



*National 'European Research Area' (ERA)  
Roadmap for Cyprus 2016 - 2020*

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## 1 Introduction

### 1.1 European Research Area (ERA)

Breaking down barriers to research through the achievement of the European Research Area (ERA) was proposed by the European Commission in its Communication “Towards a European Research Area” of January 2000 and was endorsed by the EU at the March 2000 Lisbon European Council. ERA, a central element of the Europe 2020 strategy for a smart, sustainable and inclusive economy, aims to achieve a “unified research area open to the world, based on the Internal Market, in which researchers, scientific knowledge and technology circulate freely and through which the Union and its Member States strengthen their scientific and technological bases, their competitiveness and their capacity to collectively address grand challenges”.

In 2012, the Communication on “A Reinforced European Research Area Partnership for Excellence and Growth” identified five priorities for action: “More effective national research systems”, “Optimal transnational co-operation and competition”, “An open labour market for researchers”, “Gender equality and gender mainstreaming in research”, and “Optimal circulation, access to and transfer of scientific knowledge including via digital ERA”. Complementing this partnership, the Commission also adopted two further Communications entitled “Towards better access to scientific information: Boosting the benefits of public investments in research” and “Enhancing and focusing EU international cooperation in research and innovation: a strategic approach”.

The “European Research Area Roadmap” was presented on 20 April 2015, within the framework of the “European Research and Innovation Area Committee” (ERAC). This European ERA Roadmap sets out seven action priorities for six priority areas, which are considered to be essential for further developing the ERA. Further to that, in May 2015, the EU Competitiveness Council adopted conclusions on the ERA Roadmap 2015-2020 calling the Member States to start the implementation of the ERA Roadmap top action priorities through appropriate actions in their national specific action plans or broader Research and Innovation (R&I) strategies, by mid-2016.

#### ERA PRIORITIES

Priority 1: Effective National Research Systems

Priority 2: Optimal Transnational Co-Operation and Competition

Priority 2a: Jointly Addressing Grand Challenges

Priority 2b: Make Optimal Use of Public Investment in Research Infrastructures

Priority 3: An Open Labour Market for Researchers

Priority 4: Gender Equality and Gender Mainstreaming in Research

Priority 5: Optimal Circulation, Access to and Transfer of Scientific Knowledge

Priority 5a: Fully Implementing Knowledge Transfer Policies at National Level

Priority 5b: Promoting Open Access to Scientific Publications

Priority 6: International Cooperation

### **1.2 The Cyprus ERA Roadmap**

The Cyprus ERA Roadmap 2016-2020 was prepared by the Directorate General for European Programmes, Coordination and Development (DG EPCD), taking into consideration the views and positions of the national Research and Innovation (R&I) stakeholders. It is based on the specific characteristics, dynamics, strengths and bottlenecks of the national R&I system. The Roadmap describes the current situation related to the implementation of ERA priorities at national level and indicates the national priorities and relevant current and future actions aiming to address the individual ERA Priorities. Those priorities were identified after a consultation with all the relevant stakeholders from the public and private sector, including all Research Performing and Funding Organizations (RPOs and RFOs) and are in line with the Smart Specialization Strategy for Cyprus (S3Cy). Furthermore, the national ERA Roadmap presents a set of objectives and ERA related measures/actions, including new initiatives that are planned for the coming years.

### **1.3 The Cyprus Research and Innovation System**

The R&I system in Cyprus is relatively young (from the mid-1990s) but is evolving over time with the aim to increase efficiency and foster cooperation between the research community and the productive sector (business and industry). The current governance system was established in 2007.

#### Governance of the R&I System

The National Research and Innovation Council (NRIC) is the political, decision-making body of the R&I System. It is composed by a cabinet of six members/ ministers (Finance, Energy-Commerce-Industry and Tourism, Education and Culture, Transport-Communications and Works, Agriculture-Rural Development and Environment and Health) and it is chaired by the President of the Republic. The NRIC is entrusted with the responsibility of formulating long term R&I strategic priorities. The DG EPCD provides administrative support to the NRIC.

The Cyprus Scientific Council (CSC) is an advisory scientific body comprising of 19 reputable high calibre scientists. All three Public Universities as well as Private Universities and Public Research Institutions are represented in the CSC. This Council is responsible for advising NRIC on strategy and policy R&I matters. The Research Promotion Foundation (RPF), which is the national research funding agency, provides secretarial support to the CSC.

The existing Governance system has proven to be rather inflexible and has been inactive for the past few years. The gap is currently filled, to some extent, by the Council of Ministers.

### Policy Level

The responsibility for the design of the national R&I policy, is carried out by the DG EPCD, an independent governmental body which, administratively, is under the Minister of Finance. The latest major policy initiative undertaken by DG EPCD was the preparation of the Smart Specialisation Strategy of Cyprus (S3Cy). This strategy is implemented through an Action Plan that is a “dynamic” document reflecting the national Framework Programmes for R&I over the period 2016-2020.

The DG EPCD is also responsible for the representation of the Republic Cyprus in the relevant European institutions, bodies and working groups, including bodies dealing at strategic level with the implementation of HORIZON 2020 and for the preparation of bilateral and multilateral transnational agreements on the promotion of R&I Cooperation.

The DG EPCD defines the multi-annual financial support for R&I through the Government budget (with the exception of funding to higher education institutions). More specifically, it provides funding to the main RFO in Cyprus, the RPF, as well as institutional funding to RPOs, such as the Cyprus Institute of Neurology and Genetics (CING) and the Cyprus Institute (Cyl).

The Ministry of Energy, Commerce, Industry and Tourism (MECIT) is responsible for the design of the Business Innovation Policy, including entrepreneurship.

The three Public Universities of Cyprus (University of Cyprus (UCY), Cyprus University of Technology (CUT) and Open University (OUC)), formulate their own R&I policy and goals based on their interests and research capacities, which, to an extent, agree with the national policy priorities of the S3Cy. Furthermore, public departments and Institutions such as the Agriculture Research Institute (ARI), the State General Laboratory (SGL), the Department of Fisheries and Marine Research (DFMR) and the Department of Meteorology (DoM) formulate their own R&I priorities.

### Implementation Level

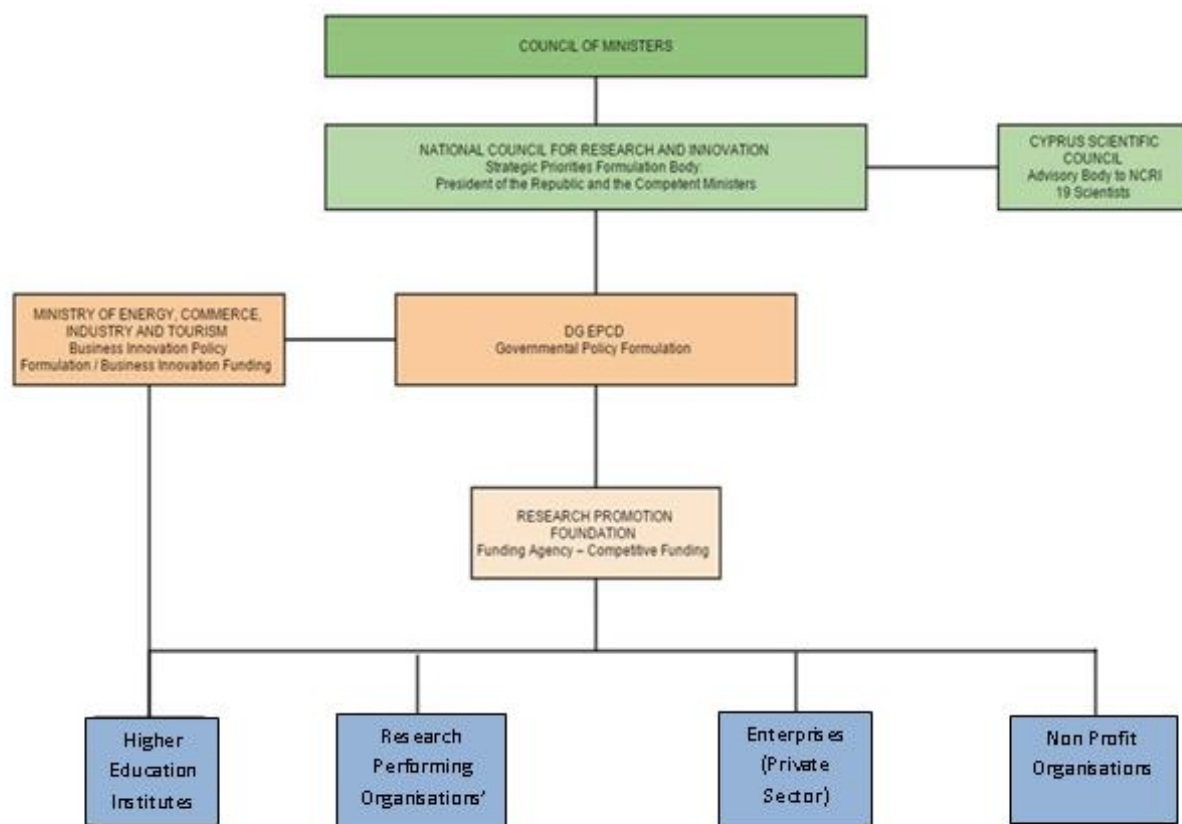
R&I Policy is mainly implemented by the RPF, which is the main research funding agency in Cyprus. The RPF is an autonomous agency under private law, supervised by a Board of Directors, chaired by the Permanent Secretary of DG EPCD. The Board is composed by representatives of the Ministries involved in R&I issues as well as representatives from the business, academic and research community.

The RPF is responsible for: (a) the provision of competitive funding for the implementation of research and technological development projects and innovation activities through the development and monitoring of national programmes and grant schemes for the implementation, inter alia, of the Action Plan of the Smart Specialisation Strategy for Cyprus, (b) the management of European research and innovation projects by establishing the network of National Contact Points (NCP) for Cyprus' participation in the EU Framework Programmes, thus providing assistance to applicants for EU research competitive funding and the implementation of international agreements in R&I and (c) the implementation of bilateral and multilateral agreements between Cyprus and other countries in the field of research and technological development.

In addition, the Technology Service of MECIT, is responsible for the design and implementation of specific actions/programmes related to business innovation, on the basis of the national policy and in particular the S3Cy.

### Research Performers

The major research activity in Cyprus is performed by the Higher Education Institutes (HEIs), RPOs including departments and Institutions of the public sector, enterprises and the private non-profit organisations. The role of public universities (UCY, CUT and OUC) is crucial, while the major RPOs such as the ARI, the CING, the Cyl, the SGL, the DFMR and the DoM are important research performers. Research in the Business sector is dominated by a few Enterprises in the pharmaceutical sector as well as small-medium companies and start-ups mainly in the ICT sector.



## 2 ERA Priorities

### 2.1 Priority 1: More Effective National Research Systems

**EU Top Action Priority:** *“Strengthening the evaluation of Research and Innovation (R&I) policies and seeking complementarities between, and rationalisation of, instruments at EU and national levels”.*

Effectively designed and efficiently functioning national research and innovation systems responsive to the specific objectives of each individual Member State are central to ERA implementation. With this priority, Member States are invited to promote better alignment of national and European policies, with the goal of making optimal use of public investments in R&I, ensure that all public bodies responsible for allocating research funds apply the core principles of international peer reviews, introduce or enhance competitive funding through calls for proposals and institutional assessments respecting the need for a satisfactory balance between competitive and institutional funding, as well as invest in wider education, research and innovation systems.

### **Current Situation in Cyprus**

#### **Research and Innovation System**

The R&I system in Cyprus is relatively young and is evolving with the aim to increase its efficiency. The main barriers of the system relate to the inflexible governance structure, the weak coordination between the various actors involved and the absence of an explicit long-term strategy for R&I. In addition, the development of the R&I system is hindered by the weak cooperation between the research and academic community with the business world, the low involvement and investments of the private sector in R&I activities and the limited extroversion of the Cyprus R&I system.

Taking into consideration the above, the government of Cyprus promoted various initiatives and studies in order to develop a concrete proposal for restructuring and upgrading the R&I governance structure in Cyprus. Due to a wider administrative reform effort which is currently under way decisions on the specific issue are still under preparation. The major obstacles for the development of R&I system were also identified in the Smart Specialisation Strategy for Cyprus (S3Cy) and are expected to be addressed by the various measures and schemes included in its Action Plan.

