

Horizon 2020 & Horizon Europe - Participation and opportunities

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The Research Council of Norway / NorCore

Trøndelag fylkeskommune – Næringsseksjonen

2019-04-10, Brussel





Outline

-  Kunnskapskontoret / NorCore
-  Horizon 2020
-  Horizon Europa

NORCORE

Norwegian Contact Office for Research \ Innovation \ Education



Kunnskapskontoret

Rue du Trône 98

<https://www.norcore.eu/>



Kunnskapskontoret - Målsetninger

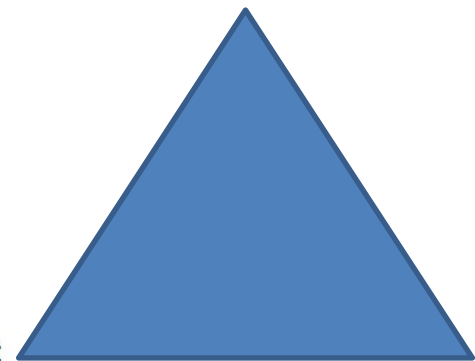
- Bedre norsk deltakelse i EUs programmer for forskning, innovasjon og utdanning
- Bedre samspill mellom norske aktører
- Støtte opp under norsk påvirkning og posisjonering
- Styrke kunnskapstriangelet



Mission of Norway
to the European Union



Diku



Næringsliv



Universiteter
Institutter

Regionkontorer



Kort om Norges forskningsråd

- Forskningsrådet er den viktigste forskningspolitiske rådgiveren for Regjeringen og departementene.
- Formidler årlig vel ni milliarder kroner til forskning og innovasjon.
- Har som mål å øke kvaliteten i norsk forskning og å fremme innovasjon og bærekraft.
- Mobiliserer til økt norsk deltakelse i internasjonal forskning og innovasjon, og stimulerer til samarbeid mellom forskingsmiljøer, næringslivet og offentlig sektor.

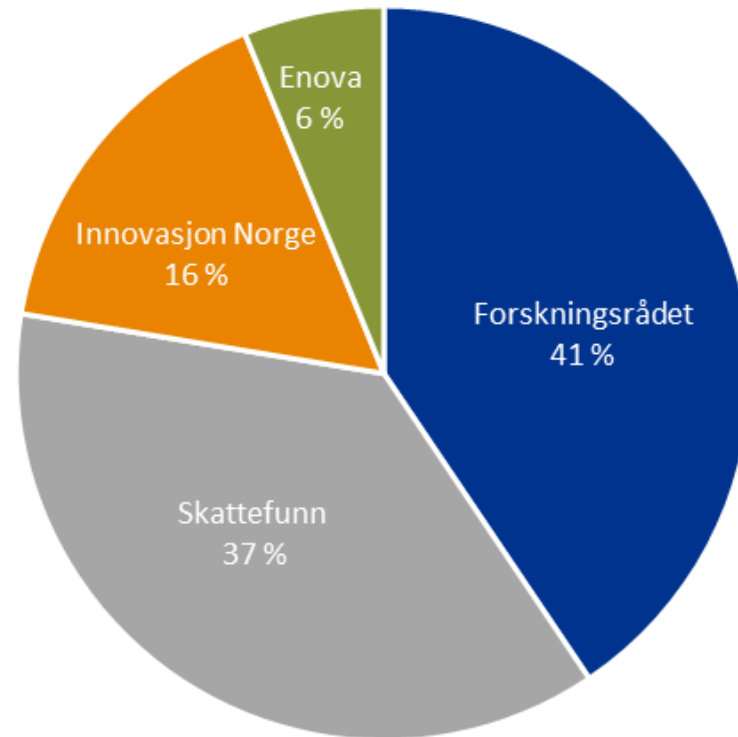


I Brussel:

- Mobilisering
- Strategisk arbeid / med- og påvirkning



Offentlige bevilgninger til innovasjon og næringsrettet FoU. 2017.



Finansiør	2016	2017
Forskningsrådet	5,0	4,6
Skattefunn	3,6	4,2
Innovasjon Norge	2,0	1,8
Enova	0,7	0,7
Totalt	11,3	11,3

A night view of Earth from space, showing the curvature of the planet and a dense field of city lights. The sky is dark with many stars. A white rectangular frame is overlaid on the image, containing the text "Horisont 2020".

