



*Ministero degli Affari Esteri  
e della Cooperazione Internazionale*



*Ministero dell'Istruzione,  
dell'Università e della Ricerca*



REGIONE AUTONOMA  
FRIULI VENEZIA GIULIA

**PROGRAMME AGREEMENT  
FOR THE PROMOTION OF THE SCIENTIFIC AND  
INNOVATION SYSTEM OF FRIULI VENEZIA GIULIA  
SiS FVG**

**2017-2018 OPERATIONAL PLAN**

(Article 3, paragraphs 2 and 3 of the Agreement)



## INTRODUCTION

Launched in August 2016, SiS FVG is the networking initiative of the research institutions located in the Friuli Venezia Giulia region.

Considered as a science and technology “hub” with a significant number of internationally known research facilities, Friuli Venezia Giulia hosts a large community of international students and researchers together with a noteworthy network of public and private research institutions.

SiS FVG is a strategic instrument promoting the regional scientific and innovation system and guaranteeing that the research results will translate into substantial benefits in terms of socio-economic development of the local area.

The Initiative was established under the Agreement signed on 8th August 2016 by the Ministry of Foreign Affairs and International Cooperation (MAECI), the Ministry of Education, University and Research (MIUR) and the Regional Authority of Friuli Venezia Giulia in order to reinforce the previous Agreement signed in 2004.

By promoting the Scientific and Innovation System, the purpose of the Agreement is to enhance the national and international visibility of the System, to foster the exchange of services and activities among the Bodies involved, to support the network between science and economy, as well as to encourage technical and scientific dissemination and the knowledge on innovation.

The Education, Advanced Training and Research Area is the regional technical Department responsible for the implementation of the Agreement. For the planning, monitoring and the operational implementation of the activities, it works in cooperation with the Park Development and SiS FVG Office, operating within the Park Management, SiS FVG and Corporate Training Department of Area Science Park.

This Document presents the activities included in the 2017-2018 Programme, defined as strategic for the System by the members of the Steering Council. In addition to a brief summary of the activities, the Document contains the Programme tables with a detailed description of each project.

## OPERATIONAL OBJECTIVES

With a view to improve the effectiveness of its actions and the optimisation of its resources, the regional Scientific and Innovation System (SiS FVG) shall pursue the following **operational objectives**:

**Objective no. 1: Creation of a “Scientific network of excellence”** to reinforce the capacity for action, attractiveness and competitiveness of the institutions at a national and international level;

**Objective no. 2: Rationalisation of the regional structures that operate in the valorization of research,** technology transfer and the development of innovation;

**Objective no. 3: Promotion and services for the internationalisation of the centres present in Friuli Venezia Giulia region;**

**Objective no. 4: Technical and scientific communication and diffusion of innovation.**

The following activities were planned for the 2017-18 two-year period in order to pursue the objectives above:

### OBJECTIVE 1. CREATION OF A “SCIENTIFIC NETWORK OF EXCELLENCE”:

#### **Objective strand 1.1 Creation and enhancement of integrated research infrastructures**

In order to reinforce the capacity for action of the SiS FVG scientific institutions and optimise the use of the infrastructures themselves, five project tables were presented. The first four tables concern projects involving shared research infrastructures, implemented by the regional universities and SISSA, in the interest of integration, optimisation and implementation of shared services for research, funded under **Regional Law 2/2011** (Funding of the regional university system), Art. 4 § 2 letter d). In particular, the SISSA - International

School for Advanced Studies, in cooperation with the Universities of Trieste and Udine, aims to enhance the infrastructure devoted to HPC - **High Performance Computing** (table 1) in order to reinforce the regional primacy in the field of HPC and in the **100 G Network** (table 2), a regional telecommunications infrastructure based on the wavelength division multiplexing transmission optical technology. At the same time, the University of Udine, in the framework of the collaboration among the regional universities, aims to enhance the **Advanced Mechatronics Laboratory - Lama FVG** (table 3), in order to promote also the transfer of knowledge at the applicative and industrial level. Still in the framework of the regional funding under Regional Law 2/2011, the University of Trieste aims to reinforce the **SEM Microscopy Infrastructure** (table 4) in order to consolidate the research collaborations in sectors ranging from life sciences to engineering, physics and chemistry. In order to further enhance and share the use of the infrastructures, Area Science Park aims to implement the **Open Lab - Technological Platforms** (table 5), developed in partnership with Elettra Sincrotrone Trieste and the operating offices of the National Research Council in the Region, aimed at optimising the infrastructures for direct-access industrial research.

### **Objective strand 1.3 Support for the development of international agreements, cooperation agreements and projects in the sector of research and innovation**

In order to enhance the regional network, among the strategic activities there is the promotion of collaboration and enhancement agreements with international scientific networks, as well as research projects, also in the EUSALP and EUSAIR areas. In this strand, the **Regional Authority** supports the actions planned by the European Association within the **“Ambient Assisted Living” Programme - AAL** (table 6) to favour the participation of regional scientific and industrial partners in research and development projects at the international level on AAL subjects, starting from the next Europeans calls and programmes, in line with the “Smart Health” specialisation area of S3. In addition, in order to enhance international scientific collaborations and reinforce the transfer of knowledge within the SIS FVG, the **Regional Authority** has signed a **Framework Agreement** with the **Joint Research Centre of the European Commission - JRC** (table 7) with a potential wide range of activities for the enhancement of the regional scientific institutions. This includes the activation of vouchers for the mobility of researchers to the research facilities located at the various JRC centres. Another **Framework Agreement**, which is strategic to favour scientific collaborations with **MIT** - Massachusetts Institute of Technology through traineeships and short training periods, was signed by the Regional Authority, the regional universities and the SISSA with this prestigious University (table 8). Finally, the **APRE centres** have carried on their operations to favour access to the Horizon 2020 opportunities (table 9).