#### **Research and Development Funding**

Total Gross Expenditure on Research and Development (GERD) for 2015 accounted to €85,3 or 0,48% of GDP. The significant fluctuations of GDP determine to a large extent the evolution of Research & Development (R&D) intensity as actual investments in absolute terms remain relatively stable over the years. The R&D intensity target has been set at 0,5% of GDP by 2020. Although the national target for R&D expenditures as a percentage of GDP for 2020 has been achieved in 2014 (0,51%), this was mostly due to the decrease of GDP as a result of the financial crisis of the last years. Even though the R&D target of Cyprus is low compared to the overall EU target (3%), it is considered appropriate for Cyprus since it will result in an increase of annual research expenditure by 2020, without being at the same time unrealistically ambitious. This target was set taking into due consideration the particularities of Cyprus in terms of the size of the research community, the orientation of the economy in low value-added products and services and the very small size and low involvement of Cypriot companies in R&D activities in terms of participation and expenditure in R&D.



GERD performed by the Government in 2015 (most recent available data) was accounted to 50.6%, including the expenditures of the Public Universities which were accounted to 23%. The private sector contribution accounted to 26.4% while the contribution from abroad accounted to 23%.

The Cyprus Government allocates institutional funding to public Higher Education Institutes (HEIs) and the Research Promotion Organisation (RPO) annually, through the state budget. HEIs have introduced mechanisms within the universities for the selection and management of research proposals.

Also, national funding schemes included in the Action Plan of the S3Cy, amounting to €144 ml and co-funded by the European Structural and Investment Funds (ESIF), are implemented mainly through the Research Promotion Foundation (RPF) and the Technology Service of the Ministry of Energy, Commerce, Industry and Tourism (MECIT).

### Private sector Involvement

The private sector contribution to Research and Development activities is low and has been identified as a major limitation factor for the development of the field. Business Enterprise Expenditure on Research and Development (BERD) also stood very low compared to the EU average in 2015. More specifically, the indicator stood at 0.11% of GDP in 2015, far below the EU average (1.3%). Businesses performed 22.8% of GERD in 2015. As mentioned above, in terms of R&D financing, the Cypriot private sector funded 26.4% of overall R&D expenditure in 2015 (most recent available data).

The reasons for low private R&I investment and demand lie to a large extent in the orientation of the economy dominated by the service sector (84.5% of Gross Value Added) and the limited manufacturing and heavy industry sectors. Furthermore, the location of the Cyprus in relation to other EU countries as well as the small domestic market (857,000 inhabitants), are disincentives for the attraction of R&D investments.

In order to address this challenge a number of policy actions, instruments and policy measures were promoted by the Government. Namely, the Action Plan of S3Cy includes specific actions in order to develop an innovation culture among the business sector and to promote further participation of SMEs in R&I activities. Furthermore, relevant measures aiming to attract private investments in R&I, enhance entrepreneurial innovation and promote synergies between the research and academic community with the business sector are promoted by the Government. More specifically, the National Policy Statement on the Entrepreneurial Ecosystem, approved by the Council of Ministers in December 2015, sets out objectives and actions to improve the framework conditions for business R&I, which among others includes the introduction of tax incentives for investments in innovative firms and startups, the streamlining of the regulations governing the creation of university spin-offs, the strengthening of intellectual property legislation and the use resources from Structural Funds in a more targeted manner guided by the S3Cy.

In this framework, in December 2016, the House of Parliament approved a revision of Income Tax Law that came into effect on 1<sup>st</sup> January 2017, in order to improve incentives that foster investment in start-

up and innovative companies in Cyprus. Furthermore, a startup visa scheme was approved by the Council of Ministers in February 2017, in order to attract startups from non-EU countries to relocate in Cyprus and enhance the startup ecosystem.

### EU Framework Programmes for R&I – Horizon 2020

According to the latest data up to 28 February 2017, the total funding secured by Cyprus from Horizon 2020 was of the order of €73.6 mln (corresponding to 193 contracts and 234 participations in projects). The share of this funding to Higher or Secondary Education Institutions was 52.04%, followed by the Private For-Profit Sector with a share 32,7%. The share of the funding secured by SMEs was 31,4%. It is noted that the total FP7 funding that accrued to Cyprus in the period 2007-2013 was €92.3 mln, with public Universities and businesses receiving the bulk of FP7 funding accounting to 37,88% and 37,84 respectively, followed by the Public Research Organisations with 15,1%.

The participation of Cyprus Organisations and Stakeholders in the EU Framework Programmes for R&I is promoted and monitored by the RPF which hosts the National Contact Points Network (NCP) for the EU Framework Programme HORIZON 2020. The services provided by the NCPs include, among others, the organization of info days and training workshops, the pre-screening of proposals, the dissemination of information through newsletters, social media and personal meetings with researchers. The NCP Network of Cyprus participates in a number of training seminars offered by the EU NCP Network Project which includes training in order to improve the quality of the services provided covering the topics of Train-the-Trainer, Training Techniques, Legal and Financial Issues and Pre-screening of Proposals.

The promotion of the participation in H2020 schemes and programmes is also facilitated by the National Information Portal for Funding Programmes (<http://www.fundingprogrammesportal.gov.cy>). The portal started its operation in March 2014 with an objective to facilitate the interested citizens to identify and utilize the appropriate funding opportunity from the European and National programs and consequently stimulate growth and job creation. The ultimate goal is to maximize the absorption of these funds. In this effort, there is a close cooperation between the NCPs of each program and the Directorate General of European Programmes, Coordination and Development (DG EPCD). Through the portal, citizens can immediately identify information on funding opportunities in the area of their interest, such as Employment, Competitiveness, Environment, Energy, Education, Culture, Youth, Rural Development etc.

### **National Priorities and Actions to be Promoted**

For the promotion of a more effective National Research System the following National Priorities have been set:

#### **1. Reform of the national R&I Governance System**

At this stage, a top action priority for Cyprus is to adjust and upgrade the current R&I Governance structure in Cyprus so as to become more effective and efficient and to adopt a long-term strategy and explicit multi-annual R&I priorities. Such structure should be flexible and be able to take immediate

actions in order to efficiently and effectively support R&I. Also, it should involve stakeholders from all the R&I community (public universities, research organisations, public and private bodies, SMEs etc).

Furthermore, another key objective is the enhancement of the monitoring and evaluation of R&I public policy and its instruments. The evaluation system should apply novel principles relevant to the impact of the policy on the competitiveness of the economy, the European added value and the utilization of research results. Furthermore, factors such as Open Access policy and the transformation of research results to innovative products and services should be included in the principles of the new evaluation methodology.

***Actions to be promoted:***

- Take political decision on the upgrade of the R&I Governance structure based on the recommendations of the relevant studies conducted.
- Support Policy making by setting up of Scientific Advisory Committee on R&I issues.
- Establish a mechanism for the monitoring and evaluation of the national R&I policy.

### **2. Optimal allocation and use of R&I funds**

Competitive funding applying the core principles of international peer reviews is considered extremely important for Cyprus for the optimal use of scarce financial resources, especially given the financial constraints still in force as a result of the financial crisis in recent years. Therefore, an optimal and balanced allocation of public funding between block funding (currently applied to fund Cypriot Research Institutions) and competitive funding (currently applied to fund all projects selected through national competitive programmes) needs to be promoted.

A systematic ex post and ex ante evaluation of the R&I programmes and schemes offered at national level is very important for the optimal allocation and use of R&I. For the evaluation of all national R&I funding schemes that are included in the Action Plan of the S3Cy, a National Monitoring and Evaluation Mechanism has recently been established (December 2015). It is expected that monitoring and assessment will be enhanced through the use of indicators.

***Actions to be promoted:***

- Explore the possibility of establishing an Assessment Mechanism for organisations receiving institutional funding, based on core principles of international peer review.
- Introduce the use of indicators in the monitoring mechanism for the implementation of the national S3Cy.
- Evaluate the national Framework Programmes through the systematic Monitoring and set-up of an Evaluation Mechanism, which will include Annual Monitoring Reports, an Interim Evaluation (by external experts) in 2018 and an Ex-Post Evaluation in 2023.

### **3. Increase the involvement of the Private sector in Research and Innovation activities**

Among the main challenges of the R&I system with respect to the exploitation of research results is the weak interconnection and cooperation between enterprises, businesses and academia. The private

sector must be at the heart of harnessing innovation, while government departments can play a key role in facilitating businesses to improve the interface with the universities and in shaping a positive environment for the commercialisation of research results.

It should also be noted that the majority of the programmes and schemes included in the Action Plan of the S3Cy, implemented by the RPF and the MECIT, seek to stimulate the involvement of the private sector in R&I activities offering ample opportunities to all local stakeholders, including universities and research organisations, to establish consortia for the implementation of projects, thus nurturing closer links between them.

The Action Plan of the S3Cy includes the establishment of a Technology Transfer Office (TTO) in order to provide support to the RPOs in Cyprus, especially in relation to the exploitation of research results and the protection of Intellectual Property Rights.

### ***Actions to be promoted:***

- Further enhance the collaboration between academia and business through the national Framework Programmes.
- Amend the law and regulations of public universities and develop a Framework of Principles so as to allow technology transfer from public universities to business (e.g. University spin offs).
- Promote the creation of research institution spin offs.
- Promote the implementation of start- up visa/permit.
- Promote the establishment of a TTO complemented by Units in the major academic and research institutions.
- Examine alternative forms of risk financing (loans, guarantees, access to venture capital funds) to firms and other organizations for R&I activities.
- Promote of the research and Innovation culture.
- Improve the visibility of the national Information Portal for Funding Programmes.
- Facilitate the utilisation of University Laboratories by the private sector.

Funding Schemes 2016 – 2020	Budget
<p><b>Research in Enterprises (RPF)</b></p> <p>This Programme aims at: (a) enhancing the competitiveness of Cypriot enterprises, thus resulting in making a contribution in the country's economy growth, through the development of new products / services / production methods of high added value, or significantly optimised products / services / production methods which will be commercially used, and (b) intensifying the participation of Cypriot enterprises in research activities resulting in raising the contribution of the private sector in the country's R&amp;I investments. The Programme covers a wide range of industrial research and experimental development activities, that may include the production of a prototype, demonstration, pilot operation, testing and validation of new or significantly optimised products / services / production methods in a representative, real conditions operating environment.</p>	<p>€ 9.300.000</p>

Maximum Funding per project: €200.000

#### **Research in Start-Ups (RPF)**

€ 1.000.000

This Programme aims at encouraging Start Up Companies to be involved in research activities with a scope to develop or significantly optimise existing products / services / production methods of high added value, thus contributing to the enrichment of the Cypriot business ecosystem with innovative and research performing enterprises.

Maximum Funding per project: €50.000

#### **Proof of Concept for Technology / Knowhow Applications**

€ 1.000.000

This programme aims at the preliminary investigation of possible industrial applications of a technology/knowhow. Through this Programme it is expected that Enterprises will have the opportunity to verify the industrial application potential of a technology/knowhow before being involved in a broader scale research project of Technological Development and Innovation.

Maximum Funding per project: €25.000

#### **Innovation Vouchers (RPF)**

€ 260.000

This Programme aims at supporting the ecosystem of Entrepreneurial Innovation. The provision of Innovation packages will provide limited funding (€5,000, €10,000, € 20,000 or €50,000) for a specific activity using the lump sum method. It will run until 2020 with the first call expected in 2017. Total funding will amount to €4 m. It will fund three different type of activities:

1. The provision of Innovation Packages to enterprises, Research and Development Centers, Universities Entrepreneurial Centers, Associations, and others in order to develop activities that promotes innovation culture and awareness. Primarily they will draw the attention of the media to their activities that will promote innovation culture to any audience from children, to students and enterprises by competitions TV programs and other activities.
2. The provision of Innovation Packages to SMEs and Start-ups so that they prepare, either material or their organization, to attract funding from investors, Business Angels and Investment Funds.
3. The provision of Innovation packages to SMEs for the certification of their innovative products that target the international market.

**Strengthening Business Innovation-A (MECIT)** (in priority sectors identified in the smart specialization)

€ 13.960.000

**Strengthening Business Innovation-B (MECIT)** (only exceptional innovative products and services that have the potential of great growth to become new priority sectors).

€ 5.040.000

Aims to support mainly SMEs, Start-ups, Research& Development Centres and Universities to develop and introduce to the international market innovative products and services in order to increase their competitiveness.

