



MISSIONS

Mission-Oriented Research and Innovation in the European Union

A problem-solving approach to fuel innovation-led growth

by Mariana MAZZUCATO

written at the request of European Commissioner for Science,
Research and Innovation Carlos Moedas



- Prof. Mariana Mazzucato presented her report on Missions on 22/2/2018
- The report describes key criteria to select missions and important factors for implementation
- Available online:
<https://publications.europa.eu/s/fDzP>

INTRODUCTION

- Why Europe needs Missions
Innovation and economic growth has a rate and *direction*.
- Europe's Mission Potential
Solving complex societal challenges through openness, collaboration & competitiveness, using dynamic co-investment along the entire innovation chain.
- Change begins at home
New way of connecting research, science and innovation funded under H2020. Linking missions to European Research Council and European Innovation Council.

INSPIRATION FOR EU R&I MISSIONS

The Apollo 'Man on the Moon' mission

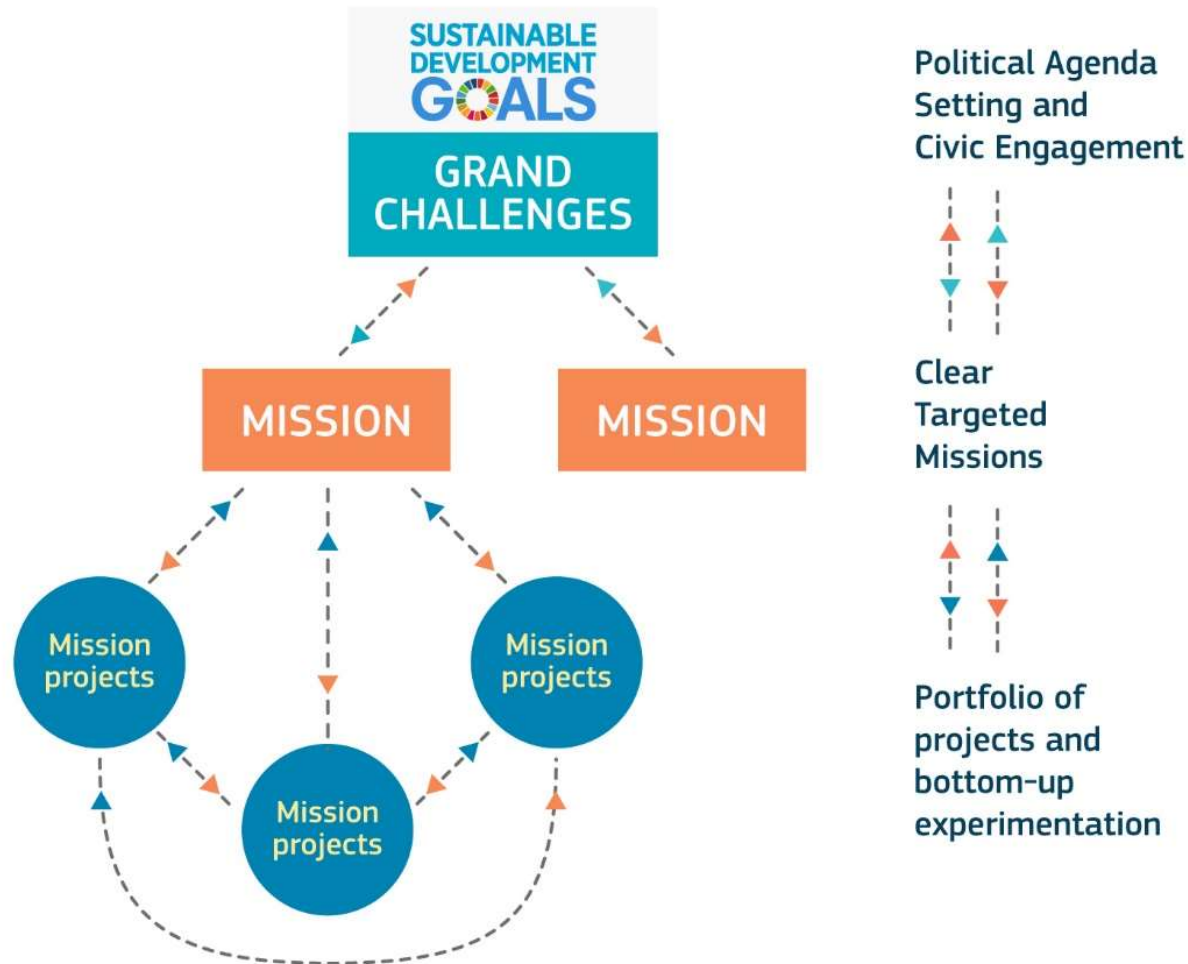
Energiewende in Germany

FET Flagships

MISSIONS FOR EU RESEARCH AND INNOVATION

- Societal Relevance
 - EU added value - Improve society's welfare
- No 'One Size Fits All'
