FAST TRACK TO INNOVATION (FTI) – možna je prijava projektov iz dveh (od treh) prioritet programa Obzorje 2020

1. **Leadership in Enabling and Industrial Technologies**

- Information and Communication Technologies
- Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology
- Space

2. **Societal Challenges**

- Health, demographic change and wellbeing;
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy;
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies - protecting freedom and security of Europe and its citizens.

1. Področje Leadership in Enabling and Industrial Technologies

1.1. Information and Communication Technologies

Six main activity lines have been identified in the ICT-LEIT part of the Work Programme:

- A new generation of components and systems
- Advanced Computing
- Future Internet
- Content technologies and information management
- Robotics
- Micro- and nano-electronic technologies, Photonics

1.2. Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology

This part of the programme covers different areas :

- Nanotechnologies
- Advanced materials
- Advanced manufacturing and processing
- Biotechnology

1.3. Space

Actions will be carried out in conjunction with research activities of the Member States and European Space Agency (ESA), aiming at building up complementarity among different actors. For this purpose an enhanced coordination between the different actors is envisaged.

The work programme has been structured to address these challenges by:

- Prioritising the existing two EU Space flagships of European Global Navigation Satellite System (EGNSS) and Earth Observation reaping the benefits they can generate in the coming years and ensuring their state-of-the-art also in the future;

- Ensuring support for the third priority of the EU space policy: the protection of space infrastructure, and in particular the setting up of a Space Surveillance and Tracking system (SST) at European level;
- Ensuring support to EU industry to meet the objectives defined in the Commission communication on Space Industrial Policy, notably to maintain and enhance industry's competitiveness and its value-chain in the global market;
- Ensuring that Europe's investments made in space infrastructure are exploited to the benefit of citizens; as well as supporting European space science; and
- Enhancing Europe's standing as an attractive partner for international partnerships in space science and exploration.

2. Področje Societal Challenges

2.1. Health, Demographic Change and Wellbeing

Personalising health and care

Research & Innovation supported by this call will:

- improve our understanding of the causes and mechanisms underlying health, healthy ageing and disease;
- improve our ability to monitor health and to prevent, detect, treat and manage disease;
- support older persons to remain active and healthy;
- and test and demonstrate new models and tools for health and care delivery.

2.2. Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy

Agriculture and forestry

Agriculture and forestry have always had and maintain an important role for EU's society: they supply reliable, healthy and nutritious food as well as feed and non-food products for a wide range of industries, shape and take care of our landscapes, provide public goods, and keep the countryside alive by providing jobs. Research activities and policies will help to cope with the three main challenges these sectors are facing today: securing viable food production in face of a growing world food demand; ensuring sustainable management of natural resources and climate action; and finally to contribute to a balanced territorial development of the EU's rural areas and their communities.

Agri-food sector for a safe and healthy diet

The challenge is how to meet consumers' needs and preferences while minimising the related impact on health and the environment. Research and innovation will address food and feed security and safety, the competitiveness of the European agri-food industry and the sustainability of food production, processing and consumption. It will cover the whole food chain and related services from primary production to consumption.

Aquatic living resources and marine research

The objective is to sustainably manage and exploit aquatic living resources to maximise benefits from Europe's oceans, seas and inland waters. This includes optimising the sustainable contribution of fisheries and aquaculture to food security, boosting innovation through blue biotechnologies and fostering cross-cutting marine and maritime research to harness the potential of Europe's oceans, seas and coasts for jobs and growth.

Bio-based industries

The transition from fossil-based European industries towards low carbon, resource efficient and sustainable ones is a major challenge. It entails the transformation of conventional industrial processes and products into environmentally friendly bio-based ones, the development of integrated bio-refineries

and the opening of new markets for bio-based products. Research and innovation will provide the means to reduce the Union's dependency on fossil resources and contribute to meeting its energy and climate change policy targets for 2020.

Investments in research and innovation under this societal challenge will support Europe in contributing to food security, climate protection and sustainability. It will also enable Europe to take leadership in the concerned markets and will play a role in supporting the goals of the Common Agricultural Policy, the European Bioeconomy Strategy, and more broadly of the Europe 2020 strategy and its flagship initiatives 'Innovation Union' and 'Resource-efficient Europe'.

2.3. Secure, Clean and Efficient Energy

The Energy Challenge is designed to support the transition to a reliable, sustainable and competitive energy system.

To make the transition to a competitive energy system, we need to overcome a number of challenges, such as increasingly scarce resources, growing energy needs and climate change.

The Energy Challenge is structured around seven specific objectives and research areas:

- Reducing energy consumption and carbon footprint
- Low-cost, low-carbon electricity supply
- Alternative fuels and mobile energy sources
- A single, smart European electricity grid
- New knowledge and technologies
- Robust decision making and public engagement
- Market uptake of energy and ICT innovation.