<b>Innovation Houses Scheme (MECIT)</b>	€ 1.200.000
<p>This programme aims at supporting the ecosystem of Entrepreneurial Innovation. The establishment of Innovation Houses, addressed to the unemployed and students, aims to provide guidance and training to them so that can establish innovative businesses or so that they may become employed by Innovative enterprises. This can be achieved by special training aiming at cultivating the necessary skills and supplying the required knowledge that is needed by innovative business to protect their intellectual property rights, to develop, to finance and to introduce in the international added- value chains innovative products and services. The programme is expected to last 2-3 years with a total budget of € 1.2m. It will bring together academics and successful businessmen for training young people while it will offer theoretical classes and on the job training. It is envisaged that 4 innovation houses will be established by the end of the programme, encompassing 100 groups of 5 people each.</p>	
<b>Participation in International Brokerage Events (RPF)</b>	€ 140.000
<p>This Programme aims to the international networking of Cypriot organisations and more particular to the enhancement of Cypriot organisations' extroversion and the elimination of the weaknesses attributed to the small size of the Cypriot market and lack of critical mass of resources and infrastructures. The participation of Cypriot organisations in international brokerage events will provide to them the opportunity to investigate possibilities of involvement in research activities, the exchange of knowledge, experiences, best practices and business cooperation for technology transfer, knowhow and innovation.</p> <p>Maximum Funding per project: €900</p>	
<b>"Integrated projects" Programme (RPF)</b>	€20.000.000
<p>This Programme concerns the implementation of large, interdisciplinary projects that aim to provide integrated interventions in major challenges of the Priority Sectors and integrated solutions with significant impact on the economic development and the reform of productive sectors. The projects are expected to be implemented by integrated, mainly local consortia, which will make use of the significant links and synergies between all components of the quadruple helix, namely research centres, higher education institutions, enterprises, policy makers, and other interested organisations. During the implementation of the projects it is also anticipated to utilize the most significant local infrastructures that can assist in the achievement of projects' objectives and the development of the Priority Sectors.</p> <p>Moreover, the implementation of "Integrated Projects", aims to:</p> <ul style="list-style-type: none"> <li>• the development of substantial links and synergies between all components of the quadruple helix,</li> <li>• the creation of a critical mass of researchers and the utilisation of young scientists for the development of top level research activities,</li> <li>• the utilisation of existing infrastructures and centres of excellence, and the contribution to the development of new competitive ones, and</li> <li>• the facilitation, where appropriate and possible, of the horizontal and</li> </ul>	

technological priorities of S3Cy.

#### **Establishment of cluster businesses (MECIT)**

€3.000.000

This programme concerns the establishment and functioning of cluster businesses both vertically and horizontally in order to create larger scale activities with the aim to achieve economic and competitive advantages.

#### **Use software applications in cloud computing by SMES (MECIT)**

€1.200.000

The programme aims at the increase in the number of SMEs supported for integrating ICT at all levels of operation and in particular the increase in the use of cloud computing applications by SMEs. In addition, the aim is to develop applications cloud computing from Cyprus computer companies on the international market which use the internal market as a test field.

#### **Commercial Exploitation of Research Results (RPF)**

Stage A: €270.000

Stage B: €1.000.000

The Programme is expected to contribute in the investigation of the possibilities for exploitation of research results and the implementation of preparatory actions for development, demonstration and promotion of products at a “prototype” stage, as well the establishment of spin-off companies for the commercial exploitation of the produced products and services.

The Programme consists of two independent stages. The first stage is preparatory, while the second stage refers to the actual investment for the exploitation of research, technological development and innovation results, as follows:

- Stage A - Preparation: Supports the development of a business plan for the commercial exploitation of results emerged from research activities carried out by Cypriot Research Organisations or Other Public and Broader Public Sector Organisations. It also supports preparatory actions for product refinement, development of a business strategy, promotion and access to finance.
- Stage B - Investment: Support activities for setting a new company and its operational activities according to the business plan for the commercial exploitation of research results. Stage B may (it is not obligatory) be the continuation of the support received during Stage A.

Stage A: €30.000, Stage B: €250.000. The aid intensity is 80%.

#### **Innovation Packages (MECIT)**

€4.000.000

Aims to support the ecosystem of Entrepreneurial Innovation. The provision of Innovation packages will provide funding for a specific activity using the lump sum method. It will fund three different type of activities:

1. The provision of Innovation Packages to enterprises, Research and Development Centers, Universities Entrepreneurial Centers, Associations, and others in order to develop activities that promote innovation culture and awareness. Primarily they will draw the attention of the media to their activities that will promote innovation culture to any audience from children, to students and enterprises by competitions TV programs and other activities.
2. The provision of Innovation Packages to SMEs and Start-ups so that they prepare, either material or their organization, to attract funding from investors,



Business Angels and Investment Funds.

3. The provision of Innovation packages to SMEs for the certification of their innovative products that target the international market.

Maximum Funding per Project: €5.000 - €50.000

### **Upgrading of existing Liaison offices with the business world (UCY)**

€7.100.000

Since 2010, a University-Industry Liaison Offices Network was established in all public and private Universities in Cyprus, with co-financing from the European Social Fund 2007-2013. The aim of this project is the upgrading of the existing Liaison offices with the business world and the creation of one new. The objective is the systematic integration of workshop curricula first and/or second circle of Universities, contributing therefore to the cooperation between universities and the business world. The Liaison Offices will focus on issues such as the promotion of research and consultancy partnerships, student placements in enterprises for practical and transfer of know-how in the Cypriot business scene.

### **Nurturing an RTDI Culture (RPF)**

€500.000

The Programme aims to the cultivation of a R&I culture and the understanding of the importance of research, technology development and innovation (RTDI) in society. The Programme includes activities (competitions, awards, exhibitions, workshops, and other activities) concerning:

- the cultivation of culture in all three levels of the educational system,
- the acknowledgement of excellent scientists and entrepreneurs, and
- the raise of public awareness regarding RTDI, and especially the youth, end-user associations (i.e. Consumers), the public sector and the policy makers.

## **4. Maximising the impact of H2020 on the national R&I System**

### **(a) Promote the establishment of Centres of Excellence in R&I**

Of particular importance to Cyprus is the Spreading of Excellence and Widening Participation Programme, and specifically the Teaming for Excellence Action. It is expected that this action, through the creation/ upgrading of Centers of Excellence, will foster Innovation and contribute to the economic growth and competitiveness of Cyprus. It will also contribute to addressing key challenges of the national R&I system such as the leverage of private investments, the establishment of cooperation between the research and academic community with the business world, the reduction of brain drain and the enhancement of extroversion of the Cyprus R&I system. It will also allow the deepening of cooperation with our neighboring countries, giving Cyprus the opportunity to become a European node of scientific cooperation in the region and build on constructive partnerships between research institutions in the Eastern Mediterranean and Middle East. Realizing the importance for such initiatives, the Government of Cyprus, through DG EPCD, has provided support at policy level as well as financial support to national stakeholders involved in this process.

Currently Cyprus has secured the implementation of one proposal under the first call of this action, for



the upgrade of the “KIOS Research and Innovation Centre of Excellence” of the University of Cyprus, which will conduct multidisciplinary R&I in the area of intelligent systems and networks. In addition to H2020 funding (€15 mln) and funding from other stakeholders (€10 mln), the Centre will be supported by €15 mln from the Government Budget.

The intention is to extend similar support to additional Centres of Excellence that will be created through the Teaming Action.

***Actions to be promoted:***

- Continue to provide support at policy level for ensuring the successful participation of Cyprus in H2020 Teaming for Excellence action.
- Provide the required financial support to the Centres of Excellence in the most effective way in order to ensure proper implementation and long-term sustainability.

**(b) Foster synergies and complementarities between H2020 funds, ESIF and national funds**

Synergies and complementarities between Horizon 2020, ESIF and national funds can be a powerful instrument for greater impact and efficiency of the various sources of funding on the national R&I system and for promoting ERA priorities at national level, serving at the same time the S3Cy. Specific Funding schemes under the national Framework Programme are aiming to promote this Priority.

***Actions to be promoted:***

- Promote synergies and complementarities between H2020 funds, ESIF and national funds through the implementation of relevant funding schemes.

Funding Schemes 2016 – 2020	Budget
<b>Horizon 2020 – 2nd Opportunity (RPF)</b> This Programme aims to provide a second opportunity to organisations and natural persons (researchers) who attempted to obtain a grant under Horizon 2020 Programme, and whose proposals despite of being of high quality did not manage to secure funding due to budget exhaustion. At the same time, the Programme aims to integrate and utilise young, high-level scientists in the Cypriot R&I System, as well as to promote the implementation of globally competitive innovation projects by Cypriot SMEs. The Programme acts also as an incentive for Cypriot organisations and natural persons to participate in specific actions of the “HORIZON 2020” Programme of the EU. The Programme consists of two Modules: (a) the “Young Researchers- 2 <sup>nd</sup> Opportunity” Module, and (b) the “SME Instrument-2 <sup>nd</sup> Opportunity” Module.	€ 5.500.000
<b>Encouragement of Project Coordination in Horizon 2020 (RPF)</b> This Programme acts as an incentive to encourage researchers in Cyprus to take the initiative and lead pan-European networks that will submit a research project proposal under the EU’s Horizon 2020 Programme (Horizon 2020), as	€ 1.000.000

Coordinators. In this way, the inflow of funds from the Horizon 2020 budget is maximised, and the cooperation between Cypriot and leading European and/or world-wide research organisations is encouraged. The funding is expected to be utilised to cover costs for the preparation period of the Proposal, e.g. travel costs. Maximum Funding per project: €7.000 paid in two phases.

### **Matching Funds (RPF)**

€ 4,000,000

«Matching Funds» Programme acts as an incentive to Cypriot organisations to participate in Horizon 2020 by offering complementary funding to beneficiaries participating in Horizon 2020 Projects, to be used for further developing their research potential with activities such as hiring researchers and project managers and purchasing new or upgrading existing equipment.

The maximum amount per approved proposal is set at 5% of the total amount secured by the beneficiary for the project under H2020.

### **(c) Support the participation and improve the success rate of national stakeholders at H2020**

The RPF is responsible for the promotion of Cyprus participation to the EU Framework Programmes for Research and Innovation and hosts all HORIZON 2020 NCPs. Cyprus performance in Horizon 2020 has been particularly encouraging so far and every effort is exerted by the RFP to further improve these results to the extent possible.

#### **Actions to be promoted:**

- Strengthening the cooperation/ coordination between the national R&I stakeholders.
- Further enhance the effectiveness of the H2020 Programme Committee Members (PCM) Network and their interaction with the national R&I stakeholders.
- Further enhancement of the support provided by the National Contact Point Network.
- Promote incentives for organizations to participate in EU Framework Programmes.

## **2.2 ERA Priority 2: Optimal Transnational Cooperation and Competition**

### **2.2.1 ERA Priority 2(a): Jointly Addressing Grand Challenges**

**EU Top Action Priority:** *“Improving alignment within and across the Joint Programming Process and the resulting initiatives (e.g. Joint Programming Initiatives (JPIs)) and speeding up their implementation”.*

All Member States can benefit from strengthened cross-border cooperation and competition that allows for challenges to be jointly addressed.

Under this priority, Member States are encouraged, among other things, to step up efforts to implement joint research agendas addressing grand challenges, sharing information about activities in agreed

priority areas and ensuring that national strategies are better aligned with the themes and priorities of the Scientific Research and Innovations Agendas (SRIAs) of the Joint Programming Initiatives (JPIs). Better integration of calls at national and transnational level in order to avoid duplication in submitting proposals and in funding, should also be promoted. Furthermore, Research Funding Organisations (RFOs) should develop enablers such as mutual recognition of evaluation procedures, interoperability of selection procedures, common terminology and other rules and procedures for implementing R&I programmes. Authorities should also raise the profile of transnational cooperation initiatives with all relevant actors (including regional ones) and seek to raise their participation.

### Current Situation in Cyprus

Cyprus acknowledging that exploiting synergies between national and transnational programmes and improving cross border collaboration between national research actors could reduce fragmentation and duplication of effort, making therefore best use of resources, currently participates in several ERA Initiatives and multilateral cooperation actions.

According to the “Evaluation of Joint Programming to Address Grand Societal Challenges Report”, issued by the European Commission, Cyprus, in relation to its participation in JPIs, belongs to the “selective players” group of countries (together with Finland, Israel, Poland, Portugal, Romania and Turkey). This group is generally more selective in its participation but is active when they do so. Their investment is relatively high compared with their size and national public expenditure on R&I, but still less than what was expected when JPIs were created.

