

H2020: HEALTH-RELATED TOPICS IN OTHER WORKPROGRAMMES

2. Future and Emerging Technologies	FETFLAG 2 - 2015: Graphene FET Flagship Core Project	Proposals should progress the Graphene FET Flagship in accordance with the defined roadmap. This includes the complete range of scientific and technological challenges involved, in particular development and exploration of material aspects of Graphene, health and environmental issues, fundamental science for Graphene, the production of Graphene or Graphene film, high-frequency electronics, optoelectronics, spintronics, sensing, flexible electronics, energy applications and nanocomposites. Other 2D materials may also be considered.	Research & Innovation Actions
4. European research infrastructures (including e-Infrastructures)	Call 2 - Integrating and opening research infrastructures of pan-European interest H2020-INFRAIA-2014/2015	This call focuses on opening up key national and regional research infrastructures to all European researchers from both academia and industry and ensuring their optimal use and joint development. Through a targeted approach, specific types of research infrastructures or research communities will be addressed, ranging across all fields of science and technology. Integrating Activities under the different domains target research infrastructures needed to address the Societal Challenges, in particular "Health, demographic change and well-being"...	-
5. Leadership in enabling and industrial technologies i. Information and Communication Technologies	ICT 1: 2014: Smart Cyber-Physical Systems	Creating new ICT Platforms for both vertical and core markets from automotive, health and energy to wireless communications and digital consumer products and services.	Research & Innovation Actions, Innovation Actions, Coordination and Support Actions
	ICT 2: 2014: Smart System Integration	Seized new opportunities in addressing societal challenges, e.g. in health, well-being, environment and food/beverage quality and safety.	Research & Innovation Actions, Innovation Actions, Coordination and Support Actions, PCP
	ICT 3: 2014: Advanced Thin, Organic and Large Area Electronics (TOLAE) technologies	<u>Specific Challenge:</u> TOLAE is an emerging technology and is the basis for advanced products that are thin, light weight, flexible and/or stretchable, suitable for large market sectors such as the textile, automotive, health, paper, plastic, advertising or construction industries.	Research & Innovation Actions, Innovation Actions, Coordination and Support Actions, PCP

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	ICT 8: 2015: Boosting public sector productivity and innovation through cloud computing services	Increased adoption of smart cloud-based solutions for a range of public services, spanning from generic enabling services to specific applications such as culture, businesses, tourism, education, health care, and cross-border intergovernmental systems	PCP, PPI
	ICT 23: 2014: Robotics	In addition, demand-driven innovation actions will be pursued in areas of public interest, including pre-commercial procurement of innovative robotics solutions for the healthcare sector.	Research & Innovation Actions, Innovation Actions, PCP
	ICT 26: 2014: Photonics KET	Europe needs to better exploit the large enabling potential of photonics in many industrial sectors and in solutions addressing major societal challenges such as health and well-being, energy efficiency or safety.	
	ICT 28: 2015: Cross-cutting ICT KETs	<u>ICT-KET integrated platforms for the healthcare and food sectors:</u> Further development and validation in real settings of reliable, low-cost micro-nano-bio and bio-photonics systems driven by users. Actions should target the health sector for early or fast diagnosis and monitoring (clinical trials are excluded) or the food sector for quality and safety.	Research & Innovation Actions, Innovation Actions, Coordination and Support Actions
	ICT 29: 2015: Internet of Things and Platforms for Connected Smart Objects	This topic cuts across several LEIT-ICT challenges (smart systems integration, smart networks, big data) and brings together different generic ICT technologies (nano-electronics, wireless networks, low-power computing, adaptive and cognitive systems) and their stakeholder constituencies. Their applicability across multiple application domains (ehealth, food chain, intelligent transport and systems and logistics) bridges the gap to applications-specific developments under the H2020 Societal Challenges.	Research & Innovation Actions, Coordination and Support Actions
	EUB 2 – 2015: High Performance Computing (HPC)	Specific focus will be on application work of HPC on societal challenges and in areas such as transport, energy, environment, climate, health and bio-sciences, prediction and simulation of natural disasters, disaster prevention and crisis management, urban development etc.	Research & Innovation Actions
	EUJ 1 – 2014: Technologies combining big data, internet of things in the cloud	The focus of the joint research is the development of innovative global cloud platform technologies to meet the new challenges of big data, mobile and IoT. It should address requirements from business and industrial applications, such as robotics or factory automation and/or societal applications, such as health management for an aging society.	Research & Innovation Actions

