GOOD GOVERNANCE OF RIS3 CYPRUS, 2021-2027

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Introduction

1. The objective of the present report is to assess the conditions of good governance of RIS3 Cyprus for the period 2021-2027. It is based on data available and interviews realised in the period of October and November 2019.

The concept of Governance "is broadly conceived as a form of coordination in the taking of collectively binding decisions within a certain community" (Beunen et al., 2015, p.4). "The term governance itself is often associated with the supposed shift from government to governance, a supposed change in western societies from central steering and expert-driven decision-making to more participatory forms of democracy" (p. 7).

Any attempt to intervene in governance should start with a thorough understanding of **context**: the community but also the governance context in which the intervention is expected to materialize and achieve first effects. Both contexts, however are highly dynamic. **Governance is conceptualized as radically evolutionary**. This implies that change does not occur in random patterns. Whether it is comprehensive, minute, ad hoc, gradual, or fast, change in governance is per definition a change in coordination, requiring coordination itself to avoid breakdown. As such it cannot ignore the existing organisation of society and governance.

2. There is **high diversity in forms of governance of the first wave of RIS3** (RIS3 1.0) which were designed and implemented during 2014-2020, and the way the core principles of RIS3, such as triple or quadruple helix engagement and co-design, place-based policy with respect to context, entrepreneurial discovery setting priorities for investment, and monitoring and assessment for evidence driven policy, were implemented (Figure 1).

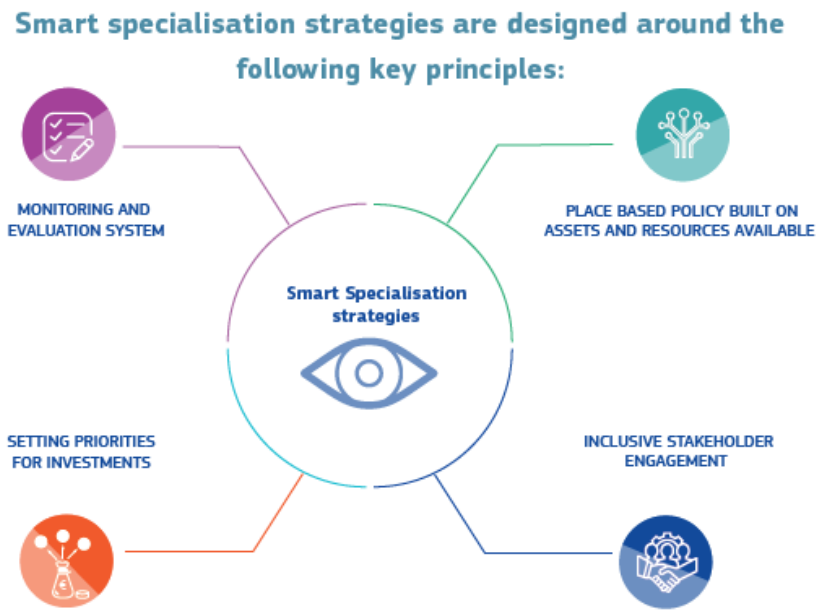

Figure 1: S3 principles
Source: European Commission 2019, p. 5

A survey and mapping on RIS3 design in 30 EU strategies (9 at national level and 21 at regional level) showed significant diversions in RIS3 governance from the above

referred principles, even in the wealthiest and innovative regions. These are related to (1) **weak stakeholder engagement** and information dissemination methods promoting engagement and participatory decision-making, (2) identification of priorities was based on working/focus groups, but **very few participatory deliberation and collaborative design of actions** and annotation of opportunities were followed, (3) **very limited use of output and result indicators** as most prevalent monitoring method, however many of the described approaches seemed simplistic for an comprehensive and effective monitoring and impact assessment (Griniece, et al., 2017).

3. The assessment of RIS3 governance of Cyprus for the period 2021-2027 is based on the enabling conditions for good governance of S3, defined by the Policy Objective 1 for 'Smarter Europe' through innovation, digitisation, economic transformation and support to small and medium-sized businesses. The 7 fulfilment criteria of RIS3 good governance for 2021-2027 are:

1. Up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation
2. Existence of competent regional/national institution or body, responsible for the management of the smart specialisation strategy
3. Monitoring and evaluation tools to measure performance towards the objectives of the strategy
4. Effective functioning of entrepreneurial discovery process
5. Actions necessary to improve national or regional research and innovation systems
6. Actions to manage industrial transition
7. Measures for international collaboration

4. Assessing the RIS3 governance of Cyprus for 2021-2027, in each of the above 7 fulfilment criteria, we consider the following:

a) **The guidance on RIS3 governance for 2014-2020 provided by official EC documents,** such as (1) the Guide to Research and Innovation Strategies for Smart Specialisation Strategies (European Commission, 2012), (2) the RIS3 Assessment Wheel developed by the JRC, a tool for the synthetic representation of the progress made in drafting/designing a RIS3 that allows condensing a huge amount of information in one visual modality, which identified 6 steps in the elaboration of RIS3, namely, analysis of regional and national context, governance, shared vision, identification of priorities, policy mix, monitoring and evaluation (European Commission - S3 Platform, n.d), (3) other official documents and publications of the European Commission relevant to RIS3 governance.
b) **The way S3 governance has been implemented in the RIS3 Cyprus 2014-2020**, as it is presented in the main documents, actions under implementation, and interviews with stakeholders.
c) **The new governance model for R&I under development**, including the institutions of National Board for Research and Innovation, Chief Scientist, and the Ministry of Research and Innovation under formation, as well as the ideas of relevant authorities on RIS3 governance for 2021-2027 and opinions gathered during our interviews with stakeholders from the government, industry, and academia.

Our recommendations for each of the 7 fulfilment criteria for good governance 2021-2027 are based on these three aspects of RISC. Thus, they are pragmatic, based on what happened during 2014-2020 and what is under design for 2021-2027. We should point out, however, to a constraint of this approach, the very limited assessment and data on

results and achievements of RISC 2014-2020 in terms of innovation, competitiveness, growth, and industry change of the seven priority domains.

At the end of each condition for RIS3 good governance 2021-2027 we summarize in a table (1) what has been done in this topic, (2) what is missing, and (3) how it should be treated.

1. Up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation

1.1. Innovation bottlenecks is a very common situation in innovation development. All major models of new product development, such as the Stage-Gate model (Copper, 1990), the funnel of innovation, and open innovation (Chesbrough, 2003) include processes of assessment and selection, which work as successive bottlenecks from one stage to another. New product development starts with idea generation and through successive bottlenecks arrive at the implementation of prototype(s), production, and commercialisation (Figure 2).

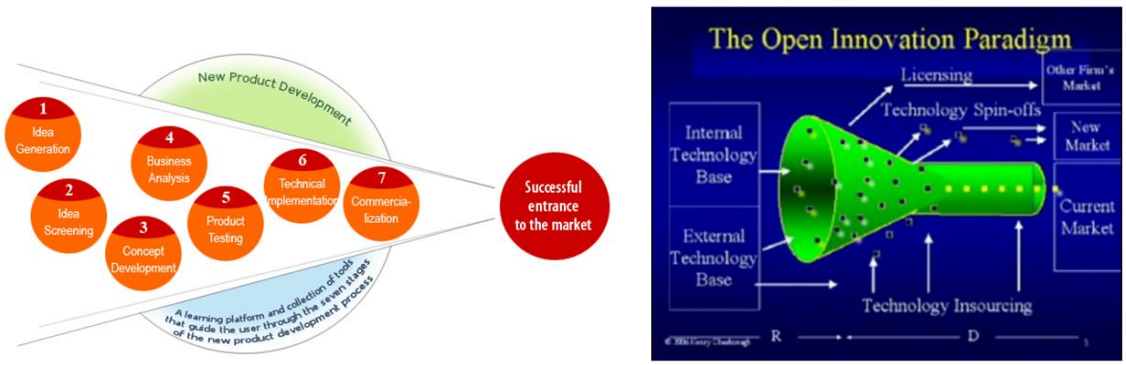

Figure 2: Stage-gate and open innovation new product development
Source: Komninos et al., 2006

Innovation support programmes inherit innovation bottlenecks to the extent that new products being supported finally fail to arrive at the implementation and commercialisation stages. This is quite usual. The survey of Hopkins and Baily (1971) documents that about 40% of new consumer products, 20% of new industrial products and 18% of new services related products fail to enter the market. Cooper and Edgett estimate that "new product development is a risky business and the rates of failure are high, ranging from 30 percent to as high as 95 percent with an average of 38 percent" (cited by Sindakis and Walter, 2015, p. 13). Similar forms of innovation bottlenecks are observed between patent registration and patent commercial exploitation or innovative new company creation and the survival after one year in the so called 'valley of death' (Maughan, 2010).

1.2. Guidance from the RIS3 on how to deal with innovation bottlenecks is rather limited. The *Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3)* (Foray et al. 2012) point out "to focus on the regional specific context, assessing the existing assets, evaluating major regional strengths and weaknesses, identifying any bottlenecks of the innovation system" (p. 22); identifies bottlenecks in the "growth of newly established companies" (p. 55); refers to broadband and NGA networks as "measures aiming at the removal of bottlenecks which hinder the completion of the Digital Single Market" (p. 88); and promotes RIS3 as evidence-based strategy that should be "based on a sound assessment of the competitive assets of the region, including an analysis of its strengths, weaknesses and bottlenecks" (p. 120). However, more practical and methodological tools in identifying innovation bottlenecks and policy measures to deal with bottlenecks are not provided. The same holds for the JRC *RIS3 Assessment Wheel d*eveloped by the Smart Specialisation Platform, in which innovation bottlenecks are not included in the challenges to be addressed or in tools used across the RIS3 steps. *(https://s3platform.jrc.ec.europa.eu/ris3-assessment-wheel)*. Beside the lack of specific guidance on the assessment of innovation bottleneck, the link between bottlenecks and system of innovation is correct:

bottlenecks should be addressed by respective policy instruments at the level of the wider system of innovation.

1.3. The current RIS3 Cyprus 2014-2020, assesses innovation bottlenecks as "the rationalised choice between contrasting or/and competitive priorities, philosophies, expectations or desires of various groups/sections of the research and business communities" (Antoniou, 2014). There is limited recording, analysis or methods dealing with innovation bottlenecks, beside the advanced methodologies for data analysis used, such as GAP analysis, VRIO, PEST, social network analysis and SWOT (S3Cy, 2015, pp. 254-295). On the other hand, innovation bottlenecks should be expected, given the significant funds devoted to research-industry collaboration and the respective actions included in the RIS3 action plan. A large number of prototypes of new products and concepts for new production methods should be expected from actions in the 'Smart Growth' pillar, such as 'Integrated Projects', 'Research and Innovation in Enterprises' and 'Enhancing Entrepreneurial Innovation-A'. RIS3 policy measures that address innovation bottlenecks comprise measures of the 3rd pillar of the action plan 'Modernising the RTDI system' with a total budget of 20 million Euro (technology transfer, innovation vouchers, patenting, innovation packages, etc.).