More specifically, Cyprus participates in:

- 4 Joint Programming Initiatives:
  - Water Challenges for a Changing World,
  - URBAN EUROPE: Global Challenges – Local Solutions, Agriculture
  - Food Security and Climate Change
  - Cultural Heritage and Global Change: A New Challenge for Europe
- 3 Initiatives under the Article 185 of the Treaty on the Functioning of the European Union TFEU:
  - Active and Assisted Living (AAL),
  - EUROSTARS 2
  - PRIMA
- 10 ERA-NET and ERA-NET COFUND projects of Horizon 2020:
  - ERANETMed: Innovation and competitive research in the societal challenges of the Mediterranean Region
  - GENDER-NET Plus: Promotion of gender equality
  - ERA-NET Smart Cities and Communities: Technological shift in the current energy system and provide smart and integrated solutions for technology, government and society
  - WaterWorks 2015: Sustainable water use in agriculture and forestry
  - ERA-NET Plus FACCE-JPI: Climate smart agriculture

- ERA-NET Cofund SURPLUS: Sustainable and resilient agriculture
- M-ERA.NET 2: Materials research and innovation
- SOLAR-ERA.NET Cofund: Photovoltaics and concentrating solar power
- EN-SUGI: Food, energy and water
- ENSFUF

Cyprus also participates in the EU-Mediterranean policy dialogue as well as in relevant initiatives aiming to promote synergies and cooperation in order to address common challenges of the region. Cyprus has actively participated in the development of the Partnership for Research and Innovation in the Mediterranean Area (PRIMA) which, within the legal framework of art. 185 of Treaty on the Functioning of the European Union (TFEU), is set up to build R&I capacities and to develop knowledge and common innovative solutions for water management and agro-food systems in the Mediterranean basin. The country is also involved in the BLUEMED initiative offering a shared strategic framework for working towards a healthy, productive and resilient Mediterranean Sea, facing the relevant challenges of the area by structuring transnational cooperation for creating new “blue” jobs, promoting social cohesion and at the same time by improving the environmental status and the local citizens’ wellness.

Cyprus is also a Member of COST<sup>1</sup> (European Cooperation in Science and Technology) and EUREKA<sup>2</sup> R&I programmes and has developed national instruments for the financial support of Cypriot research organizations and private enterprises taking part in these particular projects.

Currently there is no participation in Joint Technology Initiatives (JTI) mainly because of the limited interest from the side of the business sector.

### **National Priorities and Actions to be Promoted**

#### **1. Contribution to the formulation of the ERA policy on addressing Societal Challenges based on National Priorities**

Cyprus seeks an active contribution to the formulation of the priorities of Joint Programming Initiatives (JPI's) and other Joint Initiatives. The participation of Cyprus in this process will allow the country to benefit, as much as possible, from these joint efforts in also addressing national policy priorities and challenges. This has positive effects on both its limited R&I financial and human resources, as possible integration of calls at national and transnational level will provide added value to national and EU investments, avoiding duplication of work in submitting proposals and in funding and reducing fragmentation.

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<sup>1</sup> COST aims to enable breakthrough scientific developments leading to new concepts and products, contributing therefore to the strengthening of Europe's research and innovation capacities. COST supports the integration of research communities, leverages national research investments and addresses issues of global relevance.

<sup>2</sup> EUREKA is a leading open platform for international cooperation in innovation. It is a publicly-funded, intergovernmental network, involving over 40 countries. EUREKA's aim is to enhance European competitiveness by fostering innovation-driven entrepreneurship in Europe, between small and large industry, research institutes and universities.

**Actions to be promoted:**

- Actively Participate in the policy dialogue regarding the Joint Programming Initiatives (JPI's) in the framework of ERAC and the High-Level Group for Joint Programming (GPC).
- Actively participate in the formulation of the priorities of the JPI's in which Cyprus participates.
- Establish scientific advisory networks and/or mirror groups to assist in the formulation of national positions for each of the JPI that Cyprus participates.
- Conduct a mapping and assessment exercise for the identification and selection of initiatives where Cyprus could participate further on the basis of national priorities and its R&I capacity.

**2. Promotion of synergies between national and EU policies on Societal Challenges**

The objective of this priority is to enhance the streamlining of national priorities, research programmes and activities with European transnational initiatives in order to address common Societal Challenges.

**Actions to be promoted:**

- Promote synergies between national policies and strategies on Societal Challenges with the SRIAs priorities of JPIs.
- Raise awareness and support participation of national stakeholders to JPI's and other Joint Initiatives.
- Promote the implementation of national programmes related to JPI's and other Joint Initiatives SRIA's.
- Effective use of national resources and funding Programmes to promote the European transnational initiatives for addressing common Societal Challenges.
- Budget Commitment for JPI's, Art. 185 Initiatives and other Joint Initiatives.

Funding Schemes 2016 – 2020	Budget
<p><b>European Initiatives - National Development (RPF)</b></p> <p>This Programme aims at enhancing the extroversion of the national Research, Technological Development and Innovation system, one of the horizontal priorities recognised by the Smart Specialisation Strategy. The Programme offers the opportunity to implement research projects in cutting-edge fields of the priority sectors, in order to improve the quality of life and competitiveness of Cyprus' economy, allowing at the same time the transfer of knowledge and expertise to the Cypriot organisations.</p> <p>I. (Joint Programming Initiatives (JPIs)</p> <p>These are EU member-states initiatives, their activities being coordinated and funded by the participating member-states. The EU supports the JPIs and on several occasions contributes to the implementation of their activities through the funding of projects under Coordination and Support Actions (CSAs) and ERANET COFUND in which the Members of the JPIs participate.</p> <p>II. ERA - NET COFUND</p> <p>The ERA-NET COFUND instruments of the "Horizon 2020" Programme support the</p>	<p>€ 8.000.000</p>

Funding Schemes 2016 – 2020	Budget
<p>coordination of national research activities at a European level, with the objective to set the base for the formation of the ERA. They are powerful instruments that promote the creation of consortia between organisations that formulate and implement research policies. The implementation of joint activities provides the opportunity for exchanging opinions, experience and best practices regarding the way of planning, launching and implementing research programmes.</p> <p>III. Programmes under the Article 185 of the EU Treaty</p> <p>Article 185 of the EU Treaty enables EU member states to develop Joint Programmes in which the European Commission contributes with co-funding of the selected projects. The implementation of activities of the abovementioned European initiatives is carried out by consortia consisting of organisations/agencies which are responsible for the promotion and development of R&amp;I activities in other countries. The Calls for Proposals are announced in the frame of Joint Programmes, inviting interested research organisations and enterprises of the participating countries to submit joint proposals for the implementation of research projects.</p> <p>Maximum Funding per project: €175.000 for the Cypriot Consortium. In case that the Cypriot Organisation undertakes the coordination of the Transnational Consortium, the maximum funding for the Cypriot Organisations can be increased up to €200.000.</p>	
<p><b>EUREKA Cyprus (RPF)</b></p> <p>This programme aims at the enhancement of the Cypriot enterprises' competitiveness and the resulting contribution to the country's growth of economy, through the development of new products/ services/ production methods of high added value, or by the significant optimisation of products/ services/ production methods in view of commercial exploitation in the European area, in the frame of cooperation and networking of Cypriot organisations with foreign organisations for the implementation of international research and development projects of the EUREKA Organisation. The "EUREKA CYPRUS" Programme constitutes the instrument for selecting and supporting Cypriot organisations wishing to participate in international EUREKA projects.</p> <p>Maximum Funding per project: €175.000</p>	€ 1.200.000
<p><b>EUROSTARS Cyprus (RPF)</b></p> <p>This programme aims at encouraging innovative SMEs to participate in transnational research activities and to enhance their competitiveness through the development of new products/ services/ production methods of high added value or the development of significantly improved existing products/ services/ production methods which are expected to be commercially exploited by the participating Organisations. The «EUROSTARS Cyprus» Programme is the funding instrument for enabling Cypriot organisations to participate in transnational projects of the EUROSTARS joint European Programme.</p> <p>Maximum Funding per project: €175.000</p>	€ 2.500.000

### **3. Enhancement of national Bilateral and Multilateral Cooperation, in particular Euro-Mediterranean, in addressing common societal challenges**

A national priority for Cyprus is the enhancement of the Euro-Mediterranean cooperation in Research and Innovation, based on the principles of mutual interest and shared benefits and the development of common instruments and joint programmes to address the common societal challenges of the area.

#### ***Actions to be promoted:***

- Effective participation in the Euro-Mediterranean dialogue and formulation of R&I Initiatives of Programmes.
- Effective use of national resources and funding Programmes to promote the European Mediterranean initiatives for addressing common Societal Challenges.

### **2.2.2 ERA Priority 2(b): Make Optimal Use of Public Investments in Research Infrastructures**

**EU Top Action Priority:** *“Making optimal use of public investments in RIs by setting national priorities compatible with the ESFRI (European Strategy Forum for Research Infrastructures) priorities and criteria taking full account of long term sustainability”.*

High quality Research infrastructures (RIs), facilitate the conduction of excellent research. They constitute one of the most important tools for research being at the centre of the knowledge triangle of research, education and innovation, where knowledge produced through research is spread through education and thereafter is applied through innovation.

With this ERA priority, Member States are invited to ensure that the ESFRI roadmap and their national RIs roadmaps are compatible with each other and that their national RIs roadmaps take due account of the directions agreed within ESFRI. They are also invited to facilitate access to RIs and carefully examine the planned financial contributions, both to proposed new ESFRI projects and to existing ones, in order to ensure their sustainability.

#### **Current Situation in Cyprus**

In the case of small countries, such as Cyprus, open and facilitated access to large RIs throughout Europe will safeguard their undistracted access to knowledge. Furthermore, physical mobility problems due to remoteness and insularity could be alleviated by increased emphasis on e-infrastructures (e-RI) as a means for diminishing the digital divide in Europe.

The Research and Innovation (R&I) Strategy of Cyprus attaches great importance to the capacity building and the development of high quality RIs in the country. Furthermore, it focuses on ensuring access of

national stakeholders to pan-European RIs. The aim is to provide the necessary tools to support the national research community, promoting at the same time its extroversion and enhancing the collaboration between research, education and industry for the benefit of the society.

Top priority for Cyprus is the removal of any potential barriers to cross-border access to pan-European RIs from which, as a small Member State with limited capacity in investments, can derive great benefits. At national level, emphasis is given in easing the access in national RIs, mainly through the simplification of access procedures and the removal of any obstacles of legal or technical nature, as Cyprus considers very important the optimisation of the use of national RIs and the widening of the scope of use, in order to cover the whole spectrum of potential users from the academia, the research community and the business world.

Currently, Cyprus is a member of international RIs such as CERN and SESAME. Additionally, it participates as a member or observer in four ESFRI Landmarks<sup>3</sup>, while national stakeholders are involved in the preparation phase of five ESFRI Projects<sup>4</sup>.

Governments' policy on the development of RIs is composed of a number of policy tools and actions. Firstly, there are ongoing procedures, which will contribute to the preparation of the national Roadmap for the Investments in RIs, including ESFRI Infrastructures. In this frame, preparations for a mapping exercise for the existing Research Infrastructures in Cyprus as well as the evaluation of a call of interest for the identification of the national stakeholders' needs and opportunities, for the participation and access in Projects and Landmarks of the ESFRI Roadmap 2016, are currently underway. Both actions are expected to be concluded in 2017. Based on the results of this procedure, the Government will provide support at policy level as well as financial support for the participation of national stakeholders in the European RIs i.e. cover the national participation fee and provide to interested parties the required national support.

Furthermore, funding for the development of new Research Infrastructures, in the priority sectors recognised by the Smart Specialisation Strategy for Cyprus (S3Cy), is provided, on a competitive basis, by the Research Promotion Foundation (RPF) under the national research funding program Restart 2016-2020, which was launched in September 2016.

The government policy also attaches great emphasis on the promotion and support of the participation of national proposals in European competitive programmes such as HORIZON 2020. In this respect, Cyprus considers that the Programme "Teaming for Excellence", is a great opportunity for Cyprus to pursue the creation of Centres of Excellence and greatly enrich the Research Infrastructures landscape of the country. Currently one such Centre of Excellence is under implementation with substantial co-funding by the Government.

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<sup>3</sup> BBMRI ERIC, PRACE, DARIAH ERIC and ESS-Social

<sup>4</sup> EU-SOLARIS, EMPHASIS, E-RIHS, KM3NeT and ACTRIS



## National Priorities and Actions to be Promoted

### 1. Preparation of a National Roadmap for the investments in Research Infrastructures including ESFRI Infrastructures

This priority has as an objective the formulation of a National Roadmap for the investments in RIs including ESFRI Infrastructures.

The National RIs Roadmap will include: (i) a mapping of the existing RIs in Cyprus with focus on the ones that have received national funding, (ii) information regarding the bilateral and multilateral cooperation of Cyprus with International and European RIs and (iii) a roadmap for the participation of Cyprus in ESFRI Projects and Landmarks.

#### ***Actions to be promoted:***

- Formulate a national Roadmap for RIs in line with the national priorities identified by the S3Cy and the Research Community.
  - a. Mapping of the existing RIs in Cyprus with focus on the ones that have received national funding.
  - b. Mapping of the bilateral and multilateral cooperation of Cyprus with International and European RIs.
  - c. Call of interest for the participation of Cyprus in ESFRI Projects and Landmarks and evaluation of the proposals received based on two sets of criteria:
    - Scientific excellence, Research Capacity, Sustainability, impact and added value for Cyprus
    - National Priorities (S3Cy) and financial requirements.
  - d. Evaluation of the participation of Cyprus in European and International RIs.
- Preparation of a web portal where all relevant information on the existing RIs will be included and updated continuously.

