

The Lund Declaration 2015

Europe must speed up solutions to tackle grand challenges through research, alignment and impact

The Lund Declaration 2009 called upon Member States and European Institutions to focus research on the Grand Challenges of our times by moving beyond rigid thematic approaches and aligning European and national strategies and instruments. During the last six years European institutions, member states and associated countries have taken important steps to align and coordinate resources and shift the focus to society's major challenges.

Today Europe still faces a wide range of major challenges and business as usual is not an option. The Lund Declaration 2015 therefore emphasises the urgency for increased efforts in alignment at national and European level and that investments in research and innovation better and more rapidly be exploited to the benefit of society.

It identifies four priority areas, each with defined priority actions, and calls on all stakeholders to take these priorities into account in their field of responsibility:

- Europe needs clear political commitment to step-up efforts to align strategies, instruments, resources and actors at national and European level in order to address the grand societal challenges.
- This commitment needs to be underpinned by an excellent science base, world-class research infrastructures and new generation of researchers with the right set of skills, notably creativity, entrepreneurship and innovation.
- Europe needs to connect with partners around the world, in advanced, emerging and developing countries to address the grand societal challenges in partnership and to attract the world's best researchers and innovators and private sector investment.
- Greater impacts on the challenges have to be created by involvement of public sector and industry in knowledge creation, with stronger focus on open innovation and the role of end-users.

1. ALIGNMENT

The research and innovation funding landscape in Europe is diverse and a relatively small share of the public funding is coordinated through European initiatives or aligned across borders. Despite an ever-greater need for efficiency and effectiveness, resources across Europe aimed at societal challenges are still spent sub-optimally. In many countries challenge-based research is not highly prioritised or is often an integrated part of the institutional funding for public research organisations. It makes it difficult to bring together a truly critical mass of resources for the societal challenges we are addressing today. In this context the use of smart specialisation strategies should be considered.

While there are valuable experiences from on-going initiatives (JPIs, ERA-NETs, Art.185 initiatives), these are limited in scale and scope. These experiences have not yet been translated into a strategy and process with sufficiently flexible options of instruments and processes. This makes it difficult for Member States and associated countries to select and implement new areas of cooperation, and eventually the uptake of results for the benefit of citizens across Europe.

2. FRONTIER RESEARCH AND

EUROPEAN KNOWLEDGE BASE

The ability to tackle the grand societal challenges and to respond rapidly to new challenges is dependent on a strong science base. This relies on research excellence and appropriate frameworks to foster interdisciplinary collaboration. Europe must maintain and raise the level of excellence to ensure world-class research and secure long-term competitiveness of its science base. Significant investments in frontier research through initiatives such as the ERC and continued efforts on how to build and maintain an aligned roadmap for world-class research infrastructures across Europe are necessary prerequisites. Furthermore Europe needs to improve researchers working conditions to create the right skills, facilitate work across disciplines and encourage researcher's mobility. Increased gender equality within research performing organisations will increase excellence.

Quality of research and researchers needs to be ensured across Europe: by endorsing new ideas, supporting young talent and providing researchers with access to state-of-the-art research infrastructures. These steps can make Europe an attractive location for the world's' best researchers.

3. GLOBAL COOPERATION

The grand challenges related to health, climate, food, energy, cities, migration and security are truly global. The scale of resources needed to address them requires global partnerships to mobilise the very best researchers and innovators.

With Horizon 2020 and the Joint Programming Process, Europe is well positioned for this. The Joint Programming Initiatives in some areas already demonstrate their potential to set a global Research and Innovation agenda. Furthermore, joint programmes such as the Art.185 initiatives on clinical trials or metrology are perceived as internationally leading programmes. This shows that Europe as a whole can take the lead in global research and innovation initiatives when it acts together.

European initiatives to address societal challenges have the potential to become internationally recognised as best practices, involving more partners in advanced, emerging and developing countries.

4. IMPACT ON CHALLENGES

Investments in knowledge creation must be better and more rapidly exploited to enable solutions to the societal challenges, with clear benefits for our citizens and society at large.

However, there are still barriers evident in the European research and innovation area, such as structural, organisational and cultural, limiting co-creation between disciplines and sectors which hampers the potential to reach full impact. Public research organisations' role in knowledge exploitation through open innovation and co-creation should be reinforced.

Innovation, including non-technical innovation and new business models, relies on strong participation of end-users and industry. Today they are not sufficiently involved in the joint programming process addressing societal challenges. There are weak incentives for academia to collaborate with research institutes, industry, end-users and the public sector, and to create impact. Further, the public sector has a potentially important role in demand-side actions for addressing societal challenges, which is insufficiently used

Priority actions

The following priority actions need to be jointly taken by Member States, associated countries and EU-institutions to address the grand societal challenges in close collaboration with their research and innovation funding and performing bodies, stakeholder organisations, businesses, civil society and public sector. They should furthermore be taken into account in the context of national ERA roadmaps and in reporting on progress of ERA.

Alignment

- Provide **high-level political support ensuring active participation of all Member States** and associated countries in addressing grand societal challenges;
- Step-up efforts to **align national strategies, instruments, resources and actors** to ensure an efficient and effective European approach including smart specialisation strategies;
- Improve **Framework Conditions** within the European research and innovation landscape and speed up necessary structural adaptation in Member States to increase interoperability and openness of programmes, notably in the context of national ERA roadmaps;
- Agree on a common approach and design a **process for "smart alignment"** that allows Member States to jointly identify and address new challenges.

Frontier research and European knowledge base

- Investing in and **strengthening excellence in frontier research and research infrastructures** and ensuring that it is effectively organised to enable interdisciplinary projects;
- Fostering a new generation of **researchers with the right set of skills** that includes creativity, entrepreneurship, mobility and innovation;
- Strengthening **open science including open access** to both publications and data as well as fostering knowledge exchange.

Global leadership and cooperation

- **Connect with partners in advanced, emerging and developing countries** to address societal challenges at global level;
- Ensure that European initiatives better exploit their potential to **attract the world's best researchers and innovators and private sector investment**.

Impact on challenges

- Incentivise Europe's public research organisations to **strengthen the interface and collaboration with stakeholders and actors** outside the academic community;
- **Strengthen pro-active involvement of end-users, public sector and industry** in addressing societal challenges including demand-side actions.