which	55%	€	47.465	43%	€	1.713	100%	€	564	75%	€	4.059	56%	€	53.801	
1.Health	8%	€	6.609	0%	€	- 1	0%			25%	€	1.353	8%	€	7.962	
2a.Inclusive and Creative Society	1%	€	1.253	23%	€	914	20%	€	113	0%			2%	€	2.280	
2b. Secure Society	2%	€	1.538	9%	€	343	0%			0%			2%	€	1.881	
3. Digital, Industry and Space	16%	€	13.619	6%	€	228	60%	€	338	25%	€	1.353	16%	€	15.539	
4.Climate energy and mobility	16%	€	13.524	6%	€	228	20%	€	113	25%	€	1.353	16%	€	15.218	
5.Food, Natural Resources and Agriculture	10%	€	8.953	0%	€	- 1	0%			0%			9%	€	8.953	
6.Non-nuclear direct actions of the JRC	2%	€	1.970	0%	€	- 1	0%			0%			2%	€	1.970	
Pillar III Innovative Europe	14%	€	11.706	9%	€	359	0%	€	-	25%	€	1.353	14%	€	13.418	
1.European Innovation Council	10%	€	8.383	0%	€	- 1	0%			25%	€	1.353	10%	€	9.736	
European Innovation Ecosystem	1%	€	447	2%	€	80	0%			0%			1%	€	527	
EIT	3%	€	2.876	7%	€	279	0%			0%			3%	€	3.155	
IV Strenthening the European																
research Area	4%	€	3.180	5%	€	212	0%	€	-	0%	€	-	4%	€	3.392	
Spreading excellence and widening	3%	€	2.822	3%	€	132	0%			0%			3%	€	2.954	
Reforming and																
enhancing European (Union) R&I System	0%	€	358	2%	€	80	0%			0%			0%	€	438	
TOTAL	100%	€	85.543	100%	€	3.998	100%	€	564	100%	€	5.412	100%	€	95.517	

https://sciencebusiness.net/sites/default/files/inline-files/Final%20budget%20breakdown%20Horizon%20Europe_0.pdf

Horizon Europe Pillars

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to strengthen the EU's scientific and technological bases and the European Research Area (ERA)

to boost Europe's innovation capacity, competitiveness and jobs

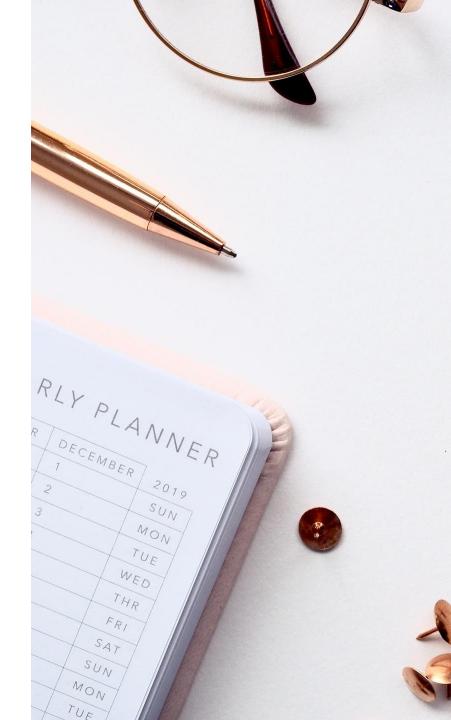
to deliver on citizens' priorities and sustain our socioeconomic model and values

Pillar 1 EXCELLENT SCIENCE	Pillar 2 GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS	Pillar 3 INNOVATIVE EUROPE									
European Research Council	은 · Health · Culture, Creativity and Inclusive Society	European Innovation Council									
Marie Skłodowska-Curie Actions	 Inclusive Society Civil Security for Society Digital, Industry and Space 	European innovation ecosystems									
Research Infrastructures	 Climate, Energy and Mobility Food, Bioeconomy, Natural Resources, Agriculture and Environment 	European Institute of Innovation and Technology									
	Joint Research Centre										
WIDENING PARTICIP	WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA										
Widening participation and spread	ding excellence Reforming ar	d Enhancing the European R&I system									

Multiannual Strategic Plan

Point of reference for R&I in all related programmes across the EU budget and nonfunding instruments

- Consistency and synergy between work programmes, EU and national priorities; other programmes, policies
- HE objectives, focus on impact, coherence of 3 pillars
- Less fragmentation of efforts, duplication and funding overlaps
- Link research and other actions for further policy support
- Balanced, broad, systemic, cross-disciplinary, crosssectoral and cross-policy approach to R&I
- Early involvement and consultations with various stakeholders
- From Plan for 2021-2024 to Work Programme 2021-2022 → calls



