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## **Position Paper for Strategic Plan 2025-2027 Framework Programme for Research and Innovation in Europe**

In times of crisis Europe must maintain a solid frame for top quality, excellence-based research, and innovation to be delivered with the Horizon Europe Programme. Pandemics, war in Ukraine, energy crisis, and high inflation rate a.o. illustrate that it has never been more important than now to strengthen our capacity, resources, and key competences across Europe in the best possible way, to work together.

The strategic orientation of the European framework programme for research and innovation will ensure that research and innovation investments contribute to a recovery process based on the twin green and digital transition and resilience. It is therefore critical to maintain and even increase the investments in knowledge and valorisation to be at the forefront and to solve extraordinary challenges.

Complex and critical challenges do not recognise regional, national, and global divides. Producing and implementing knowledge for the world requires active collaboration, problem-based learning (PBL), and partnerships. For Aalborg University, being a mission-oriented university means that we are guided by a meaningful purpose that goes beyond our own organisation and contributes to the sustainable development of the world. We need partnerships, bringing all stakeholders together, to address our challenges and to drive the innovative capacity of Europe. Universities play an instrumental role in pushing boundaries and in finding new solutions. But we do not work alone, and therefore, Aalborg University strongly supports a mission-driven approach to tackling societal challenges.

In the coming years, we need to further develop and accelerate the twin green and digital transitions among others that were clearly started in Horizon Europe Strategic Plan 2021-2024. Therefore, Aalborg University finds it important to build on and to continue key elements of the existing programme. In this paper we will highlight some of the areas that we believe are essential to include to advance our capacities in Europe.

In the following, we will present three key positions for the coming strategic phase of the framework programme.

- **Improving participation**
- **New perceptions of research areas – *game changers***
- **Innovation agenda – A new Open Entrepreneurship concept**

## 1). IMPROVING PARTICIPATION

For universities to further deliver and play an even more central role with ground-breaking research and knowledge that makes an impact to the European society, Aalborg University would like to state especially three parts for improvements for the future framework programme:

- A. Strengthening and simplifying European Partnerships**
- B. Re-balance the share of calls with lower, middle, and higher technology readiness levels (TRL) and**
- C. Ensuring an important and stable budget for European research and innovation.**

### A). STRENGTHENING AND SIMPLIFYING EUROPEAN PARTNERSHIPS

To solve major global societal challenges with concrete actions – we encourage organising cross-cutting partnerships where we bring together actors across state, business, foundations, universities, and civil society with a clear intention to both involve and co-create. Strengthening partnerships is a way of developing and implementing research for true impact. However, less is more, and Aalborg University welcomes a simplification of partnerships to ensure dynamic and agile cooperation on key strategic agendas for Europe. We encourage to focus on highly strategic partnerships addressing large scale cooperation with the key stakeholders from across sectors to ensure European scale and added value.

We furthermore strongly encourage more simplification of partnership instruments, improve accessibility, and enhance transparency. Considering the substantial budget allocated to partnerships in pillar II of Horizon Europe, it is pivotal that the partnerships demonstrate the capacity to deliver impact and **leadership**.

Aalborg University encourages strategic cooperation at European level for coordinated and resourceful partnerships with a stronger involvement of European knowledge institutions. Universities play an important role in delivering on tomorrow's solutions. Hence, ensuring easy access and dynamic cooperation in larger strategic partnerships should be a priority.

The EU Missions still need to prove their role as part of the European research and innovation framework programme. Today, it is our experience, that the level of research involvement is limited and most of the R&I related calls are very high up the TRL scale. Aalborg University welcomes mission-oriented approaches where cooperation across disciplines and sectors co-create to solve the challenges and defined missions. We strongly encourage the involvement of research communities for both short- and longer-term perspectives and problem-solving.

### B). RE-BALANCE THE SHARE OF CALLS WITH LOWER, MIDDLE, AND HIGHER TECHNOLOGY READINESS LEVELS (TRL)

We call on the European Commission *to re-balance the shares of calls with lower, middle, and higher technology readiness levels (TRL)* of collaborative call topics under the second pillar of Horizon Europe.