Funding Schemes 2016 – 2020	Budget
<b>“Integrated projects” Programme (RPF)</b> This Programme concerns the implementation of large, interdisciplinary projects that aim to provide integrated interventions in major challenges of the Priority Sectors and integrated solutions with significant impact on the economic development and the reform of productive sectors. The projects are expected to be implemented by integrated, mainly local consortia, which will make use of the significant links and synergies between all components of the quadruple helix, namely research centres, higher education institutions, enterprises, policy makers, and other interested organisations. During the implementation of the projects it is also anticipated to utilize the most significant local infrastructures that can assist in the achievement of projects’ objectives and the development of the Priority Sectors. Moreover, the implementation of “Integrated Projects”, aims to: <ul style="list-style-type: none"> <li>• the development of substantial links and synergies between all components of the</li> </ul>	€20.000.000

quadruple helix,

- the creation of a critical mass of researchers and the utilisation of young scientists for the development of top level research activities,
- the utilisation of existing infrastructures and centres of excellence, and the contribution to the development of new competitive ones, and
- the facilitation, where appropriate and possible, of the horizontal and technological priorities of S3Cy.

### **2. Support national stakeholders as regards their participation in ESFRI Research Infrastructures**

The participation of national stakeholders in ESFRI RIs will give Cyprus access to the highest quality of facilities for research in diverse areas and allow further development of its R&I capabilities.

#### ***Actions to be promoted:***

- Facilitation of the participation of national stakeholders in the selected ESFRI Projects and Landmarks.
- Ensure adequate budget resources for Cyprus participation in ESFRI Landmarks.
- Promotion and awareness raising on the content of ESFRI Roadmap (National workshops/seminars and other events).

Funding Instrument	Budget 2017-2018
Participation of the Republic of Cyprus as a member or observer in European research infrastructures of ESFRI Roadmap.	€ 200.000/ year

### **3. Support for the development of new Research Units and Laboratory Capacities**

The ongoing and continuous creation of new Research Units and Laboratories is important for the research community as it will provide support for conducting R&I activities in highly specialised fields. This will also help pursue international research agendas in cooperation with scientific institutions from other countries.

The Government pursues this objective by allocating institutional funding to a number of Research Performing Organisations (RPOs) and to the Public Universities. Furthermore, funding is provided to young scientists through a specific funding scheme for the creation of new research units.

#### ***Actions to be promoted:***

- Continue to provide support through institutional funding to RPOs and academic Institutions for the creation of new research units and laboratories and also pursue this aim through national competitive funding

Funding Schemes 2016 -2020	Budget
<p><b>“New Strategic Infrastructure Units – Young Scientists” Programme (RPF)</b></p> <p>The “New Strategic Infrastructure Units - Young Scientists” Programme aims at creating new, distinct research units under the coordination of young scientists. The new research units shall pursue high level frontier research, and the proposed projects shall focus on topics of specific Groups of Technologies / Science Fields and be applicable on the Priority Sectors, while it is expected that they will significantly contribute to upgrading the research level in Cyprus, the development of new ideas for innovative solutions and products and the future reinforcement of the competitiveness of the Priority Sectors with:</p> <ul style="list-style-type: none"> <li>• the creation of development hubs for excellence centres, with significant prospects in the following years,</li> <li>• the development of a critical mass of researchers in cutting-edge sectors and the creation of jobs for young scientists,</li> <li>• the promotion of research cooperation on a national and international level, and</li> <li>• the widening of prospects to attract additional competitive R&amp;I funds from other funding sources.</li> </ul> <p>Proposed projects must be submitted in one of the following four (4) Groups of Technologies / Scientific Fields:</p> <ol style="list-style-type: none"> <li>1. ICT- Information and Communication Technologies.</li> <li>2. Nanotechnology, Advanced Materials and Advanced Manufacturing and Processes.</li> <li>3. Biosciences, Biomedical Sciences and Technology and Biotechnology.</li> <li>4. Micro-Nanoelectronics and Photonics (MNE).</li> </ol>	<p>€11.000.000</p>

#### **4. Promote optimal utilisation of publicly funded Research Infrastructures**

The development of a policy and a framework of procedures for ensuring the optimal utilization of the University Laboratories by the business community consists one of the measures included in the National Policy Statement for Strengthening the Business Ecosystem in Cyprus. This will enhance the cooperation between the business sector and the research and academia community, having also numerous positive effects in the R&I sector in general.

##### ***Actions to be promoted:***

- Utilisation of University Laboratories by the business community.
- Utilisation of Research Infrastructure of other publicly funded RPOs by the private sector.
- Promote access of the R&I Community to publicly funded Research Units and Laboratories.

#### **5. Investigation of the possibility of absorbing EEA grants to support Research Infrastructure in Cyprus**

The DG EPCD is the designated National Focal Point for the implementation of the Programmes under the EEA and Norway Grants. The projects implemented so far in Cyprus fall within the sectors of Public Health, Environmental Protection, Cultural Heritage, Justice and Home Affairs, Children and Youth at

Risk and Civil Society. Given the fact that “Innovation, Research, Education and Competitiveness” is one of the five priority sectors for the new programming period 2014-2021, Cyprus could benefit in this area, especially as regards the sector of health which is one of the key areas of support for Cyprus identified for the following EEA Grants programming period<sup>5</sup>. It is noted that this sector is also included amongst the priorities identified by the S3Cy for Cyprus.

### ***Actions to be promoted:***

- Raise awareness in the research community for possible utilization of EEA grants in this area.
- Provide support to stakeholders for the submission of proposals to the programme.

## **2.3 ERA Priority 3: An Open Labour Market for Researchers**

**EU Top Action Priority:** *“Using open, transparent and merit based recruitment practices with regard to research positions”.*

The goal of this ERA priority is the promotion of an open and excellence-driven ERA in which highly skilled and qualified people can move across borders, sectors and disciplines to where their talents can be best employed, to advance the frontiers of knowledge and support innovation throughout Europe and beyond.

Given the above, Member States are invited to promote the uptake and effective implementation by Research Performing Organisations (RPOs) of the principles of openness, transparency and merit-based recruitment as articulated in the Researcher’s “Charter and the Code of Conduct for Recruitment of Researchers”- (“Charter and Code”), remove legal and other barriers to open recruitment of researchers in public sector RPOs and define new structures and approaches to researcher career development. Authorities should also encourage openness and the circulation of international talent by reinforcing a welcoming culture for EU and third-country researchers and reducing obstacles to mobility.

### **Current Situation in Cyprus**

Researchers (Full Time Equivalent) in Cyprus accounted for 0,25% of total employment in Cyprus (2014 data). Based on the sector of performance, most researchers, with rate up to 61,7%, are employed by the Higher Education Institutes (HEIs), 20.6% are employed by business enterprises, 10.0% are employed at the public sector and 7.7% are employed by non-profit organisations. About 55% of researchers hold a PhD degree, 31% hold postgraduate degree, and 13% hold a graduate degree. A main bottleneck for

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<sup>5</sup> Strengthening civil society, facilitating dialogue and bi-communal cooperation, Improving services for and protection of victims of domestic violence and Improving health diagnostics and capacity are the 4 key areas of Support for Cyprus for the programming period 2014-2021.

the low number of human resources for research activities is considered the weak demand from business and more specifically industry.

There is a sharp contrast between the high number of tertiary education graduates and the very low number of human resources engaged in research. This is partially explained by a still not favourable enough environment for research activities which leads to a substantial brain-drain of tertiary education graduates to other countries, mainly the United Kingdom and the United States. In addition, businesses involvement in research and development activities is very limited, mainly due to the lack of big companies and high-tech industrial activity. The business sector is focused on services and is dominated by very small enterprises that have not developed an R&D culture yet.

As regards using open, transparent and merit based recruitment practices with regard to research positions, it is noted that recruitment of researchers in posts in the Government is open and transparent, with all positions and selection criteria advertised in the Government Gazette, in local press, websites and in the Cyprus EURAXESS portal. Most positions are advertised in English. The Research Promotion Foundation (RPF) serves as the Bridgehead Organisation and Service Centre for the EURAXESS Network in Cyprus and has the responsibility for promoting the implementation of the “Charter & Code” through its networking activities with the research institutes and the dissemination of promotional material.

Universities and Research Institutes in Cyprus have also started developing a Human Resources Strategy for Researchers in order to support and promote mobility, exchange knowledge and experiences, promote transparency in the recruitment process as well as an attractive working environment. For this reason, they have started harmonizing their internal processes with the “Charter and Code” through a process of continuous internal analysis, re-evaluation and feedback that is monitored by external evaluators every four years. In this respect the University of Cyprus and the Cyprus Institute of Neurology and Genetics were acknowledged with the “HR Excellence in Research” logo by the European Commission.

As regards openness and the circulation of international talent by reinforcing a welcoming culture for EU and third-country researchers, in 2009, the Republic of Cyprus introduced the “Scientific Visa”. More specifically Cyprus, in line with the relevant Council Directive, amended the national Aliens and Immigration legislation in order to incorporate the procedure for the admission of third-country researchers for more than three months for the purposes of carrying out a research project under hosting agreements with research organizations. The “Scientific Visa” foresees procedures for the validation of Research organizations wishing to carry out hosting agreements with third country researchers and regulations for the facilitation of the submission of such requests through a fast track procedure. In the framework of this procedure the RPF has been nominated as the national authority for the evaluation and validation of the hosting agreements.

Furthermore, the government has introduced a fast track procedure for the recruitment of highly qualified third country nationals through the introduction of a start-up visa/permit that came into effect in February 2017.

As regards the pension rights in the Republic of Cyprus, researchers do not enjoy a special social security statute. Depending on their type of contract, they can choose to be insured under the General Social Security Scheme as either employed or self-employed. For instance, post-doctoral researchers can be insured as employed persons.

### National Priorities and Actions to be Promoted

#### 1. Increase the number of Researchers in Cyprus and reduce brain drain

The enhancement of the Human Resources capacity in the R&I sector is critical for its effective development and was identified as a challenge by the Smart Specialization Strategy of Cyprus (S3Cy). To this end, the improvement of the framework regarding the recruitment and employment policies and conditions for the researchers and the promotion of initiatives for upgrading the R&I capacity in Cyprus (especially the creation of Centres of Excellence in R&I), thus creating more opportunities of scientific employment, are expected to have positive effects on the attraction of new researchers from abroad as well as on the limitation of brain drain. Furthermore, the promotion of R&I culture to the whole spectrum of the economy will create the conditions and opportunities for training and employment of new researchers.

#### **Actions to be promoted:**

- Promote national funding opportunities for the development of Research Career.
- Encourage the endorsement of the European Charter for Researchers” and of the “Code of Conduct for the Recruitment of Researchers”, development of Human Resources Strategy for the Researchers (HRS4R) and obtain the "HR Excellence in Research" certification by RPO's.
- Further exploration and initiation of a dialogue with all stakeholders regarding the utilisation of the EU pension system.
- Enhance the participation in Marie Skłodowska-Curie Actions (MSCA), as well as in international networks and partnerships that provide opportunities for training and access to research infrastructures/activities of international scope.
- Further encouragement of RPOs/HEIs to advertise research positions on the EURAXESS portal.
- Support the setting up and running of structured innovative doctoral training programmes.
- Support the creation of Centre of Excellences through Teaming.
- Further promotion and utilization of the “Scientific Visa” legislation.
- Encourage exchange and visiting mobility of research staff of all levels.

Funding Schemes 2016 – 2020	Budget
<b>DIDAKTOR (RPF)</b> This Programme aims to integrate young, post-doctoral scientists in the Cypriot R&I System, to carry out high level research projects, seeking to involve the young scientists in novel research activities, to stimulate critical mass of	€9.400.000

researchers in cutting-edge scientific areas and to create sustainable, top level specialised job positions for young scientists. The Programme also aims to address the problem of brain drain which has increased in recent years due to the weak financial situation of the country. The Programme refers to the implementation of a research project by a Young Researcher, holder of a doctoral degree, in the frame of his/hers employment by a Cypriot Research Organisation, Enterprise or Other Organisation. The Young Researcher, who may also be the coordinator of the proposed project, shall be employed by the Host Organisation, for the implementation of the project as the main object of the employment, while being able at the same time to participate in other research or teaching activities.

Maximum Funding per project: €160.000 for Life Sciences and Physical Sciences and Engineering projects and € 120.000 for Social Sciences and Humanities projects.