### **Objective strand 1.5 Consolidation of partnerships and initiatives of international cooperation to benefit the SiS FVG with the support of the appropriate offices of the MAECI and the networks of scientific experts located across the territory**

In order to strengthen the knowledge of the regional Research System in a domain that is strategic also to develop the competitiveness of the business of our territory, the the National Institute of Oceanography and Experimental Geophysics - **OGS** has offered to support the creation of a **Platform of knowledge and competences on the Blue Economy with a focus on the countries of the Mediterranean area** (table 10). Such Platform is aimed at gathering various initiatives based on the sectors of the Blue Economy, to support training, information spreading, entrepreneurial support and mobility.

### **Objective strand 1.7 Reinforcement of the relations with the Liaison Office in Brussels of the Friuli Venezia Giulia Region**

In order to promote the SiS FVG at European institutions to favour links and the participation of the SiS FVG partners in European networks operating in the context of research, the 2017-2018 programme will see the extension of the current collaboration between the SiS FVG Office of Area Science Park and the **Liaison Office in Brussels of the Regional Authority**.

The Brussels Office of the Regional Authority supports the participation of the SiS FVG bodies in the **brokerage meetings of the ERRIN, CORAL and RSCN European networks**. In addition, the Institutions are involved in the drafting of the **position paper** promoted through the GIURI, the network of the Italian Liaison Offices in Brussels (table 11).

## **OBJECTIVE 2. RATIONALISATION OF THE REGIONAL STRUCTURES THAT OPERATE IN THE VALORISATION OF RESEARCH, TECHNOLOGY TRANSFER AND THE DEVELOPMENT OF INNOVATION:**

### **Objective strand 2.1 Definition and implementation, in collaboration with the Region and the MIUR, of an organisational model of Innovation Enablers**

To help strengthen the regional competitiveness, in a system logic, the Friuli Venezia Giulia Region, the Ministry of Education, University and Research and the Ministry of Economic Development have signed a memorandum of understanding to develop a complex project called “**Argo System**,” of which Area Science Park is the coordinator for its implementation ([table 12](#)). The Project sees the involvement of the main territorial stakeholders in the field of Research and Innovation in order to build an integrated system of private enterprises and public operators able to generate economic development.

In order to support businesses in the management of the entire innovation process, experimenting with collaborative actions among Scientific and Technological Parks, Incubators and Regional Districts, the project named “**Open Innovation System FVG**” ([table 13](#)) is implemented on the territory in order to build a shared model of innovation services addressed to enterprises.

## **OBJECTIVE 3. PROMOTION AND SERVICES FOR THE INTERNATIONALISATION OF THE CENTRES PRESENT IN FRIULI VENEZIA GIULIA REGION:**

### **Objective strand 3.1 Reinforcement of the services for internationalisation offered by the Welcome Office FVG**

With reference to the well-established service **Welcome Office FVG**, the programme aims to foster the targeted services of assistance to users, also thanks to the opening of a new office in the centre of Trieste. The content of the web portal [www.welcomeoffice.fvg.it](http://www.welcomeoffice.fvg.it), renewed in 2016, has been constantly updated and further reinforced by additional applications such as the To Do List, an online digital instrument aimed at creating a personalised path for each website user ([table 14](#)).

Also, the year 2018 will see the training workshops for SiS FVG researchers, in order to increase their submissions for European calls for mobility or the preparation of scientific papers and posters for the development of their career.

### **Objective strand 3.2 Enhancement of the links of the Welcome Office FVG with the appropriate offices of the MAECI dedicated to migratory policies and entry procedures for foreigners**

The SiS FVG Office of Area Science Park organises periodical meetings with public administration offices in relation to the entry and the residence of international students and researchers in the region. In addition, a meeting is planned between the Welcome Office FVG partners and the experts of the Visa Centre of the Ministry of Foreign Affairs, in order to strengthen the competences of the staff of the SiS FVG institutions on this subject ([table 14](#)).

### **Objective strand 3.3 Creation of thematic forums and study groups with the MIUR and the MAECI to improve support for the quality and the attractiveness of the regional Scientific System**

Over the programme term as per this document, the SiS FVG Office of Area Science Park intends to promote a series of **meetings** in order to discuss the EU initiatives in support of researchers, such as the “**HRS - Human Resources Strategy**” and the initiative “**Science4Refugees**” ([table 14](#)).

### **Objective strand 3.4 Creation of studies and models to monitor the incoming and outgoing flows of researchers and international students**

The annual survey “**The Mobility of Knowledge**” ([table 15](#)) shall continue. It focuses on the flows of international students and researchers at the scientific and academic institutions in the regional territory. It shall be carried out by the SiS FVG Office of Area Science Park, in cooperation with the partner bodies of SiS FVG.

#### **OBJECTIVE 4. TECHNICAL AND SCIENTIFIC COMMUNICATION AND DIFFUSION OF INNOVATION:**

##### **Objective strand 4.1 Creation of communication initiatives to favour the transfer of knowledge to the entire scientific community**

In view of the “*European Science Open Forum*” to be held in Trieste in 2020, an important international showcase promoted by **Trieste International Foundation for Progress and Freedom**, a series of initiatives shall be promoted for the dissemination and the promotion of the Scientific and Innovation System in the proESOF phase, in collaboration with all the SiS FVG partners (table 16).

