

Guidelines

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ОДОБРЯВАМ

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**GUIDELINES FOR THE PREPARATION OF DEVELOPMENT AND
SUSTAINABILITY PROGRAMMES WITH BUSINESS PLANS
BY CENTRES OF EXCELLENCE (CoEs) AND CENTRES OF COMPETENCE
(CoCs) FUNDED UNDER THE OPERATIONAL PROGRAMME “SCIENCE AND
EDUCATION FOR SMART GROWTH”
AND BY ADDITIONAL CENTRES OF COMPETENCE APPOINTED THROUGH A
SPECIFIC PROCEDURE FROM THE NATIONAL RESEARCH
INFRASTRUCTURE ROADMAP AND THE SOFIA TECH PARK LABORATORY
COMPLEX**

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INTRODUCTION

These guidelines concern creation of development and sustainability programmes with business plans (hereafter “Plans”) by the Centres of Excellence (CoEs) and the Centres of Competence (CoCs) funded under the Operational Programme “Science and Education for Smart Growth” (OPSESG). The Guidelines have been prepared by the Executive Agency “Programme Education” (EAPE) in response to the recommendations of the report of the EC Joint Research Centre (JRC) “*Strategic evaluation of the Bulgarian Centres of Competence and Centres of Excellence and recommendations for their further development*”.

The specific recommendation in point 7.3 of the JRC report relates to the sustainability of the centres and recommends the preparation of a business plan for a period of **3-5 years after** the implementation of the project under the OPSESG as well as a **vision and strategy for a period until 2029**. Especially the JRC report highlights the need to:

- analyse the market opportunities; and
- specifically analyse the societal and market needs and **create an important source of revenue from dissemination of knowledge through contract research services, joint research, test bed/demonstration facilities and other EU R&D institutions and programmes (e.g. ‘HORIZON’)**.

At the same time, the Programme “Research, Innovation and Digitalization for Smart Transformation” 2021-2027 (PRIDST) sets the development and sustainability programmes with business plans (“Plans”) as a key precondition for funding of the centres.

In this sense, the Plans prepared under these guidelines will address, on the one hand, the need to ensure their operational sustainability and, on the other hand, enable them to apply for support under the PRIDST.

The guidelines are meant to support the centres established under procedures BG05M2OP001-1.001 “Construction and development of centres of excellence”, BG05M2OP001-1.002 “Construction and development of centres of competence” and BG05M2OP001-1.003 “Additional support for scientific organisations with approved projects under the Horizon 2020 Framework Programme, competition Widespread-teaming, Phase 2” under the OPSESG. The guidelines will be applied also for the additional Centres of Competence/ Centres of Excellence appointed through a specific procedure from the National research infrastructure roadmap and the Sofia Tech Park Laboratory Complex which are also required to prepare the development and sustainability programmes with business plans in order to apply for financing from the PRIDST.

In order to ensure sustainability, **relevant analyses must be carried out at the level of each centre, and for the international, national, regional contexts**. They should refer to reports and analyses already adopted and published, such as the report of the Joint Research Centre (JRC) “*Strategic evaluation of the Bulgarian Centres of Competence and Centres of Excellence and recommendations for their further development*”, the reports prepared by the World Bank¹ as a result of the implementation of the activities of Pillar 1 “Review of Public

¹ Reports prepared by the World Bank as a result of the implementation of Pillar 1 ‘Science, Technology and Innovation Public Expenditure Review’ of the *Agreement on the provision of advisory services to review public spending in science, technology and innovation and support for building an evidence-based approach to the National Strategic Framework for Education by 2030 between the Ministry of Education and the Executive Agency, of the one part, and the International Bank for Reconstruction and Development (the Bank), on the other hand*: Opening Report (Inception Report); Assessment of the needs of the country and the policy mix in the field of science, technology and innovation (Bulgaria Country Needs and STI Policy Mix Assessment); Increasing the contribution of public research in Bulgaria to innovation: Enhancing the Contribution

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Expenditure in Science, Technology and Innovation” under the Agreement with the Ministry of Education and Science and the EAPE², an innovation strategy for smart specialisation. The Plans should contain activities (both research and administrative) that contribute to the long-term sustainability of the Centre.