Horisont 2020

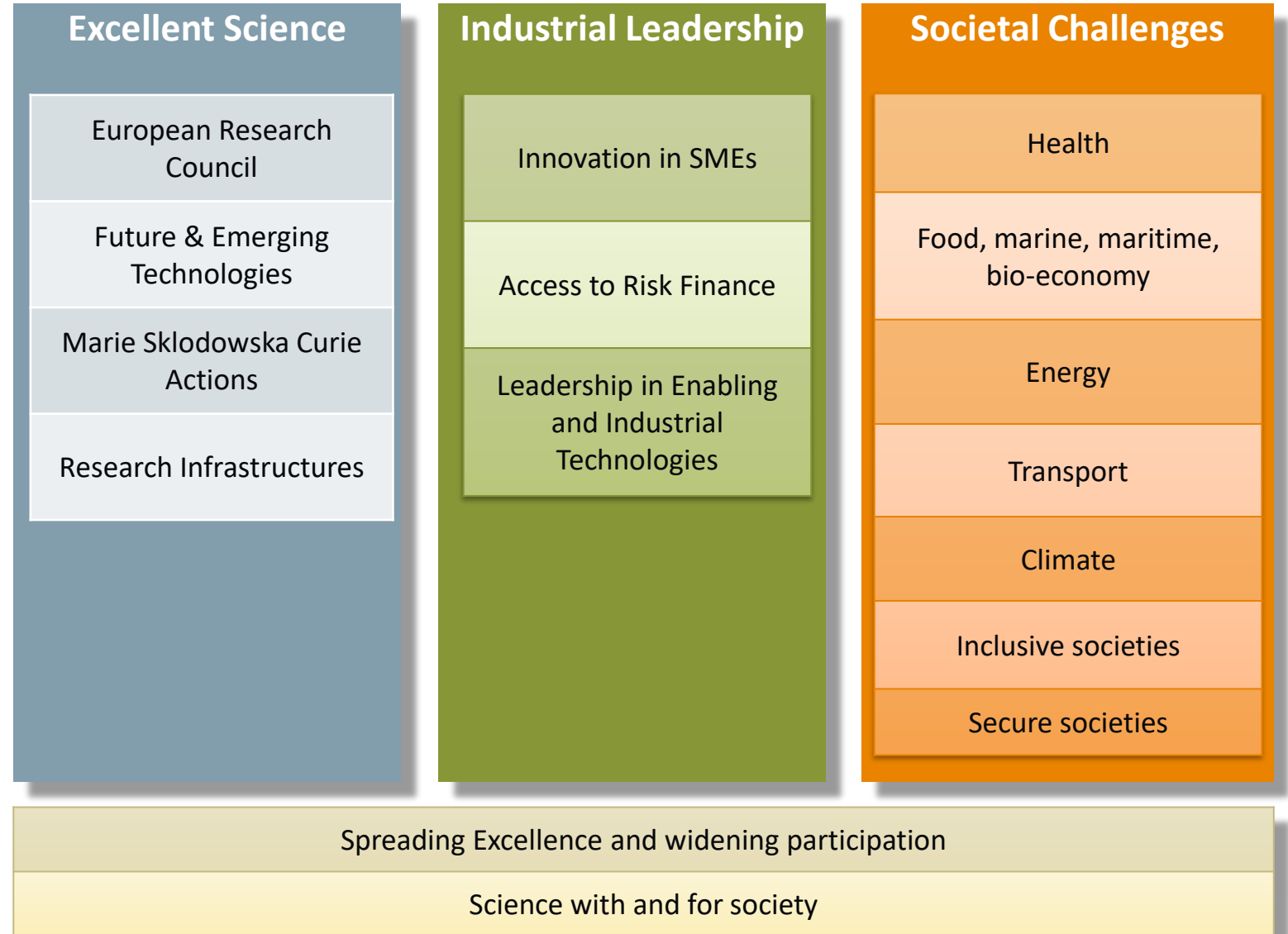


- The European Union's funding instrument for research and innovation
– The world's largest of its kind
- Contribute to innovation, sustainable growth and employment
- Duration: 2014-2020
- Budget: €74,83 billion
- **Open for all**

ec.europa.eu/research/participants/portal



Horisont 2020





Funding rates

Research and Innovation Actions RIA	100 % + 25 % flat-rate overhead
Innovation Actions IA	70 % (non-profit legal entities: 100 %) + 25 % flat-rate overhead
Coordination and support actions CSA	100 % + 25 % flat-rate overhead



Understand Horizon 2020 in less than 5 min

In Norwegian



HORISONT 2020

Forstå Horisont 2020 på fem minutter
Denne introduksjonsfilmen gir deg en innføring i hva Horisont 2020 er, hva som skal til for å få tilslag med et prosjektforslag og hva du får ut av å forske og skape innovasjon med midler fra EUs rammeprogram Horisont 2020.