 - Flexibility is needed in how a mission is defined.
- Granularity: between a project and a challenge
- Fostering Experimentation
 - Mission success depends on bottom-up processes that nurture innovation.
- New conversations between fundamental and applied research

The '**granularity**' of European research and innovation missions sits between broad challenges and concrete projects. Missions set clear and ambitious objectives that can only be achieved by a portfolio of research and innovation projects and supportive measures.



The movement from broad challenges to specific missions

FIVE KEY CRITERIA FOR SELECTING MISSIONS

1. Bold, inspirational with wide societal relevance
2. A clear direction: targeted, measurable and time-bound
3. Ambitious but realistic research and innovation actions
4. Cross-disciplinary, cross-sectoral and cross-actor innovation
5. Multiple, bottom-up solutions

KEY FACTORS FOR IMPLEMENTING MISSIONS AT EU-LEVEL

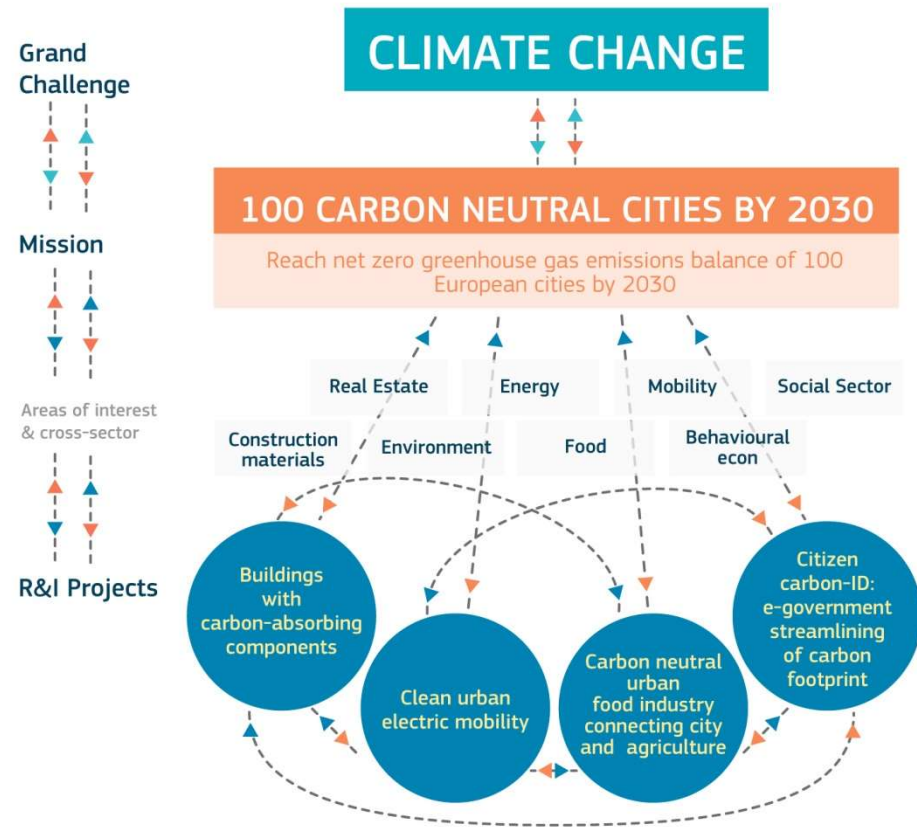
- Engagement of diverse national and regional stakeholders
- Measurement and impact by goals and milestones
- A portfolio of instruments to foster bottom-up solutions
- Flexibility, pro-active management and building in-house capabilities