1.4. In the design / update of RIS3 2021-2027, the concern about innovation bottlenecks is stronger. The interviews we had with the University of Cyprus and the Chief Scientist of the National Board for Research and Innovation, recognize the need for a more advanced monitoring system capable of assessing innovation bottlenecks and impact. The 'Innovate Cyprus' strategy 2019-2023, which will offer the framework for the RIS3 2021-2027, includes the pillar 'Knowledge Transfer and Commercial Exploitation' that encourages "extensive user involvement in the process of product and service development [that] can help minimize risk and optimize development loops, while ensuring that products respond to the real needs of the customers" (p.12). However, both directions should be further elaborated.

1.5. Our recommendations for RIS3 2021-2027 are toward three directions.

- ***Create datasets enabling*** to record different forms of innovation bottlenecks. This may be done by introducing appropriate output and result indicators. Output indicators will be recorded at the end of a RIS3 action, while result indicators will be recorded one year after. Recording should be a contract obligation of RIS3 beneficiaries. Some indicative indicators of this kind are:

	Product/ process bottlenecks	**Company creation bottlenecks**	**Patents and IPR related bottlenecks**
Output indicators	No of prototypes supported / created	No of start-ups supported / created	No of patents supported for registration
Result indicators	No of prototypes turned to products and commercialised	No of supported start-ups in operation one year after the support period	No of patents providing any income one year after registration

- ***Analyse and understand the causes and drivers*** of innovation bottlenecks and how they can be addressed by actions at the level of the innovation system. This may be done by surveys related to RIS3 actions that suffer from innovation bottlenecks, such as academia-industry collaboration for new product/process/service development, research excellence actions, startup and spin-off support, intellectual property rights support, and other. Such surveys can

reveal the causes of innovation failure, either internal to the company or lab receiving support to innovation or external related to market access and consumer preferences.

- ***Design and clearly identify in the RIS3 action plan measures*** capable to address innovation bottlenecks at the various fields they occur, such as open innovation and commercialisation by organisations other than those developed innovations, engagement of intermediaries that facilitate market access, use of platforms in two-sided markets, etc. Such actions may change radically the innovation support and funding from upstream (design) to downstream (implementation), paying more attention to introducing innovations in the market than designing innovations and new products (prototype, startup, IPR) that remain on paper.

In conclusion

What has been done	*What is missing*	*How it should be treated*	*Progress towards fulfilment of condition 1*
• There is limited concern about innovation bottlenecks in RISC3 2014-2020 • The actions of RISC 2014-2020 are not connected explicitly to drivers and causes of innovation bottlenecks • Innovation policy authorities of Cyprus recognize the need to elaborate further this field of S3 policy	• Data on innovation bottlenecks are non-existent • S3 policies to address innovation bottlenecks have not been designed or assessed	• Create datasets on innovation bottlenecks at the company / organisation level by appropriate indicators (monitoring) • Analyse and understand the drivers and causes of innovation bottlenecks (periodic surveys) • Design innovation support policies to remove bottlenecks and barriers to innovation	**1 / 5** Scale 1/5: Awareness 2/5: Work started 3/5: Work in progress 4/5: Most is done 5/5: Fulfilment

2. Institutions or bodies responsible for the management of the smart specialisation strategy

2.1. Stakeholder engagement is the principle that guides the management of S3. As the RIS3 Guide defines (Foray et al., 2012), stakeholders should be "fully involved and encourage innovation and experimentation" (p.8); "stakeholders of different types and levels should participate extensively in [S3] design" (p.21); "governance schemes should allow for collaborative leadership" (p. 21); "reliance on the consultation and support of regional stakeholders [is the] a basis of innovation policy" (p.31); "multi-level dimension of policy implies that governance mechanisms need to include stakeholders and decision-makers from these various levels" (p.34); "collaboration among stakeholders holds the key to successful implementation of innovative practices" (p. 38). The structure of the management body should be adapted to regional context, and the "governance system of a typical RIS project revolved around three elements — Steering Group, Management Team and Working Groups" (p. 38). Stakeholder participation from the government, private and civil society is expected to all steps of RIS3 and "it has a pivotal role in answering today's major societal challenges" (p. 113).

The same participatory management of RIS3 is proposed in the RIS3 Assessment Wheel designed by the JRC: governance structure with identification of specific bodies and definition of their tasks, roles and responsibilities; broad participation with interactive, consensus-based application of collaborative leadership principles-quadruple helix actors; management & communication with the use of open forum discussion and citizen dialogue and e-governance tools (https://s3platform.jrc.ec.europa.eu/ris3-assessment-wheel).

2.2. The design RIS3Cy 2014-2020 was based on wide stakeholder engagement and participation. Three bodies contributed: The *Steering Committee* (SC) was the final forum for decision-making and formulation of a commonly agreed strategy and vision framework. Members of the SC were representatives, at the highest level, from the quadruple helix, the ministries, HEIs, entrepreneurship bodies, 21 members overall (S3CY, 2015, p. 17). The *Monitoring Commit*tee is small and flexible, with 3 members from state authorities, to monitor the implementation of the study and make "intermediate" decisions if necessary. Finally, stakeholders and individuals involved in *Working Groups* can also be considered part of the broader governance framework. The Working Groups were staffed by the Foundation of Research and Innovation and the Ministry of Finance, while DG ESPA staff and a large number of external partners assisted in various activities.

The management of the RIS3Cy 2014-2020 has been complex. The strategy was initially designed by the Directorate General for European Programmes, Coordination and Development (DG EPCD), operating under the supervision of the Minister of Finance, and an external study group. Within DG EPCD two individual committees were established: (a) the Governance Committee and (b) the National Committee of Monitoring and Evaluation. The Governance Committee - with the assistance of an external Study Group - was responsible for the implementation of the EDP and the consolidation of the strategy framework and policy actions.

The implementation of the RIS3 was initially a shared responsibility among the Ministry of Labour, the Ministry of Finance and the Research and Innovation Foundation (formerly known as Research Promotion Foundation), an intermediate agency, operating since 1996 as the authority responsible for coordinating, supporting and funding research activities in Cyprus. During the current programming period, many of the S3 calls appointed to other Ministries for implementation were finally

transferred to the Research and Innovation Foundation, mainly due to observed delays in the publishing of the calls and the subsequent low absorption of funds.

2.3. The institutional framework for the next programming period will be completely different. Cyprus is currently undertaking a series of reforms to realise a new governance structure for its National Research and Innovation System which can be described as follows (Figure 3):
At the strategy level, responsible authorities are the Minister of Finance together with the National Board for Research and Innovation, which operates as a consulate body. Members of the National Board are representatives both from the academic community and the business sector (former entrepreneurs or business executives). The Government has also under consultation at the parliament a new bill for the creation of a new Ministry of Innovation and Digital Transformation. The new ministry will be responsible both for the Research and Innovation policy and digital transformation. At the policy level, the Chief Scientist is responsible for the supervision and the coordination of the Research and Innovation strategy and the effective functioning of the national governance system including all individual departments and agencies involved at the policy and operational level. The Chief Scientist is appointed by the President of the Republic with a mandate that expires simultaneously with the mandate of President of the Republic.

Within this new governance of R&I, the management of RIS3Cy 2021-2027 will be defined by three frameworks:

- First, the roles, institutions and components of the new governance system for R&I, including the leading role of the Chief Scientist and the new ministry of R&I (Fig. 3).
- Second, the working principles of the National Board for Research and Innovation: utilisation of the maximum possible synergy between the public and the private sector and engagement of all stakeholders in the knowledge chain; strong guidance, supervision and ownership at policy level; take-up of existing experience and know-how within the R&I ecosystem; ensure sufficient resources and competences for the effective operation of the R&I governance system; and adoption of mechanisms to monitor and evaluate system performance.
- Third, by measures related to the governance described in 'INNOVATE CYPRUS', such as operationalising the new R&I governance system, establishing the R&I Ministry coordinators committee, establishing channels for contribution of stakeholders in policy design, and the oversight dashboard (NBRI, 2019, p.11). **Nevertheless, the detailed management structure of RIS3 2021-2027 is to be defined.**

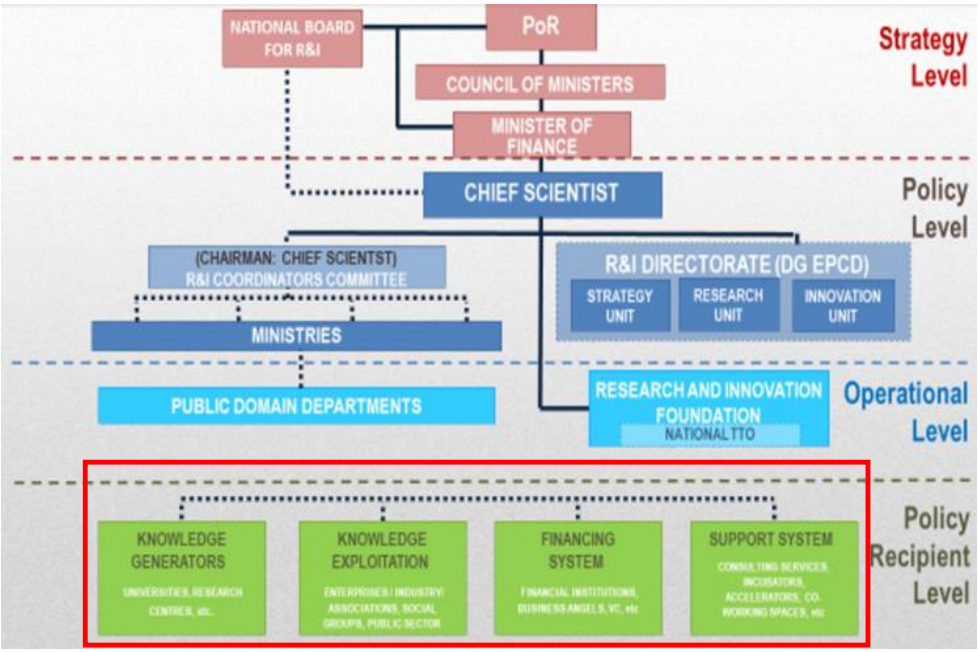

Figure 3: New R&I governance structure
Source: https://www.nbri.gov.cy/strategy-plan/governance/

At the operational level, the Research and Innovation Foundation will continue to be the executive authority for the implementation of the Research and Innovation strategy. It is supervised by the Board of Directors which is chaired by the Chief Scientist. However, actions related to digital agenda and SME growth will be implemented by other bodies, which are to be defined. Currently, there are many strategies dealing with research and innovation, which operate in parallel: RIS3, Innovate Cyprus, sectoral strategies from individual ministries etc. Yet, it is not clear how these will be integrated. Cyprus's new governance structure for R&I is partly addressing this fragmentation with the appointment of a Research and Innovation Coordination Committee in each Ministry. But it is necessary to clarify the position of RIS3 within the overall landscape of research and innovation policy.

2.4. Our recommendations for the management RIS3 2021-2027 focus on deepening the participatory approach already in place. Three actions may contribute to this:

- ***Develop the four components of RIS3 participatory management:*** (a) decision making Committee with quadruple helix representation, (b) technical support and working groups, including a monitoring and assessment unit, (d) liaison with Programme Management Authorities, and (d) implementation agencies across the three domains of Smarter Europe 2021-2027, research and innovation, digitisation, economic transformation and support to small and medium-sized businesses.