## **OBJECTIVE 1**

**Creation of a “Scientific Network of Excellence”**

TABLE 1	HIGH PERFORMANCE COMPUTING - HPC INFRASTRUCTURE
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.1 Creation and enhancement of integrated research infrastructures, to reinforce the capacity for action of the scientific institutions and to optimise the use of the infrastructures themselves, making them available also to private companies, and creation of shared services for research or the coordination of existing services
<b>Description of the action</b>	<p>Within the actions funded by Regional Law 2/2011 (Funding of the regional university system) relating to research facilities, the Plan includes the enhancement of the High Performance Computing - HPC infrastructure, in order to support and reinforce the primacy achieved by SISSA in the field of HPC. The extension of the benefits to the regional university system requires the availability of appropriate computing resources. The “Ulysses” computer currently used by SISSA is now reaching the end of its three-year technological cycle and therefore requires an upgrade.</p> <p>By adding two cabinets of computing nodes, the new-generation technology makes it possible to achieve a two-fold increase in the computing power versus the current cluster. The addition of said cabinets also requires an upgrade of the cooling capacity and of the interconnecting networks.</p> <p>This measure is included in the “2016-2018 three-year Programme” relating to the funding of the regional university system pursuant to Regional Law 2/2011.</p>
<b>Implementing bodies</b>	SISSA - International School for Advanced Studies (managing body), University of Trieste and University of Udine
<b>Starting date</b>	Starting from 2016
<b>Planned duration</b>	2017-2018
<b>Planned expenditure</b>	<b>€ 1,000,000</b>
<b>Expected result</b>	Enhancement of the regional resources in terms of integrated research infrastructures, with a related increase in the potential for research and attractiveness of the regional academic and scientific system and promotion of the transfer of knowledge at the applicative and industrial level.
<b>Output indicator</b>	Implementation of the infrastructure by 30 September

TABLE 2	100 G NETWORK
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.1 Creation and enhancement of integrated research infrastructures, to reinforce the capacity for action of the scientific institutions and to optimise the use of the infrastructures themselves, making them available also to private companies, and creation of shared services for research or the coordination of existing services
<b>Description of the action</b>	<p>Within the actions funded by Regional Law 2/2011 (Funding of the regional university system) relating to research facilities, the Plan includes the implementation of a regional telecommunications infrastructure based on the wavelength division multiplexing transmission optical technology, with technological scalability and a possible long-term evolution based on the requirements of the users (including the cross-border routes of Trieste and Gorizia).</p> <p>The Infrastructure includes the use of the LightNet fibres in Trieste and Gorizia, the purchase of transmission equipments for 100G, 10G or 40G access at pre-determined strategic hubs, which involve the main players of regional research, and the use of the optical fibre connections of ERMES - the Programme devoted to the development of the Information &amp; Communication Technology (ICT) across the regional territory - along the main routes.</p> <p>The Project aims to guarantee: ultra high-capacity symmetric connectivity, ultra low latency transmission and high reliability; sharing of computing resources, storage space and scientific equipment, regardless of the geographic location; virtually unlimited capacity for the transmission of large quantities of data, real-time communication and ultra high definition audio/video transmission.</p>
<b>Implementing bodies</b>	University of Trieste & International School for Advanced Studies (SISSA), for the benefit of all the SIS FVG bodies
<b>Starting date</b>	<b>2018</b>
<b>Planned duration</b>	2 years
<b>2017 Planned expenditure</b>	<b>€ 1,500,000</b>
<b>Expected result</b>	Enhancement of the regional resources in terms of integrated research infrastructures, with a related increase in the potential for research and attractiveness of the regional academic and scientific system and promotion of the transfer of knowledge at the applicative and industrial level.
<b>Output indicator</b>	Implementation of the Infrastructure by 31 December 2019

TABLE 3	MECHATRONICS LABORATORY
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.1 Creation and enhancement of integrated research infrastructures, to reinforce the capacity for action of the scientific institutions and to optimise the use of the infrastructures themselves, making them available also to private companies, and creation of shared services for research or the coordination of existing services
<b>Description of the action</b>	<p>Within the actions funded by Regional Law 2/2011 (Funding of the regional university system) relating to research facilities, the Plan includes the purchase of complementary equipment for the Advanced Mechatronics Laboratory (Lama FVG), an international centre of excellence for industrial innovation, in addition to the machinery already available.</p> <p>The Centre represents a research facility of excellence for the development of research and training in cooperation with the production system. The Facility aims to favour the creation of clusters of research groups in similar sectors within the regional university system; the creation of the conditions for the spreading of updated know-how on the latest technologies; the industrial application of research. All of this is promoted in application sectors that are consistent with the specialisation areas defined in the Regional Smart Specialisation Strategy (S3).</p> <p>This Measure is included in the “2016-2018 three-year Programme” relating to the funding of the regional university system pursuant to Regional Law 2/2011.</p>
<b>Implementing bodies</b>	University of Udine (managing body), University of Trieste and International School for Advanced Studies (SISSA)
<b>Starting date</b>	Starting from 2016
<b>Planned duration</b>	2017-18
<b>Planned expenditure</b>	<b>€ 550,000</b>
<b>Expected result</b>	Enhancement of the regional resources in terms of integrated research infrastructures, with a related increase in the potential for research and attractiveness of the regional academic and scientific system and promotion of the transfer of knowledge at the applicative and industrial level.
<b>Output indicator</b>	Laboratory upgrade completed by 31 October 2018