We have noticed that the share of Research and Innovation Actions (RIA) and Innovation Actions

(IA) in the first two years of Horizon Europe with TRL up to level 4 appeared significantly lower than in the first two years of Horizon 2020. We therefore did a limited data analysis for the Horizon 2020 Societal Challenges and Space, Nanotech and Information and Communication Technologies (ICT) work programmes for 2014 to 2015 and compared these to the Horizon Europe clusters in the work programmes for 2021 to 2022.

This development is an issue due to the following reasons:

- It impedes transformations needed: to tackle local and global challenges, and to deliver on key commitments such as the European Green Deal and the digital transition, Europe depends on science and technology developments across all TRL as well as a strong science base and frontier research, including as outlined in the Lund Declaration.
- It impedes the cooperation between key types of beneficiaries: in collaborative research projects with TRLs up to level 4, collaborations between universities, RTOs, industry partners and other players are a key bridge between basic research and the deployment of new science and technology in and for society.
- It challenges the leadership position of Europe in deep tech and key technologies: to be a strong knowledge block in the world, especially in areas of deep tech emerging key technologies, Europe depends on a strong ability to link different types and readiness levels of research across the full knowledge chain.

### **C). ENSURING AN IMPORTANT AND STABLE BUDGET FOR EUROPEAN RESEARCH AND INNOVATION**

Larger new initiatives such as the launch of the New European Bauhaus programme and measures to ensure European competitiveness by introducing the European Chips Act, have been prioritized at the expense of the Horizon Europe budget and even reduced the cluster-specific budgets. This decreases the ambitions for the European Research and Innovation cooperation as well as it creates a more complicated, less transparent, and less manageable overview of funding opportunities.

Therefore, we recommend ensuring that the Horizon Europe budget is strictly used for intended research and innovation.

## **2). NEW PERCEPTIONS OF RESEARCH AREAS – GAME CHANGERS**

The world is constantly changing at a speed never experienced before. This extraordinary high speed of the development of the society demands much more flexible approaches to research and innovation and demands new perceptions of research areas.

Aalborg would like to suggest fostering new perceptions and approaches for especially the following two research areas that needs attention.

**A. *Future educational systems, and***

**B. *Push boundaries of the perception of culture and creativity***

These areas of research will benefit society at large and need a game changing approach - a fundamentally new perception to further develop and mature in a way that suits the future requirements in an everchanging world.

#### **A. FUTURE EDUCATIONAL SYSTEMS**

Europe is depending on its citizens and their way of tackling every day's challenges. Since the conditions are changing at a speed never seen before, it is essential that citizens learn how to navigate. An increasing need within Higher Education is to explore educational designs and pedagogical models that empower students to work with real-world problems and large-scale societal challenges. These are challenges and problems that transgress disciplinary, sectorial, and geographical boundaries and enable students to develop competencies that are important in a life-long and life-broad perspective.

Therefore, Aalborg University calls on an increased focus on research-based developments of Problem-Based Learning Models which focus on digitalisation, entrepreneurship, and the integration of SSH and STEM.

#### **B. PUSH BOUNDARIES OF THE PERCEPTION OF CULTURE AND CREATIVITY**

In addition to the above broader missions/challenges, Aalborg University calls on the need *to push boundaries of the content of Cluster 2: Culture, Creativity, and Inclusive Society*. Broadening of "the cultural perspective" should be related to not only inclusivity but also to topics like sustainability, (de-) globalization, demographic changes, and growing inequality.

The primary reasons for why it is essential in the future to push boundaries and the perception of culture and creativity are:

1. The concept of "High Culture" is changing away from a corpus of valuable "works" towards a much broader set of valuable practices that still needs to be explained and interpreted in an elaborate cultural discourse to count as acceptable/desirable/valuable.
2. Art is no longer something being produced and consumed at the margins of society. Under the label of "creativity" art has become the blueprint for a desirable conduct of life and for desirable industrial practice.
3. There is a new cultural division between those who are or want to be creative and have an elaborate discourse on cultural practices and products and those who have not and don't strive for creativity. This division can be related to a new polarization between elitist and populist positions and to apathy and aversion in the political sphere and social life. What to do with non-creative people and with non-creative industries?