- ***Integrate the RIS3 participatory management and representation of priority domains into the new R&I governance system*** (Ministry of Innovation and Digital Policy, National Board, Chief Scientist, Directorate General for European Programmes, Coordination and Development) with a formal mandate and decisional powers to develop, coordinate the implementation and monitor the smart specialisation strategy.

- ***Ensure participatory management across all stages of RIS3*** (context analysis, priority setting, shared vision, action plan, implementation, assessment) not only at the initial design stage of S3.

In conclusion

What has been done	*What is missing*	*How it should be treated*	*Progress towards fulfilment of condition 2*
• The design RIS3Cy 2014-2020 was based on a wide stakeholder engagement and participation • A new governance structure has been created for the R&I system of Cyprus • Participatory working principles and synergy between the public and private sector are within the scope of the new governance structure for R&I	• The detailed management structure of RIS3 2021-2027 has to be defined, and how it will address weaknesses of RIS3 2014-2020 • The integration of RIS3 participatory governance within new governance structure for R&I • Stakeholder engagement at the design of RIS3 actions and policy measures	• Develop the components of RIS3 2021-2027 participatory management: (1) decision making, (2) technical support, (3) liaison with Programme Management Authorities, (4) implementation agencies, and (5) monitoring and assessment • Integrate the RIS3 participatory management and representation into the new R&I governance system • Ensure participatory management across all stages of RIS3 and feed-back from implementation	**3 / 5** Scale 1/5: Awareness 2/5: Work started 3/5: Work in progress 4/5: Most is done 5/5: Fulfilment •

3. Monitoring and evaluation tools to measure performance towards the objectives of the strategy

3.1. EC guidance: Monitoring and evaluation are integrated as a key step both in the S3 design and implementation guidelines proposed by the European Commission. At the initial stage of S3 design, monitoring is expected to guide the EDP process providing new and important insights towards evidence-based decision making but also contribute to a wider consensus on the selected investment priorities. During implementation, monitoring aims to assess the progress of the strategy, developing adjustments where necessary in order to reinforce results but also to increase accountability and promote trust building between different stakeholders. A central task of RIS3 monitoring is to select output and result indicators and integrate these in an effective strategy revision mechanism that reflects the S3 logic of intervention. Collecting data or other systematic information related to socio-economic results, specific policy objectives and expected changes is meant to evaluate progress, enable benchmarking, ensure coherence and avoid duplications. Most importantly it is expected to allow taking concrete action in a timely way (Foray et al. 2012).

For the programming period 2021-2027 it is still unclear what will be the exact requirements for monitoring and evaluation, although the new simplification rules pronounce one integrated reporting system for all forms of finance with real-time reporting, and common output and result indicators which will cover a high share of interventions.

3.2. The monitoring and evaluation of the RIS3 strategy in Cyprus in the 2014-2020 period is conducted by the National Committee of Monitoring and Evaluation which was established at the end of 2015 by the Directorate General for European Programmes, Coordination and Development (DG EPCD). The Committee is chairing the General Manager of the DG EPCD while other participants are the Director General of the Ministry of Energy, Commerce and Industry, the Secretary General of the Cypriot Chamber of Commerce and Industry, the President of the Rector's summit and the president of the Research Institutes' managers summit. The Committee is responsible for monitoring the implementation of S3 strategy and the evaluation of the individual measures' efficiency. So far, the Committee has been convened 1-2 times per year with no action taken since 2018. Three reports were prepared and data on funds absorption are available till the end of 2018 (see annex 1).

To-date evaluation of the RIS3 Cyprus is restricted to an analysis of the absorption of funds. This can be explained by the fact that its implementation was delayed and was slow in absorption of funds, therefore an impact analysis exercise could not be properly executed. The main problems are concentrated in the low participation of the private sector, despite the prerequisites of many calls for the participation of at least one company in the funding scheme.

It is planned to evaluate the implementation of the programs of the existing national R&D framework "RESTART 2016-20" at the end of the period and when the projects and related payments have been finalized. These programs cover most of the actions RIS3Cy 2014-2020. In particular, on the impact on new jobs and competitiveness, some KPIs are expected to be measured when implementing the RESTART Programs 2016-20 (e.g. number of new researchers in aid agencies etc.). It is noted that Technopolis Belgium is currently evaluating the design of the RESTART 2016-20 programs. The results of this study are expected to be taken into account in the preparation / planning of the next national R&D framework for the next programming period.

Still, Cyprus did not set a monitoring system for the evaluation of the S3 implementation and is relying on the standardised output indicators from the portfolio of ERDF and CF indicators with the purpose not to increase potential administrative burden. The country doesn't have an integrated information system not a tailored set of indicators monitoring the impact of the strategy.

3.3. For the RIS3Cy 2021-2027 there is no plan on the monitoring framework and organisation. 'INNOVATE CYPRUS' outlines the need for a data-driven policy making and the establishment a complete set of metrics, both qualitative and quantitative, in R&I to measure performance and impact of national R&I strategies and policies, and a dashboard that will reflect progress towards the strategy goals (p. 11). The Chief Scientist outlined the need for a complex monitoring system (eventually designed by a competent consulting firm) capable to capture short and long-term strategy impact. A common idea among interviewed stakeholders is to exploit and expand the Research and Innovation Foundation's (RIF) Innovation and Research Information System (IRIS Portal), which is the Information System for managing RESTART 2016-2020 Programmes for Technological Development and Innovation. The portal has been designed to provide online services related to submission of proposals and management of funded projects as well as the monitoring of RIF's activities but is limited to the calls of RESTART programme.

3.4. For RIS3Cy 2021-2027 our recommendations regarding monitoring are:

- ***Establish an effective and independent unit of monitoring and assessment*** of RIS3 strategy outcomes and impact. Cyprus should invest more on monitoring and evaluation of its research and innovation strategies. Due to the size of the country, the collection of data is relatively easy, especially with regards to new business creation, start-up creation and survival rates, percentage of funding in horizontal priorities of the RIS3 Cyprus such as digital technologies etc. Yet, it is crucial to address monitoring needs not only in the sense of standardised monitoring of individual programmes but in terms of wider impact assessment of the strategy on the socioeconomic environment of the country (competitiveness, new jobs creation, etc.).
- ***Develop a full set of outcome and result indicators*** and assessment procedures to highlight inconsistencies and bring to light significant problems and gaps (e.g. the reasons behind the low absorption of R&I funds by the private sector) and allow for the continuous adaptation / change of S3 actions across objectives and priority sectors.
- ***Develop advanced informational system and analytics*** or expand existing ones, to understand the impact of RIS3. The IRIS portal or other initiatives and projects of Cyprus University or the H2020 ERA Chair in Science and Innovation Policy and Studies (SInnoPSis) programme that focuses on the evaluation of research results in Cyprus can contribute in advocating the Chief Scientist, the National Council of Research and Innovation and the Research Promotion Foundation with data and insights to improve RIS3 priorities and actions.

In conclusion

What has been done	*What is missing*	*How it should be treated*	*Progress towards fulfilment of condition 3*
• Appointment of the National Committee of Monitoring and Evaluation responsible for S3 assessment • This Committee convened a few times only • The evaluation of RIS3 2014-2020 is restricted to absorption of funds • Some RIS3 actions were re-designed due to non fulfilment of private sector target contribution	• A comprehensive monitoring and assessment system has not been set • There is a need for an information system to record, analyse, corelate output and result indicators across all RIS3 actions • A connection loop is missing between monitoring and assessment and the revision/ re-design of RIS3 actions	• Establish an effective and independent (from implementing agencies) unit for monitoring and assessment of RIS3 outcomes and impact • Develop a full set of outcome and result indicators and assessment procedures capable to capture short- and long-term impact of RIS3 • Develop or expand existing informational systems to monitor indicators by thematic objective, action, priority sector, complemented by analytics tools to capture economic and social impact	**1 / 5** Scale 1/5: Awareness 2/5: Work started 3/5: Work in progress 4/5: Most is done 5/5: Fulfilment

4. Effective entrepreneurial discovery process

4.1. The Entrepreneurial Discovery Process (EDP) is at the cornerstone of smart specialisation (Kyriakou et al., 2016) a feature that distinguishes the S3 approach from innovation strategies of the past (Rodriguez-Pose and Wilkie, 2017). During the EDP, different entrepreneurial actors are brought together in **a government-led participatory process** generating a collective debate, integrating the divided and dispersed knowledge belonging to different actors, and setting common priorities for intervention. Guidance on Entrepreneurial Discovery Process (EDP) is provided by the RIS3 Guide (Foray et al., 2012) on aims, contribution to prioritisation, and methods of implementation.

- *Aim*: [EDP] "aims to build a systematic understanding of the areas in the economy and society that have the **greatest potential for future development**" (p.20) & "mobilise talent by matching RTD + I capacities and business needs through an entrepreneurial discovery process" (p.17).
- *Prioritisation*: "Smart Specialisation should address the difficult problem of **prioritisation and resource allocation** based on the involvement of all stakeholders in a process of entrepreneurial discovery, which should secure a regionally and business-driven, inclusive and open prioritisation process" (p.52).
- *Method*: "There are different methodologies for organising such processes, e.g. surveys, seminars with participatory leadership methods, crowdsourcing, etc. Such an open, **participatory process, together with reliance on robust evidence** based on regional assets, are the best guarantees to avoid both the risk of capture by interest groups and the risk of lock-in into traditional activities" (p.52). "An effective appreciation of dynamic EDP can only be performed if entrepreneurial actors and management and governance bodies responsible of RIS3 engage in direct discussion" (p.20).

The same recommendations on EDP come from the RIS3 Assessment Wheel: EDP should assure consistency of priorities by aligning them with context analysis. Main method for implementation is the dialogue among stakeholders from industry, government, academia.

4.2. The design of RIS3Cy 2014-2020 was based on wide consultation and stakeholder engagement in EDP, conducted with the technical assistance of an independent study group, operating under the supervision of DG EPCD. Many methods were used to identify priority areas for specialisation through EDP, which are shown on Table 1. More specifically, the EDP included consultation at all levels of analysis with questionnaires, focus groups, interviews and workshops and with the participation of about 850 enterprises, 50 experts and one focus group in each sector of interest (S3Cy, 2015, p.202).

Desk research	Field research	Public consultation
• Critical review of the literature • Case studies • National and international reports on the economy and RTDI sectors • Evaluation of RTDI programmes • Evaluation of participation in international programmes	• Quantitative data: questionnaires to enterprises • Qualitative data: interviews with opinion leaders and focus groups	• Government bodies, universities, enterprises, wider public • Government board • Open workshop • Special thematic workshops • Publicity

• Statistical data for Cyprus & EU • Sectoral analyses		

Table 1: RIS3Cy methods used for EDP
Source: Antoniou, 2014

The EDP rational combined the principles of 'regional basis' and 'relevance'. The regional basis relates to the existence of productive activities that are in harmony with socio-economic conditions and are based on a trained local workforce. Relevance is the diversification of businesses into related sectors, based on evolving innovative techniques or methods (S3CY, 2015, p.42).