TABLE 4	MOLECULAR BIOMEDICINE (ICaN-FVG)
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.1 Creation and enhancement of integrated research infrastructures, to reinforce the capacity for action of the scientific institutions and to optimise the use of the infrastructures themselves, making them available also to private companies, and creation of shared services for research or the coordination of existing services
<b>Description of the action</b>	<p>Within the actions funded by Regional Law 2/2011 (Funding of the regional university system) relating to research facilities, in the interest of integration, optimisation and implementation of shared services for research, the Plan includes the creation of an innovative inter-university facility devoted to research, training and innovation, with a multi-disciplinary approach, which shall be competitive at the international level in the field of the research on the diseases related to the ageing of the population, such as: tumours, neurodegenerative, cardiovascular and chronic diseases.</p> <p>The Facility will connect, through an integrated research and experimentation network, the activities of the three regional universities in the field of molecular biomedicine, under the supervision of the University of Trieste, which shall be the managing partner of the Action to be developed in cooperation with the University of Udine and SISSA. Specifically, the Plan includes the implementation of a central lab (hub), equipped with large and medium-sized scientific equipment and the upgrading of the labs connected through the network (spoke). Such measures shall be accompanied by the upgrading of the microscopy equipment.</p> <p>The concentration and the networking of human and technological resources aims to favour the achievement of scientific results of excellence, competitive at the national and international level, thanks to a shared environment, the international calibre of the researchers involved and the availability of state-of-the-art equipment. With its activity, “ICaN” further aims to make a contribution to the training of new generations of researchers, physicians and entrepreneurs, providing the necessary basis on multiple aspects of research in the fields involved.</p> <p>This Measure is included in the “2016-2018 three-year Programme” relating to the funding of the regional university system pursuant to Regional Law 2/2011.</p>
<b>Implementing bodies</b>	University of Trieste (managing body), University of Udine and International School for Advanced Studies (SISSA)
<b>Starting date</b>	Starting from 2016
<b>Planned duration</b>	2017-18
<b>Planned expenditure</b>	<b>€ 2,110,991.75</b>
<b>Expected result</b>	Enhancement of the regional resources in terms of integrated research infrastructures, with a related increase in the potential for research and attractiveness of the regional academic and scientific system and promotion of the transfer of knowledge at the clinical and industrial level.
<b>Output indicator</b>	Completion of the operations by 31 December 2018

TABLE 5	OPEN LAB - TECHNOLOGICAL PLATFORMS
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.1 Creation and enhancement of integrated research infrastructures, to reinforce the capacity for action of the scientific institutions and to optimise the use of the infrastructures themselves, making them available also to private companies, and creation of shared services for research or the coordination of existing services
<b>Description of the action</b>	<p>“Open Lab” is a project presented by Area Science Park falling into the bonus quota of the Ordinary Fund for the financing of research bodies and institutes (FOE) 2012 (<i>Open Lab Support Structure</i>). It aims to promote industrial research, by integrating and upgrading the Large Laboratories of the Area Science Park Campus (the Elettra Sincrotrone light source, the Fermi free electron laser and the nanoscience and nanotechnology labs of the Istituto Officina dei Materiali - CNR) in an open infrastructure devised to support enterprises in their R&amp;D activities, putting at their disposal a system of competences and facilities devoted to the application of imaging techniques, structural analysis and chemical characterisation.</p> <p>The Project is to be implemented with an “Open Lab” format, a new approach to favour the presence of open research environments shared with different subjects, with a special focus on public-private collaborations. “Open Lab” is currently implemented by the following initiatives:</p> <ul style="list-style-type: none"> <li>- “Open Lab - A System of Open Research Facilities” (project proposal presented pursuant to Ministerial Decree - MIUR no. 615 of 04/08/2016), which provides for the upgrading of the equipment devoted to the research in structural biology and its applications, reinforcing, with a complementary and multidisciplinary approach, the links and interactions among competences and research facilities existing at Elettra Sincrotrone Trieste, Istituto Officina dei Materiali (IOM) and Istituto di Cristallografia (IC) of the CNR;</li> <li>- Creation of Technological Platforms (see also “ARGO System” table).</li> </ul>
<b>Implementing bodies</b>	Area Science Park, Elettra Sincrotrone Trieste and CNR (IOM and IC)
<b>Starting date</b>	Open Lab - A System of Open Research Facilities: first 2018 semester to implement the Open Lab Support Structure (launched in November 2014).
<b>Planned duration</b>	Multiannual (2018-2020)
<b>Planned expenditure</b>	<b>€ 1,200,000</b>
<b>Expected result</b>	<ul style="list-style-type: none"> <li>• Enhancement of the offer of the Large Laboratories of Area Science Park.</li> <li>• Enlargement of the offer of competences and equipment through the creation of a network of “open” laboratories on the national territory.</li> <li>• Development of an organisational scheme allowing for the access to the Network labs, favouring and balancing the interaction among different scientific disciplines and communities, as well as among public and private bodies.</li> </ul>
<b>Output indicator</b>	<ul style="list-style-type: none"> <li>- Number of labs participating in the network: at least 5.</li> <li>- Number of research projects/commissions with industrial users: at least 25.</li> </ul>

