



MIBE 2015 – Overview of H2020

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What is Horizon 2020?

- The biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020)
- Emphasis on excellent science, industrial leadership and tackling societal challenges
- The goal is to ensure Europe
 - produces world-class science,
 - removes barriers to innovation
 - makes it easier for the public and private sectors to work together in delivering innovation.



The Three Pillars of Horizon 2020

<i>Excellent Science</i>	<i>Industrial Leadership</i>	<i>Societal Challenges</i>
<ul style="list-style-type: none">• <i>European Research Council</i>• <i>Future and Emerging Technologies</i>• <i>Marie Curie actions</i>• <i>Research Infrastructures</i>	<ul style="list-style-type: none">• <i>Leadership in Enabling and Industrial Technologies</i>• <i>Access to risk finance</i>• <i>Innovation in SMEs</i>	<ul style="list-style-type: none">• <i>Health, demographic change and wellbeing</i>• <i>Food security, sustainable agriculture, marine and maritime research & the bio economy</i>• <i>Secure, clean and efficient energy</i>• <i>Smart, green and integrated transport</i>• <i>Climate action, resource efficiency and raw materials</i>• <i>Inclusive societies</i>• <i>Secure societies</i>



Transport main challenges

- GHG emissions – climate + health impacts
- Oil dependency - volatile oil prices
- Congestion – liveability of cities
- Infrastructure capacity vs mobility demand
- Urbanisation – role of public transport
- Demographic trends – ageing populations
- Global competition



Transport policy goals: efficiency and sustainability

- Resource efficiency vs. climate change and oil dependency
 - Transport accounts for 32% of all energy consumption
 - Boost alternative fuels and infrastructure
- Curb noxious emissions, improve air quality
 - 24% of CO₂, 20% of GHG come from transport
 - 400 000 premature deaths in EU, 1/5 due to transport
 - Achieve the 2030 energy-climate targets: GHG -40%, 27% renewables, 27% energy savings
- Network capacity and modal shift vs saturation and congestion
 - Congestion costs: 1 to 2 % of GDP
 - 30% of road freight > 300 km moving to rail/water by 2030
- Smart solutions for safety and security
- Fierce international competition Expanding markets but shrinking market shares
 - Innovate to preserve market-shares and jobs



Horizon 2020 - Transport

Objectives of Societal Challenge 4 'Smart, green and integrated Transport':

Achieving a European transport system that is

- resilient
- resource-efficient
- climate and environmentally friendly
- safe
- seamless
- competitive

...and that benefits citizens, economy and society



Transport challenge budget

- 6339 M € for 7 years 2014-2020
- 50/50 JTI/collaborative calls
 - Clean Sky
 - SESAR
 - Shift2Rail
 - Fuel Cells & Hydrogen (contribution)
- 938 M € for Work Programme 2016-17





Transport Work programme 2016-2017 What's new?

- New R&I area on Safety
- More emphasis on socio-economic aspects, behavioural research and forward-looking activities
- International cooperation in many selected topics (e.g.: US, China, Brazil, Africa)
- New approach for the two-stage procedure: “GO” proposals up to 3 times the budget available
- Pilot on Open Research Data to improve and maximise access to and re-use of research data generated by projects: voluntary basis
- 1st Stage proposal: 10 pages limit



Call "Mobility for Growth"

Objectives:

- Reconcile competitiveness and sustainability, improved mobility and economic impact
- Boost interconnection of infrastructure, transport means, travellers, goods
- Optimise door-to-door mobility, increase safety and resilience, reduce environmental impact and operational costs
- Make equipments and systems smarter, cleaner, quieter, more efficient, less dependent on fossil fuels
- Focus on aviation, waterborne, cross-modal aspects



Call "Mobility for Growth"