4.3. EDP for RIS3Cy 2021-2027 will follow along the same practices, enriched by consultation with new stakeholders, such as Invest Cyprus and the Council of Competitiveness, and regular monthly meetings of working groups. The aim stated by the Chief Scientist, Mr K. Kokkinos, is to reveal investment opportunities and emerging business ecosystems. Interviews with other stakeholders pointed out the need for a two-stage EDP: initially at the design of the smart specialisation strategy, and at a second time at the detailed design of RIS3 actions. EDP should assess and reveal investment opportunities in all sectors of the economy, the main manufacturing industries, construction, services, and sectors in which start-ups appear.

4.4. Recommendations on EDP for RIS3Cy 2021-2027
EDP in the current smart specialisation strategy was based on specifications proposed by the European Commission and JRC. However, stakeholders from the industry and academia consider that most advanced discovery methods should be used to bring up investment opportunities and promising niche markets. A separate report provides analysis and recommendations for EDP during 2021-2027.

Toward this direction, we would recommend the following:

- ***Focus EDP*** on business sectors and ecosystems at the level of industry groups (3-digit NACE) that allow a detailed foresight of growth potential, innovation, and future opportunities.

- ***Focus EDP on collective objectives and opportunities that interest a group of companies*** or a ***business ecosystem***. Opportunities identified should link to big public investments that pave the way to smaller but many business investments. The question is not which sector is given priority only, but for what investments and which activities within each priority sector are supported.

- ***Implement EDP in all important industry groups identified in this expertise (16 industry groups) and then decide about prioritisation and actions.*** This EDP without exclusion should search for common elements connecting businesses and platforms that work as a growth multiplier or externality.

Both for incumbent companies and startups, core elements of the entrepreneurial discovery should be (a) the entrepreneurial role, to grasp opportunities for profit and drive the ever-changing market processes, (b) the role of discovery, and the distinction of discovery from successful search, as it involves the element of surprise, boldness and imagination in a world of uncertainty, and (c) rivalrous competition and freedom of entrepreneurs to enter markets in which they see opportunities for profit (Kirzner 1997 , p. 62).

In conclusion

What has been done	*What is missing*	*How it should be treated*	*Progress towards fulfilment of condition 4*
• Wide consultation and stakeholder engagement took place in EDP at the design of RIS3Cy 2021-2027 • The same is planned for the revise / update of S3 2021-2027	• Stakeholder participation and consultation should extend at the detailed design of RIS3 actions • Priority activities should be defined at higher granularity and interconnectedness (this is stated as intention for 2021-2027)	• Focus EDP on business sectors and ecosystems at the level of industry groups (3-digit NACE) • Focus EDP on collective objectives relevant for industry groups and business ecosystems • Perform EDP to all important industry groups of CY	**2 / 5** Scale 1/5: Awareness 2/5: Work started 3/5: Work in progress 4/5: Most is done 5/5: Fulfilment

5. Actions that improve the research and innovation systems

5.1. The EU perspective on innovation is mainly systemic. Innovation is an outcome of networks linking institutions and actors of research, production, financing, market making, and consuming. In the RIS3 Guide, reference to innovation system(s) is related to (a) interconnection of partners of innovation (p. 79), (b) analysis of weaknesses and strengths of the innovation system of a region, such as weak support structure for businesses, access to risk capital is limited, a few systematic environmental and market analysis (p. 19), (c) innovation performance and efficient innovation systems as a collective endeavour based on public-private partnership (quadruple helix) and platforms that give voice users (p.17), and (d) differentiation of strategies and policy options with respect to context and types of regions defined by internal and external connectivity (p. 47). This network-based understanding of innovation allows linking innovation systems with digital systems, providing the bridge between innovation and digital strategies.

5.2. In the RIS3Cy 2014-2020, the innovation system perspective is dominant both in the analysis of context (Figure 4) and the policy mix. "The primary aim of S3Cy is the enhancement of the effectiveness of the RTDI system and its targeted interconnection with the production base in order to enhance the competitiveness of the economy and quality of life in Cyprus" (Antoniou, 2014, p. 5). In terms of policy mix, the 2nd pillar of RIS3 'Sustainable R&I System' concerns the development of a diachronic and dynamic RTDI system, contributing to the restructuring of the Cyprus economy and the ability to tackle social challenges, while the 3rd pillar "Support R&I System" relates to the enhancement of framework, mechanisms and operational structures of the RTDI system (RIS3Cy, 2014, pp. 331-334). Most of the 3rd pillar actions, however, have not been implemented yet, and eventually they will not be implemented at all.

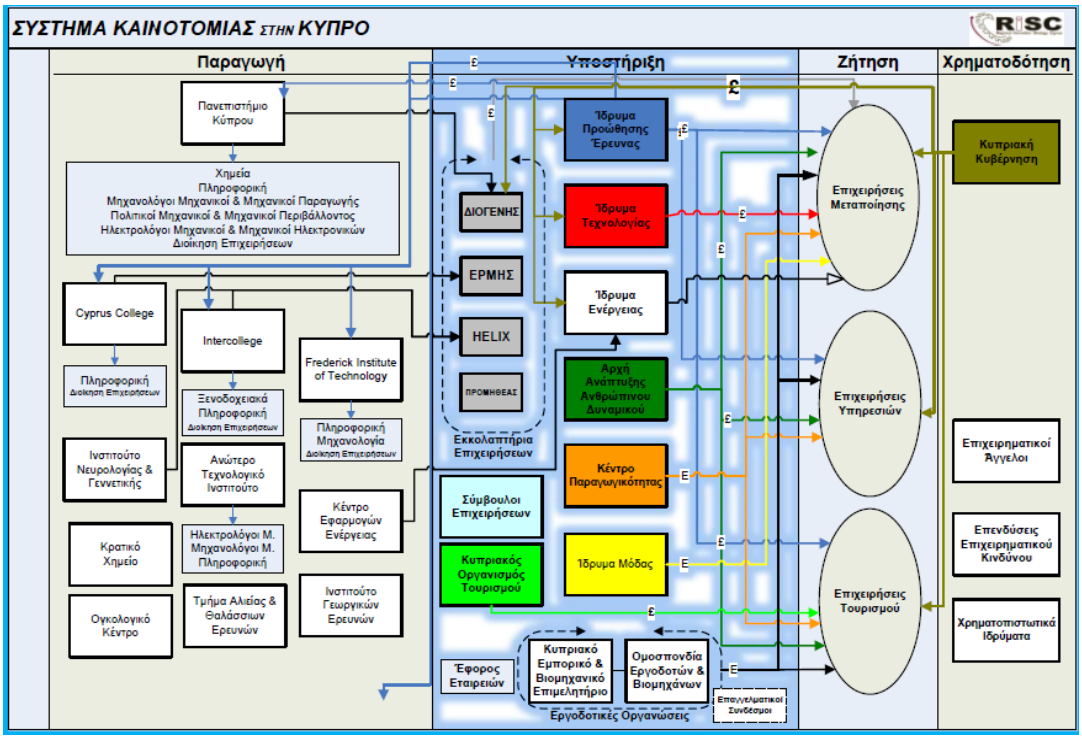

Figure 4: System of Innovation in Cyprus
Source: S3CY, 2015, p. 107

5.3. In the current discussion and strategy documents for 2021-2027, the systemic perspective is also strong. The National Board for Research and Innovation created will lead the design / update of RIS3 2021-2027. The NBRI gathers actors from the entire system of innovation, including institutions for knowledge generation, research, funding, and support. The mission of the NBRI is defined in terms of systemic innovation and promotes the maximum possible synergy between the public and the private sector and engagement of all stakeholders in the knowledge chain. In the Cyprus Research and Innovation Strategy Framework 2019-2023 'INNOVATE CYPRUS', nine systemic innovation policy pillars are identified, such as Research Excellence, Knowledge Transfer and Commercial Exploitation, Innovative Entrepreneurship, Cultural Change, Communication and Digital Transformation. Moreover in the interviews, stakeholders stressed the need to strengthen the linkages between the nodes of the Cyprus system of innovation with equity funds, high risk business angels, liaison units of industry-academia, and higher gender equality in business and innovation activities.

5.4. Recommendations for actions that improve the research and innovation system of Cyprus in the RIS3Cy 2021-2027 are towards (a) better understanding of the innovation system through detailed mapping and identification of gaps, and (b) strengthening the ***systemic perspective of the business innovation policy*** (e.g. the Smart Growth pillar of the current RIS3 and the actions for research and innovation in enterprises and entrepreneurial innovation).

This can be done by developing a dual innovation support policy at the level of business ecosystems, in parallel to support of individual companies. The following actions may contribute to this type of ecosystems innovation support:

- ***Actions in which all beneficiaries belong to the same supply chain***, thus the objective of actions will be the improvement of an entire supply chain. Targets may include forecast of future inventory demand, optimal placement of inventory within the supply chain, coherent purchased part policy, increase the value-added portion of purchasing or cost engineering, greening of the supply chain, linking to global supply chains, and others.

- ***Actions in support of platform-based ecosystems***. Platform-based ecosystems are created when an organisation or company launches a platform which becomes the foundation for products and services of other companies. Gawer and Cusumano (2014) call this relationship 'platform leadership', a strategy that enables companies to exert influence over the direction of innovation in an industry, by engaging other firms in a joint effort for complementary products. Each platform creates its own business ecosystem, composed of many companies that provide complementary products/services developed over a common base. Industry platforms are technological building blocks (that can be technologies, products, or services) that act as a foundation on top of which an array of firms, organized in a set of interdependent firms develop a set of interrelated products, technologies and services" (Gawer, 2010). Platform-based ecosystems offer advantages due to externalities, increasing returns, specialisation and complementarity, awareness, engagement and collaboration. A major advantage is the positive production and consumption externalities as the consumer and producer sides, as the platform increases the number of consumers and the number of producers offering products on the platform (Jacobides et al., 2018; Katz and Shapiro, 1985).

- ***Actions in support of digital platforms*** that enable the creation of new business ecosystems. Srnicek (2017) identified four characteristics that allow

digital platforms to support business ecosystems: (a) they are digital spaces that enable different users, such as customers, service providers, producers and suppliers, to interact and they empower these users with e-tools to build their own products and services over the platform; (b) they constantly engage the users through attractive offerings; (c) they use cross-subsidisation to gather more users and free offerings are balanced by the increase of the number of users; (d) they rely on network effects and the potential to generate value that increases with the number of users on the platform.

The above three types of actions can reinforce the systemic dimension of S3, shaping business ecosystems in which members collaborate, share resources, knowledge, skills, and work in joint ventures. This is accomplished through an organisational mode which is neither a 'firm' nor a 'market', but has the full characteristics of specialisation, continuity of association, and reliance on direction that define the nexus of contracts making a firm.