TABLE 6	“AMBIENT ASSISTED LIVING” - AAL EUROPEAN PROGRAMME
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.3 Support for the development of international agreements, cooperation agreements and projects in the sectors of research and innovation, which involve the institutions belonging to the scientific network of excellence, first of all inside the strategy areas of the European Union for the Alpine Region (EUSALP) and of the European Union Strategy for the Adriatic – Ionian Region (EUSAIR)
<b>Description of the action</b>	<p>As set out in Art. 8 § 57 of Regional Law 25/2016 (Regional Stability Law for 2017), in 2017 the Regional Authority joined the “Ambient Assisted Living Association” (AALA). Therefore, it participates in the activities of the Research and Development Programme in support of an active and independent life (“AAL Programme”) of the European Commission.</p> <p>In particular, the Regional Authority helps managing the calls set out in the Programme, with specific reference to the applicants and beneficiaries from its territory, participating in the governance of the Programme based on its scope of action. The 2018 Call concerns “Smart Solutions for Ageing Well.” The goal is to support innovative, cross-border and multidisciplinary collaboration projects that develops solutions based on ICT (Information and Communications Technologies) aimed at intervening in the fields of application of the Programme, focusing on specific markets.</p> <p>The Regional Authority joined the Association with a view to make a contribution to the promotion of the internationalisation of the scientific system and of the regional innovation, and to facilitate the access to European funding opportunities, with special regard to the development strategy devoted to Ambient Assisted Living (AAL) included in the “Smart health” specialisation area of the Regional S3.</p>
<b>Implementing bodies</b>	Regional Authority
<b>Starting date</b>	2017
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	<b>€ 5,000 (annual membership fee).</b> <b>€ 200,000 (regional budget for the 2018 Call).</b>
<b>Expected result</b>	Participation of the Region in the AAL Programme as a National Funding Authority (NFA).
<b>Output indicator</b>	Participation in the 2018 Call of the AAL Programme

TABLE 7	AGREEMENT BETWEEN THE FVG AUTONOMOUS REGION AND THE JOINT RESEARCH CENTRE (JRC) OF THE EUROPEAN COMMISSION
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.3 Support for the development of international agreements, cooperation agreements and projects in the sectors of research and innovation, which involve the institutions belonging to the scientific network of excellence, first of all inside the strategy areas of the European Union for the Alpine Region (EUSALP) and of the European Union Strategy for the Adriatic – Ionian Region (EUSAIR)
<b>Description of the action</b>	With a view to strategically boost collaboration activities at the European and international level in the field of research, innovation and technological transfer, the Regional Government signed and has been implementing an Agreement with the DG - Joint Research Centre (JRC), the research centre of the European Commission which supports European policies, contributing research and scientific evidence to the decision-making process. The Agreement is a framework instrument which makes it possible to promote and facilitate further operational agreements between the Institutions belonging to the regional Scientific and Innovation System and the JRC for the development of shared initiatives, also with beneficial effects on the regional territory. Through resources from the European Social Fund, the Region supports the mobility of researchers across JRC research centres.
<b>Implementing bodies</b>	Regional Authority and SiS FVG Institutions
<b>Starting date</b>	2017
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	<b>€ 500,000 (in support of the mobility of SiS FVG researchers)</b>
<b>Expected result</b>	Increase in the internationalisation capabilities of the regional Scientific and Innovation System and increase in the active international collaborations.
<b>Output indicator</b>	3 operational agreements between JRC and FVG research bodies.
<b>Output indicator</b>	15 mobility programmes for SiS FVG researchers at JRC research centres

TABLE 8	AGREEMENT BETWEEN THE REGION, THE FVG UNIVERSITIES AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY - MIT
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.3 Support for the development of international agreements, cooperation agreements and projects in the sectors of research and innovation, which involve the institutions belonging to the scientific network of excellence, first of all inside the strategy areas of the European Union for the Alpine Region (EUSALP) and of the European Union Strategy for the Adriatic – Ionian Region (EUSAIR)
<b>Description of the action</b>	<p>In order to strategically enhance the collaboration activities at the international level in the field of research, innovation and technological transfer, and to increase the impact and the visibility of such initiatives, the Regional Authority signed along with the Universities of Trieste and Udine and SISSA - and has been implementing - an Agreement with the Massachusetts Institute of Technology (MIT).</p> <p>The Agreement falls within the “MIT Italy Program” and has the purpose of strengthening such programme through new initiatives to increase its critical mass, as well as its impact and visibility.</p> <p>The Project concentrates on the scientific areas having shared interests and complementary competences, already available within the institutions involved.</p> <p>In particular, four types of activities are supported:</p> <ol style="list-style-type: none"> <li>1) Initial funding to promote new collaborations on pioneering subjects, with funds amounting to maximum € 25,000.00.</li> <li>2) Residencies and fellowships for MIT students and researchers at the universities of Friuli Venezia Giulia working on projects of shared interest.</li> <li>3) Contribution to travel costs amounting to € 2,500.00 aimed at exploring collaboration opportunities.</li> <li>4) An annual meeting to highlight the achievements of the initiative and disseminate information about it.</li> </ol>
<b>Implementing bodies</b>	Regional Authority, University of Trieste, University of Udine, International School for Advanced Studies (SISSA) and MIT
<b>Starting date</b>	2017
<b>Planned duration</b>	Three years
<b>Planned expenditure</b>	<b>€ 150,000 a year</b>
<b>Expected result</b>	Increase in the internationalisation capabilities of SiS FVG and increase in the active international collaborations.
<b>Output indicator</b>	7 projects and annual exchanges implemented among FVG Universities and MIT

