



# Horizon 2020

Open to the World

Egypt in Horizon 2020  
(2014-2017)

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## List of projects: H2020 grants involving Egypt

Project Acronym	Project Number	Project Title	Topic
4PRIMA	724060	Partnership for Research and Innovation in the Mediterranean Area	Climate action, environment, resource efficiency and raw materials
5TOL_4EWAS	692523	Quintuple Helix Approach to Targeted Open Innovation in Energy, Water, Agriculture in the South Mediterranean Neighborhood	Europe in a changing world - inclusive, innovative and reflective societies
BEYOND	641607	Building EGNSS capacity On EU Neighbouring multimodal Domains.	Space
CLUSDEV MED	645730	Cluster Development Med	Marie-Sklodowska-Curie Actions
CURE-XF	734353	Capacity Building And Raising Awareness In Europe And In Third Countries To Cope With Xylella fastidiosa	Marie-Sklodowska-Curie Actions
DiCoMI	778068	Directional Composites through Manufacturing Innovation	Marie-Sklodowska-Curie Actions
ECOFISH	645691	Researches on the potential conversion of conventional fish farms into organic by establishing a model and good practice guide	Marie-Sklodowska-Curie Actions
FEUTURE	692976	The Future of EU-Turkey Relations. Mapping Dynamics and Testing Scenarios	Europe in a changing world - inclusive, innovative and reflective societies
ForestValue	773324	ForestValue - Innovating forest-based bioeconomy	Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
GEO-CRADLE	690133	Coordinating and integrating state-of-the-art Earth Observation Activities in the regions of North Africa, Middle East, and Balkans and Developing Links with GEO related initiatives towards GEOSS	Climate action, environment, resource efficiency and raw materials
GLYCANC	645756	Matrix glycans as multifunctional pathogenesis factors and therapeutic targets in cancer	Marie-Sklodowska-Curie Actions
IMAGE	677353	Innovative Management of Genetic Resources	Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
InvisiblesPlus	690575	InvisiblesPlus	Marie-Sklodowska-Curie Actions
IST-Africa 2016-2018	723240	IST-Africa (2016 - 2018)	Information and Communication Technologies
LEAP-AGRI	727715	A long term EU-Africa research and innovation partnership on food and nutrition security and sustainable agriculture	Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
MADFORWATER	688320	Development And application of integrated technological and management solutions FOR wastewater treatment and efficient reuse in agriculture tailored to the needs of Mediterranean African Countries	Climate action, environment, resource efficiency and raw materials
MedAID	727315	Mediterranean Aquaculture Integrated Development	Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
MedReset	693055	MEDRESET.A comprehensive, integrated, and bottom-up approach to reset our understanding of the Mediterranean space, remap the region, and reconstruct	Europe in a changing world - inclusive, innovative and reflective societies
MERID	645846	Middle East Research and Innovation Dialogue	Europe in a changing world - inclusive, innovative and reflective societies
Net4Mobility	640603	Net4Mobility: Network of the Marie Sklodowska-Curie Actions National Contact Points	Marie-Sklodowska-Curie Actions

Project Acronym	Project Number	Project Title	Topic
Net4MobilityPlus	785632	Network of the Marie Skłodowska-Curie Action National Contact Points for the mobile scientific and innovation community	Marie-Sklodowska-Curie Actions
NonMinimalHiggs	645722	Non Minimal Higgs	Marie-Sklodowska-Curie Actions
ODYSSEA	727277	OPERATING A NETWORK OF INTEGRATED OBSERVATORY SYSTEMS IN THE MEDITERRANEAN SEA	Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the
OptArch	689983	Optimization Driven Architectural Design of Structures	Marie-Sklodowska-Curie Actions
SIMRA	677622	Social Innovation in Marginalised Rural Areas	Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
SiS.net2	635656	Network of Science with and for Society National Contact Points	Develop the governance for the advancement of responsible research and innovation by all stakeholders,
TACTILENet	690893	TACTILENet: Towards Agile, effiCient, auTonomous and masslvely LargE Network of things	Marie-Sklodowska-Curie Actions
trans-making	734855	Art / culture / economy to democratize society. Research in placemaking for alternative narratives	Marie-Sklodowska-Curie Actions
VI-SEEM	675121	VRE for regional Interdisciplinary communities in Southeast Europe and the Eastern Mediterranean	Marie-Sklodowska-Curie Actions
WaterWorks2015	689271	Water Works 2016-2020 in Support of the Water JPI (WaterWorks2015) - Sustainable water use in agriculture, to increase water use efficiency and reduce soil and water pollution	Climate action, environment, resource efficiency and raw materials
WaterWorks2017	776692	Water Works 2018-2022 in Support of the Water JPI (WaterWorks2017) and of the EC Call SC5-33-2017: Closing the water cycle gap	Climate action, environment, resource efficiency and raw materials
			<b>Number of grants: 31</b>

<b>Title</b>	<b>Partnership for Research and Innovation in the Mediterranean Area</b>
<b>Acronym</b>	4PRIMA
<b>Project N°</b>	724060
<b>Call ID</b>	H2020-SC5-2016-OneStageA
<b>Project Budget</b>	1,999.379 €
<b>EC Contribution</b>	1,999.379 €
<b>Coordinator</b>	MINISTERO DELL'ISTRUZIONE, DELL'UNIVERSITA' E DELLA RICERCA - ITALY
<b>Egyptian Partner</b>	MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

### **Abstract**

The 4PRIMA Coordination and Support Action will create the bases and will develop a set of activities aimed at supporting the establishment of a long-term, well-structured and integrated partnership for research and innovation (R&I) on food systems and water resources, among countries from both sides of the Mediterranean Sea (“PRIMA Initiative”). In order to enable a sustainable development in this area, 4PRIMA will facilitate the establishment of favourable and stable conditions for a reinforced international cooperation on food systems and water research, based on a better coordination, collective ownership of R&I programmes and, consequently, clear and tangible mutual benefits.

4PRIMA will develop a Strategic Research and Innovation Agenda (SRIA) and an associated implementation plan, as a result of an extensive participatory process that will target a critical mass of key players at international level and all relevant stakeholders of the food and water sectors. To achieve this main objective, 4PRIMA will take advantage of a wide portfolio of results and relationship generated in previous and on-going EU projects, as well as it will seek cooperation between EU and Mediterranean Partner Countries (MPCs), in coherence with the activities of the Strategic Forum for International Cooperation.

Given the strategic relevance of an appropriate development and uptake of the SRIA to establish a long lasting partnership in the region, 4PRIMA science diplomacy actions will be essential to ensure the support to R&I policy dialogue addressing sensitive challenges between EU and MPCs. Moreover, in order to maximise its expected impact, 4PRIMA project will explore avenues for awareness raising and development of strategic alliances with key stakeholders, including EU, AC and MPCs countries that did not take part to the PRIMA joint programming process, with the goal to enlarge the participation to the “PRIMA Initiative”.

<b>Title</b>	<b>Quintuple Helix Approach to Targeted Open Innovation in Energy, Water, Agriculture in the South Mediterranean Neighbourhood</b>
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<b>Acronym</b>	5TOI_4EWAS
<b>Project N°</b>	692523
<b>Call ID</b>	H2020-INT-INCO-2015
<b>Project Budget</b>	1,949.914 €
<b>EC Contribution</b>	1,949.644 €
<b>Coordinator</b>	UNIVERSITAT AUTONOMA DE BARCELONA - SPAIN
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY (ASRT)

### **Abstract**

5TOI\_4EWAS project will focus on Targeted Open Innovation in energy, water and agriculture societal challenges through a balanced innovation-friendly ecosystem in the Southern Mediterranean Neighbourhood (SMN) based on quintuple helix and NEXUS approach. The project will enhance and support regional smart specialization and development by increasing research capacity, effective mobility of young innovators/researchers and shared knowledge to improve their participation in the EU research area. It will contribute to the establishment of favourable and stable conditions for international cooperation and the set-up of a Common Knowledge and Innovation Space of specialization in the SMN for a real socio-economic impact, based on co-ownership and mutual benefits. Our partnership ensures coherence and complementarity with past and on-going regional EU-MPC cooperation initiatives and existing bilateral S&T Agreements.