In conclusion

What has been done	*What is missing*	*How it should be treated*	*Progress towards fulfilment of condition 5*
• In the RIS3Cy 2014-2020, the innovation system perspective is dominant both in the analysis of context and the policy mix. • The systemic innovation perspective is also strong in the strategy 'INNOVATE CYPRUS', in which nine systemic innovation policy pillars are identified • The new governance of R&I advocates a systemic innovation perspective, which will be applied to RIS3 also	• Identification of gaps and white areas in the system of innovation of Cyprus, such as lack of equity funding, emerging business ecosystems, operation of technology intermediary organisations • Identification of new forms of system of innovation, such as digital ecosystems or platform-based ecosystems	• Include in the RIS3 2021-2027 actions that have systemic / network effect, such as actions in which all beneficiaries belong to the same supply chain; actions in support of digital ecosystems; and actions in support of platform-based ecosystems	**4 / 5** Scale 1/5: Awareness 2/5: Work started 3/5: Work in progress 4/5: Most is done 5/5: Fulfilment

6. Actions to manage industrial transition

6.1. RIS3 guidance on industrial transition: 'Industrial transition' is not mentioned in the *RIS3 Guide*, but four other industry transformation processes are mentioned as major objectives of Smart Specialisation Strategies (Foray et al. 2012, pp. 12-13):

- *The transition* from an existing sector to a new one based on cooperative institutions and processes, i.e. the collective R&D, engineering, and manufacturing capabilities that form the knowledge base for development of the new activity;
- *The modernisation* and technological upgrading of an existing industry, involving the development of specific applications of a Key Enabling Technology to improve efficiency and quality in an existing (perhaps traditional) sector;
- *The diversification*, and discovery of potential synergies (economies of scope and spillovers) which are likely to materialise between an existing activity and a new one, and
- *The radical foundation* of a new domain, and discovery of R&D and innovation in a certain field can make previously low growth activities suddenly become attractive.

A pilot action on *Regions in Industrial Transition* was launched by DG Regio at the beginning of 2018 in order to help regions undergoing industrial transition to develop new approaches to restoring their growth and productivity. The focus was on **globalisation**, **new technologies** and the **transition to a climate neutral, circular economy**, which are drivers radically changing regional economies. In 12 EU regions, the pilot action identified abilities to adapt and innovate by facilitating investment in new technologies and embracing changes brought on by increased digitalisation and the transition to a low-carbon and circular economy (European Commission, 2019).

Understanding and Managing Industrial Transitions is a Working Group launched by the JRC (Joint Research Centre) within the frame of the project 'RIS3 Support to Lagging Regions' that aims to support regional (and where appropriate national) authorities facing major industrial transitions by charting actionable paths towards employment-intensive economic growth. Core activity of the Working Group is the **reviews of industrial transition** following a common methodology (POINT, Projecting Opportunities for INdustrial Transition) that draws on expertise on system innovation/transition management, foresight, industrial policy and innovation governance. The reviews aim to build the evidence base for appropriate "Actions to Manage Industrial Transitions", as stipulated in fulfilment criterion No.6 of the enabling condition of good governance foreseen in the next multi-annual financing period of the EU Structural Funds. The reviews can further inform RIS3 design and implementation (e.g. refining or extending priorities, broadening the EDP, fostering synergies with other funding streams) (https://s3platform.jrc.ec.europa.eu/industrial-transition).

On December 2019, the Commission published the communication "*The European Green Deal*", which commitment to tackling climate and environmental-related challenges. "The European Green Deal is a response to these challenges. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use". It also aims to protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impact.

The Communication on European Green Deal presents an initial roadmap of the key policies and measures. The figure below illustrates the various elements of the Green Deal.

Figure 5: European Green Deal
Source: European Commission, COM(2019) 640 final

6.2. In the RIS3Cy 2014-2020, industrial transition is part of the strategy for transformation of priority sectors selected. Within the framework of the S3Cy the following sectors have been identified as the main priorities, in which there is clear concern for renewable energy and the environment (see below in bold).

- Tourism: **sustainable tourism**, alternative forms of tourism, digital tourism applications, management and promotion of tourism product.
- Energy: **renewable forms of energy, solar energy, solar-thermal technology, solar photovoltaic**, technologies for solar heating and cooling, energy storage and transfer.
- Agriculture –food industry: agricultural and livestock production, agriculture, **food security and climate change**.
- Construction industry: **sustainable urban development**, sustainable construction, existing building stock, innovative and intelligent materials, **reuse of building materials**, cultural heritage.
- Transportation: marine, shipping, Intelligent Transport Systems, road freight.
- Health: e-health, prognosis - prevention and treatment of diseases, health pharmaceutical industry.

In addition, the Environment and the ICT were defined as important sectors of horizontal character

- Environment: **climate change, pollution, eco systems, eco – innovation**, water resources
- ICT: ICT applications, future technologies

In the Figure 6, S3 priority sectors are plotted against two axis (1) current vs. future value, and (2) technology vs. natural resources.

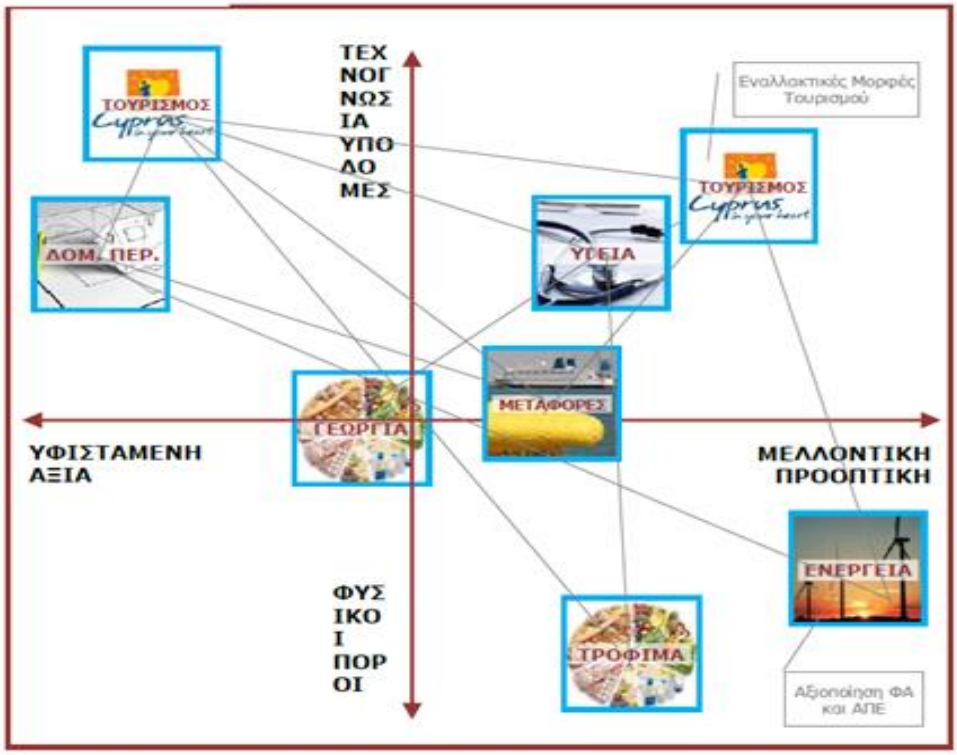

Figure 6: RISCy 2014-2020 priority sectors
Source: S3CY (2015)

In these sectors, RISCy 2014-2020 has launched actions for research support, promotion of extroversion, collaboration and networking of research organisations and enterprises of Cyprus and institutions from other countries. However, data on the impact of RISCy 2014-2020 on the transformation of these industries is not available. To our knowledge there isn't any survey and assessment on this matter.

6.3. For the period 2021-2027,'INNOVATE CYPRUS' the Cyprus Research and Innovation Strategy Framework 2019-2023 paves the way to RIS3Cy 2021-2027. The different time horizon of this strategy is due to the mandate of the National Board for Research and Innovation that comes from the Presidency of Cyprus, compared to the time frame of structural funds (2021-2027). Nevertheless, the document points out to "an updated Smart Specialization Strategy [which] should be developed to identify areas with capacity of innovation and to enhance the impact of national R&I investment" (NBRI, 2019, p. 24). Concerning the industries that will make the core of the S3 2021-2027, there is reference to 5 sectors involving academia and enterprises: ***climate*** (solar energy, energy storage), ***argotech*** (marine biology, water management, soil tech), ***digital*** (fintech, AI, cyber, blockchain), ***health*** (biomedical technologies) and ***maritime*** (NBRI 2019, p.12).

In our interviews with stakeholders and policy makers, new priorities discussed are about (a) the diversification of large sectors of industry, pharmaceuticals, dairy products, construction, (b) more support towards start-ups in emerging sectors, and (c) valorisation of innovation opportunities created by the new established research centres such as the KIOS Research and Innovation Centre of Excellence and other Centres of Excellence. The digital transformation is a high priority also, focusing on leading technologies, such as AI, blockchain, big data and IoT, and skills and competences required for a widespread disruption of business and government models (NBRI, 2019, p. 38).

6.4. Our recommendations for actions to manage industrial transition focus on sectors / activities of S3 priority. Industrial transition is a challenge to address within each priority domain selected for RISCy 2021-2027. Industrial transition involves a process by which traditional structures are replaced by modern industries, but this process should be defined on a case-by-case basis. Actions should be place-based and industry-based since problems vary across firms, research institutions and intermediaries (OECD, 2019). In particular we suggest:

- ***Assessment of the technology and innovation base of priority sectors*** selected for diversification / industrial transition and their cognitive proximity with existing science and technology bases, thus, identifying sources for advanced technology and innovation for diversification. Two transition drivers should be present in each priority sector (a) last generation digital technologies, augmented reality, AI, big data analytics, IoT, and (b) extensive use of renewable energy, energy saving solutions, and planning for low carbon industry.

- ***Launch of industrial transition platforms per priority sector*** in which relevant stakeholders define integrated actions for industrial transition, linking technology and entrepreneurial know-how and good practice from the JRC reviews on industrial transition. Those platforms may be the launch pad for elaborating policies and actions for industrial transition. Examples are the Energy Transition Platform (https://www.theclimategroup.org/EnergyTransitionPlatform) and the agro-ecological food platform (http://www.agroecology-europe.org/).

In conclusion

What has been done	*What is missing*	*How it should be treated*	*Progress towards fulfilment of condition 6*
• Industrial transformation is addressed at the level of priority sectors • The main industries of Cyprus are included as RIS3 priority sectors • ICT and environmental technologies for sustainability and efficiency cross all priority sectors • The revision of priority sectors for 2021-2027 has started	• Environmental and energy concerns and the European Green Deal roadmap should be included into the new priority sectors, defining the contribution to industrial transition principles to priority sectors	• Assessment of the technology base in the priority areas, related to EU Green Deal • Launch an industrial transition platform per each priority sector	**4 / 5** Scale 1/5: Awareness 2/5: Work started 3/5: Work in progress 4/5: Most is done 5/5: Fulfilment

7. Actions for international collaboration

7.1. International collaboration has not given significant attention in the first wave of RIS3. In the RIS3 Guide (European Commission, 2012) it is mentioned once only in the ICT measures for RIS3 "to exploit pre-commercial procurement and other related innovative procurement activities including reinforcing cross border and international collaboration in preparing the digital growth actions" (p. 86). The same is true for the RIS3 Assessment Wheel: international collaboration does not figure among the 18 components of the Wheel.