Dato :19.05.2015

<http://tinyurl.com/H2020-film>

English variant from EC: <https://www.youtube.com/watch?v=CimJI88c4fE>



Norges deltakelse i tall



6,9 mrd. kr

Har Norge mottatt av
Horisont 2020-midler



2,04 %

Av de
konkurransutsatte
midlene fra EU har
gått til Norge



15,06 %

Suksessrate for
norske søknader



50 mrd. kr

Samlet verdi av
EU-prosjekter Norge
har konkurrert seg til



Horisont 2020-midler til Norge fordelt på de tre pilarene

Samfunnsutfordringer

3,5 mrd. kroner

Cirka 1 mrd. til energi og 965 mill. til mat, hav og bioøkonomi

Konkurransedyktig næringsliv

1,5 mrd. kroner

646 mill. til LEIT-ICT

Fremragende forskning

1,7 mrd. kroner

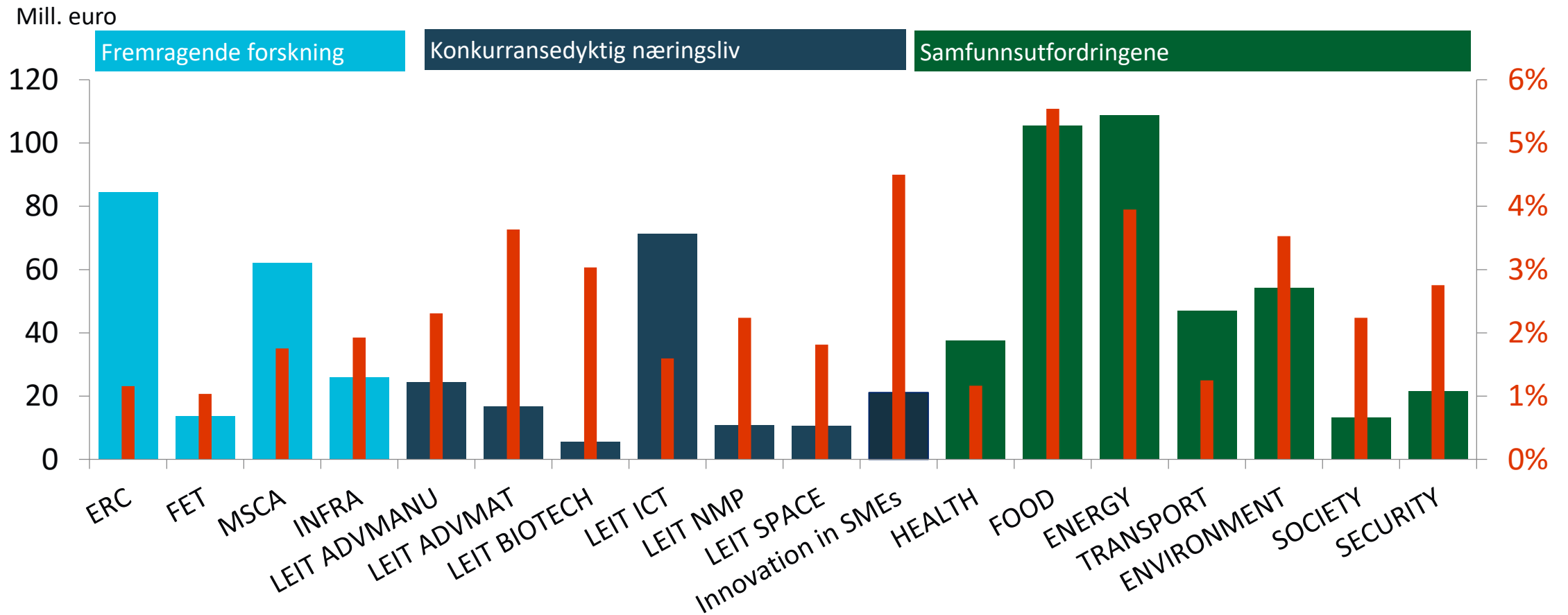
1,3 mrd. til ERC og MSCA





Beløp i innstilte søknader med norsk deltakelse

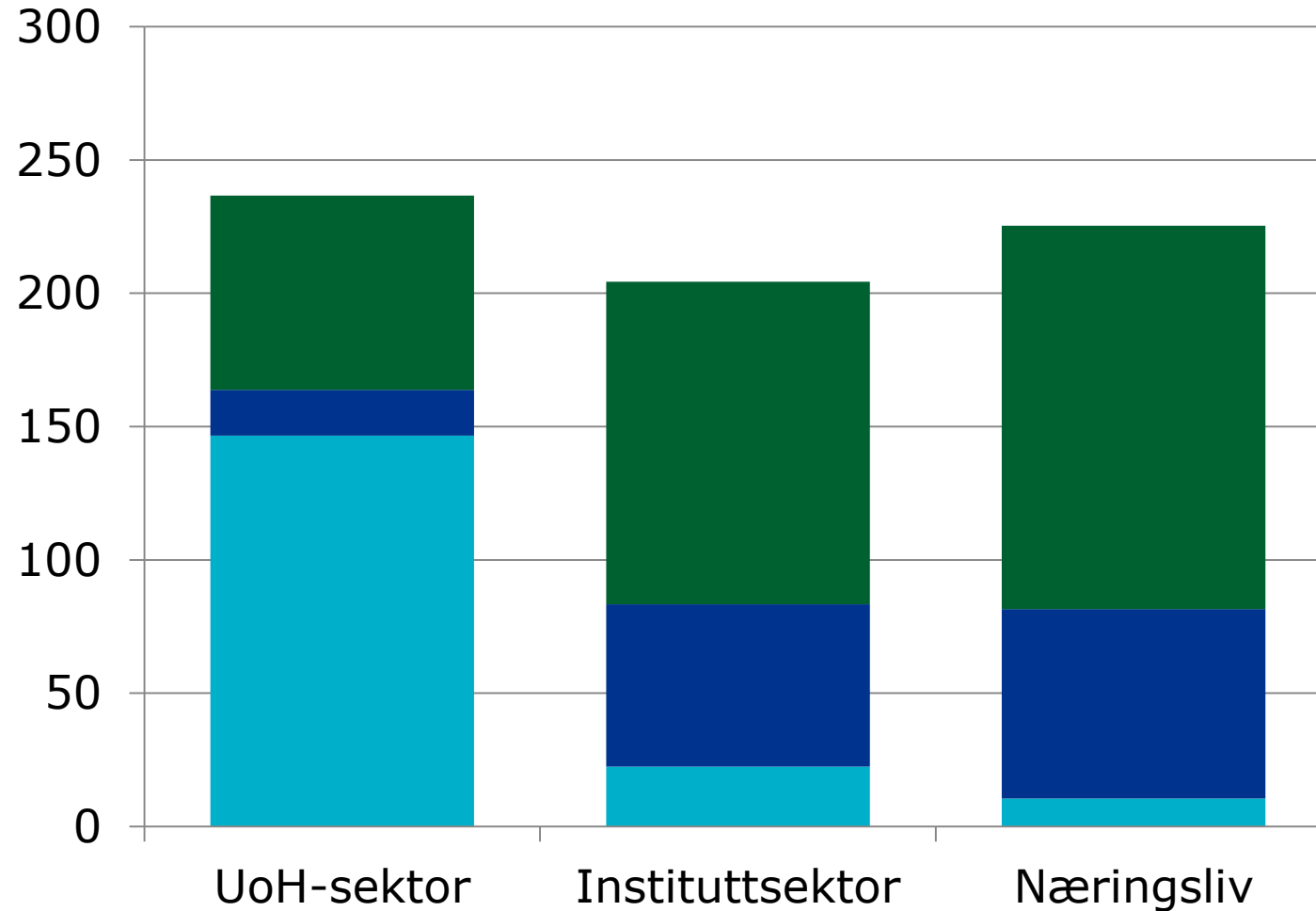
Returandel





Hvor henter norske FoU-sektorer midlene fra?

mill. euro



- Samfunnsutfordringene
- Konkurransedyktig næringsliv
- Fremragende forskning

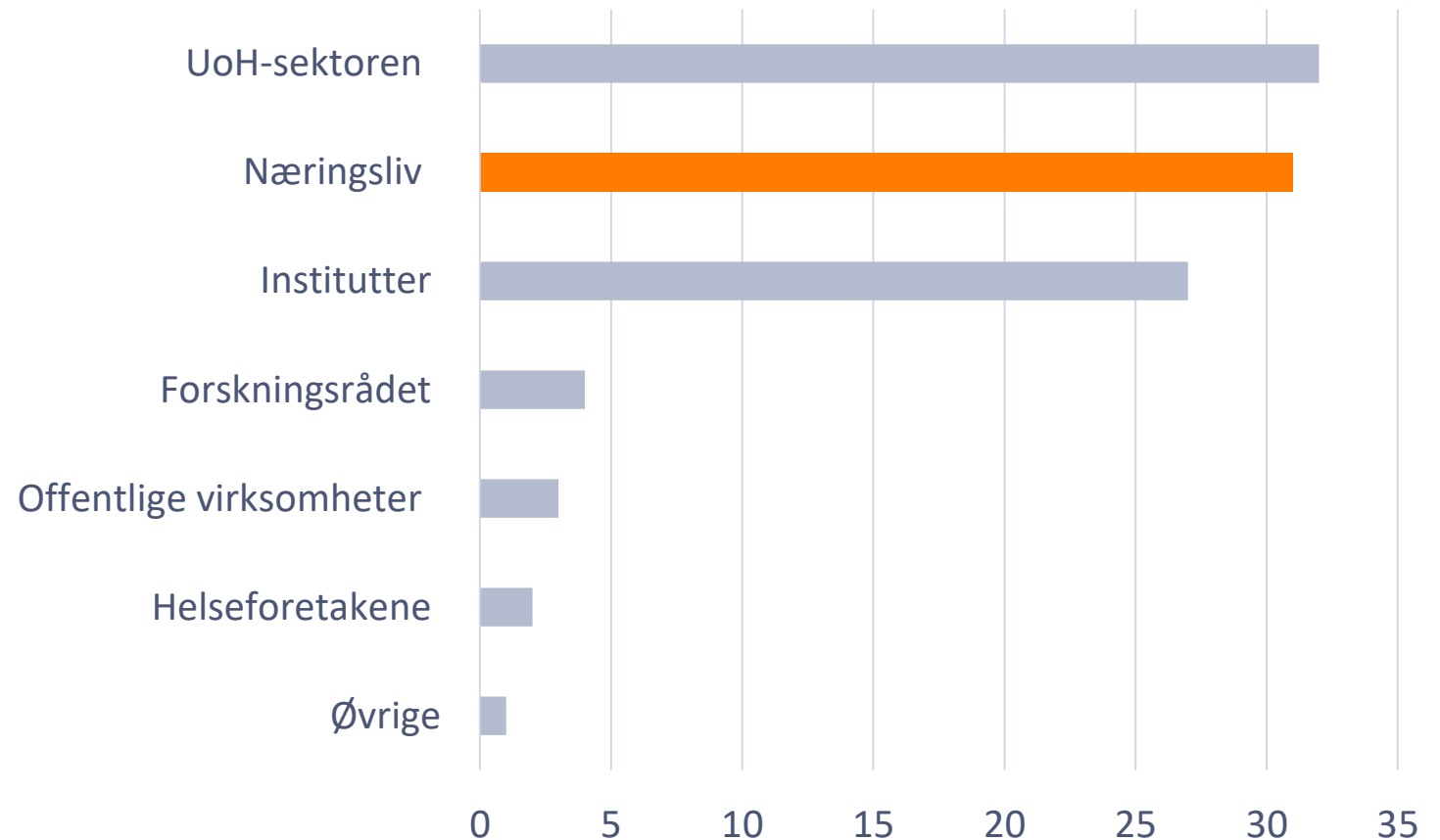


Næringslivet øker deltakelsen



Næringslivsdeltakelse er viktig for instituttsektorens suksess i samarbeidsprosjekter.