PUBLIC ENGAGEMENT

- Public participation in the selection process of missions
- Public inclusion in the implementation
- Citizens as active participants in missions

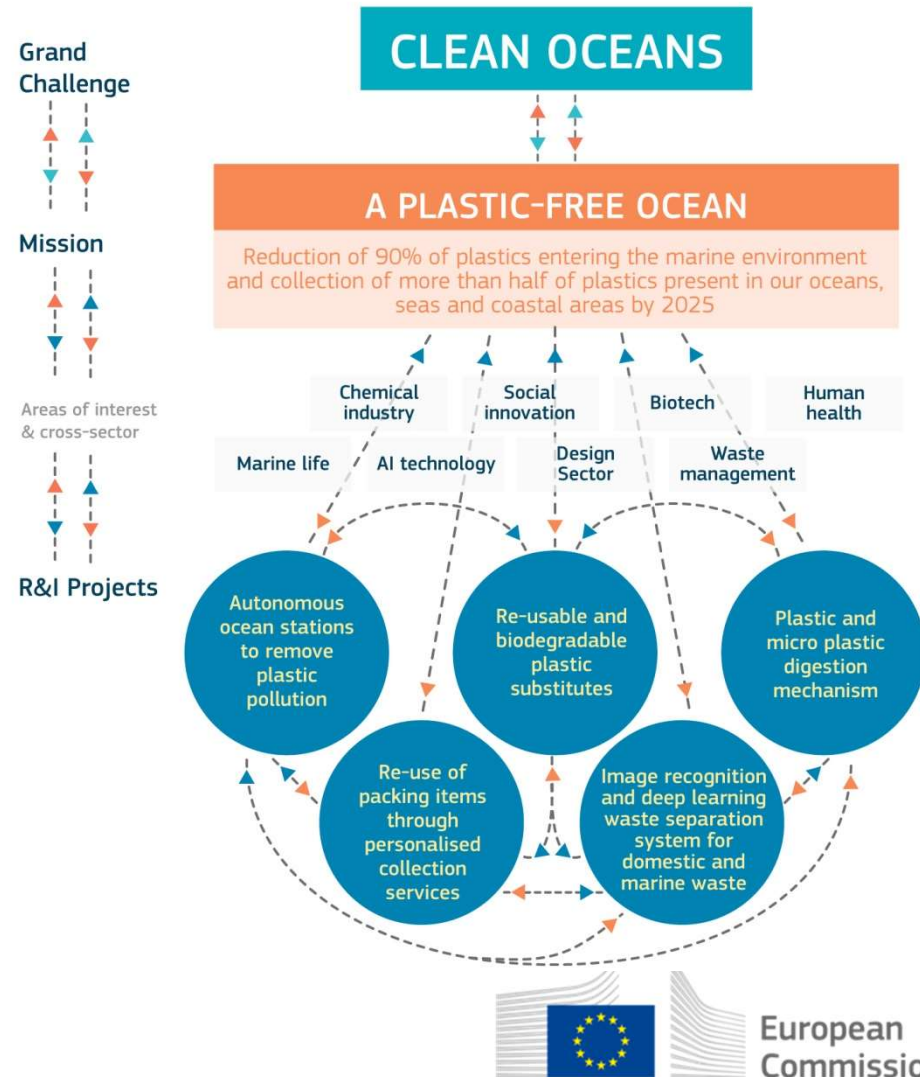
FUTURE EXAMPLE: 100 Carbon Neutral Cities by 2030