7.2. In the RIS3Cy 2014-2020, international collaboration is clearly promoted to

a) ensure that the R&I system is characterized by strong extroversion, as the size of Cyprus does not allow for "autonomous" major initiatives,
b) "bridge" major system gaps in infrastructure, research potential, etc.,
c) strengthen international networking within and outside European space, and
d) seize the opportunities offered by HORIZON 2020 and the Joint Programming Initiatives (S3Cy, 2015, p. 306).

The current S3 has a very strong international dimension, including international collaboration beyond the European Union with Israel, Russia, and China. 15% of the funding can be allocated to research organisations outside Cyprus, and many EU-level networking and collaboration activities have been implemented.

7.3. In the RIS3Cy 2021-2021, an additional push to international collaboration in R&I will be done by the six newly established Centres of Excellence (CoE) that received funding under the "Teaming" Competitive Action of H2020. These are KIOS, RISE, MaRITeC-X, CY-BIOBANK, EMME-CARE and Eratosthenes-EXCELSIOR. In his interview, Mr. K. Kokkinos, Chief Scientist, underlined that the six CoE are expected to enhance the competitiveness of the country and promote Cyprus as a regional center for research, innovation and entrepreneurship in the Eastern Mediterranean region.

7.4. Our recommendations for international collaboration in R&I are based on the interviews and opinion of stakeholders from industry:

- First, ***structure international collaboration around the challenges of extroversion and export that Cypriot companies*** are facing in competing on global markets, in terms of logistics, transport cost, energy cost, and economies of scale. Thus, include into the Entrepreneurial Discovery Process challenges of internationalisation and search for actions that can contribute to address them successfully.
- Second***, include into RIS3 2021-2027 actions that sustain extroversion*** and access of companies to international innovation networks, such as support to participation of companies to expos, support actions of global marketing and branding, and joint ventures with companies from other countries as a means to establish collaborations and get access to international markets and know-how.

In conclusion

What has been done	*What is missing*	*How it should be treated*	*Progress towards fulfilment of condition 7*
• Funding for international cooperation has been provided under the Extroversion-Open	• Collaboration at the level of company innovation through the participation of companies in	• Structure international collaboration around the challenges of extroversion and	**4 / 5** Scale

Horizons measure of the Smart Growth pillar • Centres of Excellence providing opportunities for international research collaboration have been created recently	international innovation networks	export of Cypriot companies • Include into RIS3 2021-2027 actions that sustain the access of companies to international innovation networks	1/5: Awareness 2/5: Work started 3/5: Work in progress 4/5: Most is done 5/5: Fulfilment

Concluding remarks

The S3Cy 2014-2020 is a document of value, designed according to the specifications and guidance provided by the European Commission. In general, the implementation follows the design of the strategy and the adaptations made improve the strategy. For 2021-2027 an efficient R&I system is under formation. Our overall assessment of the current state of RIS3 with respect to the 7 enabling conditions of good governance for 2021-2027 appears on the figure 7 below. Each enabling condition is assessed on a scale 1-5. Main weaknesses are at the analysis of innovation bottlenecks and monitoring and evaluation, which should be given more attention. Some weaknesses in the other fulfilment conditions (e.g. in EDP) are due to the early phase of RIS3 2021-2027 and will be addressed once full preparation of the S3 2021-2027 will start.

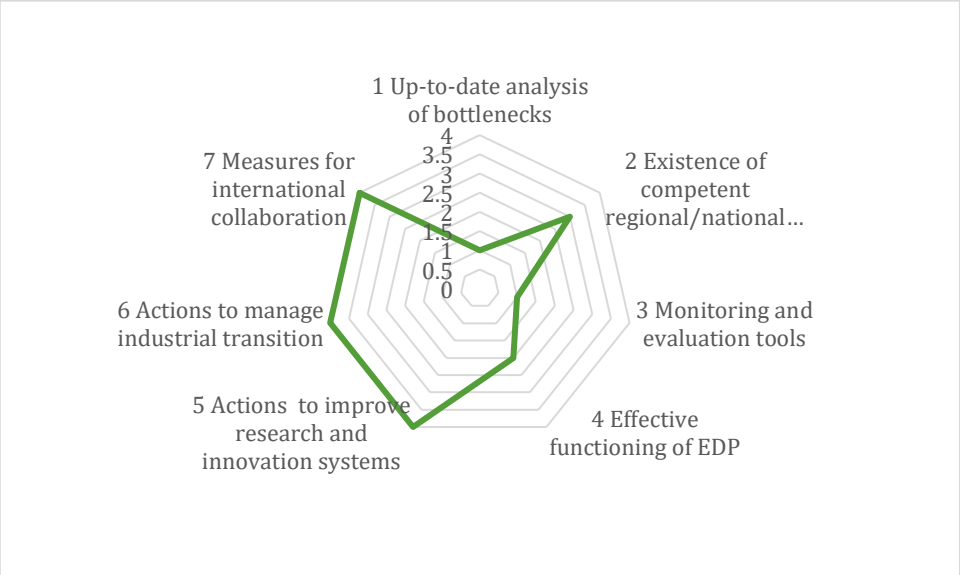

Figure 7: Assessment of current state of good governance conditions

Our recommendations for S3Cy 2021-2027 in relation to the current state of affairs of good governance for a smarter Europe can be codified in a series of **institutional actions** and **control points** that document that a good governance system has been set up and the principles of smart specialisation strategies are followed. Compared to S3Cy 2014-2020, our recommendations for 2021-2027 are toward of more evaluation and active engagement of the private sector in the design of the strategy and R&I actions.

The following checklist summarizes 17 recommendations and provides a guide for the fulfilment of enabling conditions foreseen in the next multi-annual financing period of the EU Structural Funds. The fulfilment of each condition can be assessed with "yes" or "no".

Smarter Europe enabling conditions	Measures to fulfil enabling conditions	YES/NO
1. Up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation	1.1. Creation of datasets to record innovation bottlenecks	
	1.2. Surveys on causes and drivers of innovation bottlenecks	
	1.3. Design and implement RIS3 actions to address innovation bottlenecks	
2. Existence of competent regional/national institution or body, responsible for the management of the smart specialisation strategy	2.1 Develop all components of RIS3 participatory management	
	2.2. Integrate RIS3 management into the new R&I governance system	
	2.3. Ensure participatory management across all stages of RIS3 design	
3. Monitoring and evaluation tools to measure performance towards the objectives of the strategy	3.1. Establish an independent unit for monitoring and assessing RIS3 outcomes and impact	
	3.2. Develop outcome and result indicators and assessment procedures	
	3.3. Develop or expand existing informational system to support monitoring	
4. Effective functioning of entrepreneurial discovery process	4.1. Focus EDP on collective objectives and actions that interest groups or ecosystems of companies	
	4.2. Perform EDP at the level of NACE industry groups	
	4.3. Perform EDP at all important industry groups identified and then define prioritisation	
5. Actions necessary to improve national or regional research and innovation systems	5.1. Include in the RIS3 2021-2027 actions that have systemic / network effect, such as support for supply chains and business ecosystems	
6. Actions to manage industrial transition	6.1. Assess technology and innovation bases related to industrial transition of priority sectors	
	6.2. Launch industrial transition platforms per sector of priority	
7. Measures for international collaboration	7.1 Structure international collaboration around the challenges of extroversion of Cypriot companies	
	7.2. Include in RIS3 2021-2027 actions that sustain extroversion and access to international innovation networks	

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- Christos Aspris, staff member of DG EPCD
- Maria Poiiti, staff member of DG EPCD

Foundation for Research and Innovation
- Vasilios Tsakalos, Director General
- Leonidas Antoniou, Head, National Coordinator H2020, EEN Cyprus & COST
- Marinos Portokalidis, Unit of Strategic Design

National Board Research and Innovation
- Kyriacos Kokkinos, Chief Scientist

University of Cyprus
- Marios Demetriades, Head Research Support Service

Chamber of Industry and Commerce, Nicosia
- Andreas Antoniadis, Director of Industry
- Thedosis Hajigeorgiou, Chief Financial Officer, Zorbas and Sons Ltd
- Michael Michael, Finance and Business Development Director, Zorbas and Sons Ltd
- Kyriacos Angastiniotis, General Manager, Vita Nutrition Ltd
- Staff member of Vita Nutrition Ltd

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Annex 1
Progress in the implementation of RIS3Cy 2014-2020 action plan

The vision of the Smart Specialisation Strategy for Cyprus (S^3Cy) concerns the emergence of Research, Technological Development and Innovation (RTDI) as a tool for the amplification and enhancement of the efforts initiated for overcoming the current economic crisis and as an important diachronic agent for the restructuring and post evolution of the Cyprus economy and society according to the principles of "Europe 2020".

The Policy Mix adopted in the S^3Cy to implement the main aspects of this vision, comprises of three main pillars, which are strongly complementary:

- Pillar I largely serves the first and second part of the vision that refer to overcoming the financial crisis and restructuring and post evolution of the Cyprus economy and society.
- Pillar II is more strongly linked to the Vision aspect concerning the system's timeliness and future prospects, both in terms of the scope of the projects it will cover and the recipients.
- Pillar III serves horizontally the first two as it both concerns the strengthening and upgrading of the overall RTD system and responds to a number of problems and weaknesses identified in the analysis.

The first two Pillars include measures related to the implementation of research and innovation projects by businesses, universities, research centers and other private and public stakeholders. The notable difference between Pillar III and I or II, is that it does not concern the implementation of RTD projects, but rather the implementation of horizontal policy measures, and that the relevant agencies and services are involved more intensively.

As far as resource allocation is concerned, the Study Group proposed a 55% - 30% - 15% ratio for Pillars I, II and III respectively. This proportion expresses the intention to concentrate resources on measures that more strongly express the idea of vertical choice of priorities. Thus, the majority of available resources are proposed to be concentrated in a limited number of sectors / sub-domains which have been identified by the study to be very important for growth and successful targeting of positive added value.

As a result, the process of designing the measures proposed in the S^3Cy Action Plan for research and innovation development focuses on the priorities of the Strategy and in particular on the thematic priorities. Thus, of the EUR 116.5 million earmarked for research and innovation projects, 65% (EUR 75.6 million) is allocated to Pillar I, where all measures and programs relate only to priority areas.

In addition, thematic projects in the priority areas are expected to absorb a significant proportion of the approximately EUR 40.9 million of Pillar II, which is more horizontal and focuses on measures to promote excellence, young researchers and innovative enterprises. Many of the actions and measures of Pillar III relating to the modernization of the RTDC system will again relate to the priority areas. **It is generally estimated that projects in the priority areas will absorb around**

EUR 95 million, representing 80% of the budget for RTD projects and 70% of the total budget.

An indicative annual budget allocation by Program and Measure of the Action Plan is presented in the Table 1, below.

Annual Budget Allocation of the S^3Cy Action Plan for the period 2015-2022.