The above proposed fields are game changers to existing approaches and perceptions. Game-changers that are needed to be better prepared for the future.

## **VITAL RESEARCH MISSIONS**

Aalborg University is strengthening and intensifying research fields that are completely in line with the key priorities of the EU Commission - to further develop and accelerate the twin green and digital transitions as well further develop and shape the future health care system using digital solutions. We call on continued support for the following research fields:

### **A SUSTAINABLE ENERGY SYSTEM**

Research is needed to further investigate and create knowledge on the integration of abundant renewable energy. It involves the provision of flexibility from active users to ensure stability and robustness of the power system and considering key societal aspects.

### **DIGITAL SKILLS AND LEARNING**

For Europe to be fit for the Digital Age, it is necessary and essential to ensure and improve research that is related to the further development of digital skills and digital learning. Aalborg University calls on the design of EU research programmes that will enhance our digital skills and digital education to modernise education capacities. EU should invest further to understand how to develop the best possible digital learning and digital skills. Research in digital learning is more important than ever.

### **SHAPING THE FUTURE HEALTHCARE SYSTEM, USING DIGITAL SOLUTIONS**

The health care system must undertake a tremendous transformation to tackle a growing ageing population and integrate new digital opportunities including artificial intelligence. A much more collaborative healthcare system is needed – *a robust and sustainable patient-centred healthcare system* that integrates all relevant partners to balance a data-driven approach and the evolution of individual treatment. Digital solutions are expected to increase the well-being of citizens and transform the health and health care services and translate scientific knowledge into helping citizens remain in good health, thus helping to ensure that they do not turn into patients. Further focus on the use of health data in research and innovation to support personalised healthcare, better health interventions and more effective health and social care systems.

## **3). INNOVATION AGENDA - A NEW OPEN ENTREPRENEURSHIP CONCEPT**

To further develop and strengthen European innovation, drive the sustainable and resilient recovery, accelerate the green and digital transitions, which are the key objectives of the New European Innovation Agenda - Aalborg University recommends reviewing the fundamental conditions for supporting innovation capacities, especially in Pillar III.

A key challenge in Europe is to transform researched-based knowledge and results into commercial value creation in society. Today, this is primarily done based on a linear conception of the value chain of the development of research into business. This process generates an overflow of national and international investments, soft funding programmes and funds - all well-meaning with the intent to provide help in different stages. The programmes and funds are needed but they overshadow and *massively underestimate the resources required to nurture, identify, and*

*develop a pipeline that has been prepared to a level where programmes, funds, companies, or investors can understand and identify the knowledge as an opportunity.*

What is needed to **secure Europe's technological lead** and to **build a stronger and improved ecosystem for value creation from knowledge generation**?

Aalborg University highly suggests that the European Commission encourages and supports **an open entrepreneurship concept** that supports a more pragmatic approach. This includes the commercialization of research by combining and accepting the nature of universities, governmental structure preferences and the needs of investors and companies as well as softening up classic compartmental barriers within university support functions. Aalborg University has worked with these challenges for decades together with partners both nationally and internationally and developed a concept to solve this challenge.

As a university with a strong and pervasive DNA and in-depth experiences of innovation, entrepreneurship, start-ups, spinouts and innovation eco-systems, Aalborg University strongly recommends that the coming Strategic Plan to a higher extent **clearly defines the strategic direction and framework conditions for Pillar III**. We suggest the above concept to be an inspiration for that. **Open entrepreneurship** enables creating the best possible conditions for deep-tech scale-ups and makes universities the engines of regional, national, and European innovation. It is through entrepreneurial talent and close collaboration across disciplines and sectors that new innovative research and solutions can be developed.

#### **ADDITIONAL REMARKS**

Aalborg University supports the input to the next Strategic Plan 2025-2027 that has been identified and developed by the Nordic countries cf. Nordic Non-Paper: First input to the next Strategic Plan for Horizon Europe (2025-2027).