UoH-sektoren ligger stabilt på rundt 30 prosent.

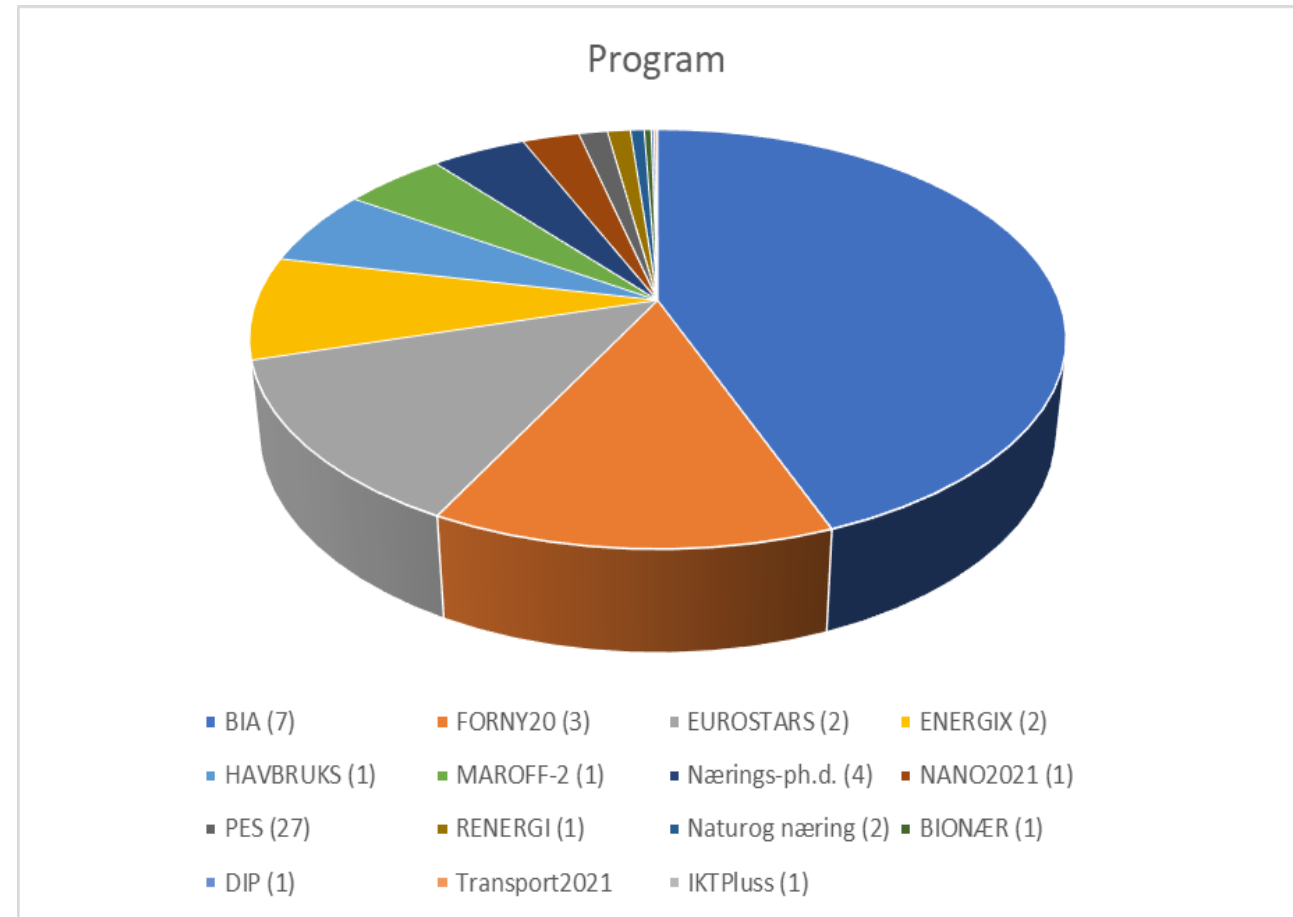




SME-instrument: Previous national support to successful companies

Ex: recent call with 8 successful companies in phase 2 and 6 in phase 1)

- NOK 122 797 719 has been allocated to 13 of the companies over the last 10 years
- The companies have got
 - Innovation Project for the Industrial Sector,
 - Commercialising R&D results (FORNY2020),
 - Industrial Ph.D. and last but not least
 - Project Establishment Support





Horizon 2020: Most successful Norwegian companies

Company	Funding [M€]
BORREGAARD AS	26,7
ARBAFLAME AS	9,7
SMART INNOVATION NORWAY AS	6,1
CESSDA ERIC	4,4
YARA INTERNATIONAL ASA	4,1
SMERUD MEDICAL RESEARCH INTERNATIONAL AS	4,1
ELKEM ASA	3,6
TELENOR ASA	3,5
HYOP AS	3,4
RESPINOR AS	3,0
REETEC AS	3,0
KONGSBERG MARITIME AS	2,9
ROLLS-ROYCE MARINE AS	2,8
ESMART SYSTEMS AS	2,7
PIQL AS	2,7
TOCIRCLE POWER SYSTEMS AS	2,5
MSG PRODUCTION AS	2,5
LYSE AS	2,5
FJELLSTRAND AS	2,4
SCHNEIDER ELECTRIC NORGE AS	2,4

Norwegian companies:

proposals: 1195

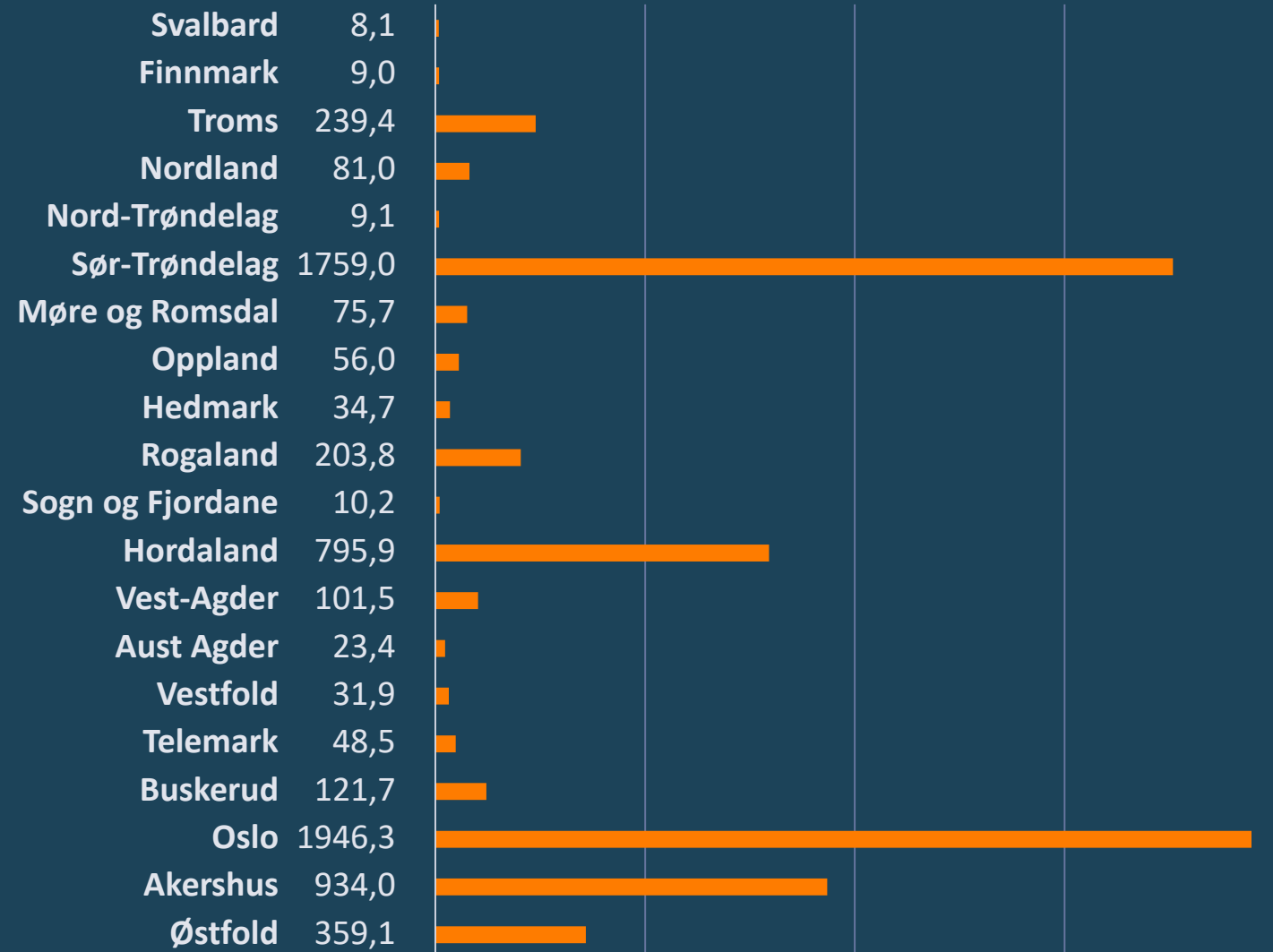
funded projects: 313

Total funding: 232,4M€

Average funding: 750k€



Fordelingen av midlene





Smarte byer



Stavangers suksessformel

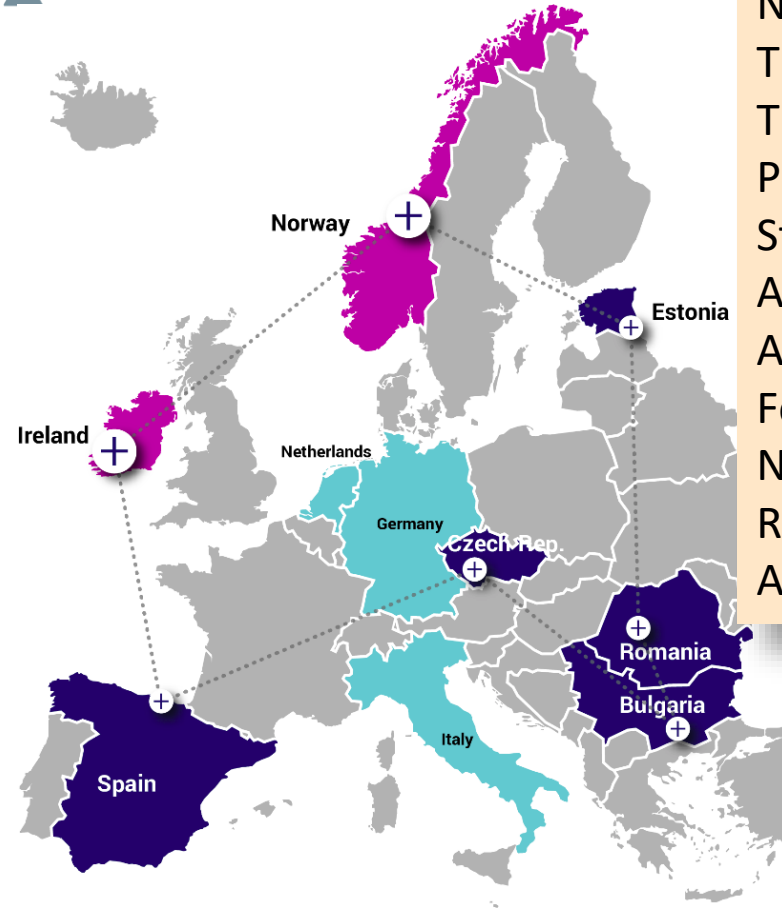
Stavanger blir ett av tre fyrtårn i EUs storsatsing for å utvikle smarte byer i Europa. Hvordan greide byen å få full klaff allerede ved første forsøk i Horisont 2020?



Partnerskapet bak søknaden fra Stavanger. Fra venstre: Monika Hermanns fra Universitetet i Stavanger, Joachim Weisser fra Rogaland fylkeskommune, Tone Grindland Gustafsson fra Greater Stavanger, Dagfinn Wåge fra Lyse energi, Gerd Seehuus fra Stavanger kommune, Mohsen Assadi fra UiS og Per Fjeld, Lyse energi. (Foto: Greater Stavanger)



NTNU
Trondheim Kommune
Trønderenergi AS
POWEL AS
Statkraft Varme AS
Avis Budget Group
ABB AS
FourC AS
NHP Eiendom AS
R. Kjeldsberg AS
AtB AS



Fyrtårnbyer: Trondheim og Limerick
Følgebyer: Sestao (Spania), Pisek (Tsjekkia), Smolyan (Bulgaria), Alba Iulia (Romania) og Vöru (Estland)

+CITYXCHANGE

Trondheim i førersetet for smartbyprosjekt med 200mill kr i EU-støtte



Rådmann Morten Wolden i Trondheim, Annemie Wyckman (NTNU) og Silja Rønningsen (Trondheim kommune). Foto: Trondheim kommune

Merverdien av deltakelse i EUs utdannings, forsknings og innovasjonsprogrammer





Støtte og veiledning



NCP - Nasjonale kontaktpunkt
Regionalansvarlige

EU-nettverk

Kobling til nasjonale programmer

<https://www.forskningsradet.no/horisont2020>



Noen stikkord for å lykkes



Kompetanse

- Hva gjør deg attraktiv på EU-arenaen
- Kunnskap, produkter, tjenester, etc.
- Synlighet

Forankring

- Ledelsesforankring
- Egen strategi og planer
- Langsiktighet
- Ressurser

Innsikt

- Planer, strategier og bakgrunnsdokumenter
- Utlysningsteksten
- Aktører, prosjekter og porteføljer