2021-2024 priorities Key strategic orientations

Climate challenges will receive at least 35% of the funding Europe will hopefully lead a Transition to sustainability

- A. Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains (5)
- B. Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources (4)
- C. Making Europe the first digitally enabled circular, climate-neutral and sustainable economy (4)
- D. Creating a more resilient, inclusive and democratic European society (6)





Clusters Contribution to SDGs



RA

Health: SDG 3 - Good Health and Well-Being for People; SDG13 - Climate Action

Culture, creativity and inclusive society: SDG 1 - No Poverty; SDG 3 - Good Health and Well-Being for People; SDG 4 - Quality Education; SDG 5 - Gender Equality; SDG 8; SDG 9; SDG 10; SDG; SDG 16

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Civil Security for Society: SDG 16 - Peace, Justice and Strong Institutions

Digital, Industry and Space: SDG 8 - Decent Work and Economic Growth; SDG 9 - Industry, Innovation and Infrastructure; SDG 12 - Responsible Consumption and Production; SDG-13 Climate Action

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Climate, Energy and Mobility: SDG 6 - Clean water and sanitation; SDG 7 - Affordable and Clean Energy; SDG 9 -Industry, Innovation and Infrastructure; SDG 11 - Sustainable Cities and Communities; SDG 12; SDG 13



Food, Bioeconomy, Natural Resources, Agriculture and Environment: SDG 2 - Zero Hunger; SDG 3 - Good Health and Well-Being; SDG 6 - Clean Water and Sanitation; SDG 8 - Decent Work and Economic Growth; SDG 9; SDG 11; SDG 12; SDG 13; SDG 14; SDG 15

- → Relating EU's research and innovation better to society and citizen's needs with strong visibility to impact
- Portfolio of actions across disciplines intended to achieve a bold, inspirational and measurable goal within a set timeframe, with impact for society and policymaking as well as relevance for a significant part of the European population and wide range of European citizens
- Specific missions will be programmed within the Global Challenges and European Industrial Competitiveness pillar

R&I MISSIONS

5 MISSION AREAS:

- Adaptation to Climate Change, including Societal Transformation
- Cancer
- Healthy Oceans, Seas, Coastal and Inland Waters
- Climate-neutral and Smart Cities
- Soil Health and Food



Horizon Europe - The horizontal pillar

What's new in Horizon Europe?

Reforming and enhancing the European R&I system

Broad lines:

- Strengthening the evidence base for research and innovation policy
- Foresight activities, to anticipate emerging needs and trends
- Support for policy makers, funding bodies, research performing organisations (including universities) or advisory groups working on ERA (CSAs)
- Support to national research and innovation policy reform (PSF)

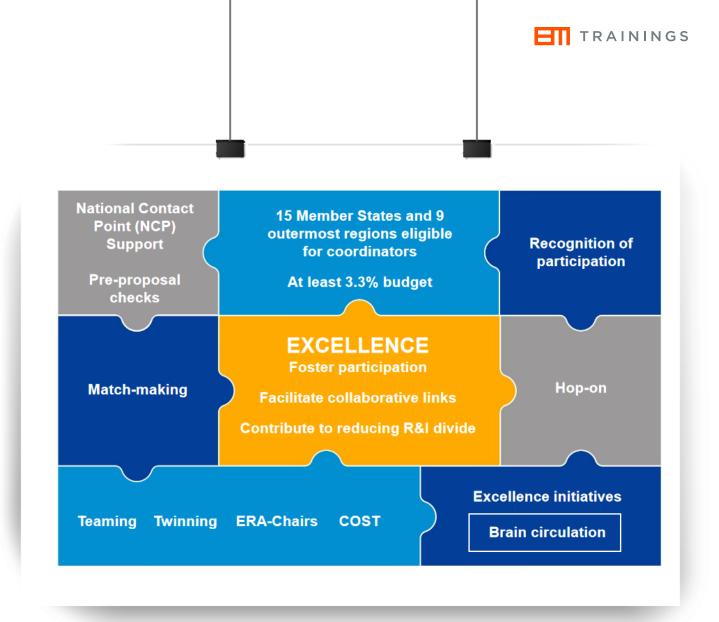
- Accelerating the transition towards open science
- Providing researchers with attractive career environments, skills and competences
- Citizen science, supporting all types of formal, non-formal and informal science education
- Supporting and monitoring gender equality
- Ethics and Integrity
- Supporting international cooperation

Horizontal pillar

Widening participation and strengthening the ERA

Excellence Hubs:

- €3-5 million
- complement the science-oriented schemes Teaming, Twinning, ERA Chairs and the university alliances by a dedicated innovation component.
- help to bridge the innovation
- translating R&I results into the economy
- aim at boosting the resilience and competitiveness of our economies and societies
- partnerships of place-based innovation ecosystems
- elaborate joint R&I strategies that must be aligned with RIS3 and/or European strategies (e.g. Green Deal, Digital transition)
- underpinned by concrete actions plans and an investment strategy