### **Complementary Funding (RPF)**

€ 4.000.000

This Programme aims on the one hand to maximise the benefit from the participation of Cypriot Organisations in Horizon 2020 projects and, on the other hand to reward these organisations by enhancing their potential to maintain and upgrade their ability to carry out international level research and continue to attract funds from Horizon 2020 or other international Programmes. A percentage of the funding secured by the beneficiary organisation from the EU in the frame of one or more Horizon 2020 research projects is provided as Complementary Funding, aiming to enhance its research capabilities by covering actions such as hiring researchers or research management personnel, and the purchase of new or the upgrade of existing equipment.

Maximum Funding per project: 5% of the total amount the beneficiary organisation has secured from the EU in the frame of one or more H2020 research projects for which the proposal is submitted.

### **“Young Researchers- 2<sup>nd</sup> Opportunity” Module (RPF)**

Up to € 5.500.000

This programme supports the integration of young scientists in the Cypriot R&I System by offering a second opportunity to researchers who attempted to obtain a grant under the “ERC Starting Grant” and “ERC-Consolidator Grant” funding instruments of the European Research Council (ERC), and the “Marie Skłodowska Curie Actions”- Individual Fellowships (IFs)/ Standard European Fellowships (EFs), whose proposals were eligible for funding, but did not manage to secure a grant due to budget exhaustion. The maximum budget amount available for funding of projects relating to “Marie Skłodowska Curie Actions” – Individual Fellowships (IFs)/ Standard European Fellowships (EFs) proposals, is €1.200.000.

Maximum Funding per projects that relate to:

- “MSCA-Individual Fellowships (IFs)-Standard European Fellowships (EFs)” proposals: €150.000
- “ERC-Starting Grant” proposals: €700.000

- “ERC- Consolidator Grant” €1.000.000

#### **“Integrated projects” Programme (RPF)**

€ 20.000.000

This Programme concerns the implementation of large, interdisciplinary projects that aim to provide integrated interventions in major challenges of the Priority Sectors and integrated solutions with significant impact on the economic development and the reform of productive sectors. The projects are expected to be implemented by integrated, mainly local consortia, which will make use of the significant links and synergies between all components of the quadruple helix, namely research centres, higher education institutions, enterprises, policy makers, and other interested organisations. During the implementation of the projects it is also anticipated to utilize the most significant local infrastructures that can assist in the achievement of projects’ objectives and the development of the Priority Sectors.

Moreover, the implementation of “Integrated Projects”, aims to:

- the development of substantial links and synergies between all components of the quadruple helix,
- the creation of a critical mass of researchers and the utilisation of young scientists for the development of top level research activities,
- the utilisation of existing infrastructures and centres of excellence, and the contribution to the development of new competitive ones, and
- the facilitation, where appropriate and possible, of the horizontal and technological priorities of S3Cy.

#### **“New Strategic Infrastructure Units – Young Scientists” Programme (RPF)**

€11.000.000

The “New Strategic Infrastructure Units - Young Scientists” Programme aims at creating new, distinct research units under the coordination of young scientists. The new research units shall pursue high level frontier research, and the proposed projects shall focus on topics of specific Groups of Technologies / Science Fields and be applicable on the Priority Sectors, while it is expected that they will significantly contribute to upgrading the research level in Cyprus, the development of new ideas for innovative solutions and products and the future reinforcement of the competitiveness of the Priority Sectors with:

- the creation of development hubs for excellence centres, with significant prospects in the following years,
- the development of a critical mass of researchers in cutting-edge sectors and the creation of jobs for young scientists,
- the promotion of research cooperation on a national and international level, and
- the widening of prospects to attract additional competitive research and innovation funds from other funding sources.

Proposed projects must be submitted in one of the following four (4) Groups of Technologies / Scientific Fields:

1. ICT- Information and Communication Technologies (see Table II.1.h).
2. Nanotechnology, Advanced Materials and Advanced Manufacturing and Processes.



3. Biosciences, Biomedical Sciences and Technology and Biotechnology.
4. Micro-Nanoelectronics and Photonics (MNE).

#### **Excellence Hubs (RPF)**

€17.100.000

The “Excellence Hubs” Programme aims to promote scientific excellence, by funding frontier research projects in cutting-edge fields. Additionally, the Programme aims to contribute to the development of growth prospects of the local economy and to address current social and other challenges.

The “Excellence Hubs” Programme will fund projects that fall under the following three Scientific Fields:

- Life Sciences,
- Physical Sciences and Engineering, and
- Social Sciences and Humanities.

The basic objective of the Programme is to reward and invest in research excellence. The Programme can also contribute to the collaboration of national research/academic institutions and enterprises as well as to the development of consortia with foreign organisations. The implementation of projects is expected to result into new, internationally significant knowledge, which can form the base for future exploitation in terms of social and economic development.

#### **Innovation Houses (MECIT)**

€1.200.000

The establishment of Innovation Houses, addressed to the unemployed and students, aims to provide guidance and training to them so that can establish innovative businesses or so that they may become employed by Innovative enterprises. This can be achieved by special training aiming at cultivating the necessary skills and supplying the required knowledge that is needed by innovative business to protect their intellectual property rights, to develop, to finance and to introduce in the international added- value chains innovative products and services.

The programme is expected to last 2-3 years will bring together academics and successful businessmen for training young people while it will offer theoretical classes and on the job training.

It is envisaged that 4 innovation houses will be established by the end of the programme, encompassing 100 groups of 5 people each.

## **2.4 ERA Priority 4: Gender Equality and Gender Mainstreaming in Research**

**EU Top Action Priority:** *“Translating national equality legislation into effective action to address gender imbalances in research institutions and decision-making bodies and integrating the gender dimension better into Research and Innovation (R&I) policies, programmes and projects”.*

Equality between women and men is one of the European Union's founding values. The EU has made significant progress over the last decades due to the introduction of relevant legislation, the integration of the gender perspective into its policies and the introduction of specific measures for the advancement of women. However, gender gaps remain in all sectors of economy including research. In order for Europe to achieve its ambitions in R&I both women and men are needed in research and research policy making. The objective of ERA in this priority is to foster scientific excellence and a breadth of research approaches by fully utilising gender diversity and equality and avoiding an indefensible waste of talent.

Within the framework of this priority, Member States are invited to develop policies on gender equality in Research Performing Organisations (RPOs), and regularly monitor their effectiveness and adjust measures as necessary. At the same time RPOs are invited to review and enhance their policies for gender equality in research and ensure their implementation and focus in the areas where women are underrepresented and to the funding schemes and disciplines where the imbalances are greatest. Member States should also work with the European Commission to identify good practices which could be incorporated into their national systems. Gaps in crosscutting gender equality legislation at EU and national levels should also be addressed.

### **Current Situation in Cyprus**

Providing equal opportunities to female and male scientists will promote success in harnessing the full potential of Europe's talented workforce. Within this framework, Cyprus focuses on eliminating gender parity barriers in the field of R&I. Emphasis is given to the elimination of women inferiority stereotypes relating to their ability to compete with men and their devotion to their careers. This is promoted through the introduction of measures that facilitate the reconciliation of family and work as well with other specific measures that support female scientists' careers.

The most important measures introduced so far by stakeholders in the field of R&I are the following:

- Establishment of UNESCO Chair on Gender Equality and Empowerment by the University of Cyprus (UCY) in 2009 where research is being conducted and gender mainstreaming activities are being organised until this day. The UCY, through the Research Centre for Gender Studies also undertakes research activities in relation to gender equality with special emphasis on issues related to the rights and participation of both women and men in all aspects of human activity, scientific, economic, political, social and cultural. At the same time, it supports the exposure of male and female students of its University in the social, political and ideological issues with which the experience of the gendered subject is interwoven. The Centre also collaborates closely with the interdisciplinary, interdepartmental programmes in Gender Studies offered by the UCY, as well as with the UNESCO Chair in Gender Equality and Women's Empowerment at the UCY. Finally, the UCY is running this postgraduate degree in Gender Studies, available on a master's (MA) and doctoral (PhD) level, since 2012. The programme responds to the need for gender expertise and the education of professionals who will work to incorporate gender mainstreaming in all areas of life. The programme is offered by

the UCY and is coordinated by the UNESCO Chair in Gender Equality and Women's Empowerment and the Centre for Gender Studies of the UCY. Accommodating graduates from all scholarly backgrounds, the degree gives students the opportunity to critically engage with the wide range of themes, resources, methodologies and analytical approaches that constitute gender studies, and apply these to a diverse number of sectors and fields.

- Development of a Gender Equality Plan for 2014-2020, by the Cyprus University of Technology (CUT) developed under a Rector's Council's decision. The plan concerns all departments and the administration of the University and includes the following actions: creation of Special Committees, seminars, trainings, workshops, training for promoting expertise on gender equality, procedures to combat sexual harassment and discrimination, use of gender neutral language, collection and use of sex-disaggregated data and review and assessment of actions.
- Participation of the RPF as a beneficiary in three high impact projects funded through Horizon 2020 with a focus on gender issues in the ERA. Specifically, within the framework of the GENDERACTION Project, the objective is to create an innovative policy community for the implementation of the gender priority in the ERA by setting up a network of representatives appointed by national authorities, thus facilitating networking and exchange among more and less experienced countries to develop knowledge and build capacities, competences and know-how for gender equality and mainstreaming in research and innovation (R&I) among a variety of European and national stakeholders. In addition, the TARGET Project aims to initiate institutional change in seven gender equality innovating institutions (GEIIs) in the Mediterranean basin – including RPOs, RFOs, including the RPF as well as a network of universities, taking a reflexive approach which goes beyond the formal adoption of a gender equality plan by emphasising an iterative reflection of progress made. Finally, the RPF has an active role in the GENDER-NET Plus ERA-NET Cofund which aims to strengthen transnational collaborations between research programme owners and managers, and provide support to the promotion of gender equality through institutional change, instigating the integration of sex and gender analysis into research and funding programmes.
- Inclusion of the issue of gender equality in R&I in the national Programmes Restart 2016-2020. More specifically, under the Programmes RESTART 2016-2020, the operators must comply with relevant laws that relate to equality of opportunity between men and women and non-discrimination. Furthermore, it is recommended that the players would consider the equality of gender in relation to the research content of the work and composition of the research team of the project.

Also, gender equality as a horizontal policy is being taken into account and promoted throughout the preparation and implementation of the co-financed by ESIF Programmes over the period 2014-2020, including monitoring, reporting and evaluation actions. Furthermore, the competent Authorities for Gender equality are participating as members in the Consultation Committee for the design and strategic monitoring of the programming documents 2014-2020, as well as in the Monitoring Committee of the co-financed Programmes. The Evaluation Plan of the Programmes includes a thematic Evaluation on Gender mainstreaming to be commenced in 2019.

Cyprus has also implemented a number of laws and processes aimed at promoting gender equality, including a law stipulating equal pay between women and men and extensions in PhD terms to compensate for maternity leave. More progress can however be achieved in the area of women participation in decision making bodies, as there are no explicit quotas or quantitative targets as regards women participation in these bodies.

### **National Priorities and Actions to be Promoted**

#### **1. Empowerment of the women's role by encouraging their equitable representation in decision-making bodies and in high-level appointments**

One way to address gender imbalances in decision making processes is to promote women participation/representation in high level positions and integrate the gender dimension in the recruitment policies for science and research.

##### ***Actions to be promoted:***

- Encourage the development of a Gender Equality Plan by RPOs.
- Integrate the gender dimension in the structures and policies in science and research.
- Organize workshops and seminars on gender equality.
- Examine and adopt good practices that other Member States have incorporated into their systems.
- Contribute to the Identification of gaps in gender equality legislation at national level and promotion of corrective measures.

#### **2. Facilitation of the reconciliation of family and professional life (better work-life balance)**

Reconciliation of work and family life lies at the heart of gender equality. It enables a more effective participation in and contribution to the workplace by women with caring responsibilities. Work-life balance includes measures that enable people to combine priorities in their life outside work with their work responsibilities.

Facilitation of the reconciliation of family and professional life, through the development of a family friendly policy that includes initiatives and support measures that create a favourable environment for those who have left the labour market to raise children and/or care for family members to return to paid employment, especially in the area of research, will help in the reconciliation of work and family life and will promote gender equality.

##### ***Actions to be promoted:***

- Design of support measures regarding the promotion of better work-life balance i.e. making scientific careers more family-friendly.
- Investigate the possibility for the introduction of flexible work and working time arrangements.

### **3. Promotion of gender dimension in research proposals and projects and equal participation opportunities in the evaluation panels**

In order to have a balanced participation of women and men in all aspects of research, the gender dimension can also be introduced in the funding schemes of RPOs as well through the introduction of mandatory participation of women in experts' evaluation and monitoring panels, in Programme committees and/or other Advisory Groups and Boards.