Nettverk og allianser

- Bygge og vedlikeholde
- Teknologiplattform, møteplasser, ...
- Kollegaer, «gode hjelpere»

Mulighetsrom & timing

- Identifisere, forstå, prioritere

Deltakelse

- Prosjekter, fora, etc.
- Bidra og vær synlig
- **Ekspert for Kommisjonen**

Medvirkning og påvirkning

- Forstå mulighetsrom
- Prioritering, kanaler,
- Timing
- Finn ditt ambisjonsnivå

Partnerskap

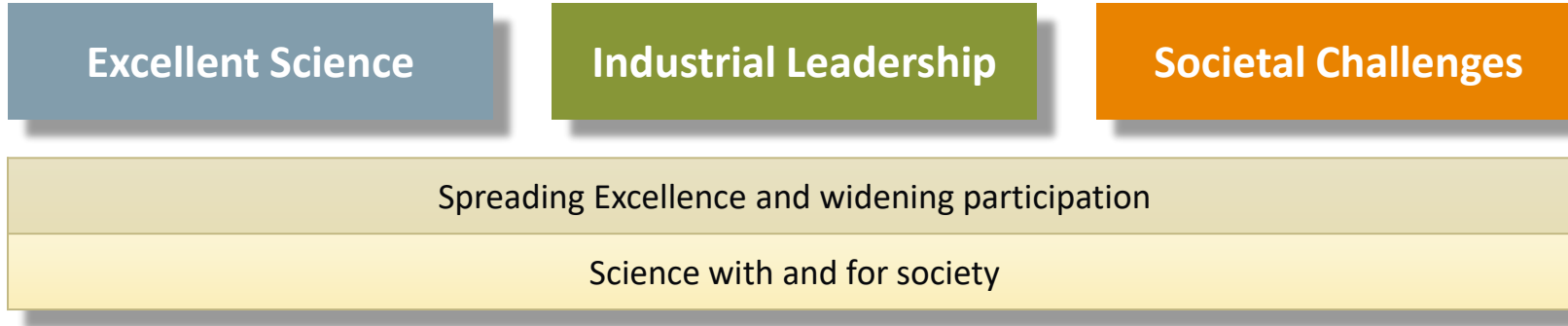
- Egen rolle
- Koordinator

Horisont 2020



Horisont Europa







Horizon Europe

Excellent Science

€25,8bn

- European Research Council (ERC)
- Marie Skłodowska-Curie Actions (MSCA)
- Research Infrastructures

Global Challenges and European Industrial Competitiveness

€57,7bn

Clusters

- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Others

- Non-nuclear direct actions of the JRC

Innovative Europe

€13,5bn

- European Innovation Council (EIC)
- European Innovation Ecosystems
- European Institute of Innovation and Technology (EIT)

28
PGA Trilogue
2019-03-20

Widening participation and strengthening the European Research Area

€2,1bn

- Widening participation and spreading excellence
- Reforming and enhancing the European R&I System

Budget: EC proposal



Pillar 2 - Clusters

PGA Trilogue
2019-03-20

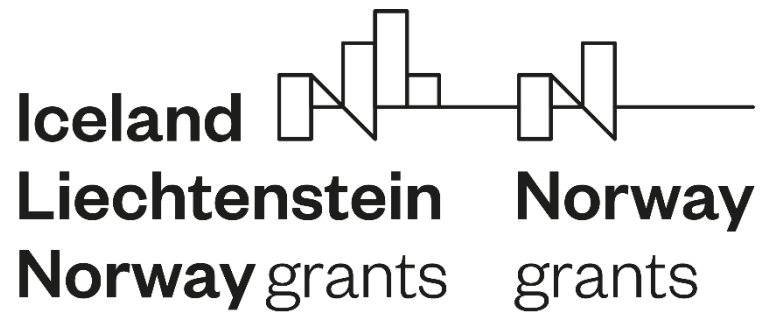
			Digital, industry and space	Climate, Energy and Mobility	
			Manufacturing Technologies	Climate Science and Solutions	
Health	Culture, Creativity and Inclusive Society		Key Digital Technologies, including quantum technologies	Energy Supply	Bioeconomy, Food, Natural Resources, Agriculture and Environment
Health throughout the Life Course	Democracy and Governance	D	Emerging enabling technologies	Energy Systems and Grids	Environmental Observation
Environmental and Social Health Determinants	Culture, cultural heritage and creativity		Advanced Materials	Buildings and Industrial Facilities in Energy Transition	Biodiversity and Natural Resources
Non-Communicable and Rare Diseases	Social and Economic Transformations		Artificial Intelligence and Robotics	Communities and Cities	Agriculture, Forestry and Rural Areas
Infectious Diseases, including poverty-related and neglected diseases			Next Generation Internet	Industrial Competitiveness in Transport	Seas, Oceans and Inland Waters
Tools, Technologies and Digital Solutions for Health and Care, including personalised medicine			Advanced Computing and Big Data	Clean Transport and Mobility	Food systems
Health Care Systems			Circular Industries	Smart Mobility	o-based Innovation Systems in the EU Bioeconomy
			Low-Carbon and Clean Industries	Energy Storage	Circular Systems
			Space, including Earth Observations		



THE EIC: EU LEADERSHIP IN THE NEXT WAVE OF INNOVATION

				
more innovations that create the new markets of the future	scaled-up companies and higher SME growth	attract more private-sector investors to innovation	more entrepreneurship and risk-taking	more accessible and user friendly support for innovation

https://ec.europa.eu/research/eic/pdf/ec_eic_factsheet_032019.pdf





A renewed European Agenda for Research and Innovation
- Europe's chance to shape its future
COM(2018)306, 2018-05-15



Brussels, 15.5.2018
COM(2018) 306 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A renewed European Agenda for Research and Innovation - Europe's chance to shape its future

The European Commission's contribution to the Informal EU Leaders' meeting on innovation in Sofia on 16 May 2018





Horizon Europe - Missions

Mission Areas

Agreement European Parliament & Council:

1. Adaptation to Climate Change, including Societal Transformation
2. Cancer
3. Healthy Oceans, Seas, Coastal and Inland Waters
4. Climate-Neutral and Smart Cities
5. Soil Health and Food