The project allows easily building of synergies among several ongoing initiatives thanks to the established Think Tanks Network of Science Counsellors in the MPC area and the observatory of current initiatives. In this way, the project will seek continuous complementarity and coherence with the activities of the Strategic Forum for International Cooperation to enhance the cooperation and close synergies through the involvement of the widest possible range of stakeholders, from funding agencies, research organizations, industry to civil society. Therefore an enhanced and more reliable definition of the priority setting mechanisms in the region from an innovation point of view is expected. Through these activities and by the definition of a Join Action Plan, the project will effectively use the science diplomacy and facilitates the identification of remaining obstacles, conflicts for cooperation and support the R&I bilateral policy dialogue addressing sensitive challenges between EU and MPC through the dialogue and coordination platform that will be created.

<b>Title</b>	<b>Building EGNSS Capacity On EU Neighbouring Multimodal Domains.</b>
<b>Acronym</b>	BEYOND
<b>Project N°</b>	641607
<b>Call ID</b>	H2020-Galileo-2014-1
<b>Project Budget</b>	1,914,054 €
<b>EC Contribution</b>	1,914,054 €
<b>Coordinator</b>	EUROPEAN SATELLITE SERVICES PROVIDER SAS -FRANCE
<b>Egyptian Partner</b>	ARAB INSTITUTE OF NAVIGATION

### **Abstract**

The overall project concept consists of building capacity in the field of multi-modal applications, focussed mainly on aviation using EGNSS in different Eastern European and Mediterranean countries. These countries are located at boundaries of the EGNOS SOL coverage area with limited EGNSS experience; the projects will promote the development of multi-modal applications, building on the lessons learnt in previous European R&D activities.

With relation to the call's objectives, the goal of BEYOND is threefold:

- Promoting the use of EGNSS outside the EU in neighbouring countries and stimulating investments in EGNSS;
- Preparing these countries for an optimal adoption of EGNSS and thus contributing to the increase in knowledge of EGNSS outside the EU; &
- Supporting networking between EU and non-EU players, from industry, institutions, research, academia, higher education and creating a basis for cooperation and business opportunities in EU neighbours; for aviation and other fields.

The project is intended to achieve a critical mass of new EGNSS applications, including multi-modal and aviation, providing crucial financial support and increasing the visibility of EGNSS in the different countries involved in the project.

The BEYOND project represents an important asset in supporting the GSA in the implementation of EGNSS applications in the wider Europe.

<b>Title</b>	<b>Cluster Development Med</b>
<b>Acronym</b>	CLUSDEV MED
<b>Project N°</b>	645730
<b>Call ID</b>	H2020-MSCA-RISE-2014
<b>Project Budget</b>	796,500 €
<b>EC Contribution</b>	796,500 €
<b>Coordinator</b>	UNIVERSITA DEGLI STUDI ROMA TRE – (ITALY)
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY (ASRT)

### **Abstract**

The proposal lies within priority research & innovation topics in EU-Mediterranean cooperation, as highlighted in several past projects and policies recommendations, i.e. within the MOCO - Monitoring Committee for Euro-Mediterranean Cooperation in RTD. International Cluster Cooperation offers opportunities to scale up research and technological potential, enhance competitiveness, support the regional socio-economic development and reinforce the market placement of new, innovative products. These cooperation approaches often fail due to constraints on resources, capabilities, instruments and funding. On the other hand, over 2.000 Clusters only in the European Union covering all sectors and able to realize an intersectorial framework, as well as related clusters and networks in the southern Mediterranean countries, form a great potential for transnational clustering.

The EU's framework for state aid defines innovative clusters as follows: "Innovation clusters mean grouping of independent and innovative start-ups, small, medium and large undertakings as well as research organizations operating in a particular sector and region, and designed to stimulate innovative activity by promoting intensive interactions, sharing of facilities and exchange of knowledge and expertise, and by contributing effectively to technology transfer, networking and information dissemination among the undertakings in the cluster". Taking into account the current socio-economic situations ClusDevMed priority topics are, in particular: - Agribusiness, agro food, food security – Energy - Water Core research areas is: Green Tech in the field of Clustering Activities

<b>Title</b>	<b>Capacity Building And Raising Awareness In Europe And In Third Countries To Cope With Xylellafastidiosa</b>
<b>Acronym</b>	CURE-XF
<b>Project N°</b>	734353
<b>Call ID</b>	H2020-MSCA-RISE-2016
<b>Project Budget</b>	1,777.500 €
<b>EC Contribution</b>	1,777.500 €
<b>Coordinator</b>	CENTRO INTERNAZIONALE DI ALTISTUDI AGRONOMICI MEDITERRANEI – (ITALY)
<b>Egyptian Partner</b>	THE AGRICULTURAL RESEARCH CENTER

### **Abstract**

CURE-FX aims to establish a multidisciplinary research program to answer the urgent need to improve prevention, early detection and control of Xylellafastidiosa (Xf). An appropriate approach to this emergency should include a coordination and multidisciplinary interaction between a plurality of competences and it can be facilitated by a more intense exchange and mobility of researchers. The objectives of CURE-FX are:

- To exchange the scientific capacities and novelties among the European Countries as well as between EU and third countries, in particular sensitive neighbour countries;
- To strengthen the knowledge and the know-how on Xf in third countries having intense exchange of plant material with Europe; &
- To raise awareness in relation to Xf.

These objectives will be achieved through:

- Strengthen preventive measures by consolidating expertise and awareness of plant health agencies, decision-makers and relevant stakeholders;
- Analyse Xf-hosts interaction and epidemiology; Develop advanced diagnostic tools for the detection and characterization of Xf and associated vectors;
- Consolidate innovative approaches for disease prevention, monitoring and control;

Improving pest risk analysis, phytosanitary legislations and contingency measures for a safe plant material trade and Integrating with current platforms for adequate communication and dissemination ensuring an effective knowledge transfer among the various actors involved.

The proposal involves partners from the following countries: Italy, France, Greece, Spain, Belgium, UK, Egypt, Morocco, Tunisia, Lebanon and Iran. Partner countries selected are differently involved in the study and management of quarantine pests, although each one with a different role, approach and competence.

These countries can be divided into two groups:

Group 1: countries where the disease is already present (Italy, France, Iran); &

Group 2: the other countries where the disease is currently absent, but the risk of its introduction is high.

<b>Title</b>	<b>Directional Composites through Manufacturing Innovation</b>
<b>Acronym</b>	DiCoMI
<b>Project N°</b>	7780683
<b>Call ID</b>	H2020-MSCA-RISE-2017
<b>Project Budget</b>	1,426,500 €
<b>EC Contribution</b>	1,426,500 €
<b>Coordinator</b>	LOUGHBOROUGH UNIVERSITY – (United Kingdom)
<b>Egyptian Partner</b>	Central Metallurgical Research and Development Institute - CMRDI

### **Abstract**

The Directional Composites through Manufacturing Innovation (DiCoMI) project aims to bring together leading innovators from across Europe, and beyond, to develop a new method of producing composite material parts with optimised fibre directionality. The DiCoMI project will integrate advanced manufacturing techniques, composite materials science, and manufacturing system design. As such, it requires a high level of inter-disciplinary cooperation as well as collaboration between researchers and industrials. The outcome will be a truly novel composites manufacturing system capable of producing parts with increased accuracy, reduced cost and enhanced functionality.

DiCoMI project will focus on Directional Fibre-Reinforced Polymers (FRP) materials and combined different manufacturing techniques into a unique and innovative hybrid system. DiCoMI project will have a direct impact on the European and international scientific state of the art in the fields of composite materials and manufacturing equipment, while supporting the innovation potential in the automotive and aerospace industries.

<b>Title</b>	<b>Researches on the Potential Conversion of Conventional Fish Farms into Organic by Establishing a Model and Good Practice Guide</b>
<b>Acronym</b>	ECOFISH
<b>Project N°</b>	645691
<b>Call ID</b>	H2020-MSCA-RISE-2014
<b>Project Budget</b>	580,500 €
<b>EC Contribution</b>	580,500 €
<b>Coordinator</b>	UNIVERSITATEA DE STIINTE AGRONOMICE SI MEDICINA VETERINARA DIN BUCURESTI – (ROMANIA)
<b>Egyptian Partner</b>	KAFR EL-SHEIKH UNIVERSITY THE AGRICULTURAL RESEARCH CENTER

### **Abstract**

The conversion of conventional aquaculture farms in sustainable aquaculture farms help aquaculture businesses to achieve economic viability and competitiveness. Sustainable aquaculture is undoubtedly the management technique that has most contributed to support aquaculture businesses to adopt aqua-environmental measures for protection of the environment, natural resources and landscape.