		TOTAL	2015	2016	2017	2018	2019	2020	2021	2022	ERDF	National Funds 1*	National Funds 2**
I. PILLAR "SMART GROWTH"		74.100.000	145.000	13.137.500	11.571.500	15.688.500	15.110.500	11.765.000	5.352.000	1.330.000	51.935.000	9.165.000	13.000.000
Research and Innovation Partnerships		23.000.000	0	4.900.000	2.100.000	6.400.000	5.000.000	3.400.000	1.200.000	0	19.550.000	3.450.000	0
I.1	Intagrated Projects	20.000.000	0	4.900.000	2.100.000	4.900.000	3.500.000	3.400.000	1.200.000	0	17.000.000	3.000.000	
I.2	Establishment of Clusters	3.000.000	0	0	0	1.500.000	1.500.000	0	0	0	2.550.000	450.000	
Infrastructures		11.200.000	0	0	2.625.000	1.295.000	2.625.000	2.045.000	1.870.000	740.000	9.520.000	1.680.000	0
I.3	New Strategic Infrastructure Units	11.200.000	0	0	2.625.000	1.295.000	2.625.000	2.045.000	1.870.000	740.000	9.520.000	1.680.000	
Participation of Enterprises		26.760.000	130.000	6.707.500	5.526.500	4.773.500	4.585.500	3.795.000	932.000	310.000	22.746.000	4.014.000	0
1.4	Research and Innovation in Enterprises	9.300.000	0	1.627.500	976.500	2.743.500	2.185.500	1.395.000	372.000	0	7.905.000	1.395.000	
1.5	Enhancing Entrepreneurial Innovation – A	13.960.000	0	4.770.000	4.040.000	1.470.000	1.840.000	1.840.000	0	0	11.866.000	2.094.000	
1.6	Exploitation... in Cloud Computing by SMEs	1.200.000	0	0	200.000	250.000	250.000	250.000	250.000	0	1.020.000	180.000	
1.7	RTDI Cooperation in Agriculture	2.300.000	130.000	310.000	310.000	310.000	310.000	310.000	310.000	310.000	1.955.000	345.000	
Extroversion – Open Horizons		13.140.000	15.000	1.530.000	1.320.000	3.220.000	2.900.000	2.525.000	1.350.000	280.000	119.000	21.000	13.000.000
I.8	Bilateral Collaboration	1.600.000	0	175.000	105.000	400.000	340.000	285.000	235.000	60.000			1.600.000
I.9	International Cooperation – Dual Targeting	1.200.000	0	140.000	0	320.000	80.000	320.000	260.000	80.000			1.200.000
I.10	EUREKA Cyprus	1.200.000	0	140.000	140.000	180.000	400.000	80.000	180.000	80.000			1.200.000
I.11	European Initiatives – Regional Development	9.000.000	0	1.050.000	1.050.000	2.295.000	2.055.000	1.815.000	675.000	60.000			9.000.000
I.12	Participation in International Conferences	140.000	15.000	25.000	25.000	25.000	25.000	25.000	0	0	119.000	21.000	
II. PILLAR "SUNSTAINABLE RTDI SYSTEM"		40.940.000	0	7.295.000	4.085.000	9.610.000	9.490.000	4.810.000	4.025.000	1.625.000	12.274.000	2.166.000	26.500.000
Excellence		20.000.000	0	3.500.000	2.100.000	4.850.000	5.750.000	1.650.000	1.550.000	600.000	0	0	20.000.000
II.1	Excellence Hubs	17.000.000	0	2.800.000	2.100.000	3.600.000	5.350.000	1.200.000	1.350.000	600.000			17.000.000
II.2	Social Innovation	3.000.000	0	700.000	0	1.250.000	400.000	450.000	200.000	0			3.000.000
New Researchers–New Ideas–New opportunities		13.400.000	0	1.890.000	350.000	3.830.000	2.580.000	2.000.000	2.150.000	600.000	7.990.000	1.410.000	4.000.000
II.3	DIDAKTOR	9.400.000	0	1.540.000	0	3.030.000	1.580.000	1.350.000	1.500.000	400.000	7.990.000	1.410.000	
II.4	New Researchers – 2nd Chance	4.000.000	0	350.000	350.000	800.000	1.000.000	650.000	650.000	200.000			4.000.000
Entrepreneurial Excellence		7.540.000	0	1.905.000	1.635.000	930.000	1.160.000	1.160.000	325.000	425.000	4.284.000	756.000	2.500.000
II.5	EUROSTARS Cyprus	2.500.000	0	175.000	175.000	400.000	500.000	500.000	325.000	425.000			2.500.000
II.6	Enhancing Entrepreneurial Innovation - B	5.040.000	0	1.730.000	1.460.000	530.000	660.000	660.000	0	0	4.284.000	756.000	
III. PILLAR "MODERNISING THE RTDI SYSTEM"		24.410.000	470.000	2.010.000	2.980.000	5.860.000	5.970.000	3.870.000	1.950.000	1.300.000	18.037.000	3.183.000	3.190.000
Support Mechanisms		20.670.000	340.000	1.260.000	2.180.000	5.180.000	5.280.000	3.180.000	1.950.000	1.300.000	17.561.000	3.099.000	10.000
III.1	Technology Transfer System	1.500.000	50.000	250.000	300.000	300.000	300.000	300.000	0	0	1.275.000	225.000	
III.2	Innovation Vouchers	260.000	10.000	50.000	50.000	50.000	50.000	50.000	0	0	221.000	39.000	
III.3	Patenting	400.000	20.000	60.000	80.000	80.000	80.000	80.000	0	0	340.000	60.000	
III.4	Entrepreneurial Innovation Centre	5.300.000	0	0	0	2.500.000	2.500.000	300.000	0	0	4.505.000	795.000	
III.5	Innovation Packages	4.000.000	0	0	500.000	1.000.000	1.000.000	1.000.000	500.000	0	3.400.000	600.000	
III.6	Innovation Habitats	1.200.000	0	0	250.000	250.000	250.000	250.000	200.000	0	1.020.000	180.000	
III.7	Digital Mapping of the Cypriot RTDI Network	10.000	10.000	0	0	0	0	0	0	0			10.000
III.8	Liaison Offices***	8.000.000	250.000	900.000	1.000.000	1.000.000	1.100.000	1.200.000	1.250.000	1.300.000	6.800.000	1.200.000	
Alternative Forms of Funding		3.240.000	50.000	670.000	720.000	600.000	600.000	600.000	0	0	476.000	84.000	2.680.000
III.9	Commercial Exploitation of Research Results	560.000	0	70.000	190.000	100.000	100.000	100.000	0	0	476.000	84.000	
III.10	Matching Funds	2.500.000	0	500.000	500.000	500.000	500.000	500.000	0	0			2.500.000
III.11	Studies for RTDI Modernisation	180.000	50.000	100.000	30.000	0	0	0	0	0			180.000
RTDI Culture		500.000	80.000	80.000	80.000	80.000	90.000	90.000	0	0	0	0	500.000
III.12	Nurturing an RTDI Culture	500.000	80.000	80.000	80.000	80.000	90.000	90.000	0	0			500.000
ACTION PLAN TOTAL		139.450.000	615.000	22.442.500	18.636.500	31.158.500	30.570.500	20.445.000	11.327.000	4.255.000	82.246.000	14.514.000	42.690.000

Table 1 Annual budget allocation of the S^3Cy Action Plan for the period 2015-2022

So far, there are three reports from the Monitoring and Evaluation Committee that took place in 2016, 2017 and 2018 respectively. The main aspects of these reports are summarized below.

3 June 2016: 1st report of the Monitoring and Evaluation Committee

In the first meeting for the monitoring and evaluation of the S^3Cy, the following points have been highlighted:

- The total budget of the Action Plan has increased by EUR 4 million (total EUR 144 million) in order to support certain changes in the Action Plan, including the introduction of new plans as well as changes in the budget of existing plans.
- The Research Promotion Foundation (RPF) has completed the final version of the calls for the projects RESTART 2016-2020 and their final approval is pending.
- One of the plans of the Ministry of Energy, Commerce, Industry and Tourism (MECIT) has completed the stage of proposal submission and is on the evaluation stage.
- The Ministry of Agriculture, Rural Development and Environment (MARDE) and the University of Cyprus have not yet announced their plans.

Overall, the National Monitoring and Evaluation Committee agreed with the adjustments in the Action Plan of the S3 strategy and considered them in relevance with the objectives of the strategy.

7 March 2017: 2nd report of the Monitoring and Evaluation Committee

The second meeting for the monitoring and evaluation of the S^3Cy took place after a period of nine months and reported all advancements since the last evaluation report. Regarding the programs of the Action Plan funded by the RPF:

- Out of the total budget amounting to EUR 99.14 million, there have already been announced programs reaching the amount of EUR 50.88 million.
- Out of the 14 programs announced so far, the deadline for submission of proposals has expired for 6 programs. The RPF plans to launch 6 more programs in 2017 and 7 in 2018.

Regarding the programs funded by the Ministry of Energy, Commerce, Industry and Tourism:

- The call for 2 plans has been published and the results of the evaluation process is planned to be announced during the second semester of 2017.
- Out of the total budget of the MECIT's programs of EUR 33.7 million, programs of EUR 19 million have already been announced. The rest of the programs (included in the Action Plan and managed by the MECIT) are still in the process of document preparation and a public consultation with relevant stakeholders is to be held.

For the evaluation of the results of the above programs, the use of indicators through an evaluation mechanism by RPF will be deployed to extract reports in real time. In addition, it was highlighted that there is a need to document and register all programs funded by the Republic of Cyprus for the promotion of innovation, as well as to coordinate RPF and MECIT in order to avoid overlapping of programs and funding by these two funding bodies. The mapping of publicly funded research infrastructures as well as the creation of a national roadmap for research infrastructures, both planned to be completed in 2017, will help funding bodies direct financial resources to areas where there is real need and added value for Cyprus.

Finally, it was considered useful to make a mid-term review of the strategy in 2018 with the aim of revising it where necessary to ensure the highest possible relevance to the prevailing conditions and the effectiveness of the promoted measures.

28 June 2018: 3rd report of the Monitoring and Evaluation Committee

The third meeting for the monitoring and evaluation of the S^3Cy took place after a period of fifteen months and reported all advancements since the second evaluation report.

Regarding the programs of the Action Plan funded by the RPF:

- So far, 47 Call for Proposals have been announced, representing approximately 70% of RESTART's available resources. More than 900 project proposals have been submitted, most of which have been evaluated.
- Most projects are scheduled to start in 2018 and 2019, with the highest expenditure on the European Structural and Investment Funds (ESIF) expected to take place in 2019 and 2020.
- Given the opportunity to reallocate funds between the plans whenever needed, the RPF Board has already made some adjustments. More specifically, the 'Research and Innovation in Business' project has been reduced by EUR 700,000 and the 'Social Innovation' and 'Industrial Property' projects have increased by EUR 500.00 and EUR 200,000, respectively. A total of EUR 980,207 has been paid so far.

Regarding the programs funded by the Ministry of Energy, Commerce, Industry and Tourism:

- For the Project "Enhancing Business Innovation A and B", under the 1st Call of EUR 10 million, payments of almost EUR 1.5 million have been made to date, aiming to reach the amount of EUR 5 million by the end of the year.
- The announcement of the 2nd Call is under discussion with the Managing Authority of the ESIF regarding the procedures and the timetable, while the electronic submission system should also be completed.

RPF has identified certain problems in the process of announcing the Programs, regarding the use of the OPS system, the expenditure records, while the Ministry of Finance has identified as a problem the withdrawal of the Accountants of the Treasury from the Ministry, the incompatibility of the OPS system with MECIT's system and, finally, the lack of a sufficient number of staff.