→ Horizon Europe budget for Widening participation \in 2,82 bn

Horizon Europe - Pillar 1

PILLAR 1: EXCELLENT SCIENCE

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Pillar 1 EXCELLENT SCIENCE:

reinforcing and extending the excellence of the Union's science base

European Research Council

 Frontier research by the best researchers and their teams

Marie Skłodowska-Curie Actions

 Equipping researches with new knowledge and skills through mobility and training

€ 16 bn

€ 6,6 bn

Research Infrastructures

Integrated and inter-connected world-class research infrastructures Building on the success of the European Research Council, the Marie Skłodowska-Curie Actions and the Research Infrastructures, the pillar adds more resources for projects with higher impacts.

- The projects are selected through a "bottom-up" approach, are defined and driven by researchers and networks and are evaluated on the sole criterion of excellence.
- The goal is to nurture innovation and entrepreneurship in education across Europe to provide the skills and competences needed to make Europe more competitive on a global scale.

€ 2,4 bn

European Research Council - Frontier Science

How does it support researchers?

- Long-term funding to support researchers
- Starting researchers with excellent ideas to make the transition to independence
- New ways of working in the scientific world & facilitate commercial and social innovation potential of funded research;
- Sharing experience and best practices with regional and national research funding agencies
- Raising the visibility of ERC programmes (global profile)

Funding:

- Starting Grant: up to €1.5 million. Duration: up to 5 years. 2-7 years of experience since completion of PhD.
- **Consolidator Grant:** up to €2 million. Duration: up to 5 years. 7-12 years of experience since completion of PhD.
- Advanced Grant: up to €2.5 million. Duration: up to 5 years. An excellent scientific track record of recognized achievements in the last 10 years.
- Synergy Grant: 2-4 researchers (one can be based outside Europe). Up to a maximum of €10 million for a period of 6 years. (not in 2021, only from 2022)
- Proof-of-Concept funding scheme under revision



Marie Sklodowska Curie Action

How does it support researchers?

- Mobility experiences for researchers anywhere in the world to develop their skills & career in both the academic and non-academic sector.
- Training programmes to equip researchers with a diversity of skills relevant to current and future global challenges. (research competences and transferable skills)
- Training programmes to foster excellence and spread best practices across institutions and research and innovation systems;
- Cooperation, production and diffusion of knowledge within the EU and with third countries.
- **Training programmes** supported through complementary public or private funding sources at regional, national or EU level. (EIT, Erasmus, ESF seal of excellence)
- Promoting Public Outreach

https://ec.europa.eu/research/mariecurieactions/events/msca-under-horizon-europe-information-event_en



Research Infrastructures (Part 1)

A new life-cycle of pan-European research infrastructures

What is new in those research infrastructures?

- Their preparatory and implementation phase,
- Their early-phase operation in complementarity with other funding sources
- The consolidation and optimisation of the whole ecosystem

HOW?

- By monitoring the ESFRI (European Strategy Forum for Research Infrasrtuctures) landmarks
- Facilitating service agreements, evolutions, mergers or decommissioning of pan-European research infrastructures



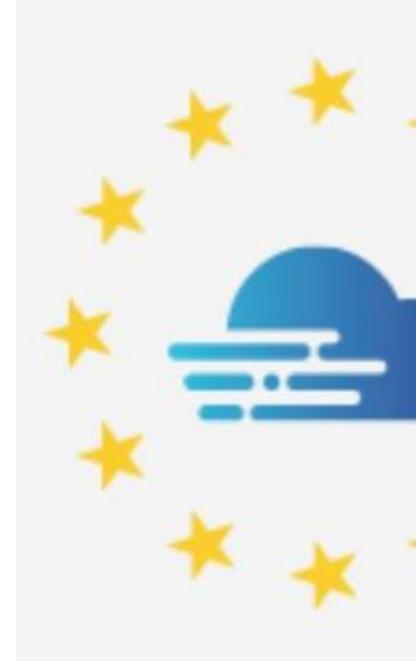
Research Infrastructures (Part 2)

A new life-cycle of pan-European research infrastructures

What does the European Open Science Cloud (EOSC) include?

- Scalability and sustainability of the access channel;
- Effective **federation** of European, national, regional and institutional resources;
- **Data inter-operability** and compliance with the FAIR principles;
- a wide user base.

The pan-European research and education network which underpins **EOSC** and **EDI** enables the delivery of **HPC/data services** in a **cloud based environment** which can hold an extreme large data sets and computational processes.





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VISIT

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Things you wished you knew about Horizon 2020

