

Joint Programming Initiative (JPI)	short description	thematic priorities / research fields	1. NATURAL SCIENCES AND MATHEMATICS	2. ENGINEERING SCIENCES AND TECHNOLOGIES	3. MEDICAL SCIENCES	4. BIOTECHNICAL SCIENCES	5. SOCIAL SCIENCES	6. HUMANITIES
<a href="#">JPND Neurodegenerative Disease Research</a>	Neurodegenerative diseases such as Alzheimer's disease and Parkinson's disease are debilitating, expensive and largely untreatable conditions strongly linked with age. Dementia alone affects almost 47 million people globally, a number expected to almost double every 20 years.9 By 2050, some 132 million people will be living with dementia.10 This creates a heavy burden on the individuals with the disease as well as their relatives and society as a whole.	find causes, develop cures and identify better ways of caring for people with neurodegenerative diseases	X		X	X		
<a href="#">FACCE Agriculture, Food Security and Climate Change</a>	FACCE-JPI provides and steers research to support sustainable agricultural production and economic growth, to contribute to a European bio-based economy, while maintaining and restoring biodiversity and ecosystem services under current and future climate change.	sustainable agricultural production, economic growth, research on agriculture, food security and climate change		X		X		
<a href="#">HDHL A Healthy Diet for a Healthy Life</a>	JPI HDHL focuses on research in the area o JPI HDHL's vision is that: "In 2030, all citizens will have the motivation, ability and opportunity to consume a healthy diet from a variety of foods, have healthy levels of physical activity and the incidence of diet-related diseases will have decreased significantly". JPI HDHL has two specific aims; firstly, to increase understanding of those factors determining food choices and physical activity behaviour; secondly to translate this knowledge into programmes, products, tools and services promoting healthy food choices. food, nutrition, health and physical activity to help prevent or minimise diet-related chronic diseases.	production, processing, packaging, distribution, marketing, consumption and disposal of food; food, nutrition, health, physical activity, diet-related disease, epidemiological studies	X		X	X	X	
<a href="#">CULTURAL HERITAGE Cultural Heritage and Global Change</a>	In addition to natural ageing, Europe's Cultural Heritage faces a variety of threats including climate change and pollution, environmental risk, increasing urbanisation, mass tourism, negligence, vandalism and even terrorism. Protecting this Cultural Heritage in the face of global change is increasingly becoming a major concern for decision-makers, stakeholders and citizens.	reflective society (identity, perception, values, ethics), connecting people with heritage (ICT, Sustainability, Security), creating knowledge (methods, measure, damage), safeguarding cultural heritage resources (conservation, adaptation, mitigation)	X	X			X	X
<a href="#">URBAN EUROPE Urban Europe - Global Urban Challenges</a>	It is increasingly common to refer to the current era as the urban age. This reflects the fact that urban locations act as regional innovation hubs, attracting, processing and channelling the societal, cultural and economic human influences. However, replacing the currently unsustainable urban development models with urban environments and systems with the lowest possible carbon footprint and inequality requires action. Clearly, it is easier to coordinate economies of scale, size, infrastructure, consumer behaviour, strategic planning and cross-sectoral policy instruments on a city scale.	urban development, carbon footprint, urban research to serve societies and citizens; vibrant urban economies; welfare & finances; urban environmental resilience;	X	X		X	X	X
<a href="#">MYBL The Potential and Challenges of Demographic Change</a>	Demographic Change is one of the grand social and economic challenges facing Europe. The combined effect of increasing life expectancy and low fertility rates is creating an ageing population, a picture compounded by rapidly changing patterns of migration.	health and social welfare; education and learning; work and productivity; housing, urban development and mobility; environment and technology	X		X		X	X
<a href="#">AMR Antimicrobial Resistance</a>	Antibiotics have saved millions of lives. However, antimicrobial resistance (AMR) continues to spread, as over-use and misuse is rendering many antibiotics ineffective. By 2050, 10 million people each year are predicted to die as a result of drug resistant infections. Currently, there few new antibiotics in development. Therefore, focus must be put on reducing the incidence of bacterial infectious disease, ensuring rational use of the remaining antibiotics and reducing transmission of resistant bacteria. Further research needs to be undertaken to better understand how resistance develops and spreads in the environment. Diagnostic tools need to be developed and better surveillance methods as well as validating smarter strategies for using antibiotics in healthcare and agriculture.	public health, veterinarian research, agricultural, pharmaceutical	X		X	X		
<a href="#">WATER Water Challenges for a Changing World</a>	In 2015, the World Economic Forum4 identified water crises as the number one risk in terms of their impact to economy and society in the coming years. Global water requirements are projected to exceed sustainable water supplies by 40 per cent by 2030. Decision-makers will be forced to make tough choices on how to allocate water in ways that will impact users throughout the economy; The European water sector (annual turnover €72 billion) is highly fragmented with a diverse range of stakeholders; water resources, water supply and wastewater are often locally managed; The current development of water technology is insufficient to meet the grand challenge of delivering sustainability. Often, the main running costs of technologies relate to energy consumption. This means that the water-energy nexus plays a crucial role in all economic sectors and in society at large; agricultural production presents another challenge for the water resources framework.	water resources, water supply, wastewater; agricultural production; water efficiency within economic sectors	X	X		X	X	
<a href="#">OCEANS Healthy and Productive Seas and Oceans</a>	Providing a strategic policy platform for a long-term European approach to marine and maritime research and technology development. JPI Oceans adds to the value and impact of national research and innovation investments by implementing joint actions and aligning national priorities. These outcomes will help develop effective policies with robust and independent scientific evidence, helping underpin the ocean-based economy.	seas and oceans; climate change; human impact; marine, maritime research; innovation landscape	X	X		X	X	
<a href="#">CLIMATE Connecting Climate Knowledge for Europe</a>	Its vision is to inform and enable the transition to a low-emission, climate-resilient economy, society and environment aligned with Europe's long-term climate policy objectives. Therefore, JPI Climate is developing and coordinating a pan-European research programming platform. This will provide valuable climate knowledge and services for national, European and international climate strategies and contribute to international processes, including the UNFCCC and the UN Sustainable Development Goals	climate observation and modeling, climate services; economics of climate change; climate impact on human health	X		X		X	