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	EUJ 4 – 2014: Experimentation and development on federated Japan – EU testbeds	The solutions under experimentation should preferably address public services or applications for health, elderly, smart cities, smart buildings, energy management and should explore emerging concept, such as participatory sensing. They should also investigate the related interoperability, privacy and security issues.	Research & Innovation Actions
5. Leadership in enabling and industrial technologies ii. Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing	NMK 6 - 2015: Novel nanomaterials and nanocapsules	Benefit the European healthcare and/or consumer sector through novel new systems and improved collaborations between the key actors in the value chain	Research & Innovation Actions
	NMK 10 - 2014: Biomaterials for the treatment of diabetes mellitus	<u>Specific challenge:</u> Diabetes mellitus and its complications have become a major public health problem. It causes significant physical and psychological morbidity, disability and premature mortality among those affected and imposes a heavy financial burden on health services.	Research & Innovation Actions
	NMK 11 - 2015: Nanomedicine therapy for cancer	<u>Scope:</u> The aim is to translate promising novel nano-technology enabled therapies for cancer with pre-clinical proof-of-concept, from a pre-clinical lab stage up to clinical testing Phase I. The project shall start from an established pre-clinical proof-of-concept, with relevant efficacy and toxicity data. The project shall be focused on the translation process, so that ultimately new effective therapies can be introduced to the European healthcare market	Innovation Actions
	NMK 12 - 2015: Biomaterials for treatment and prevention of Alzheimer’s disease	Implementation of relevant objectives of the European Innovation Partnership on Active and Healthy Ageing (COM (2012) 83).	Research & Innovation Actions
	NMK 28 – 2014: Joint EU & MS activity on the next phase of research in support of regulation “NANOREG II”	Bring together the activities of national authorities responsible for consumer and worker protection, public health, and the environment including chemical safety and all other relevant authorities covering the whole value	Research and Innovation Actions

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	BIOTEC 1 – 2014: Synthetic biology – design of organisms for new products and processes	Scientific breakthroughs spurring innovation across sectors such as healthcare, energy, materials, environmental technologies and agriculture.	Research & Innovation Actions
	BIOTEC 2 – 2015: New bioinformatics approaches in service of biotechnology	<u>Specific challenge:</u> One of the greatest challenge facing the biotechnology community today is to be able to make use of the vast and dynamic influx of "omics" data. The synchronised development of bioinformatic concepts is a prerequisite to enable the exploitation of this wealth of biological data as a source of new biotechnological applications. These can range from industry and health to the environment and agriculture.	Research & Innovation Actions
	BIOTEC 4 – 2014: Downstream processes unlocking biotechnological transformations	Specific challenge: A general bottleneck for biochemical processes is the fact that product concentrations are typically low and it is common that several by-products are produced. These two factors make downstream processing (DSP), isolation and purification having an important impact on the economics of the system causing up to 80 % of the production costs.	Innovation Actions
	BIOTEC 5 – 2014/2015: SME boosting biotechnology-based industrial processes driving competitiveness and sustainability	The large number of SMEs which characterise the EU biotechnology sector are playing a crucial role in the move to competitive and sustainable biotechnology-based processes. These SMEs are characterised by their research intensity and long lead times between early technological development and market introduction. They therefore need to be supported to overcome the so-called “valley of death”.	SME instrument

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	BIOTEC 6 – 2015: Metagenomics as innovation driver	<u>Specific challenge:</u> Metagenomics has the potential to provide unprecedented insight into the form and function of heterogeneous communities of microorganisms and their vast biodiversity, without the need for isolation and lab culture of particular organisms. Microbial communities affect human and animal health, support the growth of plants, are critical components of all terrestrial and aquatic ecosystems and can be engineered to produce fuels or chemicals.	Research & Innovation Actions
5. Leadership in enabling and industrial technologies iii. Space	GALILEO 1 – 2014-2015: EGNSS applications GALILEO 2- 2014-2015: Small and Medium Enterprise (SME) based EGNSS applications	European society and industry are facing new challenges, requiring more innovation, productivity and competitiveness, whilst using fewer resources and reducing environmental impact. GNSS offers various possibilities for the development of new space enabled applications, which will enhance Europe's capacity to address major societal challenges in focus areas such as health	Innovation Actions
	COMPET 6 – 2014: Bottom-up space technologies at low Technology Readiness Level	A number of challenges in space technologies have parallels to terrestrial challenges, for example in the fields of aeronautics, energy, environment, ICTs, natural resource exploration, sensors, robotics, advanced materials, security, and health.	Research and innovation action
9. Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy	SFS 12 - 2014: Assessing the health risks of combined human exposure to multiple food-related toxic substances	Scope: The state-of-the-art frameworks already in place at international level should be reviewed in the quest for a harmonised approach. Proposals should focus on the health risks of combined exposures to multiple chemicals from multiple sources across differing life stages, taking into account also the gender dimension relevance.	Research and innovation action