Aquaponics is known as a sustainable production system for plants and fish that combines traditional aquaculture (aquatic livestock), such as fish, crayfish and shrimp with the hydroponics (growing plants in water) in a symbiotic environment. The Aquaponics is a production system where the waste is utilized as nutrients is a system sustainable for the environment, where high-value products on the market are obtained because they are grown with organic nutrients and free of chemicals or pesticides.

By this research project, we aim at to improving on-board waste management and reduce the amount of waste disposed of inappropriately. In order to achieve this goal, we have the following objectives: to integrate aquaculture production system with agricultural production system (aquaponics) and to reconcile and achieve social, economic and environmental objectives with processing and marketing action to add more value to end aquaponics products. The project will develop concepts for the next generation of aquaculture production systems which can be used for multiple purposes, including aquaculture, agriculture and social farming.

The project originality comes through its multidisciplinary character in the sense that it combines a research team specialized in various fields, whose experience will result in a production platform product, including all necessary technical indicators for developing and interpretation socio-economic of the results obtained.

<b>Title</b>	<b>The Future of EU-Turkey Relations. Mapping Dynamics and Testing Scenarios</b>
<b>Acronym</b>	FEUTURE
<b>Project N°</b>	692976
<b>Call ID</b>	H2020-INT-SOCIETY-2015
<b>Project Budget</b>	2,500,896 €
<b>EC Contribution</b>	2,497,985 €
<b>Coordinator</b>	UNIVERSITAET ZU KOELN – (GERMANY)
<b>Egyptian Partner</b>	THE AMERICAN UNIVERSITY IN CAIRO – AUC

### **Abstract**

The EU and Turkey face mounting challenges both in relation to one another and internationally. The EU is confronted with an economic crisis which is likely to make differentiation a growing phenomenon. Turkey faces polarisation between different political forces, the state and civil society. The neighbourhood is unravelling to the east and south and a power shift is under way at global level. This questions the regional roles of Turkey and the EU.

Accordingly, FEUTURE – a consortium of 13 experienced universities and think tanks from the EU, Turkey and the neighbourhood – aims to:

- Map the dynamics of EU-Turkey relations as to underlying narratives and thematic drivers;
- Substantiate most likely future scenario(s) and assess its implications; &
- Draw policy recommendations.

FEUTURE provides excellence and pursues an ambitious, inspiring and innovative programme in a three-phased structure of elaboration, exploration and extrapolation. It applies an inter-temporal, interdisciplinary and international approach by analysing drivers within six thematic dimensions (politics, security, economics, energy, migration, identity) and across four levels of analysis (EU, Turkey, neighbourhood, global).

Phases 1 and 2 culminate in an extrapolation phase in which FEUTURE integrates new knowledge and tests the implications of 3 ideal-type future scenarios for EU-Turkey relations: conflict, cooperation and convergence.

We engage in a trans-disciplinary exchange within an elite survey and with the knowledge-user community from the four levels of analysis exploiting the full range of virtual and social media as well as traditional means. FEUTURE's work plan guarantees coherence of its research approach by streamlining work in one conceptual, one synthesis, two organisational and six thematic work packages. Joint WP meetings and three FEUTURE conferences assure intensive horizontal exchange. FEUTURE will achieve academic, practical and structural impact beyond the project.

<b>Title</b>	<b>ForestValue - Innovating Forest-Based Bio-economy</b>
<b>Acronym</b>	ForestValue
<b>Project N°</b>	773324
<b>Call ID</b>	H2020-SFS-2017-1
<b>Project Budget</b>	15,257,575 €
<b>EC Contribution</b>	5,035,000 €
<b>Coordinator</b>	MINISTRY OF AGRICULTURE AND FORESTRY – (FINLAND)
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY (ASRT)

### **Abstract**

The overall objective of the proposed Cofund action “ForestValue - Innovating the forest-based bioeconomy” is to promote increased innovation and competitiveness of the forest-based sector in Europe and support its transformation from a resource-intensive to a knowledge-intensive, productive, resource-efficient and resilient sector. Sustainability and modernisation of forestry systems and downstream value chains including innovative business concepts and production technologies will be needed to develop the forestry sector and the European bioeconomy, of which forestry accounts for a large share.

The aim of ForestValue is to comprise the joint implementation of a trans-national call for proposals for research, development and innovation in the forest-based sector with a clear financial commitment from the participating national (or regional) research programmes and the EU. The topics of the planned ForestValue joint call will contribute to transforming the global economy from a dependence on fossil and non-renewable raw materials to a sustainable “bio-based economy”. The primary purpose is to allow the partners in the consortium to successfully implement and fund a co-funded joint call in the field of forestry and the wood sector.

ForestValue builds on the success of three forest-based ERA-NETs: WoodWisdom-Net (running since 2004, the present phase running under the FP7 ERA-NET Plus Scheme 2012-2017), SUMFOREST (Tackling the challenges in sustainable and multifunctional forestry through enhanced research coordination for policy decisions, 2014-2017) and FORESTERRA (Enhancing forest research in the Mediterranean through improved coordination and integration, 2012-2015). The consortium consists of 31 partners representing different programmes in the bioeconomy funding sector, coming from different regions and countries inside/outside Europe.

<b>Title</b>	<b>Coordinating and integrating state-of-the-art Earth Observation Activities in the regions of North Africa, Middle East, and Balkans and Developing Links with GEO related initiatives towards GEOSS</b>
<b>Acronym</b>	GEO-CRADLE
<b>Project N°</b>	690133
<b>Call ID</b>	H2020-SC5-2015-one-stage
<b>Project Budget</b>	3,030,800 €
<b>EC Contribution</b>	2,910,800 €
<b>Coordinator</b>	NATIONAL OBSERVATORY OF ATHENS – (GREECE)
<b>Egyptian Partner</b>	CENTRE FOR ENVIRONMENT AND DEVELOPMENT FOR THE ARAB REGION AND EUROPE (CEDARE)

### **Abstract**

GEO-CRADLE brings together key players representing the whole (Balkans, N. Africa and M. East) region and the complete EO value chain with the overarching objective of establishing a multi-regional coordination network that will:

- Support the effective integration of existing EO capacities (space/air-borne/in-situ monitoring networks, modelling and data exploitation skills, and past project experience);
- Provide the interface for the engagement of the complete ecosystem of EO stakeholders (scientists, service/data providers, end-users, governmental orgs, and decision makers);
- Promote the concrete uptake of EO services and data in response to regional needs, relevant to the thematic priorities of the Call (adaptation to climate change, improved food security, access to raw materials and energy); &
- Contribute to the improved implementation of and participation in GEO, GEOSS, and Copernicus in the region.

In this context, GEO-CRADLE lays out an action plan that starts by inventorying the regional EO capacities and user needs, which in turn leads to a gap analysis, the definition of region specific (G)EO Maturity Indicators and common priority needs. Through showcasing pilots, it demonstrates how the priorities can be tackled by the GEO-CRADLE Network, and provides the roadmap for the future implementation of GEOSS and Copernicus in the region, building on the GEO-CRADLE Regional Data Hub, which abides by the GEOSS Data Sharing Principles. To maximise the impact of GEO-CRADLE activities, well-defined Communication, Dissemination and Stakeholder Engagement strategies are proposed. Key Performance Indicators (KPIs) will be used for the quantified assessment of the impact, identifying potential enabling or constraining factors, while pursuing realistic but also ambitious exploitation scenarios. For efficient project coordination, the project management is assisted by a regional coordination structure, and active liaison with EC, GEO and UN initiatives.

<b>Title</b>	<b>Matrix Glycans as Multifunctional Pathogenesis Factors and Therapeutic Targets in Cancer</b>
<b>Acronym</b>	GLYCANC
<b>Project N°</b>	645756
<b>Call ID</b>	H2020-MSCA-RISE-2014
<b>Project Budget</b>	567,000 €
<b>EC Contribution</b>	567,000 €
<b>Coordinator</b>	WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER – (GERMANY)
<b>Egyptian Partner</b>	CAIRO UNIVERSITY

### **Abstract**

Cancer is a leading cause of mortality within the aging European population. Therapeutic targeting is hampered by the complexity of the disease, which includes not only molecular changes within the tumour cell itself, but also within its microenvironment. Tumour angiogenesis, tumour-stroma interactions, interactions with immune cells, with the extracellular matrix and cancer stem cell niches allow for malignant cell survival and promote metastasis, the leading cause for cancer-associated mortality.