Mariana MAZZUCATO, Feb 2018



Political Agenda Setting and Civic Engagement



Clear Targeted Missions



Portfolio of projects and bottom-up experimentation



How missions could look like

Grand Challenge

Mission

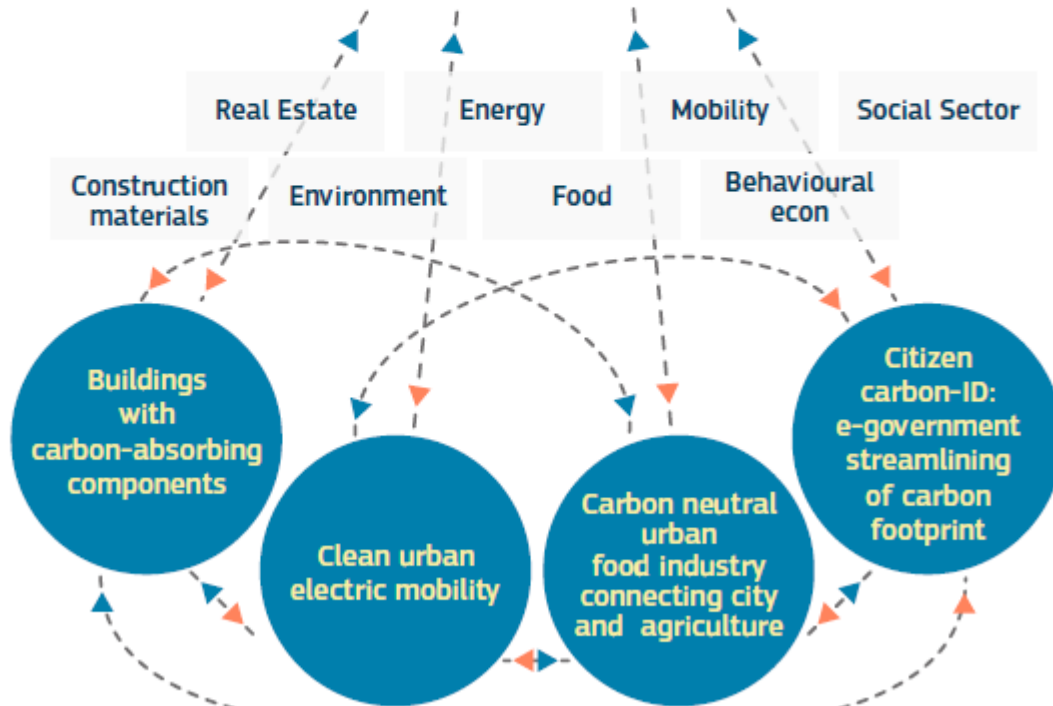
Areas of interest & cross-sector

R&I Projects

CLIMATE CHANGE

100 CARBON NEUTRAL CITIES BY 2030

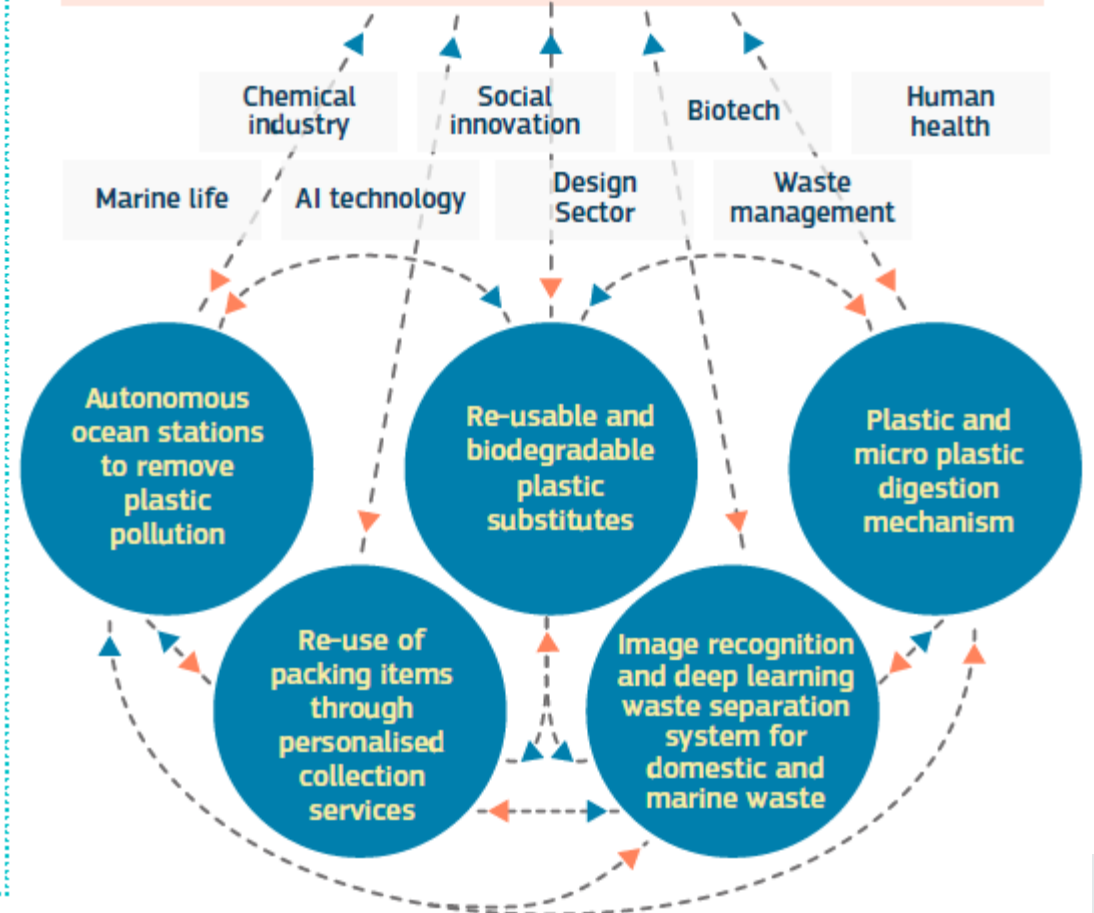
Reach net zero greenhouse gas emissions balance of 100 European cities by 2030



CLEAN OCEANS

A PLASTIC-FREE OCEAN

Reduction of 90% of plastics entering the marine environment and collection of more than half of plastics present in our oceans, seas and coastal areas by 2025





Synergies with other programmes

- **Connecting Europe Facility (CEF)**
 - eg. large-scale roll-out and deployment of innovative new technologies and solutions in the fields of transport, energy and digital physical infrastructures
 - **Digital Europe Programme (DEP)**
 - eg. high Performance Computing, AI, Cybersecurity. Uptake and roll-out
 - **InvestEU Fund**
 - **Innovation Fund under the Emission Trading Scheme (the 'Innovation Fund')**
 - REN, CCS, energy storage
 - **Programme for Environment and Climate Action (LIFE)**
 - Demo, implementation, deployment
 - **ERASMUS**
 - **European Defence Fund**
 - **European Regional Development Fund (ERDF)**
 - eg. Smart specialisation
- European Space Programme
 - Euratom
 - European Agricultural Guarantee Fund and the European Agricultural Fund for Rural Development (Common Agricultural Policy-CAP)
 - European Maritime and Fisheries Fund (EMFF)
 - European Social Fund Plus (ESF+)
 - Single Market Programme
 - Neighbourhood, Development and International Cooperation Instrument (the 'External Instrument')



Horizon Europe – **indicative** timeline

- *Mar/Apr '19*: Expression of interest Enhanced EIC pilot advisory board (deadline 10 May)
Expression of Interest Mission Boards
- *Mar/Apr*: Approval of HEU deal (except MFF part)
- *May/Jun '19*: Open consultation on the draft Strategic Plan for Horizon Europe
- *24-26 Sep '19*: European R&I Days Brussels
- *Q3 '20*: Draft Horizon Europe Work Programme adopted by the Programme Committee
- *1 Jan '21*: Horizon Europe Framework Programme launched.