TABLE 9	APRE FVG COMMITTEE
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.3 Support for the development of international agreements, cooperation agreements and projects in the sectors of research and innovation, which involve the institutions belonging to the scientific network of excellence, first of all inside the strategy areas of the European Union for the Alpine Region (EUSALP) and of the European Union Strategy for the Adriatic – Ionian Region (EUSAIR)
<b>Description of the action</b>	<p>The APRE FVG centres at Area Science Park and Friuli Innovazione are in charge of the following activities:</p> <ul style="list-style-type: none"> <li>- organisation of semestral meetings of the APRE FVG Committee to favour the exchange of best practices; mapping the projects submitted by regional partners on Horizon 2020; coordinating events and training and dissemination activities;</li> <li>- organisation of events to inform and raise awareness across the territory on the European opportunities and to increase and improve the participation of FVG companies and research bodies in H2020 (joint activity in collaboration with the APRE regional partners).</li> </ul>
<b>Implementing bodies</b>	Members of the APRE FVG Committee: Area Science Park (APRE FVG Trieste Centre), Friuli Innovazione (APRE FVG Udine Centre), Elettra Sincrotrone Trieste, ICTP, ICGEB, OGS, SISSA, University of Trieste and University of Udine
<b>Starting date</b>	Ongoing
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	A SiS FVG financial contribution is available for a few promotional activities.
<b>Expected result</b>	<ul style="list-style-type: none"> <li>• Improve the participation of FVG entities and businesses in Horizon2020 calls.</li> <li>• Favour the collaboration with national and European delegates and political stakeholders working on European programming.</li> </ul>
<b>Output indicator</b>	<ul style="list-style-type: none"> <li>- Convocation of an annual meeting on planning and semestral monitoring of the activities.</li> <li>- Organisation of at least 4 training and information events for the APRE Regional Committee and 2 events open to the local public.</li> </ul>

TABLE 10	BLUE ECONOMY PLATFORM
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.5 Consolidation of partnerships and initiatives of international cooperation to benefit the SiS FVG with the support of the appropriate offices of the MAECI and the networks of scientific experts located across the territory
<b>Description of the action</b>	<p>It is a platform of knowledge and expertise on the “Blue Economy,” hosted by OGS and aimed at promoting a sustainable economic development and a responsible blue growth in the area of the Mediterranean Sea and of the Black Sea, in line with the EU strategy. The Platform aims to:</p> <ul style="list-style-type: none"> <li>- promote an advanced training school in Trieste to provide courses once a year in cooperation with SiS FVG institutions (<i>Summer School in Sustainable Blue Growth</i>) with 50-55 participants, researchers, innovators, scientists and managers of Institutions, Universities and Research Centres from the countries of the Mediterranean and Black Sea area;</li> <li>- organise a series of international workshops and seminars (2-3 per year) addressed to researchers, scientists and Research and Development specialists, to deal with issues connected to the production and control of environmental quality and sea safety, etc.;</li> <li>- develop support activities for international startups and/or spin-offs focused on the Blue Growth sector collaborating within international projects;</li> <li>- launch an international university Master’s degree on Blue Economy with the University of Trieste and other SiS FVG partners, thus contributing to the creation of new professional figures and more job opportunities in the Blue sector;</li> <li>- collaborate within international exchange programmes.</li> </ul>
<b>Implementing bodies</b>	National Institute of Oceanography and Experimental Geophysics - OGS
<b>Starting date</b>	2017
<b>Planned duration</b>	Multiannual (2017-18)
<b>Planned expenditure</b>	<b>€ 200,000 (MIUR and funds from the Institute)</b>
<b>Expected result</b>	The OGS initiative on Blue Growth is strongly supported by the 5+5 Dialogue Countries, coordinated by Italy to promote advanced education, innovation, international mobility and access to the research infrastructures for a sustainable growth in the marine and maritime sectors and with the goal of creating new jobs and increase products and services offered by the Italian industry, especially in this region, in the marine and maritime sector.
<b>Output indicator</b>	Implementation of all the activities included in the project by 2018

TABLE 11	SUPPORT TO NETWORKING ACTIVITIES
<b>Objective</b>	<i>Objective no. 1: Creation of a “Scientific network of excellence” in the Friuli Venezia Giulia Region among universities, public research bodies and international research bodies to reinforce the capacity for action, attractiveness and competitiveness at a national and international level of the institutions</i>
<b>Objective strand</b>	1.7 Reinforcement of the relations with the Liaison Office in Brussels of the Friuli Venezia Giulia Region
<b>Description of the action</b>	<p>The support to the networking activities is guaranteed by promoting the participation of SiS FVG bodies in brokerage events organised by European networks such as ERRIN (European Regions for Research and Innovation), CORAL and RSCN (Reference Site Collaborative Network), in order to favour their inclusion in consortia interested in participating in the next calls of the Horizon 2020 programme.</p> <p>The SiS FVG know-how is also used in the drafting of the position paper promoted through the GIURI (<i>“Informal Group of the Italian Brussels-based Liaison Offices”</i>), the informal network created to connect in a more functional and effective way the “Italian integrated System” with the different EU interlocutors working in the field of research and innovation. GIURI aims to create every possible synergy with the Permanent Representation of Italy to the EU, considering the key role it plays on the subject of research and innovation with the ITRE Committee of the European Parliament.</p>
<b>Implementing bodies</b>	Brussels-based Liaison Office, in collaboration with the SiS FVG bodies
<b>Starting date</b>	2017
<b>Planned duration</b>	2017-2018
<b>Planned expenditure</b>	
<b>Expected result</b>	Promote the participation of regional subjects in the calls funded directly by the EU in the research and innovation sector and favour a constant dialogue with the main EU interlocutors in the fields above.
<b>Output indicator</b>	<ul style="list-style-type: none"> <li>- Participation in 2 brokerage events of the EU networks per year;</li> <li>- 2 position papers drafted through European networks and the GIURI per year.</li> </ul>