- Indicative budget: EUR 434 mio (210 mio in 2016)
 - 8 technical areas and 36 topics addressing...
- Cross-cutting issues: 8) Socio-economic and behavioural research and forward-looking activities for policy making
- Mode-specific challenges: 1) Aviation; 2) Waterborne
- Cross-modal / transport integration challenges: 3) Safety; 4) Urban; 5) Logistics; 6) ITS; 7) Infrastructure
- Deadlines 2016:
 - 20 January 2016 (1st stage proposals)
 - 26 January 2016 (single stage proposals)
 - 29 September 2016 (2nd stage proposals)



Waterborne



Context

- Europe is a world leader in in design, production and operation of waterborne assets, but faces a difficult market with fierce global competition.
- Need a modern, sustainable, resource-efficient, interconnected, safe, secure and resilient waterborne transport system.
- In 2016, tangible benefits through new concepts and materials.
- Waterborne also within the Blue Growth call



Waterborne

MG-2.2-2016	Development, production and use of high performance and lightweight materials for vessels and equipment (IA)	€38m
MG-2.3-2016	New and improved transport concepts in waterborne transport (RIA)	
MG-2.1-2017	Innovations for energy efficiency and emission control in waterborne transport (IA)	€40m
MG-2.4-2017	Complex and value-added specialised vessels (IA)	



Safety

Context

- Safety improved across all modes over last 10 years
- EU targets for transport safety: halving road casualties by 2020, towards zero fatalities by 2050
- Aim: reducing accident rates, fatalities and injuries in each mode
- Increasing knowledge and awareness, developing technologies, products, services, solutions