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	SFS 15 - 2014: Proteins of the future	<u>Specific challenge:</u> The growing demand for meat and other protein-rich food sources, in many parts of the world, is of increasing concern in the light of growing population figures, environmental sustainability issues and land-use and food security concerns. Questions related to optimal production and processing methods, location (EU or other), health effects, environmental impact, and legal issues remain unanswered.	Research and Innovation Action
	SFS 16 - 2015: Tackling malnutrition in the elderly	Population ageing in Europe poses major demographic and socioeconomic challenges which are expected to increase over the coming decades. While the ageing process itself does not usually cause malnutrition in healthy and active elderly people with appropriate lifestyles, changes in body composition, organ function, the ability to eat or access food, inadequate dietary intake and the partial loss of taste and smell are associated with ageing and may contribute to malnutrition.	Research and innovation action
	Call for Blue Growth: Unlocking the potential of Seas and Oceans H2020-BG-2014/2015	Due to its high cross-cutting nature, this call integrates contributions coming from different parts of Societal Challenge 2, and from Societal Challenges 3 on 'Secure, Clean and Efficient Energy'; 4 on 'Smart, Green and Integrated Transport'; and 5 on 'Climate Action, Resource Efficiency and Raw Materials'. The call is also relevant for Societal Challenges 1 on 'Health, Demographic Change and Wellbeing'	-
	ISIB 12 - 2015: Public-Public Partnerships in the bioeconomy	Specific challenge: Agriculture and the agri-food sector are integral parts of the European economy and society. They are subject to multiple pressures from external drivers, which include rising food, feed, fuel and fibre demand, globalisation, environmental changes and public health aspects	-
10. Energy Challenge	LCE 2 – 2014/15: Developing the next generation technologies of renewable electricity and heating/cooling	Environment, health and safety issues shall be considered in all developments and appropriately addressed.	

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	LCE 3 – 2014/2015: Demonstration of renewable electricity and heating/cooling technologies	Environment, health and safety issues should be considered in all demonstrations and appropriately addressed.	
11. Smart, green and integrated transport	Technologies for “super” low “real world” CO₂ and polluting emissions	<u>Specific challenge</u> : Growing road traffic in Europe entails detrimental effects on the environment and public health to a level that is becoming unsustainable, while generating a large contribution to climate change, this in spite of increasingly stringent emission standards.	Innovation Actions
14. Secure societies – Protecting freedom and security of Europe and its citizens	DRS 4 – 2014: Crisis management topic 4: Feasibility study for strengthening capacity-building for health and security protection in case of large-scale pandemics – Phase I Demo	<u>Specific Challenge</u> : Emerging diseases and their pandemic potential pose a great security threat at national and EU level, particularly in the era of globalization when disease can spread more rapidly than in previous eras. Thirty four percent of all deaths worldwide are now attributable to infectious disease, while war only accounts for 0.64 percent of those deaths. Improving capacity-building is key to fight epidemics and the European Union must increase its efforts to improve domestic and global risk assessment, surveillance, communication capability and governance. Additionally, reducing disease transmission through public education and related measures is also crucial to minimizing pandemic impacts, i.e. for health security and protection in case of large-scale pandemics, further capacity-building is essential.	Coordination and Support Action
	Call – Digital Security: Cybersecurity, Privacy and Trust H2020-CP-2014/2015	As cybersecurity is cross-domain the call will provide cybersecurity whatever the application or domain (mobile, eCommerce...), or societal challenge (e.g. health, energy, smart cities).	PPI