#### ***Actions to be promoted:***

- Preparation of gender equality guidelines for:
  - the composition of project/proposal teams (funded under national programmes)
  - the composition of evaluation panels
- Promotion of "gender equality" dimension, (of the composition of the proposal/ project consortium), as a sub-criteria in the evaluation process under the National Framework Programmes for R&I.

## **2.5 ERA Priority 5: Optimal Circulation and Transfer of Scientific Knowledge**

Removing barriers to the wider circulation and greater use of knowledge will lead to increased growth and competitiveness for Europe. Broader and more rapid access to scientific papers and data will make it easier for researchers and businesses to build on the findings of public-funded research. This will boost Europe's innovation capacity and give citizens quicker access to the benefits of scientific discoveries.

### **2.5.1 ERA Priority 5(a): Fully Implementing Knowledge Transfer Policies at National Level**

**EU Top Action Priority:** *"Fully implementing knowledge transfer policies at national level in order to maximize the dissemination, uptake and exploitation of scientific results. Research Performing Organisations (RPOs) and Research Funding Organisations (RFOs) should make knowledge transfer second nature by integrating it in their everyday work".*

Enhancing the links between research, business and education (the knowledge triangle), and particularly enhancing the knowledge transfer between public research institutions and the private sector while respecting intellectual property rights, will foster Open Innovation and increase the economic impact of research.

With this priority, Member States are invited to promote effective knowledge transfer mechanisms in their RPOs, which should be actively motivated to establish policies and procedures for the management of Intellectual Property. Member States should also develop indicators to quantify the economic and social impact of knowledge transfer policies as part of their national policy environment and also promote networking, sharing of know-how and good practices (both national and trans-national) between RPOs and with the private sector. In this direction, steps should be taken to further professionalise Intellectual Property management and the negotiation of collaborative and contract

research at Higher Education Institutes (HEIs) and other PROs, increase the creation of start-ups and private sector / public sector mobility and strengthen collaborative research between public and private research performers.

### **Current Situation in Cyprus**

Cyprus has not developed a specific strategy for Knowledge Transfer yet. The lack of a mechanism for the support of technology transfer is a major challenge for the R&I system in Cyprus and the need for the development of a Technology Transfer Office (TTO) has been identified as a major priority in the Smart Specialization Strategy of Cyprus (S3Cy).

In order to address this issue, the Action Plan of S3Cy foresees the creation of a TTO that will provide support to the RPOs in Cyprus in relation to the exploitation of their research results and the protection of Intellectual Property Rights. The TTO will be complemented by Units within the major academic and research institutions, which will undertake basic technology transfer activities and facilitate the communication between the institutions and the TTO. A Business Plan was prepared by external experts and will be put into stakeholders' consultation. The legal framework and the operation and governance of the TTO is being examined by the Government.

Moreover, since 2010, a University-Industry Liaison Offices Network was established in all major public and private Universities in Cyprus, with co-financing from the European Social Fund 2007-2013. The main priorities of the network was to ensure benefits to business and industry through academic research results and vice versa, to maximize opportunities and employment potential of students/graduates through a student placement framework, to promote Cross-National agreements/partnerships with Universities in Europe (similar activities) through student placements and internships, to exploit Universities' research results by Cypriot businesses and to encourage research in the Cyprus Business Society. The operation of the network proved extremely successful, in particular as regards placement of 1980 graduates in enterprises, exceeding by far the initial target of 400 placements. Furthermore, 36 collaboration agreements have been signed between universities and companies.

Based on the findings of the S3Cy, it was decided to continue over the period 2014-2020 the implementation of this successful action, again with co-financing from the European Social Fund. For this purpose, the Action Plan for the implementation of the S3Cy includes a similar scheme aiming to boost the academia-business cooperation by encouraging communication and collaboration of universities with the business world on issues such as Knowledge Transfer, applied research in response to specific problems of the industry, participation in research projects and student placements in enterprises.

Furthermore, the National Policy Statement of the Entrepreneurial Ecosystem, sets out some objectives to improve framework conditions for business R&I, among others streamlining the laws and regulations governing the conversion of scientific know how and innovation into commercial products and services

with the participation of public universities (e.g. the creation of university spin-offs) and strengthening intellectual property legislation.

## National Priority and Actions to be Promoted

### 1. Enhancement of the links between research, business and education and promote the exploitation of Research and Innovation Results

In order to achieve utilization and commercialization of research results, the links between research, business and education need to be enhanced.

#### ***Actions to be promoted:***

- Establish and operate a TTO.
- Promote entrepreneurship that results from Research and Innovation (R&I) outcomes.
- Revise the framework of protection of Intellectual Property Rights and copyright.
- Support Actions for the academic and research institutions in Cyprus, as regards the protection of Intellectual Property Rights and exploitation of their research results.
- Amend the law and regulations of public universities and develop a Framework of Principles so as to allow technology transfer from public universities to businesses (e.g. University spin offs).
- Provision of support at policy level as well as financial support to national proposals for the “Teaming for Excellence” Action under Horizon 2020.
- Utilization of University Laboratories by the business community.
- Promote Open Innovation and the establishment of local chapters of International Open Innovation Platforms.

Funding Schemes 2016-2020	Budget
<b>Research in Start-Ups (RPF)</b> This Programme focuses on enhancing the endogenous capacity of Start Ups for active involvement in research activities and the development of new products/ services/ production methods of high added value, by significantly contributing to the enhancement of these companies’ capacity to penetrate international markets. The Programme aims at intensifying the research activities in Start Ups, covering a wide range of Industrial Research and Experimental Development activities. Experimental Development activities may include the production of a prototype, demonstration, piloting, testing and validation of new or significantly optimised products/ services/ production methods in representative environment of real operating conditions. Maximum Funding per Project: €50.000	€1.000.000
<b>Proof of Concept for Technology/Knowhow Applications (RPF)</b> Through this Programme it is expected that Enterprises will have the opportunity to verify the industrial application potential of a technology/knowhow before being involved in a broader scale research project	€1.000.000

of Technological Development and Innovation.

Maximum Funding per Project: €25.000

#### **Innovation Vouchers (RPF)**

€260.000

The “Innovation Vouchers” Programme, aims to introduce SMEs to the concept of Innovation, and to encourage the cooperation between enterprises and knowledge intensive organisations, aiming at the involvement of SMEs in innovative activities, therefore positively affecting their competitiveness.

Maximum Funding per Project: There are two (2) types of Vouchers, worth €2.500 and €5.000 as follows:

- I. Innovation Voucher A – (€2.500)
  - Consulting services for the development of technological applications,
  - Consulting services for technology transfer and technical knowhow, and
  - Techno-economic studies for innovative products and services.
- II. Innovation Voucher B – (€5.000)
  - Measurements, tests and analyses,
  - Access to research infrastructure and databases,
  - Secondment of highly qualified research personnel, from research/academic organisations, to carry out innovation projects, and
  - Prototype design and construction.

#### **Industrial Property (RPF)**

€ 400.000

The “Industrial Property” Programme aims to increase the number of patents and industrial designs rights, granted to Cypriot entities, in order to maximize the benefits that derive from the exploitation of research, development and innovation results.

The Programme provides the opportunity to protect important R&I results, that have emerge through the implementation of research projects which have been self-funded, or funded through Programmes launched by the RPF, the EU, or other research funding organisations, and have started or have been completed in the last five years from the date of the proposal submission.

Maximum Funding per Project: €10.000

#### **Commercial Exploitation of Research Results (RPF)**

Stage A: €270.000

Stage B: €1.000.000

The Programme is expected to contribute in the investigation of the possibilities for exploitation of research results and the implementation of preparatory actions for development, demonstration and promotion of products at a “prototype” stage, as well the establishment of spin-off companies for the commercial exploitation of the produced products and services.

The Programme consists of two independent stages. The first stage is preparatory, while the second stage refers to the actual investment for the exploitation of research, technological development and innovation results, as follows:

- Stage A - Preparation: Supports the development of a business plan for the commercial exploitation of results emerged from research activities carried



out by Cypriot Research Organisations or Other Public and Broader Public Sector Organisations. It also supports preparatory actions for product refinement, development of a business strategy, promotion and access to finance.

- Stage B - Investment: Support activities for setting a new company and its operational activities according to the business plan for the commercial exploitation of research results. Stage B may (it is not obligatory) be the continuation of the support received during Stage A.

Maximum Funding per Project

Stage A: €30.000

The aid intensity is 80%.

Stage B: €250.000

### **Strengthening Business Innovation A & B (MECIT)**

€ 19.000.000

Aims to support mainly SMEs, Start-ups, Research& Development Centres and Universities to develop and introduce to the international market innovative products and services in order to increase their competitiveness.

The “Strengthening Business Innovation A and B” programmes aims to assists SMEs and Start-ups in the the development of innovative products and services, or of innovative production methods either alone or in cooperation with Research and Development Centers.

Maximum funding for SME’s per enterprise is equal to €250,000 and for the project when there is cooperation of at least two enterprises is €500,000.

Maximum funding for Start-ups or consortia which are led by them with a maximum funding of €50,000 per Start up.

### **Innovation Packages (MECIT)**

€ 4.000.000

Aims to support the ecosystem of Entrepreneurial Innovation. The provision of Innovation packages will provide funding for a specific activity using the lump sum method. It will fund three different type of activities:

1. The provision of Innovation Packages to enterprises, Research and Development Centers, Universities Entrepreneurial Centers, Associations, and others in order to develop activities that promote innovation culture, open innovation platforms and awareness. Primarily they will draw the attention of the media to their activities that will promote innovation culture to any audience from children, to students and enterprises by competitions TV programs and other activities. The establishment of local chapters of international Open Innovation Platforms will promote the involvement of young entrepreneurs in innovation activities and in internationalization.
2. The provision of Innovation Packages to SMEs and Start-ups so that they prepare, either material or their organization, to attract funding from investors, Business Angels and Investment Funds.
3. The provision of Innovation packages to SMEs for the certification of their innovative products that target the international market.

Maximum Funding per Project: €5.000 - €50.000

<p><b>Cooperation in the area of R&amp;I in agriculture (Ministry of Agriculture, Rural Development and Environment)</b></p> <p>The programme aims at the:</p> <ul style="list-style-type: none"> <li>-Promotion of R&amp;I in agriculture, the investigation of specific characteristics of local/traditional products and the creation of new quality systems.</li> <li>-Cooperation for the creation and development of short supply chain and local markets.</li> </ul>	€ 2.300.000
<p><b>“Excellence Hubs” Programme (RPF)</b></p> <p>The “Excellence Hubs” Programme aims to promote scientific excellence, by funding frontier research projects in cutting-edge fields. Additionally, the Programme aims to contribute to the development of growth prospects of the local economy and to address current social and other challenges.</p> <p>The “Excellence Hubs” Programme will fund projects that fall under the following three Scientific Fields:</p> <ul style="list-style-type: none"> <li>• Life Sciences,</li> <li>• Physical Sciences and Engineering, and</li> <li>• Social Sciences and Humanities.</li> </ul> <p>The basic objective of the Programme is to reward and invest in research excellence. The Programme can also contribute to the collaboration of national research/academic institutions and enterprises as well as to the development of consortia with foreign organisations. The implementation of projects is expected to result into new, internationally significant knowledge, which can form the base for future exploitation in terms of social and economic development.</p>	€17.100.000
<p><b>“Social Innovation” Programme (RPF)</b></p> <p>The “Social Innovation” Programme aims to the application of innovative ideas, products, services, technologies, models (for organisation, governance, enhancement and development of abilities) and strategies for facing social challenges and the establishment of new relationships and collaborations between social organisations and other stakeholders. It also aims to cultivate a social innovation culture, being the application of innovation with social dimension both in terms of its objectives and the means of achieving it. As a rule, social innovation is materialised through the involvement of all sectors, including: (i) the public sector, (ii) the private sector and the market, (iii) enterprises and social organisations, and also (iv) the private initiative of socially active persons and entrepreneurs. The “Social Innovation” Programme focuses on the promotion of projects which plan and develop social innovation for addressing a recently identified or insufficiently addressed social need in Cyprus.</p>	€1.500.000
<p><b>Business Innovation Center - Structures and Infrastructure Innovation (MECIT)</b></p> <p>Establishment and operation of a Business Innovation Center accredited by EBN, particularly through the partnership with existing organizations or the evolving of existing organization in the area of business innovation and entrepreneurship</p>	€5.300.000

support. The Centre will be responsible for the implementation of relevant strategies regarding Business Innovation.