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Takk for oppmerksomheten!

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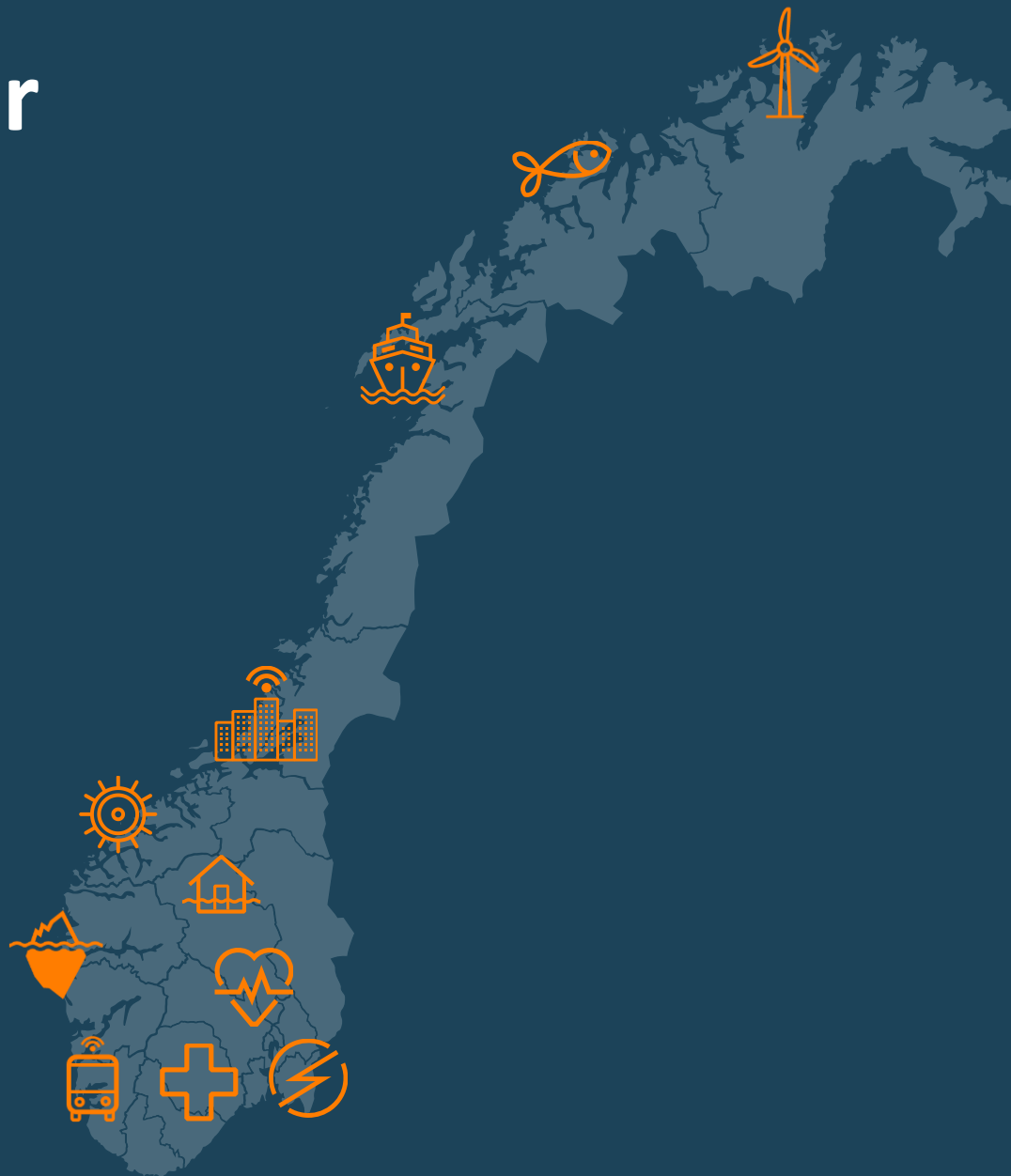
What is the SME Instrument?

Business innovation support from idea to market





Prosjekter over hele landet





Horizon Europe

EUs 9th Framework Programme for Research and Innovation

- 2021 – 2027
- Budget: Part of MFF negotiation
 - €94,1bn (EC proposal)
 - €120bn (Parliament proposal)
- June 2018: EC proposal
- 20 March 2019: Partial political agreement



20 March 2019: partial agreement on Horizon Europe

EC press release: http://europa.eu/rapid/press-release_IP-19-1676_en.htm

Science Business article: <https://sciencebusiness.net/framework-programmes/news/eu-council-and-parliament-strike-deal-horizon-research-programme>



PATHFINDER: Researchers, technologists

- ▶ For radically new technologies emerging from collaborative research
- ▶ Grant funding of up to €4 million (100% of costs)
- ▶ From proof of concept to demonstration of commercial viability
- ▶ Access to EIC coaching and mentoring services
- ▶ Majority of funding is open (no predefined themes). Strategic breakthrough technologies are also supported (challenge-based)



ACCELERATOR: Start-ups, SMEs and entrepreneurs

- ▶ For development and scaling up of high risk innovations by startups and SMEs
- ▶ Grant funding of up to €2.5 million (70% of costs)
- ▶ Option of equity investment of up to €15 million
- ▶ Access to EIC coaching and mentoring services, pitches with corporates, VCs, etc
- ▶ All funding is open (no predefined thematic areas)

...

...

**3rd
step**

Grant Only

Applicants will be informed about the results of the assessment by independent experts within five months of closure of the call, and successful applicants will receive the grant three months later.

Grant Only



Applicants will be informed about the result within one month and receive grants within five months.

Grant + Equity



Applicants will be informed about the result within one month and receive grants within five months. For the equity, additional due diligence will be undertaken before receiving the investment.



Horizon Europe

Pillar 2 – Clusters and Areas of Intervention

PGA Trilogue
2019-03-20

Example Cluster 4-6:

4. Digital, industry and space	5. Climate, Energy and Mobility	6. Bioeconomy, Food, Natural Resources, Agriculture and Environment
<ul style="list-style-type: none">• Manufacturing Technologies• Key Digital Technologies, including quantum technologies• Emerging enabling technologies• Advanced Materials• Artificial Intelligence and Robotics• Next Generation Internet• Advanced Computing and Big Data• Circular Industries• Low-Carbon and Clean Industries• Space, including Earth Observations	<ul style="list-style-type: none">• Climate Science and Solutions• Energy Supply• Energy Systems and Grids• Buildings and Industrial Facilities in Energy Transition• Communities and Cities• Industrial Competitiveness in Transport• Clean Transport and Mobility• Smart Mobility• Energy Storage	<ul style="list-style-type: none">• Environmental Observation• Biodiversity and Natural Resources• Agriculture, Forestry and Rural Areas• Seas, Oceans and Inland Waters• Food systems• Bio-based Innovation Systems in the EU Bioeconomy• Circular Systems