Proteoglycans (PGs) and glycosaminoglycans (GAGs) – structurally diverse carbohydrates of the extracellular matrix and cell surfaces - have emerged as novel biomarkers and molecular players both within tumour cells and their microenvironment, as they integrate signals from growth factors, chemokines and integrins, and cell-cell as well as matrix adhesion. Importantly, their expression is dysregulated in numerous tumour entities, and has been shown to modulate each of the hallmarks of cancer as defined by Hanahan and Weinberg (Cell 2011).

We hypothesize that dysregulated function of PGs and GAGs simultaneously affects all molecular steps towards cancer metastasis as a general principle applicable to multiple tumour entities. Pharmacological modulation of their function thus emerges as an attractive multitargeted antitumoral approach which simultaneously acts at multiple levels of disease progression. Besides providing extensive knowledge transfer and training for researchers, the combined expertise of the GLYCANC consortium aims at performing a detailed structural analysis of PG and GAG glycans in disease using state-of-the art methodology, analysing their regulation via epigenetic mechanisms and microRNAs, and elucidating molecular mechanisms underlying aberrant PG and GAG function. GLYCANC will lead to a deeper understanding of glycan structures and glycan-dependent mechanisms promoting cancer progression, providing the basis for rational multitargeted anticancer approaches.

<b>Title</b>	<b>Innovative Management of Genetic Resources</b>
<b>Acronym</b>	IMAGE
<b>Project N°</b>	677353
<b>Call ID</b>	H2020-SFS-2015-2
<b>Project Budget</b>	9,013,158 €
<b>EC Contribution</b>	7,000,000 €
<b>Coordinator</b>	INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE – (FRANCE)
<b>Egyptian Partner</b>	THE AGRICULTURAL RESEARCH CENTER

### **Abstract**

This aim of IMAGE is to enhance the use of genetic collections and to upgrade animal gene bank management. IMAGE will better exploit DNA information and develop methodologies, biotechnologies, and bioinformatics for rationalising animal genetic resources. It will demonstrate the benefits brought by gene banks to the development of sustainable livestock systems by: enhancing the usefulness of genetic collections to allow the livestock sector to respond to environment and market changes; using latest DNA technology and reproductive physiology for collecting, storing and distributing biological resources; Minimising genetic accidents such as abnormalities or genetic variability tipping points; Developing synergies between ex-situ and in-situ conservation to maximise resources for the future.

To this end, the project will involve stakeholders, SME, and academic partners to achieve the following objectives.

At the scientific level, the project will:

- Assess the diversity available in genetic collections;
- Search for adaptive traits through landscape genetics in local populations;
- Contribute to elucidate local populations' and major genes' history;
- Identify detrimental variants that can contribute to inbreeding depression;
- Predict cryobank samples' reproductive performance;
- Facilitate the use of collections for genome-assisted breeding.

At the technological level, it will develop:

- Procedures for harmonising gene bank operations and rationalising collections;
- Conservation and reproductive biotechnologies;
- A central information system to connect available data on germplasm and genomic collections.

At the applied level, it will develop methods and tools for stakeholders to:

- Restore genetic diversity in livestock populations;
- Create or reconstruct breeds fitting new environmental constraints and consumer demands;
- Facilitate cryobanking for local breeds;
- Define and track breed-based product brands;
- Implement access and benefit sharing regulations.

<b>Title</b>	<b>InvisiblesPlus</b>
<b>Acronym</b>	InvisiblesPlus
<b>Project N°</b>	690575
<b>Call ID</b>	H2020-MSCA-RISE-2015
<b>Project Budget</b>	2,322,000 €
<b>EC Contribution</b>	2,070,000 €
<b>Coordinator</b>	UNIVERSIDAD AUTONOMA DE MADRID – (SPAIN)
<b>Egyptian Partner</b>	ZEWAIL CITY OF SCIENCE & TECHNOLOGY

### **Abstract**

NEUTRINOS (Ns) and DARK MATTER (DM) are the most abundant particles in the universe. Their couplings to ordinary matter are so tenuous that they remained undiscovered -invisible- until very recently. N masses and DM constitute the first evidence ever of physics beyond the Standard Model of particle physics. The path to build the New Standard Model must confront the fundamental nature of the particles in the invisible sector at large. Furthermore, for each particle there is a mirror image with identical mass and opposite charge(s): its antiparticle. The laws of physics are almost particle-antiparticle symmetric: an asymmetry in Ns and/or DM properties may be the required seed that explains why the universe is made of matter and not antimatter, i.e. how come we are here, a fact unexplained by standard physics. In turn, the unnaturally symmetric behavior of strong interactions points to a new particle, the axion, a superb dark matter candidate. Very timely, an ambitious international experimental search has been launched on Ns, axions, other DM and Higgs physics with major breakthroughs expected soon.

InvisiblesPlus will be the first transnational program addressing the N and DM properties at large, their interfaces, and in addition the connections of their particle/antiparticle asymmetries with those of the visible universe. It will also complement, continue and specially extend to a new qualitative realm the knowledge sharing and long-term collaboration of the well-established ITN Invisibles.

InvisiblesPlus is ideally suited to the task:

- World leadership in all relevant areas;
- Multidisciplinarity;
- Key theorists and experimentalists;
- XENON, Fermilab, CERN, SuperKamiokande and ADMX participate;
- Innovative virtual institute;
- Top quality expertise from emerging countries;
- Outstanding outreach,
- Excellent junior/senior ratio in secondments; &
- Optimal in gender balance with over 50% female scientists in charge, plus the coordinator.

<b>Title</b>	<b>IST-Africa (2016 - 2018)</b>
<b>Acronym</b>	IST-Africa (2016 - 2018)
<b>Project N°</b>	723240
<b>Call ID</b>	H2020-ICT-2016-INT
<b>Project Budget</b>	800,000 €
<b>EC Contribution</b>	800,000 €
<b>Coordinator</b>	IIMC INTERNATIONAL INFORMATION MANAGEMENT CORPORATION LTD – (IERLAND)
<b>Egyptian Partner</b>	INFORMATION TECHNOLOGY INDUSTRY DEVELOPMENT AGENCY - ITIDA

### **Abstract**

IST-Africa (2016 - 2018) has 4 complimentary objectives focused on strengthening ICT-related research and innovation cooperation between Europe and Africa:

- Foster greater coordination of research and innovation activities;
- Strengthen research and innovation linkages, increase awareness of research and innovation capacity and cooperation opportunities, and support mutually beneficial collaboration; &
- Monitor research and innovation activities in 17 IST-Africa Partner Countries to identify and provide input on common R&D priorities and future cooperation opportunities; and
- Promote participation in ICT-39-2017 and other relevant Horizon 2020 calls, disseminate results from ICT-39-2015 and other relevant calls.

IST-Africa (2016 - 2018) leverages results and achievements from previous phases of IST-Africa to realise its objectives. Coordination will be undertaken through national Horizon 2020 Train-the-Trainer Workshops and stakeholder meetings. Help Desk activities, international conferences and engagement with African and European stakeholders will assist in strengthening research and innovation linkages. Surveys will be undertaken across the 17 participating African Member States to monitor ICT-related research and innovation activities, map research and innovation capacity, priorities and bilateral cooperation initiatives to support future planning. Relevant calls will be promoted and results disseminated through national and international dissemination channels, physical meetings and conference presentations.

All activities are well aligned with the work programme priorities through the organisation of research and innovation events and conferences with policy dimensions, monitoring of research and innovation activities, identification of common R&D priorities, strengthening linkages, raising awareness of collaboration opportunities, dissemination of results and building on the achievements of an ongoing Support Action for Africa Coordinator.