## **OBJECTIVE 2**

**Rationalisation of the regional structures that operate in the promotion of research, technology transfer and the development of innovation**

TABLE 12	ARGO SYSTEM
<b>Objective</b>	<i>Objective no. 2: Rationalisation of the regional structures that operate in the promotion of research, technology transfer and the development of innovation</i>
<b>Objective strand</b>	2.1 Definition and implementation, in collaboration with the Region and the MIUR, of an organisational model of Innovation Enablers
<b>Description of the action</b>	<p>The “ARGO project” was established with a view to create an economic development model at the regional level that can be replicated in other contexts at the national and international level, based on process and product innovation through the interaction of research and industry, able to generate increases in the productivity of the entire economic system.</p> <p>As it is an integrated project, it was shared at the national level through a memorandum of understanding signed by the Regional Authority, the Ministry of Education, University and Research, and the Ministry of Economic Development. Area Science Park was identified as the national public body which is going to benefit directly from the national and regional resources. The Project involves subjects participating in the research, technological transfer and innovation system of the region. Area acts as a technical and managing partner which is in charge of the implementation of the Project. ARGO implements a Hub &amp; Spoke model and comprises 4 assets (complex projects):</p> <ol style="list-style-type: none"> <li>1) the creation of the Port of industrial innovation, in cooperation with the Port Network Authority of the Eastern Adriatic Sea acting as an innovative industrial hub in the areas of the Port of Trieste, which concentrates new high-value added productive investments and the infrastructures for industrial research available to the regional, national and international sector. The Plan includes the launch of an advanced technology research and experimentation centre for the production of rare earth metals and strategic materials and the promotion of new industrial settlements in the area, activities which favour the generation of new high-value added jobs.</li> <li>2) the development of an integrated model of generation of high innovation rate enterprises to create and support innovative startups with a strong technological specialisation, through the networking of territorial nodes that operate with shared methods and strategies;</li> <li>3) the activation of a platform (IP4FVG) in support of the digitalisation of enterprises at the regional level, with services providing training, assistance to planning and implementation of living labs with four nodes specialising in a specific theme;</li> <li>4) the implementation of scientific and technological platforms open to enterprises on the subjects of Genomics and Epigenomics, Structural Biology and Cryomicroscopy, thus reinforcing the offering of the regional research facilities and contributing to the launch of new research and innovation projects.</li> </ol>
<b>Implementing bodies</b>	<p>Subjects subscribing the Memorandum of Understanding: Regional Authority, the Ministry of Education, University and Research (MIUR) and the Ministry of Economic Development (MISE)</p> <p>Implementing body: Area Science Park</p> <p>The other Partners involved are the subjects participating in the system of research, technological transfer and innovation of the regional territory</p>
<b>Starting date</b>	2018
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	<b>€ 8,800,000, of which € 4,000,000 FVG Region contribution and € 4,000,000 MIUR contribution and € 800,000 Area Science Park contribution</b>
<b>Expected result</b>	The strategic objective is to build a structured system of private enterprises and public operators able to generate economic development, leveraging the assets of advanced technology, digitalisation and advanced education existing in the territories, in order to optimise resources and attract national and international investments in new strategic development projects.
<b>Output indicator</b>	For the output indicators, please refer to the Implementation Agreement

TABLE 13	OIS - OPEN INNOVATION SYSTEM FVG - YEAR 2018
<b>Objective</b>	<i>Objective no. 2: Rationalisation of the regional structures that operate in the promotion of research, technology transfer and the development of innovation</i>
<b>Objective strand</b>	2.1 Definition and implementation, in collaboration with the Region and the MIUR, of an organisational model of Innovation Enablers
<b>Description of the action</b>	<p>The multiyear project, funded pursuant to Regional Law no. 27/2014, art. 14, paragraphs 16 and following, has the main objective of promoting and supporting the competitiveness of the regional productive system based on innovation, through actions implemented within a cooperation among the regional Scientific and Technological Parks and BIC Incubatori FVG Srl and with a connection to the other players working on the support to enterprises (industrial associations, districts, clusters and other stakeholders), mainly at the service of enterprises (Open Innovation System FVG).</p> <p>The objectives of the Project are pursued by putting at the disposal of the economic subjects well-established methodologies and qualified professionals for the evaluation and the exploration of needs, ideas and business plans. All the innovative ideas are supported, regardless of the level of entrepreneurial risk and the technical and market potential.</p>
<b>Implementing bodies</b>	Area Science Park, Friuli Innovazione, Technological Pole of Pordenone, Innova FVG Consortium and BIC Incubatori FVG Srl
<b>Starting date</b>	Ongoing
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	<b>€ 1,000,000 a year</b>
<b>Expected result</b>	Based on the needs and the innovation ideas gathered, the Project aims to favour a qualitative improvement of the innovation produced by the regional enterprises through activities intended to support the reduction of the risk related to the launch of projects and investments for innovative products and processes, with a special focus on small companies within the productive fabric.
<b>Output indicator</b>	<ul style="list-style-type: none"> <li>- Number of innovative ideas formalised: 180 yearly.</li> <li>- Number of interventions of technical assistance and planning: 250 yearly.</li> <li>- Number of enterprises supported with technical assistance: 150 yearly.</li> </ul>