Main priorities
The first work programme for "Secure, Clean and Efficient Energy" will be split into the following focus areas:

Energy Efficiency
Energy efficiency is a no-regret option for Europe, addressed by both short-term and long-term EU policies. The EU is aiming to progressively decrease primary energy consumption by 2020 and 2030. Research and demonstration activities within this area will focus on buildings, industry, heating and cooling, SMEs and energy-related products and services, integration of ICT and cooperation with the telecom sector.
Low Carbon Technologies

Research activities within this area will cover: Photovoltaics, Concentrated Solar Power, Wind energy, Ocean Energy, Hydro Power, Geothermal Energy, Renewable Heating and Cooling, Energy Storage, Biofuels and Alternative Fuels, Carbon Capture and Storage.

Smart Cities & Communities
Sustainable development of urban areas is a challenge of key importance. It requires new, efficient, and user-friendly technologies and services, in particular in the areas of energy, transport and ICT. However, these solutions need integrated approaches, both in terms of research and development of advanced technological solutions, as well as deployment. The focus on smart cities technologies will result in commercial-scale solutions with a high market potential.

2.4. Smart, Green and Integrated Transport

This Challenge 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.

Horizon 2020 will provide funding for a resource efficient transport that respects the environment by making aircraft, vehicles and vessels cleaner and quieter to minimise transport's systems's impact on climate and the environment, by developing smart equipment, infrastructures and services and by improving transport and mobility in urban areas.

Horizon 2020 supports a global leadership for the European transport industry by reinforcing the competitiveness and performance of European transport manufacturing industries and related services including logistic processes and retain areas of European leadership (e.g. such as aeronautics).

2.5. Climate Action, Environment, Resource Efficiency and Raw Materials

This Challenge funds research and innovation with the following specific objectives:

- to achieve a resource – and water - efficient and climate change resilient economy and society,
- the protection and sustainable management of natural resources and ecosystems, and
- a sustainable supply and use of raw materials, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources and eco-systems.

Research and innovation will cover the following broad lines of activities:

- Fighting and adapting to climate change
- Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystems
- Ensuring the sustainable supply of non-energy and non-agricultural raw materials
- Enabling the transition towards a green economy and society through eco-innovation
- Developing comprehensive and sustained global environmental observation and information systems
- Cultural heritage

2.6. Europe in a changing world - Inclusive, innovative and reflective societies

Key future research and innovation actions for 2014 and 2015 will focus on:

- New ideas, strategies and governance structures for overcoming the crisis in Europe (resilient economic and monetary Union, EU growth agenda, EU social policies, the future of European integration, emerging technologies in the public sector).
- The young generation in an innovative, inclusive and sustainable Europe (job insecurity, youth mobility, adult education, social and political engagement of young people, modernisation of public administrations).
- Reflective societies: transmission of European cultural heritage, uses of the past, 3D modelling for accessing EU cultural assets.
- Europe as a global actor: focusing research and innovation cooperation with third countries, new geopolitical order in the Mediterranean, EU eastern partnership and other third countries.
- New forms of innovation in the public sector, open government, business model innovation, social innovation community, ICT for learning and inclusion.

In short, this Societal Challenge of the Horizon 2020 programme aims at fostering a greater understanding of Europe, by providing solutions and support inclusive, innovative and reflective European societies with an innovative public sector in a context of unprecedented transformations and growing global interdependencies.

2.7. Secure societies – Protecting freedom and security of Europe and its citizens

The primary aims of the Secure Societies Challenge are:

- to enhance the resilience of our society against natural and man-made disasters, ranging from the development of new crisis management tools to communication interoperability, and to develop novel solutions for the protection of critical infrastructure;
- to fight crime and terrorism ranging from new forensic tools to protection against explosives;
- to improve border security, ranging from improved maritime border protection to supply chain security and to support the Union's external security policies including through conflict prevention and peace building;
- and to provide enhanced cyber-security, ranging from secure information sharing to new assurance models.

Securing the society against disasters is one of the central elements of the functioning of any society. There is barely any societal sector which is not to some extent concerned by disasters and related resilience and security issues.

Fighting crime and terrorism requires new technologies and capabilities for fighting and preventing crime (including cyber-crime), illegal trafficking and terrorism (including cyber-terrorism), including understanding and tackling terrorist ideas and beliefs to also avoid aviation-related threats.

The protection of the European borders requires the development of systems, equipment, tools, processes, and methods for rapid identification. This includes supply chain security in the context of the EU’s customs policy.

Furthermore, solutions will be developed to support the Union's external security policies in civilian tasks, ranging from civil protection to humanitarian relief, border management or peace-keeping and post-crisis stabilisation, including conflict prevention, peace-building and mediation.

On Digital Security, this Challenge focuses on increasing the security of current applications, services and infrastructures by integrating state-of-the-art security solutions or processes, supporting the creation of lead markets & market incentives in Europe, following an end-user driven approach, including for instance law enforcement agencies, first responders, operators of critical infrastructures, ICT service providers, ICT manufacturers, market operators and citizens.

This Challenge should bring together all security stakeholders: industry - including SMEs, research organisations, universities, as well as public authorities, non-governmental organisations and public and private organisations in the security domain. The active involvement of end-users is of high importance.