Regarding the program managed by the University of Cyprus for the liaison of universities with the labor market, a public competition has been launched for the creation of an electronic platform for the operation of the Project. In addition, student placement procedures for businesses and organizations have been prepared and are expected to begin in 2018. A problem with the Research Institutes has been the fact that the Plan covers only the universities.

Finally, the need to coordinate RPF and MECIT in order to avoid overlapping of programs and funding was again underlined. It was agreed that the next meeting of the Committee could take place in about a year, and in the meantime the Progress Table of the Action Plan would be updated and distributed to the Committee's members.

The most recent progress of the S^3Cy Action Plan measures and programs is provided below, which covers commitments and payments until **October 2019.**

No.	PROGRAM / MEASURE / ACTION TITLE	SHORT DESCRIPTION	IMPLEMENTATION AGENCY	BUDGET (EUR)	
				COMMITTED	PAID
I.1	Integrated projects	Fund long-range, multi-disciplinary collaborative projects to enhance the restructuring, modernization and technological diversification of selected productive sectors	Research and Innovation Foundation (former RPF)	20,000,000	
				23,467,206	5,349,639
I.2	Establishment of Clusters	Fund the creation and operation of business clusters both vertically and horizontally to achieve economic and competitive advantages.	Ministry of Energy, Commerce and Industry	3,000,000	
I.3	New Strategic Infrastructure Units – New Scientists	Create new discrete research units, focusing in particular on young scientists and in the areas of ICT / nanotechnology, advanced materials and advanced processing and processes / Life sciences, biomedical sciences and biotechnology / Micro-nano electronics and photonics.	Research and Innovation Foundation	11,000,000	
				10,884,877	4,351,951
I.4	Research in Enterprises	Create and improve products / services / production methods of high added value to enhance the competitiveness of Cypriot businesses and thus, of the Cypriot economy	Research and Innovation Foundation	10,000,000	
				9,864,573	3,653,801
New plan no.1	Research in Startups	Enhance the ability of start-ups to actively engage in research activities and create new value-added products / services / production methods.	Research and Innovation Foundation	1,000,000	
				1,019,543	608,695
New plan no.2	Investigation of Industrial Application Technology / Expertise	Give businesses the opportunity to verify the feasibility of industrial application of technology / expertise before launching an extensive research project on technological development and innovation.	Research and Innovation Foundation	1,000,000	
				533,291	299,678
I.5	Enhancing Entrepreneurial Innovation - A	Enhance research, technological development and innovation and improve the competitiveness of SMEs. In particular, the diversification of private investment is reinforced by investing equity in project implementation and attracting investment to the innovative enterprise that will market innovative products / services.	Ministry of Energy, Commerce and Industry	13,960,000	
				10,246,897	3,025,299 (Payments for Plan No. II.6 included)
I.6	Digital Transformation	Increase the number of SMEs that are being assisted to integrate ICT at all levels of their operation and in particular increasing the use of cloud computing applications by SMEs.	Ministry of Energy, Commerce and Industry	1,200,000	
I.7	RTDI Cooperation in Agriculture	Promote research and innovation, explore particular local / traditional products and create new quality systems, collaborate for the creation and development of Short Supply Chains and local markets	Ministry of Agriculture, Rural Development and Environment	2,300,000	
I.8	Bilateral Collaboration			1,600,000	

No.	PROGRAM / MEASURE / ACTION TITLE	SHORT DESCRIPTION	IMPLEMENTATION AGENCY	BUDGET (EUR)	
				COMMITTED	PAID
		Transnational Agreements or Cooperation Protocols signed by the Republic of Cyprus and the Government of another country, assuming the responsibility for implementing the Cooperation Agreement / Protocol.	Research and Innovation Foundation	346,980	242,886
I.9	International Cooperation – Dual Targeting	Networking of Cypriot institutions with research organizations of excellence and joint implementation of research for the benefit of citizens' quality of life and the competitiveness of the economy.	Research and Innovation Foundation	1,200,000	
				799,274.80	223,551.02
I.10	EUREKA Cyprus	Selection and support mechanism for Cypriot agencies wishing to participate in international EUREKA projects.	Research and Innovation Foundation	1,200,000	
I.11	European Initiatives – Local development	Elaborate research projects in cutting edge areas of priority sectors, in order to improve the quality of life and the competitiveness of the Cypriot economy.	Research and Innovation Foundation	8,000,000	
				2,766,146.36	715,507.29
II.1	Excellence Hubs	Promote scientific excellence by funding collaborative research projects in three scientific areas: Life Sciences, Natural Sciences and Engineering, Humanities	Research and Innovation Foundation	17,100,000 (Life Sciences: 6,750,000 Natural Sciences and Engineering: 6,750,000 Humanities: 3,600,000)	
				17,557,937	5,522,741
II.2	EUROSTARS Cyprus	Funding mechanism for Cypriot actors and in particular innovative SMEs wishing to participate in transnational projects of the EUROSTARS Joint European Program.	Research and Innovation Foundation	2,500,000	
				548,358	132,787.20
II.3	DIDAKTOR	Integrate young postdoctoral scientists into the Cyprus RTD system, through the implementation of a research in one of the following three scientific areas: Life Sciences, Natural Sciences and engineering, Social sciences and humanities.	Research and Innovation Foundation	9,400,000 (Life Sciences: 3,760,000 Natural Sciences and Engineering: 3,760,000 Social sciences and humanities: 1,880,000	
				9,375,990	3,379,100

No.	PROGRAM / MEASURE / ACTION TITLE	SHORT DESCRIPTION	IMPLEMENTATION AGENCY	BUDGET (EUR)	
				COMMITTED	PAID
II.4	New Researchers – 2nd Chance	HAS BEEN REMOVED			
New plan no.3	Horizon 2020 – 2nd Chance	- Provide a second opportunity to organizations / individuals seeking to obtain funding under Horizon 2020 and their proposals have not secured funding due to budget depletion.	Research and Innovation Foundation	5,500,000	
				3,988,021	1,585,184
II.5	Social Innovation	Develop and implement innovative ideas, products, services, technologies, models (for organization, governance, empowerment and capacity building) and strategies for responding to social challenges and forging new relationships and partnerships between social and other partners.	Research and Innovation Foundation	1,000,000	
				487,324	341,190
II.6	Enhancing Entrepreneurial Innovation - B	Enhance research, technological development and innovation and improve the competitiveness of SMEs. In particular, the diversification of private investment is reinforced by investing equity in project implementation and attracting investment to the innovative enterprise that will market innovative products / services.	Ministry of Energy, Commerce and Industry	5,040,000	
					See Action I.5 above
III.1	Technology Transfer System	Develop a "National Technology Transfer Bureau" at the RIF that will provide support to the Cyprus Academic and Research Institutions in protecting and exploiting their research results and intellectual property rights.	Research and Innovation Foundation	1,500,000	
III.2	Innovation Vouchers	- A simple and effective mechanism that enables SMEs to realize the importance and benefits of innovative activities and leverage the know-how of their stakeholders to offer solutions to problems they face.	Research and Innovation Foundation	260,000	
				210,000	150,126
III.3	Industrial property	Ensure that significant research and innovation results have been self-financed by programs launched or managed by the RIF, the EU or other funding body.	Research and Innovation Foundation	200,000	
				98,670	72,120
III.4	BIC – Business Innovation Center – Innovation structures and infrastructures	Creation and operation of a Business Innovation Center, in particular through collaborations of existing structures and organizations or the evolution of existing structures in the field of business innovation and entrepreneurship support to undertake the implementation of Business Innovation strategies.	Ministry of Energy, Commerce and Industry	5,300,000	
New plan no.4	Participation in International Networking Events	Strengthen the extroversion of Cypriot institutions and limit the weaknesses arising from the small size of the Cypriot market, the lack of a critical mass of institutions and infrastructure.	Research and Innovation Foundation	140,000	
				71,000	71,000
New plan no.5	Encouragement of H2020 Project Coordination	Encourage Cypriot researchers to get engaged in Horizon 2020 proposals as Pan-European Network Coordinators.	Research and Innovation Foundation	1,000,000	
				308,000	228,000

No.	PROGRAM / MEASURE / ACTION TITLE	SHORT DESCRIPTION	IMPLEMENTATION AGENCY	BUDGET (EUR)	
				COMMITTED	PAID
III.5	Innovation Packages	- Package for attracting investment funds in SMEs - Innovation Promotion Package: Innovation promotion initiatives that can come from Cyprus or be part of a European effort, e.g. Startup Europe - Certification Package: Expenses of SMEs to certify their products with various certifications required.	Ministry of Energy, Commerce and Industry	4,000,000	
III.6	Innovation Habitats	Strengthen young people's entrepreneurial innovation skills to gain the knowledge, experience and will to set up their own innovation business or join new or existing innovation firms.	Ministry of Energy, Commerce and Industry	1,200,000	
III.7	Digital Mapping of the Cypriot RTDI Network	HAS BEEN REMOVED			
III.8	Liaison Offices	Operation of Liaison Offices in each of the participating Universities aiming at better and more intense communication and collaboration between Universities and businesses focusing on student placements in internships.	University of Cyprus	7,154,118	
III.9	Commercial Exploitation of Research Results	Exploit research results, preparatory actions for the development, demonstration and promotion of prototype products and the creation of man-made enterprises for the commercial exploitation of the products / services produced. The Program consists of two independent phases: - Phase A - Preparation: Preparing a business plan - - Phase B - Investment: Incorporation and operation of a new business for the commercial exploitation of research results.	Research and Innovation Foundation	Phase A: 270,000 Phase B: 1.000.000	
New plan no. 6	Commercial Exploitation of Research Results from Enterprises	Enhance the added value of business activities in Cyprus by commercializing the results generated by research activities of Cypriot companies. The Program consists of two phases: - Phase A: Preparing a business plan - - Phase B: Funding for commercialization of research results in the context of the operation of a new hi-tech enterprise.	Research and Innovation Foundation	Phase A: 270,000 Phase B: 1,000,000	
III.10	Matching Funds	Percentage of EU funding provided by the beneficiary body in the framework of Horizon 2020 research project, will receive it as a Supplementary Sponsorship from the RIF to leverage its research capabilities through activities such as recruiting new researchers or managing research projects staff and purchase new or upgrading existing equipment.	Research and Innovation Foundation	4,000,000	
				1,394,491	1,304,322

No.	PROGRAM / MEASURE / ACTION TITLE	SHORT DESCRIPTION	IMPLEMENTATION AGENCY	BUDGET (EUR)	
				COMMITTED	PAID
III.11	Studies for RTDI Modernisation	The RIF, in accordance with the Plan, intends to undertake the following three studies in collaboration with external consultants: 1. "Create Spin Offs in Universities and Research Institutions" 2. "Access to High Risk Funding Sources" 3. "Tax incentives for RTD"	Research and Innovation Foundation	180,000	
III.12	Nurturing an RTDI Culture	Organize a series of events on a regular and extraordinary basis with the aim of nurturing a research and innovative culture.	Research and Innovation Foundation	500,000	
				275,000	192,500
TOTAL BUDGET				**143,974,118**	
TOTAL PAYEMENTS				**31,450,078**	