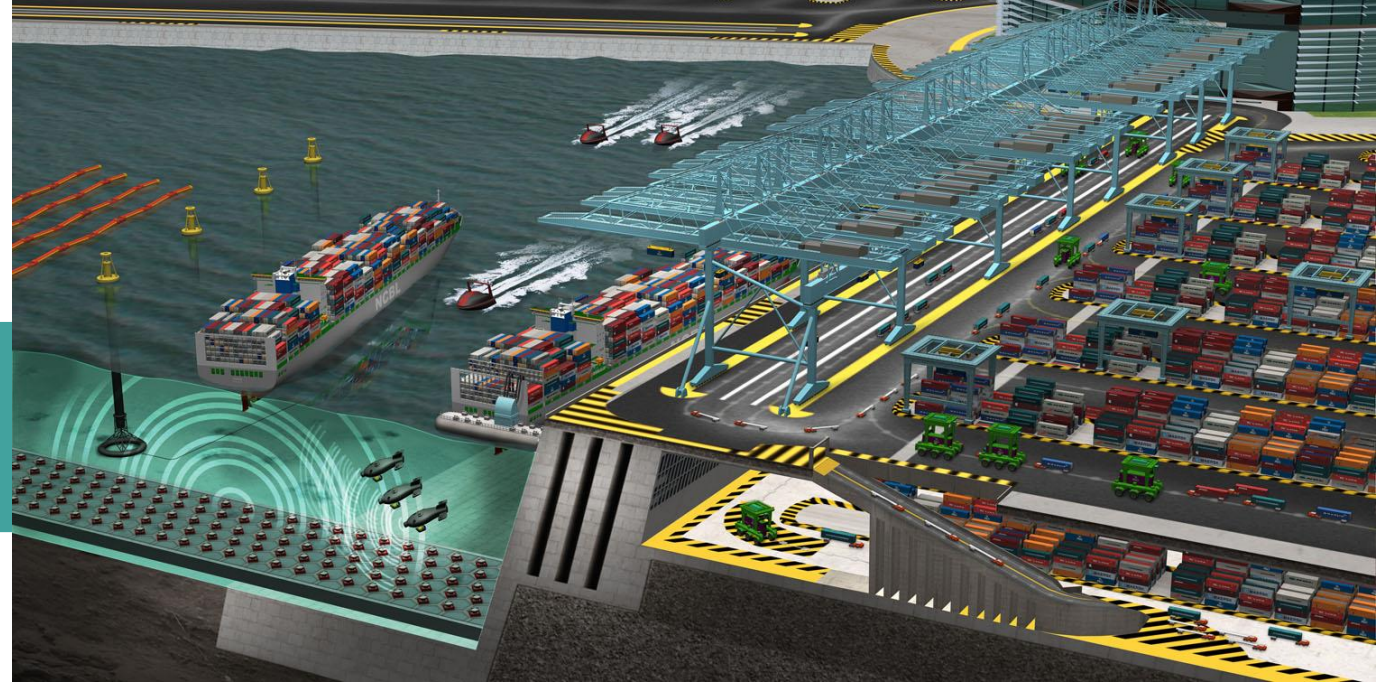


Safety

MG-3.1-2016	Addressing aviation in safety challenges (RIA)	€15m
MG-3.2-2017	Protection of all road users in crashes (RIA)	€14m
MG-3.3-2016	Safer waterborne transport and maritime operations (RIA)	€22m
MG-3.5-2016	Behavioural aspects for safer transport	
MG-3.4-2016	Transport infrastructure innovation to increase the transport systems safety at modal and intermodal level (including nodes and interchanges) (RIA)	€12m
MG-3.6-2016	Euro-African initiative on road safety and traffic management (CSA)	€3m



Infrastructure



Context

- Growing need to make infrastructure more resilient, to keep pace with growing mobility needs and extreme events
- Coping with declining resources to maintain and upgrade transport infrastructure
- Challenge: identify innovative solutions to increase efficiency and robustness of transport infrastructure



Infrastructure

MG-7.1-2017	Resilience to extreme (natural and man-made) events (RIA)	€ 37m
MG-7.2-2017	Optimisation of transport infrastructure including terminals (RIA)	
MG-7.3-2016	The Port of the future (RIA) CSA →	

€1m



Food Security, Sustainable Agriculture, Marine and Maritime Research & the Bio-Economy

- Sustainable Food Security – Resilient and resource-efficient value
- Blue Growth - Demonstrating an ocean of opportunities
- Rural Renaissance - Fostering innovation and business opportunities
- Bio-based innovation for sustainable goods and services - Supporting the development of a European Bio-economy





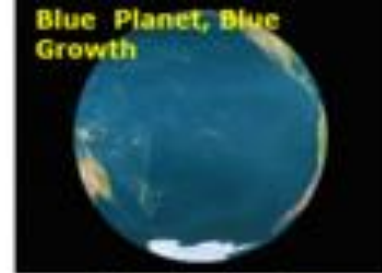
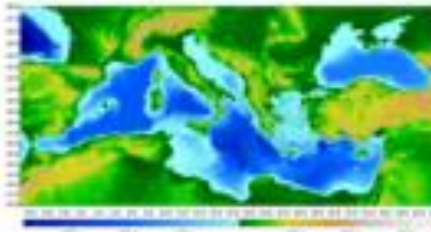
Blue Growth Focus Area



Offshore



The BLUEMED Initiative



Cleaning the Sea





Blue Growth Focus Area – contribution from other SCs



TOTAL 2016: 148,5 M€; 9 topics supported by 4 Horizon 2020 Challenges



Boosting innovation for emerging Blue Growth activities

BG-1-2016	Large scale biomass integrated biorefineries (IA)	€22m
BG-2-2016/2017	High value-added specialised vessel concepts enabling more efficient servicing of emerging coastal and offshore activities (IA)	€15m
BG-3-2016	Multi-use of oceans marine space, offshore and near-shore: compatibility, regulations, environmental and legal issues (CSA)	€2m
BG-4-2017	Multi-use of oceans marine space, offshore and near-shore: enabling technologies (IA)	€8m
BG-5-2016	ERANET Cofund on marine technologies	€10m



Any questions?

- Parallel sessions tomorrow for detailed discussion of specific topics

- More information:

<http://ec.europa.eu/programmes/horizon2020/>

<http://ec.europa.eu/research/participants/portal>