<b>Title</b>	<b>A long term EU-Africa Research and Innovation Partnership on Food and Nutrition Security and Sustainable Agriculture</b>
<b>Acronym</b>	LEAP-AGRI
<b>Project N°</b>	727715
<b>Call ID</b>	H2020-SFS-2016-1
<b>Project Budget</b>	33,049,448 €
<b>EC Contribution</b>	10,906,318 €
<b>Coordinator</b>	AGENCE NATIONALE DE LA RECHERCHE – (FRANCE)
<b>Egyptian Partner</b>	MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

### **Abstract**

The objective of LEAP-AGRI is to fulfil the ambition of the Europe Africa dialogue in Science and Technology (the HLPD) to launch a joint flagship initiative on its chosen priority area: Food and Nutrition Security and Sustainable Agriculture (FNSSA). This partnership will increase investments in research and innovation through coordinated bi-regional (EU/Africa) mechanisms aimed at reducing fragmentation. These mechanisms will be based on two complementary approaches:

- The preparation and implementation of a joint call for proposals for collaborative R&I projects between European and African partners which will contribute to the coordination and increase of joint activities between R&I institutions, and their programmes across European Union Member States (and Associated countries) and African countries. It will pool the financial resources from 22 countries for a total of over €28 M, including EC participation;
- The identification and test of innovative instruments for alignment and collaboration in research, innovation, capacity strengthening and infrastructure development, especially targeting the implication - together with the national research agencies - of foundations, development agencies, private sector, and civil-society organizations. In consultation with the relevant stakeholder communities, including European and African governments, a joint Strategic Research and Innovation Agenda in the FNSSA domain will be defined.

In these objectives, LEAP-AGRI aligns with the scope and expected impacts of the Horizon 2020 Challenge 2/ SFS 41 2016-2017 topic “EU-Africa Research and Innovation partnership on food and nutrition security and sustainable agriculture” in all aspect.

Building on earlier experiences such as ERAfrica, PRO-IntensAfrica and ERA-ARD, LEAP-AGRI will be guided by strong partnership principles such as equitability, shared governance and long-term commitment to the partnership by organisations who have relationships of trust for many years.

<b>Title</b>	<b>Development and application of integrated technological and management solutions FOR wastewater treatment and efficient reuse in agriculture tailored to the needs of Mediterranean African Countries</b>
<b>Acronym</b>	MADFORWATER
<b>Project N°</b>	688320
<b>Call ID</b>	H2020-WATER-2015-two-stage
<b>Project Budget</b>	4,039,419€
<b>EC Contribution</b>	2,910,869 €
<b>Coordinator</b>	ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA – (ITALY)
<b>Egyptian Partner</b>	MINISTRY OF WATER RESOURCES AND IRRIGATION

### **Abstract**

Climate change and population growth are expected to exacerbate the water crisis of Mediterranean African Countries (MACs), where agriculture accounts for 80-85% of freshwater consumption. The aim of MADFORWATER is to develop a set of integrated technological and management solutions to enhance wastewater treatment, reuse for irrigation and water efficiency in agriculture in three MACs (Tunisia, Morocco and Egypt). MADFORWATER will develop and adapt to three main hydrological basins in the selected MACs technologies for the production of irrigation-quality water from drainage canals, municipal, agro-industrial and industrial wastewaters, and technologies for water efficiency and reuse in agriculture, initially validated at laboratory scale. Selected technologies will be further adapted and validated in four field pilot plants of integrated wastewater treatment/reuse.

Integrated strategies for wastewater treatment and reuse targeted to the selected basins will be developed, and guidelines for the development of integrated water management strategies in other basins of the three target MACs will be produced, considering climate change, population increase and economic growth scenarios. The social and technical suitability of the developed technologies and non-technological instruments in relation to the local context will be evaluated with the participation of MAC stakeholders and partners. Guidelines on economic instruments and policies for the effective implementation of the proposed water management solutions in the target MACs will be developed. The project will lead to a relevant long-term impact in Egypt, Morocco and Tunisia in terms of increased wastewater treatment, wastewater reuse, food production and income in the agricultural and water treatment sectors, and decreased groundwater exploitation, water pollution and food contamination. The MADFORWATER consortium consists of 18 partners, 5 of which from the 3 MACs and 1 from China

<b>Title</b>	<b>Mediterranean Aquaculture Integrated Development</b>
<b>Acronym</b>	MedAID
<b>Project N°</b>	727315
<b>Call ID</b>	H2020-SFS-2016-2
<b>Project Budget</b>	6,999,996 €
<b>EC Contribution</b>	6,999,996 €
<b>Coordinator</b>	Mediterranean Agronomic Institute of Zaragoza / International Centre for Advanced Mediterranean Agronomic Studies – (SPAIN)
<b>Egyptian Partner</b>	NATIONAL INSTITUTE OF OCEANOGRAPHY AND FISHERIES

### **Abstract**

Production and productivity of Mediterranean marine fish aquaculture, mainly seabass and seabream, are stagnating or growing slowly as a result of multiple and interrelated causes. To accomplish the objective of improving its competitiveness and sustainability, MedAID is structured in a first interdisciplinary WP to assess technical, environmental, market, socioeconomic and governance weaknesses, and in several specialized WPs exploring innovative solutions, followed by an integrating WP, which will provide codes of practice and innovative tool-boxes throughout the value chain to enhance the sector performance holistically. Various stakeholders will interact in the consultation, communication, dissemination and training WPs ensuring practical orientation of the project and results implementation.

Biological performance (nutrition, health and genetics) will be scrutinized to identify and quantify the relevant components to improve Key Performance Indicators (KPIs: growth rates, mortality and feed efficiency), thus contributing to increase production efficiency. Economic, business, marketing, environmental, social, administrative and legal factors will be addressed to obtain integrated solutions to shift towards a market-oriented and consumer-responsible business and to face the multiple administrative, environmental and social issues constraining competitiveness and public acceptance. An interdisciplinary consortium of research and industrial partners will carry out R&D and case study activities to close the existing gaps.

Mediterranean countries (EU and non-EU) with significant aquaculture production are represented. Northern European R&D institutions will participate by bringing successful technological tools and integrated approaches that Mediterranean aquaculture is missing today. MedAID will impact the sector positively by providing innovative tools, integrated marketing and business plans and by improving the sector image, sustainability and governance.

<b>Title</b>	<b>MEDRESET. A comprehensive, integrated, and bottom-up approach to reset our understanding of the Mediterranean space, remap the region, and reconstruct inclusive, responsive, and flexible EU policies in it</b>
<b>Acronym</b>	MedReset
<b>Project N°</b>	693055
<b>Call ID</b>	H2020-INT-SOCIETY-2015
<b>Project Budget</b>	2,497,056 €
<b>EC Contribution</b>	2,497,056 €
<b>Coordinator</b>	ISTITUTO AFFARI INTERNAZIONALI – (ITALY)
<b>Egyptian Partner</b>	CAIRO UNIVERSITY

### **Abstract**

Euro-Mediterranean policies, as well as research on them, have been characterized by a Euro-centric approach based on a narrow geopolitical construction of the Mediterranean. Moreover, stakeholders, policy instruments, and policy issues have been defined from a European standpoint, marginalizing the perspectives and needs of local states and people, and ignoring the role played by new and powerful regional and global actors. In an increasingly multipolar world, overcoming this Euro-centric approach is key for Europe to play a more meaningful role in the region. Thus, MEDRESET aims to reset our understanding of the Mediterranean and develop alternative visions for a new partnership and corresponding EU policies, reinventing a future role for the EU as an inclusive, flexible, and responsive ‘actor’ in the region.

This will be achieved through an integrated research design which is in three phases:

- de-constructs the EU construction of the Mediterranean;
- counters it by mapping the region on the geopolitical level and in four key policy areas (political ideas, agriculture and water, industry and energy, migration and mobility) alongside a three-dimensional framework (stakeholders, policy instruments, policy issues), which directly feeds into
- a reconstruction of a new role for the EU, enhancing its ability to exert reflexive leadership and thus its relevance in the region. Embedded in an interdisciplinary research team, as well as in a civil society and media network, MEDRESET evaluates the effectiveness and potential of EU policies by investigating whether current policies still match the changing geopolitical configuration of the Mediterranean area. The perceptions of EU policies and the reasons for their successes or failures are assessed by surveying top-down and bottom-up stakeholders on both shores of the Mediterranean. Country-tailored policy recommendations for the EU will be given for four key countries: Egypt, Lebanon, Morocco, and Tunisia.