### **Upgrading of existing Liaison offices with the business world (UCY)**

€7.100.000

Since 2010, a University-Industry Liaison Offices Network was established in all public and private Universities in Cyprus, with co-financing from the European Social Fund 2007-2013. The aim of this project is the upgrading of the existing Liaison offices with the business world and the creation of one new. The objective is the systematic integration of workshop curricula first and/or second circle of Universities, contributing therefore to the cooperation between universities and the business world. The Liaison Offices will focus on issues such as the promotion of research and consultancy partnerships, student placements in enterprises for practical and transfer of know-how in the Cypriot business scene.

## **2.5.2 ERA Priority 5(b): Promoting Open Access to Scientific Publications**

**EU Top Action Priority:** *“Promoting Open access to scientific publications”.*

'Open Access' to scientific information is defined as the online access to digital academic and scientific content which is immediate, continuous, free of charge and free from most copyright restrictions. Interested parties are able to use the available content freely, for research, educational or other purposes. The aim is the exchange of scientific information, the strengthening of research and the most effective exploitation of research results.

Open Access to scientific publications brings significant benefits to the society. More specifically, it allows for the exploitation and reuse of research output for scientific purposes, enabling researchers to build on previous work and accelerate innovation. It also enhances openness and transparency of the scientific process, which are essential features of Responsible R&I, while at the same time, it provides opportunities for international cooperation. In the long-term, Open Access can contribute towards an increased return on R&I investment, enhanced productivity, improved competitiveness and economic growth.

The European policy for 'Open access' aims to optimize the impact of publicly-funded scientific research both at European and Member State level. In particular, the European Commission supports Open Access as the established practice for dissemination of publicly funded research in the European Union and promotes the open circulation of knowledge as one of the six priorities of the European Research Area. Open Access is obligatory for all the peer-reviewed publications which result from Horizon 2020 funded projects.

With this priority, Member States are encouraged to promote Gold and/or Green Open Access in line with the Commission's 2012 Recommendation on Access to and Preservation of Scientific Information (covering both scientific publications and research data), ensure the further implementation of open access to scientific publications, encourage their RFOs to exchange information and good practices during the transition to open access, consider aligning and coordinating their negotiations with scientific publishers on reasonable subscription fees and Article Process Charges (APCs) to support a transition to new and more balanced business models and facilitate the development of certified repositories for Green Open Access and stimulate self-archiving and other. Member States should also foster synergies with the fora and working groups of other multilateral organisations such as the OECD, G8, UN and UNESCO in order to advance the implementation of open access in the international environment. Member States could also consider adopting an Open Science approach on selected common societal challenges under Horizon 2020.

### **Current Situation in Cyprus**

Cyprus adopted a National Policy for Open Access on the 25<sup>th</sup> February 2016. Its vision is the creation of open access conditions - for all the citizens, researchers and businesses - to the publications of research organizations and academic institutions in Cyprus, that are publicly or privately funded. The objective of the Open Access Policy is the alignment with European policies and current best practices, effectively participating in the formulation of a research and academic ecosystem, which provides immediate and open access to research and especially publicly funded research. This is based on the recognition of knowledge as a public good which brings social and economic benefits at national, European and international level.

The National Policy promotes the "Green Route" (self-archiving) of Open Access and encourages researchers to use suitable repositories, i.e. repositories which offer Open Access to scientific information, allow data referral through permanent determinants (Digital Object Identifier (DOI)) or others which provide quality metadata (including a reference to the research funder), according to the acceptable guidelines and standards of interoperability with international digital collectors, or are compatible with OPENAIRE or other similar infrastructure.

Additionally, in the framework of the European Programmes OpenAIRE and OpenAIREplus, the Library of the University of Cyprus (UCY) has been appointed as the National Office for Support of Open Access since 2009, assisting researchers in the process of article submission and in promoting their research.

At an institutional level, there are currently three repositories operating in Cyprus: (a) LEKYTHOS repository of the UCY, (b) KTISIS repository of the Cyprus University of Technology (CUT) and (c) KYPSELI repository of the Open University of Cyprus. Despite the fact that there are not any Institutional Policies yet in place, a number of Universities are in the process of formulating such policies and are expected to be adopted soon.

### National Priority and Actions to be Promoted

#### 1. Implementation of the National Open Access Policy to Scientific Information in the Republic of Cyprus

The implementation of a National Open Access Policy to Scientific information is a crucial step for the promotion of scientific research.

##### ***Actions to be promoted:***

- Assessment of the possible development of a National Repository, facilitation of the development of certified repositories and stimulating self-archiving.
- Establishment and implementation of rules and internal procedures for the promotion of the National Policy for Open Access by research stakeholders and academic institutions.
- Training of researchers (on open access, repository use, intellectual property rights, negotiations with publishers etc.).
- Establishment of a mechanism for the monitoring of the Implementation and compliance with the provisions of the Open Access National Policy.
- Providing incentives for researchers to make their research openly accessible.
- Setting Open Access as precondition for the participation in the R&I National Programmes.
- Organization of workshops/seminars and other awareness raising events.

## 2.6 ERA Priority 6: International Cooperation

**EU Top Action Priority:** *“Develop and implement appropriate joint strategic approaches and actions for international STI cooperation on the basis of Member States’ national priorities”.*

Strengthened cooperation of the EU and its Member States with international partners is needed in order to build critical mass, pool knowledge and identify innovative solutions. The aim is to ensure that Europe, as well as the individual Member States, are able to take maximum advantage of the best Research and Innovation (R&I) opportunities on a global basis. This requires a strategy encompassing all dimensions of international cooperation in R&I so that appropriate joint strategic approaches and actions for international STI cooperation on the basis of Member States’ national priorities are developed and implemented. In a wider context, “science diplomacy” can contribute towards achieving the external policy objectives.

In this direction, Member States are encouraged to define national strategies for internationalization, to foster stronger cooperation with key third countries and reinforce multilateral STI cooperation approaches in order to maximize impact. Member States are also encouraged, among others, to promote better coordination with the EU regarding the objectives and activities towards third countries and International Organisations.

### **Current Situation in Cyprus**

Cyprus has concluded a number of Science and Technology Cooperation Agreements and Memoranda of Understanding with third countries (i.e. United States, Israel, Russia, Egypt, China, Cuba). Their implementation is coordinated by joint committees, consisting of relevant stakeholders from the countries involved. The choice of partner-countries is decided on a case-by-case basis, taking into consideration Cyprus' external policy priorities and the interest of the Cypriot Research Community for cooperation in R&I with a specific country.

Additionally, Cyprus is participating in international research organizations such as CERN, the European Organisation for Nuclear Energy, where it is an "associate member in the pre-stage to membership", providing, inter alia, the opportunity to national research organizations and scientists to participate in consortia for projects of mutual interest. Cyprus is also a founding member of SESAME and in fact, the only EU Member State participating as a full member, together with Egypt, Iran, Israel, Jordan, Pakistan, the Palestinian Authority and Turkey, providing a link between the EU and the organization, which is highly valued by the European Commission in the context of scientific diplomacy.

In recognition of the need to enhance the extroversion of the national R&I system, Cyprus has included a number of relevant Schemes in the national Funding Programme "RESTART 2016-2020" allowing for cooperation with countries with which Cyprus has concluded bilateral STI Cooperation Agreements, but also with countries for which no Agreements are in place.

Furthermore, the Centres of Excellences that will be created through the Teaming action of Horizon 2020, aiming at Spreading Excellence and Widening Participation, will contribute greatly to the enhancement of the extroversion of the Cyprus R&I system and will provide a framework for fostering innovation and for deepening cooperation with neighboring countries, giving Cyprus the opportunity to become a European node of scientific cooperation in the region as well as build on constructive partnerships between research institutions in the Eastern Mediterranean and Middle East.

### **National Priority and Actions to be Promoted**

#### **1. Development and Implementation of an Action Plan for International Cooperation**

Recognizing the need for a more coherent approach regarding the promotion of international cooperation, the government will develop an Action Plan, setting priorities for the period up to 2020, in consultation with all relevant stakeholders and taking into consideration the priorities at EU level.

#### ***Actions to be promoted:***

- Develop, in consultation with relevant stakeholders, an Action Plan for cooperation with third countries, through the:
  - Review of the implementation and impact of existing bilateral/multilateral agreements and MoUs
  - Exploration for new bilateral/multilateral cooperation opportunities
- Implement existing STI Cooperation Agreements/MoUs with other countries through:

- Policy dialogue within the framework of the Joint Committees which are established according to the Agreements/MoUs
- Promotion of joint research actions, such as joint calls of proposals.
- Active participation in the formulation of Cross-Border EU cooperation policy and in particular to the Euro-Med R&I policy through the:
  - Participation and contribution to the policy dialogue for the design of initiatives (e.g. PRIMA and BLUEMED Initiatives, etc.).
  - Promotion of Networking, exchange of views and mutual learning with our Mediterranean partners on our National R&I Priorities and Programmes.
  - Participation in the implementation of European – Mediterranean Cooperation Initiatives for R&I.

Funding Schemes 2016 – 2020	Budget
<p><b>Bilateral Collaborations (RPF)</b></p> <p>This Programme aims in developing collaborations and networking of Cypriot organisations with organisations of a specific collaboration country through the implementation of joint research projects in selected thematic areas of interest of both parts. The starting point for this Programme is the Bilateral Agreements or Cooperation Protocols signed by the Cypriot Government and the Government of another country. Usually one of their fundamental provisions is the launch of a Joint Collaboration Programme in the areas of R&amp;I which allows interested organisations from the two countries to submit proposals for the implementation of joint projects in selected thematic areas that reflect the common interests of the two parts.</p> <p>Maximum Funding per project: The amount is set in the respective Call for Proposals.</p>	€ 1.600.000
<p><b>International collaboration-Dual targeting (RPF)</b></p> <p>This programme aims to the networking of Cypriot organisations with research organisations of excellence from countries that are advanced or are emerging in the field of research, and to the joint implementation of research to the benefit of the quality of life and competitiveness of the economy. In particular, the Calls for Proposals are about collaboration with organisations from third countries, with which Cyprus does not have a Collaboration Agreement.</p> <p>Maximum Funding per project: €80.000</p>	€ 1.200.000
<p><b>European Initiatives - National Development (RPF)</b></p> <p>This programme aims at enhancing the extroversion of the national Research, Technological Development and Innovation (R&amp;I) system which is one of the horizontal priorities of the Smart Specialisation Strategy for Cyprus. The Programme offers the opportunity to implement research projects in cutting-edge fields of the priority sectors, in order to improve the quality of life and competitiveness of Cyprus' economy. At the same time, it promotes extroversion, collaboration and networking of Cypriot research organisations and enterprises with organisations from other countries through their participation in research projects implemented in the frame of joint pan-European programming initiatives, in which Cyprus participates.</p>	€ 8.000.000

Funding Schemes 2016 – 2020	Budget
Maximum Funding per project: €175.000	
<p><b>EUREKA Cyprus (RPF)</b></p> <p>This programme aims at the enhancement of the Cypriot enterprises' competitiveness and the resulting contribution to the country's growth of economy, through the development of new products/ services/ production methods of high added value, or by the significant optimisation of products/ services/ production methods in view of commercial exploitation in the European area, in the frame of cooperation and networking of Cypriot organisations with foreign organisations for the implementation of international research and development projects of the EUREKA Organisation. The "EUREKA CYPRUS" Programme constitutes the instrument for selecting and supporting Cypriot organisations wishing to participate in international EUREKA projects.</p> <p>Maximum Funding per project: €175.000</p>	€ 1.200.000
<p><b>EUROSTARS Cyprus (RPF)</b></p> <p>This programme aims at encouraging innovative SMEs to participate in transnational research activities and to enhance their competitiveness through the development of new products/ services/ production methods of high added value or the development of significantly improved existing products/ services/ production methods which are expected to be commercially exploited by the participating Organisations. The «EUROSTARS Cyprus» Programme is the funding instrument for enabling Cypriot organisations to participate in transnational projects of the EUROSTARS joint European Programme.</p> <p>Maximum Funding per project: €175.000</p>	€ 2.500.000
<p><b>Excellence Hubs (RPF)</b></p> <p>The "Excellence Hubs" Programme aims to promote scientific excellence, by funding frontier research projects in cutting-edge fields. Additionally, the Programme aims to contribute to the development of growth prospects of the local economy and to address current social and other challenges.</p> <p>The "Excellence Hubs" Programme will fund projects that fall under the following three Scientific Fields:</p> <ul style="list-style-type: none"> <li>• Life Sciences,</li> <li>• Physical Sciences and Engineering, and</li> <li>• Social Sciences and Humanities.</li> </ul> <p>The basic objective of the Programme is to reward and invest in research excellence. The Programme can also contribute to the collaboration of national research/academic institutions and enterprises as well as to the development of consortia with foreign organisations. The implementation of projects is expected to result into new, internationally significant knowledge, which can form the base for future exploitation in terms of social and economic development.</p>	€17.100.000