The Plans **should demonstrate the potential of the newly established Centres** to move into an operational phase, integrate into the research and innovation ecosystem of the country, contribute to the move towards knowledge-based economy and generate scientific results from theoretical and empirical research in selected engineering, technical and applied fields.

The Plans should ensure sustainability not only during the implementation period of the OPSESG-funded project (2024-2029), but also during the period of intensified R&D&I activities and the durability period after the completion of the PRIDST-funded project (2030-2033). The topics to be covered include sources of research funding, exploitation of the equipment built, mechanisms for effective cooperation with the private sector, establishment of an appropriate governance model, building management and expertise, attracting and retaining talent, capacity building for technology transfer, management and protection of intellectual rights, development of spin-off companies and attracting investments for their early phases of development, risk management plan, open access and dissemination plan, etc.

In view of the above, the Centres’ Development and Sustainability Programmes must have a long-term perspective and cover the period till 2029 and be complemented by a long-term strategy and vision until 2033. This period is divided into phases, in line with the recommendations of the JRC, as follows: during the project 2024-2026 and 2027-2029, and follow up period 2030-2033. The financial analysis should be provided as Annex 1 (in Excel format).

The Centres are equally asked to provide, as attachment to the Sustainability Programmes, their response to the individual recommendations outlined in the JRC Report using the corresponding template. For the Centres financed under procedure BG05M2OP001-1.003, the additional Centres of Competence/ Centres of Excellence from the National research infrastructure roadmap, and the Sofia Tech Park Laboratory Complex the general recommendations of JRC Report should be taken under consideration.

of Bulgaria’s Public Research to Innovation: A Survey-based Diagnostic (2020); Management analysis and functional analysis (Functional and Governance Analysis).

² EAPE, <http://sf.mon.bg/?go=page&pageId=451>The

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1. PRESENTATION OF THE CENTRE. MISSION, STRATEGIC OBJECTIVES, SHORT- AND MEDIUM-TERM OBJECTIVES AND TARGETS

1.1. Key characteristics of the Centre

The name should be the same as indicated in the official documentation, especially the OPSESG. The additional Centres of Competence/ Centres of Excellence from the National research infrastructure roadmap, and for the Sofia Tech Park Laboratory Complex may designate a centre name to be defined in a partnership agreement of the new centre participants.

The ID number of the project awarded under Priority Axis 1 of the OPSESG*.

The grant amount received under OPSESG for the construction of the Centre*.

The grant amount received from the Horizon 2020 framework programme (if applicable).

The thematic area of ISSS 2014-2020 in which the Centre operates*;

The name of the leading organisation (legal entity) and all partner organisations formally setting up the Centre (the table can be expanded to include all partners).

* N/A for the additional Centres of Competence/ Centres of Excellence appointed through a specific procedure from the National research infrastructure roadmap and the Sofia Tech Park Laboratory Complex

1.2. The Centre's leading scientific fields of exploration and supporting research areas

For each partner, the Centre should present the experience and achievements in the relevant scientific areas of the research groups or organizational units which constitute part of the Centre. The number of the work package of the project, supported by OPSESG, to which the group/unit contributed, should be also provided.

Description of the experience/achievements should be concise (up to 700 characters) and concern each of the groups or units, operating in the structure of the Centre. The relevant experience should cover the recent years (2018-2023), and should be supported by links to lists of publications of the members of the groups/units (for example ORCID).

A research group is a group of researchers often from the same faculty/research unit, specialized on the same subject area, working together on the issue or topic under same direction.

An organizational unit is a construct used to represent an organization whose resources are logically separate from those resources of other, similar organizations, and legally constitute a part of the Centre's partner organisation.

1.3. Socio-economic and organizational challenges

1.3.1. Socio-economic context and challenges

A brief description of the socio-economic environment and challenges which constitute the operating context for the Centre.

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The overall needs of the society, and national, European and global economy should be discussed thereby justifying the research and development activities.

1.3.2. Regional context and challenges

A brief description of the regional context and challenges which constitute the Centre's operating environment. The information should be focused on the regions forming level 2 in which the partners are operating and on the less developed regions.