<b>Title</b>	<b>Middle East Research and Innovation Dialogue</b>
<b>Acronym</b>	MERID
<b>Project N°</b>	645846
<b>Call ID</b>	H2020-INT-INCO-2014
<b>Project Budget</b>	999,750 €
<b>EC Contribution</b>	999,750 €
<b>Coordinator</b>	EVRO-SREDOZEMSKA UNIVERZA – (SLOVENIA)
<b>Egyptian Partner</b>	MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

### **Abstract**

The MERID project (Middle East Research and Innovation Dialogue) proposes a comprehensive action to intensify and encourage research and innovation cooperation between the EU and the Middle East region, directly involving partners from Egypt, Iran, Iraq, Jordan, Lebanon and Palestine, directly involving partners from Egypt, Iran, Iraq, Jordan, Lebanon and Palestine. The project intends to build upon the experience carried out in countries of the region that have already participated in the previous framework programmes, and therefore are at a relatively advanced stage of research cooperation with Europe, like Egypt and Jordan. Attention is paid to calibrating in the most appropriate way the intervention logic of the project, adapting actions to the specific needs of the target countries and their research constituencies. The needs of Iran and Iraq will for sure prove different from those of countries where cooperation with the EU has a proven track record behind.

The project is the first attempt to systematise support to the policy dialogue and involvement of research communities of Iran and Iraq in the H2020 programme, as well as an initiative that seeks to give continuity to collaboration frameworks already established between the EU and Middle East countries. The project has high potential to deliver long-lasting impact and structuring effects on cooperation between the EU and the Middle East region. It focuses on enhancing direct cooperation among researchers and on laying or consolidating preconditions, in the region, fostering joint research projects and initiatives with the EU, establishing optimal framework conditions for international cooperation and increasing coordination between policies and programmes. These objectives will be achieved through series of different on-line and in-person activities, among which are meetings of researchers, brokerage events, info-days, training and coaching, webinars and other tools, relevant for this project proposals.

<b>Title</b>	<b>Net4Mobility: Network of the Marie Skłodowska-Curie Actions National Contact Points</b>
<b>Acronym</b>	Net4Mobility
<b>Project N°</b>	640603
<b>Call ID</b>	H2020-MSCA-NCP-2014
<b>Project Budget</b>	1,777,949 €
<b>EC Contribution</b>	1,498,353€
<b>Coordinator</b>	VEREIN EURESEARCH – (SWTZERLAND)
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY (ASRT)

### **Abstract**

The objective of the Net4Mobility project is to facilitate the transnational cooperation between the National Contact Points (NCPs) of the Marie Skłodowska-Curie Actions (MSCA). The project aims to achieve the following two goals: 1) mutual support and thus raising the general standard of applicants (taking into account the diversity of the different actors) 2) to better inform the research and innovation stakeholders on funding possibilities in the MSCA and help them to improve their performance. Thus, ultimately our goal is to support research and innovation. As a synergy effect, the work processes of REA, EC and NCPs will be optimized and more effective.

The project will help less experienced NCPs to improve their service so that their beneficiaries become more competitive. Less experienced NCPs shall be able to rapidly acquire knowledge from the community of MSCA NCPs.

Net4Mobility has to raise awareness of MSCA funding possibilities in the non-academic and the academic sectors, especially for the new funding schemes or new modes in existing ones.

The project will achieve these goals by the implementation of a wide array of measures, e.g.:

- Trainings based on the needs of MSCA NCPs in particular with regards to the challenges of Horizon2020;
- Twinning' visits and Best Practice Meetings to tap into the already existing knowledge of MSCA NCPs; &
- Communication platforms for the constant exchange and transfer of knowledge.

A number of public engagement activities and networking events with relevant stakeholders round up the project's activities. Net4Mobility relates to the Work Programme for MSCA 2014-2015 'Call for Transnational cooperation among Marie Skłodowska-Curie National Contact Points (NCP)'. The activities are tailored according to the nature of the area and the priorities of the involved NCPs according to the EC Guide on the NCPs principles for H2020.

<b>Title</b>	<b>Network of the Marie Skłodowska-Curie Action National Contact Points for the Mobile Scientific and Innovation Community</b>
<b>Acronym</b>	Net4Mobility Plus
<b>Project N°</b>	785632
<b>Call ID</b>	H2020-MSCA-NCP-2017
<b>Project Budget</b>	1,800,000 €
<b>EC Contribution</b>	1,800,000 €
<b>Coordinator</b>	INSTYTUT PODSTAWOWYCH PROBLEMOW TECHNIKI POLSKIEJ AKADEMII NAUK – (POLAND)
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY (ASRT)

### **Abstract**

The National Contact Points (NCPs) play an important role in assisting potential applicants and project beneficiaries during their journey through the Horizon 2020 instruments. According to the EC Guide on the NCPs principles, they are responsible for raising awareness about available funding opportunities; advising and training potential applicants in the preparation, submission and follow-up of their grant proposals; providing support during the project execution as well as giving feedback on difficulties in the programme implementation. Thus, the NCPs constitute the main interface between the Programme and the R&I community in Europe and beyond, as well as between them and the EC. Basing on such a position, Net4Mobility+ aims at strengthening the consistency and professionalism of the NCPs for Marie Skłodowska-Curie Actions – part of H2020 supporting international and intersectoral mobility and researchers' career development.

The consortium of 19 beneficiaries and 6 associated partners representing the Member States, Associated and Third countries will execute a set of activities tailored to the nature of MSCA and to priorities and capacity of the entire NCPs network, including needs of the “widening countries”. The focus on sharing expertise and good practices, transfer of knowledge to less experienced NCPs, joint support provided on a daily basis, enhancing knowledge and skills, broadening tools and methodology will facilitate the improvement of the overall professionalism of NCP services across and outside Europe. Outcomes of project events (training, twinning, and seminars), jointly developed materials (guides, recommendations) and communication and dissemination platform (website, social media) will result in lowering entry barriers for newcomers, simplifying access to MSCA calls and raising the quality of applications. For reaching the project objectives and ensuring the impact, the consortium will work closely, keeping high management and quality standards.

<b>Title</b>	<b>Non Minimal Higgs</b>
<b>Acronym</b>	Non Minimal Higgs
<b>Project N°</b>	645722
<b>Call ID</b>	H2020-MSCA-RISE-2014
<b>Project Budget</b>	328,500 €
<b>EC Contribution</b>	301,500€
<b>Coordinator</b>	UNIVERSITY OF SOUTHAMPTON – UNITED KINGDOM)
<b>Egyptian Partner</b>	ZEWAIL CITY OF SCIENCE & TECHNOLOGY

### **Abstract**

On July 4th CERN has announced the discovery of a scalar particle at the Large Hadron Collider (LHC), later identified as the Higgs boson. This scientific breakthrough was accomplished due to the joint efforts of thousands of scientists from all around the globe. This long awaited discovery increased our understanding of the world, providing an explanation for the mechanism from which all elementary particles acquire mass. However, there are still fundamental questions awaiting a clear answer: which model better describes nature when all observed properties of this new particle are taken into consideration? Will these new models help to solve other outstanding problems in elementary particle physics? The goal of this project is to look for answers to these crucial questions regarding our understanding of nature.

In order to address the problem we have gathered a group of people with complementary expertise that range from model builders to high-energy tool developers who will finally make the connection to the LHC's experimental collaborations. We expect that this interaction between the different nodes of this international collaboration will result in a database together with high-energy tools where a number of models will be readily available for testing by the experimental groups at the LHC and future colliders.

The staff exchange will be planned according to the needs of the project. There have been collaborations in the past between some of the nodes. We now expect that the proposed staff exchange will enhance this Higgs physics network, with an effective skills development both for experienced and early stage researchers. Finally we foresee that the project will not only have an impact on European science but will also contribute to bring together different cultures with a very positive outcome for society as a whole.

<b>Title</b>	<b>OPERATING A NETWORK OF INTEGRATED OBSERVATORY SYSTEMS IN THE MEDITERRANEAN SEA</b>
<b>Acronym</b>	ODYSSEA
<b>Project N°</b>	727277
<b>Call ID</b>	H2020-BG-2016-2
<b>Project Budget</b>	8,398,716 €
<b>EC Contribution</b>	8,398,716 €
<b>Coordinator</b>	DEMOCRITUS UNIVERSITY OF THRACE – (GREECE)
<b>Egyptian Partner</b>	ARAB NETWORK FOR ENVIRONMENT & DEVELOPMENT

### **Abstract**

ODYSSEA will develop, operate and demonstrate an interoperable and cost-effective platform that fully integrates networks of observing and forecasting systems across the Mediterranean basin, addressing both the open sea and the coastal zone. The platform will collect its data from the many databases maintained by agencies, public authorities, and institutions of Mediterranean EU and non-EU countries, integrating existing earth observation facilities and networks in the Mediterranean Sea building on key initiatives such as Copernicus, GEOSS, GOOS, EMODNet, ESFRI, Lifewatch, Med-OBIS, GBIF, AquaMaps, Marine IBA e-atlas, MAPAMED and others with marine and maritime links. Through ODYSSEA's end-user centred approach, in which the various groups of end-users and stakeholders, within and external to the Consortium, will be involved from Day 1 of the project in the design, development and operation of the platform, including identification of gaps in data collection and accessibility.

