

PROGRAMME 'APPLIED RESEARCH'

DESCRIPTION OF THE CALL AREA THE IDEALAB CALL FOR FULL PROPOSALS

Cities for the future: services and solutions

The objective of this call is to encourage applicants to think outside the box about solutions, services and technologies aimed at organising cities and urban areas as good places to live and work in 2040. The call provide an unconventional space for experts from a variety of backgrounds to meet and develop new ideas that support cities of the future in addressing unforeseen challenges bound to arise.

✓ **Background**

Half of humanity – 3.5 billion people – live in cities today and 5 billion people are projected to live in cities in the nearest future. There are numerous challenges awaiting the cities of tomorrow. Cities need to react to: demographic trends, social inequality, climate change, environmental pollution (including air pollution), increasing energy consumption, mobility issues, carbon emissions and many other challenges. In a globalised world the problems of cities have no borders and no nationality. Therefore, the multidisciplinary research solutions for future cities developed by applicants from Poland, Norway, Iceland and Liechtenstein will be supported within the Programme.

According to the UN Sustainable Development Goals in the nearest future the cities should become safe, inclusive, sustainable and resilient. How can our cities become smarter in addressing the needs of all citizens?

We believe that some of the challenges of the cities of tomorrow can be addressed by technologies of the future. To secure societal responsible solutions crucial for the future cities, technologies should be developed in interaction with inhabitants and users.

✓ **Research challenges**

New solutions and services for a better quality of life of inhabitants of urban areas - examples of important perspectives:

- Human interaction with machines

Digital transformation and usage of key enabling technologies can reinforce the transition of cities. Inhabitants and users of the cities of tomorrow will need to use innovative technologies in their daily life and interact with them. How can we ensure that artificial intelligence is safe, user-driven and free from unintended discrimination? How can technologies of the future serve cities of the future?

- Independence from big ICT companies

IT services provided by global corporations (e.g. search engines, clouds, social networks) have become inevitable parts of our life. We can assume that cities of the future will be more and more dependent on ICT technologies (usage of big data, Internet of Things, etc.). What would happen if the global providers of IT services withdrew from Europe? How can we make the cities and inhabitants of the future cities less dependent on global corporations, IT monopolists? How can we ensure the security and safety of the data used by the smart city?

- Encouraging democratic engagement in the future city

The future city needs to be managed together with inhabitants and other stakeholders. How can the tools and solutions support the policy-making in an innovative city? What can be done to include various actors in the decision-making process and address needs of those in vulnerable situations, women, children, persons with disabilities and elderly people? How can information and communication solutions and other technologies help in encouraging democratic engagement of the future city?

- Green and blue city of the future

Currently, green buildings or hydroponic farming in cities is a trend. Is there in the city of tomorrow still place for green spaces available and accessible for all? How can we ensure urban biodiversity and sustainability of cities? Can modern tools and technologies help making urban areas greener and more liveable?

Nowadays, water scarcity is a serious problem and it will become even more essential in the future due to rising demand for water and insufficient supply. Cities of tomorrow need to adapt to climate change, such as altered weather-patterns (including droughts or floods). How can cities manage water resources effectively? How can they establish connection and interaction between blue and green assets?

The above-mentioned research challenges are examples of relevant project ideas to be developed in the call; they are not obligatory. Applicants are also welcome to explore other important perspectives for addressing needs of inhabitants of the future cities.

✓ **Intended results**

In the call we would like to focus on Polish, Norwegian, Icelandic and/or Liechtenstein cities. Applicants can develop ideas for one specific city or focus on more universal solutions for cities from the above-mentioned countries.

Projects which generate new solutions, services, products or processes for the future cities and its inhabitants are very welcome. Projects may include, e.g., research aiming at gaining new knowledge and skills for developing new products, processes or services, prototyping, demonstrating, piloting, testing and validating new products, processes or services. However, as the time frame of the project ideas is 2040, we do not expect that the project outcomes will be ready to use (or commercialised) directly after the project end.

Please note that the project needs to include applied research and/or experimental development. Basic research (e.g. theoretical studies on the subject) may only be a minor part of the project.