1. Impact 40% of European citizens
2. 100 cities by 2030
3. R&I in Construction materials – mobility – citizen carbon-ID
4. Urban planning- energy efficiency – mobility-behavioural economics
5. Simultaneous projects ->



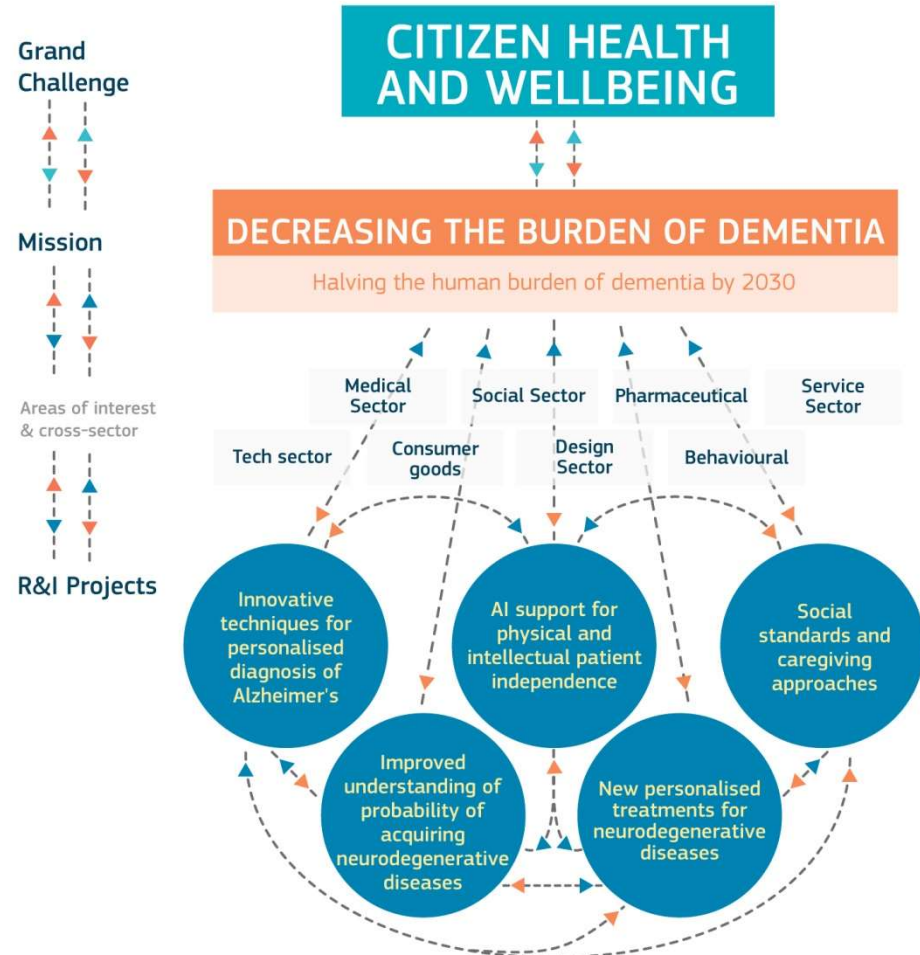
FUTURE EXAMPLE: A Plastic-free Ocean

1. Solve 25 mil tons of European plastic waste
2. Stop 7.2 mil tons and collect 2 mil tons of plastic by 2025
3. R&I in plastic chemistry-packaging – collection stations
4. Chemical – biotech – marine life – waste
5. Simultaneous projects ->



FUTURE EXAMPLE: Decreasing the burden of Dementia

1. Currently 10.5 mil Europeans affected
2. Reduce by 50% the progression of the disease by 2030
3. R&I on brain-science – treatments – artificial intelligence
4. Medical – Tech – Social – Design
5. Simultaneous projects ->



Summary of the call for Feedback on missions on the basis of the report will be made available on the Missions website:

<https://ec.europa.eu/info/node/71886/>



Full report available online

Prof. Mariana Mazzucato - Mission-Oriented Research and
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