High priority gaps will be filled through multiple approaches that include developing a network of coastal observatories, deploying novel in-situ sensors at sea (a.o. micro plastic sensors), oceanographic modelling and integrating existing mobile apps for citizen scientist networks. Applying advanced algorithms to organise, homogenise and fuse the large quantities of data in common standard type and format as well as other types of formats, the ODYSSEA platform will provide both primary data and on-demand derived data services, including forecasts, from ALL Mediterranean countries through a SINGLE PUBLIC PORTAL to various end-user groups and stakeholders. End-user requirements will drive the creation of secondary data sets which the platform will provide as new and packaged services matching the specialised information needs of users. ODYSSEA will improve accessibility to existing data as well as increase the temporal and geographic coverage of observational data in the Mediterranean.

<b>Title</b>	<b>Optimization Driven Architectural Design of Structures</b>
<b>Acronym</b>	OptArch
<b>Project N°</b>	689983
<b>Call ID</b>	H2020-MSCA-RISE-2015
<b>Project Budget</b>	1,620,000 €
<b>EC Contribution</b>	1,620,000 €
<b>Coordinator</b>	NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA – (GREECE)
<b>Egyptian Partner</b>	CAIRO UNIVERSITY

### **Abstract**

According to UNEP, the building sector is estimated to be worth 10% of the global GDP and employs 111 million people. In addition, buildings use about 40% of global energy, 40% of global resources and emit approximately 33% of global GHG emissions. Finally, the fact that people today spend, on average, more than 80% of their time indoors, enhances its social importance. All above indicate the necessity to optimize building design.

Architects usually name "optimal design" the choice among a very limited set of design alternatives, dictated by their experience and intuition. However, modern design of structures requires one to account for a great number of criteria deriving from multiple disciplines, often of conflicting nature. The vast number of alternative choices enhances the possibility of arriving at an optimum with the incorporation of smart, automatic tools in the design process, further guiding designer's intuition.

The principal aim of the proposed Network is to create and test methodologies for the application of optimization techniques in different design phases of civil structures by developing strong synergies among a multi-disciplinary team of academic experts from Greece, France, Cyprus, Canada, Turkey, Egypt & Jordan and SMEs from France & Greece. A first goal of the project is to exploit the use of shape and topology optimization techniques in computer aided architectural design. Moreover, the Network wants to exchange ideas, propose formulations that correspond to real-life applications and develop solutions for optimal multi-disciplinary architectural design. Of particular interest is the combination of criteria deriving from structural mechanics, eco-design, bioclimatic design and acoustic performance. For each topic, joint workshops, seminars and long-term visits will be organized at the coordinating and partner institutions. The results will be published in scientific journals, professional magazines and presented in international conferences.

<b>Title</b>	<b>Social Innovation in Marginalised Rural Areas</b>
<b>Acronym</b>	SIMRA
<b>Project N°</b>	677622
<b>Call ID</b>	H2020-ISIB-2015-2
<b>Project Budget</b>	5,935,829 €
<b>EC Contribution</b>	5,575,829€
<b>Coordinator</b>	THE JAMES HUTTON INSTITUTE – (UNITED KINGDOM)
<b>Egyptian Partner</b>	CAIRO UNIVERSITY

### **Abstract**

SIMRA seeks to advance understanding of social innovation (SI) and innovative governance in agriculture, forestry and rural development (RD), and how to boost them, particularly in marginalised rural areas across Europe, with a focus on the Mediterranean region (including non-EU) where there is limited evidence of outcomes and supporting conditions. These objectives will be achieved by:

- Developing systematic frameworks: a) theoretical - for improved knowledge of the complexity of SIs and its dimensions, and its impact on unfolding territorial capital; b) operational - based on a trans-disciplinary coalition (researchers and practitioners) to advance understanding of preconditions and success factors (e.g. instruments, incentives etc.) for implementing/operationalizing SI;
- Creating a categorisation of SIs which encompasses the specificities in terms of social priorities, relationships/collaborations etc. and serves as an instrument to explore reasons why regions with similar conditions display diverging paths and to 'turn diversity into strength';
- Creating an integrated set of methods to evaluate SI and its impacts on economic, social, environmental, institutional and policy dimensions of territorial capital;
- Co-constructed evaluation of SIs in case studies across the spatial variation of European rural areas, considering which components of territorial capital foster and, or mainstream RD;
- Synthesis and dissemination of new or improved knowledge of SIs and novel governance mechanisms to promote social capital and institutional capacity building and inform effective options/solutions for shaping sustainable development trajectories; &
- Creating collaborative learning and networking opportunities and launching innovative actions at different/multiple scales, with continuous interactions among researchers, 'knowledge brokers' and stakeholders to foster and mainstream SI, leaving a durable legacy.

<b>Title</b>	<b>Network of Science with and for Society National Contact Points</b>
<b>Acronym</b>	SiS.net2
<b>Project N°</b>	635656
<b>Call ID</b>	H2020-GARRI-NCP-2014-1
<b>Project Budget</b>	1,999,594 €
<b>EC Contribution</b>	1,999,594 €
<b>Coordinator</b>	THE ICELANDIC CENTRE FOR RESEARCH – (ICELAND)
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY ASRT

### **Abstract**

Science with and for Society has a vital role to play in bringing together a wide range of stakeholders in order to build capacities and develop innovative ways to connect science to society through Responsible Research and Innovation measures. This demands that the Science with and for Society National Contact Points (NCPs) are able to orientate in the wide area of policy behind the programme, its topics and research areas as well as in Horizon 2020 rules and regulations and in addition, they need to have extensive knowledge of the different groups of stakeholders, in order to be able to fulfil their job.

The proposal focuses on identifying and sharing good practices and raising the standard of proposals by organising joint activities of NCPs. The consortium ensures a balance of experienced NCPs and newcomers in order to build on knowledge and enhance skills and competences of all NCPs within the programme. This will result in more consistent and improved NCP services which will enhance participation in Science with and for Society calls.

<b>Title</b>	<b>TACTILENet: Towards Agile, effiCient, auTonomous and massIvelyLarge Network of things</b>
<b>Acronym</b>	TACTILENet
<b>Project N°</b>	690893
<b>Call ID</b>	H2020-MSCA-RISE-2015
<b>Project Budget</b>	517,500 €
<b>EC Contribution</b>	418,500€
<b>Coordinator</b>	SABANCI UNIVERSITESI – (TURKEY)
<b>Egyptian Partner</b>	Nile University

### **Abstract**

The vision for the 5th generation of mobile networks (5G) includes at its heart the Internet of Things (IoT) paradigm, leading to a new era of connectivity where billions of devices exchange data and install intelligence in our everyday life. The EU has set out to play a leading role in developing 5G technologies by consolidating and building upon the most important research and innovation results attained in previous research programs. Nevertheless, 5G is still in its early research stages. Various issues must be resolved before it can become a reality: we need to join forces – across countries, continents, and sectors.

The objective of the TACTILENet project is to bring together the complementary expertise of European and third-country partners in order to lay the foundations for addressing basic issues in several facets of 5G networking. The cross-fertilization among partners will contribute to the ongoing research efforts by jointly identifying ambitious yet feasible goals for 5G system, addressing some of the fundamental research problems in achieving these goals, and finally, by designing and analysing a suite of protocols. Given the size of our consortium and the timeframe of the project, we will focus on some of the most promising directions, such as network densification, energy efficiency/harvesting and short block length communications.

The consortium brings together expertise from all of the above research directions. Each partner will bring along its expertise in different thrusts, and the project will develop a unifying framework for a systematic study of the Internet of Things within the 5G framework capturing these clearly interrelated research areas. With its suggested mobility plan, the project aspires to strengthen collaboration among partners, exploit complementarities in expertise, educate young researchers and ultimately create a solid basis for fruitful cooperation, going beyond the time-frame of this project.

