Ministry of Higher Education and Science

Danish Agency for Science, Technology and Innovation

Horizon 2020

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Horizon 2020

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.

Horizon 2020: structure and budget

EXCELLENT SCIENCE (€ 24,4 mia.)

- European Research Council
- Future and Emerging Technologies
- Marie Skłodowska-Curie Actions
- Research Infrastructure

INDUSTRIAL LEADERSHIP (€ 17 mia.)

- Leadership in Enabling and Industrial Technologies
- Access to risk finance
- Innovation in SMEs

SOCIETAL CHALLENGES (€ 29,7 mia.)

- Health, demographic change and well-being
- Food security, sustainable agriculture…
- Secure, clean and efficient energy
- Smart, green and integrated transport — € 6,3 bio.
- Climate action, ressource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure societies

Widening participation;
Science with and for Society;
Joint Research Centre;
European Institute of Innovation and Technology

Smart, green and integrated transport

Aims to boost the competitiveness of the European transport industries and achieve a European transport system that is resource-efficient, climate-and-environmentally-friendly, safe and seamless for the benefit of all citizens, the economy and society.

- 2-year work programmes with a number of calls and topics.

EN

HORIZON 2020
WORK PROGRAMME 2014 – 2015

11. Smart, green and integrated transport
Revised

This Work Programme was adopted on 10 December 2013. The parts that relate to 2015 (topics, dates, budget) have, with this revised version, been updated. The changes relating to this revised part are explained on the Participant Portal.

(European Commission Decision C(2014)4995 of 22 July 2014)

Work programmes:
http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-work-programmes-2014-15-main-wp

Calls and topics

2014 - 2015

1. Mobility for Growth

- Aviation: 8 topics
- Rail: 3 topics
- Road: 6 topics
- **Waterborne: 4 topics**
- Urban mobility: 5 topics
- Logistics: 3 topics
- Intelligent transport systems: 2 topics
- Infrastructure: 4 topics
- Socio-economic and behavioural research: 7 topics

42 topics

***2. Green vehicles*: 8 topics**

***3. Small Business Innovation for Transport*: 2 topics**

Topic structure

HORIZON 2020 – WORK PROGRAMME 2014-2015

Smart, green and integrated transport

MG.4.1-2014. Towards the energy efficient and very-low emission vessel

Specific challenge: The challenge is to support developments that make new and existing vessels used in maritime operations (including leisure) and in inland navigation significantly more efficient and less polluting through solutions addressing four ship sub-systems: engine, pollution abatement systems, propulsion, energy sources and management including the efficient operation of on-board systems.

Scope: In order to meet this challenge, proposals should address one or several of the following aspects:

- Optimisation of conventional ship engines, including fuel flexibility, new materials, lifetime performance and near zero emissions engines.
- Development of low-maintenance, affordable off-the-shelf retrofit solutions for emission reductions of existing engines.
- Development of Liquified Natural Gas/dual fuel powered engines for small and mid-size ships, including the specific aspects of retrofitting, fuel supply and storage, safety (on-board and on-shore) and classification, and solutions to address the risks of methane slip.
- Design and demonstration of new and improved propulsion means and vessel configurations that include the entire drive train and the propeller and hull optimisation for vessels, including applied research in Computational Fluid Dynamics (CFD).
- Use of new energy sources including renewables, alternative fuels, hybrid and electric solutions with the aim to demonstrate the feasibility of the zero or near-zero emissions vessel.

Research and innovation efforts should enable pilot applications for new engines, new pollution abatement technologies, new propulsion trains and alternative fuels solutions to enter the market by the end of the research period.

The Commission considers that proposals requesting a contribution from the EU of between EUR 8 to 17 million each would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected impact:

- Achieve efficiency gains and emission reductions that go significantly beyond normal technological progress and the benchmarks of the existing regulatory regimes at lowest costs.
- Achieve fuel efficiency gains of at least 15% for retrofitting per type of solution (engine or propulsion) and at least 30% per type of solution for new concepts.
- Accomplish a 25% decrease in greenhouse gas emissions and a reduction of, on average, 80% in air pollution compared with Best Available Technology (BAT).

Experience acquired in this innovative field should be broadly made available to ship owners requiring improvements in the environmental performance of their vessel.

Type of action: Innovation Actions

Types of action and requirements

- **Research and Innovation Actions**
- **Innovation Actions**

Time to contract:
8 months (5+3)

Consortium:
Three legal entities from 3 different EU countries or associated countries

Duration:
Typically 3-5 years

Budget:
€ 3-9 (some up to 18) mio

- **Coordination and Support Actions**

Time to contract:
8 months (5+3)

Consortium:
One legal entity from an EU country or associated country

Duration:
Typically 1-2 years

Budget:
€ 0.5 – 1.5 mio

SME Instrument

Open call:
three cut-off dates
- Next: 17/12/14

- Supports close-to-market activities
- Budget: More than € 2.8 billion from 2014-2020
  - 70 % funding for total costs
- Full cycle business innovation support, from business idea to commercialisation
- Proposals must relate to any field under 'Leadership in enabling and industrial technologies' and/or 'Societal challenges'
  - Call under Transport: IT-1-2014-1: Small business innovation research for Transport

Who can apply:

- Innovative SME's with commercial ambition and potential for high growth
- One legal entity from an EU country or associated country, or a consortium with members from EU countries or associated countries

SME Instrument

Phase 1	Phase 2	Phase 3
Concept & Feasibility Assessment	Demonstration Market Replication Research Development Miniaturisation Testing Piloting Prototyping Scaling up	Commercialisation - Support
€ 50,000 6 months	€ 0,5 – 2,5 mio 12-24 months	No funding

IDEA - business coaching throughout the project - MARKET

Fast track to innovation

Pilot initiative 2015

Open call:
three cut-off dates
- First: 29/4/15

- Bringing products, services and processes to the market faster
- Budget: € 100 mio. for 2015
  - Maximum funding – € 3 mio. per project
- Industry must be represented in the consortium – universities and research institutions may also participate
- Maximum of 5 partners in the consortium (min. 3 EU countries/associated countries)
- Proposals must relate to any field under ‘Leadership in enabling and industrial technologies’ and/or ‘Societal challenges’

Participant Portal

Calls and other relevant information about Horizon 2020

EuroCenter

Danish Agency for Science, Technology and Innovation

Counselling

EuroCenters services are free and include:

- Counselling via e-mail or phone
- Client meetings
- Review of applications
- Information meetings
- Contact to the European Commission
- Quarterly magazine 'EU-Information‘

www.ufm.dk/h2020

Courses

Different courses with focus on ‘How to apply’, ‘Marie Curie’, ‘administration’, ‘ERC’ etc.