## **OBJECTIVE 3**

**Promotion and services for the internationalisation  
of the centres present in Friuli Venezia Giulia**

TABLE 14	WELCOME OFFICE FRIULI VENEZIA GIULIA
<b>Objective</b>	<i>Objective no. 3: Promotion and services for the internationalisation of the centres present in Friuli Venezia Giulia</i>
<b>Objective strand</b>	<p>3.1 Reinforcement of the services for internationalisation offered by the Welcome Office FVG in collaboration with the services of internationalisation of the universities and regional research offices;</p> <p>3.2 Enhancement of the links of the Welcome Office FVG with the appropriate offices of the MAECI dedicated to migratory policies and entry procedures for foreigners, also through the creation of workshops and dedicated working groups with officials and national and European experts;</p> <p>3.3 Creation of thematic forums and study groups with the MIUR and the MAECI</p>
<b>Description of the action</b>	<p>Within the scope of the activities of the Welcome Office Friuli Venezia Giulia, the following actions will be implemented:</p> <ul style="list-style-type: none"> <li>- Preparation of an annual planning document shared by the Partnership, semestral monitoring of the Network activities and periodical meetings for the coordination of planning activities;</li> <li>- Strengthening of the consultancy services addressed to students and researchers and constant updating of the pre-arrival information provided by the regional web portal Welcome Office FVG (<a href="http://www.welcomeoffice.fvg.it">www.welcomeoffice.fvg.it</a>) also through the launch of the new office in the city centre of Trieste;</li> <li>- Organisation of information and networking meetings for the representatives of the welcome offices of the partner centres of the Welcome Office FVG with the MAECI Visa Centre and public administrations;</li> <li>- Organisation of information meetings addressed to researchers on the funding opportunities for international mobility and forums on the European initiatives “HRS - Human Resources Strategy” and “Science4Refugees”.</li> </ul>
<b>Implementing bodies</b>	Area Science Park in collaboration with University of Udine (which manages the Welcome Office Udine)
<b>Starting date</b>	Ongoing
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	Regional funding Art. 7 of the SiS FVG Agreement, exclusively with reference to the part managed by Area Science Park; own funds of the University of Udine for Welcome Office Udine
<b>Expected result</b>	<ul style="list-style-type: none"> <li>• Reinforcing the competences of the staff of the SiS FVG Institutions in relation to the procedures for the arrival of students and researchers to Italy.</li> <li>• Supporting the development of the researchers’ career.</li> <li>• Optimising the useful information available on the web portal to facilitate the arrival to the region of students, researchers and their families.</li> </ul>
<b>Output indicator</b>	Organise at least 3 information meetings and implement a new success stories section on the website of Welcome Office FVG.

TABLE 15	“THE MOBILITY OF KNOWLEDGE” ANNUAL SURVEY
<b>Objective</b>	<i>Objective no. 3: Promotion and services for the internationalisation of the centres present in Friuli Venezia Giulia</i>
<b>Objective strand</b>	3.4 Creation of studies and models to monitor the incoming & outgoing flows of researchers and international students
<b>Description of the action</b>	Annually, the SiS FVG carries out a survey on the mobility flows of international students, researchers and scientists present in the territory in order to monitor the attractiveness rate of the regional Scientific and Innovation System. The Survey gathers the data relating to incoming international researchers and students in the Friuli Venezia Giulia region, which is validated by a Working Group created among the subjects partners of the regional Scientific System.
<b>Implementing bodies</b>	Area Science Park in collaboration with SiS FVG bodies
<b>Starting date</b>	Ongoing
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	Regional funding Art. 7 SiS FVG Agreement
<b>Expected result</b>	<ul style="list-style-type: none"> <li>• Enhance the presence of international researchers and students in the territory.</li> <li>• Improve the attractiveness of the regional Scientific System.</li> </ul>
<b>Output indicator</b>	Publication of the paper and electronic editions of the Survey by printing 1,000 hard copies by the month of December every year.

## **OBJECTIVE 4**

**Technical and scientific communication  
and diffusion of innovation**

TABLE 16	TRIESTE CITY OF SCIENCE 2020 - ACTIVITIES ASSOCIATED WITH ESOF (EURO SCIENCE OPEN FORUM) - PRO ESOF 2020
<b>Objective</b>	<i>Objective no. 4: Technical and scientific communication and diffusion of innovation</i>
<b>Objective strand</b>	4.1 Creation of communication initiatives on themes of regional interest to bring science to the wider public and to satisfy the demand for innovation of private companies (also through the participation of speakers of national and European importance)
<b>Description of the action</b>	The proESOF 2020 project is functional to the implementation of the ESOF event, an educational initiative that covers the time span of a week in the summer 2020. In particular, it involves a series of preparatory activities with certain related events to be held from July 2018 throughout 2019, up to the ESOF week in July 2020. The lynchpin of the proESOF phase is “ <i>Trieste encounters on science and innovation - TESI</i> ,” a format adopted to select the initiatives preceding the ESOF Event or which may become projects during the ESOF week. The SiS FVG bodies are fully involved in the development of proESOF activities in order to promote and select events, enhance the existing collaborations at the national and international level, with special attention devoted to the countries of the Balkan area.
<b>Implementing bodies</b>	FIT - Trieste International Foundation for the Progress and Freedom of Science in collaboration with the Regional Authority and the stakeholders of the SiS FVG, MIUR and MAECI.
<b>Starting date</b>	Starting from 2018
<b>Planned duration</b>	Multiannual
<b>Planned expenditure</b>	<b>€ 1,250,000 regional funding</b>
<b>Expected result</b>	<ul style="list-style-type: none"> <li>• Increase the international visibility of the regional Scientific System.</li> <li>• Reinforce the role of Trieste as a hub of a network of research centres at the national and international level.</li> </ul>
<b>Output indicator</b>	20 proESOF events implemented