<b>Title</b>	<b>Art / Culture / Economy to Democratize society. Research in Placemaking for Alternative Narratives</b>
<b>Acronym</b>	trans-making
<b>Project N°</b>	734855
<b>Call ID</b>	H2020-MSCA-RISE-2016
<b>Project Budget</b>	1,858,500€
<b>EC Contribution</b>	1,858,500 €
<b>Coordinator</b>	RELAIS CULTURE EUROPE ASSOCIATION – (FRANCE)
<b>Egyptian Partner</b>	CAIRO LAB FOR URBAN STUDIES TRAINING & ENVIRONMENTAL RESEARCH CLUSTER

### **Abstract**

The project trans-making aims to establish a multilateral network of research and innovation staff active in the fields of placemaking/place-based art activities as a space to create alternative narratives for social, economic and democratic renewal.

It will investigate and experiment with placemaking to contribute actively to the democratization/well-being of society, educating and empowering individuals and disadvantaged minorities through research and production in the connection between art and new technologies.

The objective is to strengthen research capacities, through exchange of knowledge and expertise between academic and non-academic partners from Europe and Third Countries in a shared research programme focused on: collecting, documenting / Exploring, experimenting / Performing / Designing. Through those work programme of Research and Innovation, the consortium, academic and non-academics partners, aims to foster links between art and culture, economy, democracy and innovation at EU level and beyond. To foster entrepreneurial skills, risk taking adaptability, innovation capacity (economic, social and democratic). And it will contribute actively to education and empowerment of individuals and disadvantaged minorities through research and production between art and new technologies.

The project through its consortium will be to foster a better understanding and knowledge sharing between scientific community, stakeholders and policy-makers. Which will be achieved with the respective networks of the involved partners. The final aim of trans-making will be to establish a long term collaboration among the partners in order to have a scientific and innovative worldwide community devoted to the research, (including art-based research), innovation, education activity in the matters concerned by the project. Moreover, the proposed measures of the project will be conceived in order to have the widest possible impact of the society.

<b>Title</b>	<b>VRE for regional Interdisciplinary communities in Southeast Europe and the Eastern Mediterranean</b>
<b>Acronym</b>	VI-SEEM
<b>Project N°</b>	675121
<b>Call ID</b>	H2020-EINFRA-2015-1
<b>Project Budget</b>	3,300,000€
<b>EC Contribution</b>	3,300,000€
<b>Coordinator</b>	ETHNIKO DIKTYO EREVNAS TECHNOLOGIAS AE – (GREECE)
<b>Egyptian Partner</b>	BIBLIOTHECA ALEXANDRINA *LIBRARY OF ALEXANDRIA BIBALEX

### **Abstract**

In the last decade, a number of initiatives were crucial for enabling high-quality research - by providing e-Infrastructure resources, application support and training - in both South East Europe (SEE) and Eastern Mediterranean (EM). They helped reduce the digital divide and brain drain in Europe, by ensuring access to regional e-Infrastructures to new member states, states on path to ascension, and states in European Neighbourhood Policy area – in total 14 countries in SEE and 6 in EM. This VI-SEEM proposal brings together these e-Infrastructures to build capacity and better utilize synergies, for an improved service provision within a unified Virtual Research Environment (VRE) for the inter-disciplinary scientific user communities in the combined SEE and EM regions (SEEM).

The overall objective is to provide user-friendly integrated e-Infrastructure platform for regional cross-border Scientific Communities in Climatology, Life Sciences, and Cultural Heritage for the SEEM region; by linking computer, data, and visualization resources, as well as services, models, software and tools.

This VRE will provide the scientists and researchers with the support in full lifecycle of collaborative research: accessing and sharing relevant research data, using it with provided codes and tools to carry out new experiments and simulations on large-scale e-Infrastructures, and producing new knowledge and data - which can be stored and shared in the same VRE. Climatology and Life Science communities are directly relevant for Societal Challenges. The driving ambition of this proposal is to maintain leadership in enabling e-Infrastructure based research and innovation in the region for the 3 strategic regional user communities: supporting multidisciplinary solutions, advancing their research, and bridging the development gap with the rest of Europe. The VI-SEEM consortium brings together e-Infrastructure operators and Scientific Communities in a common endeavour.

<b>Title</b>	<b>Water Works 2016-2020 in Support of the Water JPI (WaterWorks2015) - Sustainable water use in agriculture, to increase water use efficiency and reduce soil and water pollution</b>
<b>Acronym</b>	WaterWorks2015
<b>Project N°</b>	689271
<b>Call ID</b>	H2020-WATER-2015-one-stage
<b>Project Budget</b>	20,524,924€
<b>EC Contribution</b>	6,267,995 €
<b>Coordinator</b>	AGENCE NATIONALE DE LA RECHERCHE – (FRANCE)
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY - ASRT

### **Abstract**

The WaterWorks2015 proposal responds to the Horizon 2020 (H2020) Societal Challenge 5 2015 Call topic Water-3 [2015]: Stepping up EU research and innovation cooperation in the water area.

WaterWorks2015 aims at pooling resources from the 32 participating research programme owners / managers of 23 countries to implement a joint call for proposals, with EU co-funding in the area of sustainable water use in agriculture and forestry. It's a collaboration between the Joint Programming Initiatives (JPIs), Water JPI “Water Challenges for a Changing World” and FACCE JPI “Agriculture, Food Security and Climate Change”. Achieving a “sustainable water use in agriculture, to increase water use efficiency and reduce soil and water pollution” is at the intersection of the two JPIs, contributing to the implementation of their respective Strategic Research Agendas.

WaterWorks2015 includes 9 organisations from associated and third countries in an effort to reinforce international cooperation. Additional Activities will also be carried out to further support the implementation and strategy of the Water JPI. The overall aims include:

- Increasing the value of relevant national and EU R&D funding by concerted and joint planning, implementation and evaluation of national research programmes;
- Pooling financial resources from participating states towards the definition and implementation of a Co-funded transnational and multi-disciplinary Call for research and innovation proposals. The aim of the Call will be to support the implementation of initiatives and environmental policies, in particular those related to water and agriculture & forestry, as a way to increase water use efficiency and to reduce soil and water pollution;
- Overcoming the fragmentation of European water and agriculture/forestry-related research and innovation activities; &
- Supporting the implementation and the development of the two Joint Programming Initiatives, seeking synergies in overlapping research issues.

<b>Title</b>	<b>Water Works 2018-2022 in Support of the Water JPI (WaterWorks2017) and of the EC Call SC5-33-2017: Closing the water cycle gap</b>
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<b>Acronym</b>	WaterWorks2017
<b>Project N°</b>	776692
<b>Call ID</b>	H2020-SC5-2017-OneStageB
<b>Project Budget</b>	22,283,676€
<b>EC Contribution</b>	7,320,613 €
<b>Coordinator</b>	AGENCE NATIONALE DE LA RECHERCHE– (FRANCE)
<b>Egyptian Partner</b>	ACADEMY OF SCIENTIFIC RESEARCH AND TECHNOLOGY - ASRT

### **Abstract**

The WaterWorks2017 project is pooling resources from the 23 participating research programme owners / managers of 19 countries to implement a joint call for proposals, with EU co-funding in the area of closing the water cycle gap. It will support delivery of priorities identified in the Water Joint Programming Initiative (Water JPI) Strategic Research and Innovation Agenda (SRIA) in order to reconcile water supply and demand, both in terms of quantity and quality, and also in terms of space and time. It covers the following sub-themes:

- Enabling Sustainable Management of Water Resources;
- Strengthening Socio-economic Approaches to Water Management.

WaterWorks2017 includes 8 organisations from associated and third countries in an effort to reinforce international cooperation. Additional Activities will also be carried out to further support the implementation and strategy of the Water JPI. The overall aims include:

- Supporting the implementation and development of the Water JPI on priorities identified in its SRIA;
- Pooling financial resources from participating national and regional research programmes and implementing a co-funded transnational and multi-disciplinary call for research and innovation proposals;
- Pooling additional financial resources to implement a joint call for proposals resulting in grants to third parties without EU co-funding (through a Thematic Annual Programming action - TAP);
- Overcoming the fragmentation of European water related research, development and innovation (RDI) activities while avoiding overlaps with ongoing actions co-funded by the European Commission and/or the Member States;
- Improving the implementation of research and innovation programmes in these fields through exchange of good practices;
- Contributing to the implementation of EU Water policies, the UN Sustainable Development Goals (SDGs), in particular SDG 6 and SDG 13, as well as the conclusions of the COP21 Agreement; and
- Seeking synergies with international research programmes beyond Europe.