Horizon 2020

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Horizon 2020 – The Basics

• The EU’s research and innovation programme
• A budget of nearly €80 billion over 7 years (2014 to 2020)
• Aims to drive economic growth and create jobs
• Supports all stages in the research and innovation chain:
  - Frontier research, basic and applied research
  - Technology development and integration
  - Prototyping, testing and validation
  - Demonstrating, piloting and first market replication.
Horizon 2020 – The Basics

• Aims to provide a balanced approach to research and innovation
  - Development of new products and services on the basis of scientific and technological breakthroughs
  - Use of existing technologies in novel applications
  - Continuous improvement

• Emphasis on research and innovation activities complemented with activities which operate close to the end-users and the market, such as demonstrating or piloting.
Horizon 2020 – Types of Projects

- Research and Innovation Actions: establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution.
- Innovation Actions: produce plans and arrangements or designs for new, altered or improved products, processes or services.
- Coordination and Support Actions: accompanying measures that support research and innovation, e.g. standardisation, networking, awareness raising and communication.
- SME Instrument: activities covering the whole innovation cycle from verifying the economic viability and market studies to industrial readiness activities e.g. prototyping.
Horizon 2020 – Types of Projects

- Funding: 70% - 100%
- Indirect costs: flat rate of 25%
- Strong emphasis on expected impact - business plan to be included with the proposal
- Collaboration: industry-academia links, transnational links
- Support to and involvement of industry, in particular high potential SMEs
Horizon 2020 - 3 Pillar Structure

**Excellent Science**  
€24.4B
- European Research Council
- Future & Emerging Technologies
- Marie Skłodowska-Curie actions
- Research Infrastructures

**Industrial Leadership**  
€17B
- Leadership in Enabling and Industrial Technologies
- Access to Risk Finance
- Innovation in SMEs

**Societal Challenges**  
€29.7B
- Health, demographic change & wellbeing
- Food security, sustainable agriculture, forestry, marine, maritime, inland water & bio-economy
- Secure, clean and efficient energy
- Smart, green & integrated transport
- Climate action, environment, resource efficiency & raw materials
- Inclusive, innovative & reflective societies
- Secure societies – protecting freedom & security of Europe and its citizens

**Spreading Excellence & Widening Participation**
- Science with & for Society
- European Institute of Innovation & Technology
- Joint Research Centre
Space Solutions for Transport in Horizon 2020

Space - GALILEO

• EGNSS applications (for new applications with a future commercial impact)
• SME based EGNSS application (SME coordinator)
• Releasing the potential of EGNSS applications through international cooperation (applications with a high international context and impact)

SME Instrument

• Bottom up and for any space based project but in particular GALILEO and Copernicus applications
Space Solutions for Transport in Horizon 2020

Transport

- Enhancing resource efficiency of aviation
- Safe and connected automation in road transport (*specifically mentions use of satellite navigation systems*)
- Demonstrating and testing innovative solutions for cleaner and better urban transport and mobility
- Common communication and navigation platforms for pan-European logistics applications (*specifically mentions use of EGNSS*)
- Smart governance, network resilience and streamlined delivery of infrastructure innovation
- Powertrain control for heavy-duty vehicles with optimised emission

SME Instrument

- Bottom up and used for any transport related product or service
Types of funding actions

- **Research and Innovation Actions (RIA)**
  - New knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution
  - Basic and applied research, technology development and integration, testing and validation on a small scale (100% direct + 25% indirect) x 100%

- **Innovation Actions (IA)**
  - Producing plans and arrangements or designs for new, altered or improved products, processes or services
  - Prototyping, testing, demonstrating, piloting, large-scale product validation and market replication (100% direct + 25% indirect) x 70%

- **Coordination and Support Actions (CSA)**
  - Standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies (100% direct + 25% indirect) x 100%

Specific challenge: European society and industry are facing new challenges, requiring more innovation, productivity and competitiveness, whilst using fewer resources and reducing environmental impact. GNSS offers various possibilities for the development of new space enabled applications, which will enhance Europe’s capacity to address major societal challenges in focus areas such as health, citizen safety, mobility, smart cities, sustainable resources monitoring and management, regional growth, low-carbon energy infrastructure planning and protection, disaster management and climate action including natural catastrophes.

Satellite navigation provides continuous, real-time, reliable, accurate and globally available position, velocity and time. The technology fits important societal and market needs.

Scope: Proposals should aim at developing new innovative applications, with future commercial impact. The topic addresses application development in all market segments, such as transport (road, rail, maritime, aviation), high precision surveying, location based services (LBS), agriculture, emergency services etc. responding to user requirements. Application development should be seen in a broad context - it includes the development, adaptation and/or integration of new software, hardware, services, datasets, etc. The use of EGNOS and Galileo Early Services is a key priority for this topic.

Research and innovation activities within this topic should take into consideration possibility of:

1. Exploitation of synergies with other space-based services and systems in order to enable multi-use character of EGNOS and Galileo-enabled applications in all market segments.
National Contact Point Support

• Feedback to/from EC on call topics
• Clarification of documentation and rules
• Guidance on choosing thematic priorities and instruments
• Support with the application process and feedback on draft proposals
• Assistance with partner search
  - through theme specific databases or across the network of other Member State NCPs
  - through network support (EEN and KTN)
Thank you for your attention

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Enterprise Europe Network
SME Instrument support
http://een.ec.europa.eu/

Knowledge Transfer Network
Space and Transport themes
https://connect.innovateuk.org/