The overall needs of the regional society and economy should be discussed thereby justifying the activities to be undertaken by the Centre in the field of research and development.

1.3.3. Organizational/institutional context

A brief description of the institutional context of the entities, which constitute the Centre.

Present an analysis of the strengths, weaknesses, opportunities and threats (SWOT) faced by the partners that can be addressed by establishing the Centre.

1.4. Centre's mission and vision, PRIDST project identification and strategic objectives for the project

1.4.1. The Centre's mission

A mission is a concise statement about the purpose and primary goals of the Centre and how it intends to serve its customers, community, employees and other stakeholders.

Mission is referring to the present time and shall remain valid in future.

1.4.2. The Centre's vision

A vision is a brief statement defining the Centre's desired impact on its community or the wider environment in the long term. It states the Centre's values, primary purpose, and objectives, and it should provide answers to questions about the Centre's ultimate goals and aspirations in a longterm perspective, beyond 2029.

The purpose of a vision statement is to help the Centre inspire its employees to achieve goals, create long-term plans and differentiate from competitors.

Writing a vision statement should always begin with a brainstorming session where you think about the Centre's goals, core values and primary purpose.

Vision is referring to the future.

1.4.3. The PRIDST-funded project identification

The characteristics of the project intended to be financed from PRIDST, in the timeframes of the PRIDST and the guiding principles set by PRIDST. The project identification should set roughly the project boundaries, organization and planned course of action.

1.4.4. The PRIDST-funded project objectives till 2029

In this section, the Centre is requested to define which objectives it intends to accomplish with PRIDST funding until 2029. The objectives should be in compliance with the PRIDST objectives and should be defined using the SMART formula:

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- **Specific:** well defined, clear, and unambiguous,
- **Measurable:** with specific parameters that measure progress toward the accomplishment of the objective,
- **Achievable:** attainable, possible to achieve and not over-optimistic,
- **Realistic:** within reach, realistic, and relevant to the purpose,
- **Timely:** with a clearly defined timeline, including a starting date and a target date.

The objectives should correspond to the overall strategies, and mission/vision defined before. They should also serve as a basis for development of Key Performance Indicators (see: below).

1.5. Addressing the Centre-specific recommendations of JRC

The report of the EC Joint Research Centre (JRC) “*Strategic evaluation of the Bulgarian Centres of Competence and Centres of Excellence and recommendations for their further development*” contains a series of Centre specific recommendation, directed to all 14” OPSESG funded Centres.

The Centres are equally asked to provide, as attachment to the Development and Sustainability Programmes, their response to the individual recommendations outlined in the JRC Report using the corresponding template (Annex 2, completed separately for each centre). For the Centres financed under procedure BG05M2OP001-1.003, for the additional Centres of Competence/ Centres of Excellence from the National research infrastructure roadmap, and for the Sofia Tech Park Laboratory Complex the general recommendations of JRC Report should be taken under consideration.

2. STRATEGIC / POLICY CONTEXT

2.1. Addressing the challenges identified by PRIDST

The Centre should indicate to which of the challenges identified in PRIDST it will contribute. It should also describe the mechanism how the Centre will contribute to address the challenges, by demonstrating a clear logical cause-effect relation. The template document provides a list of the challenges described in PRIDST:

- Strengthening the contribution of applied scientific research and innovation to the higher economic and social development of the country in the field of ISSS 2021-2027, led by the entrepreneurial process;
- Strengthening the capacity of scientific organisations and higher schools;
- Strengthening the cooperation of scientific organisations and higher schools with industry;
- Shortening the path from scientific research to innovation;
- Transfer of technologies and knowledge and their market realization;
- Creating conditions for internationalization

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- Creating conditions for increasing the shares of those engaged in R&D in the public and private sectors;
- Creating and sharing data for research and innovation purposes;
- Overcoming regional imbalances by supporting businesses from less developed regions for easier access to R&D.

2.2. The strategic context at the European level

Describe strategic context at European Union level by indicating the name of the strategic document, and the specific element in this document, to the implementation of which the centre will contribute.

Use the table in the section 2.2 of the Template, to indicate the document and the elements of the strategic document (with respective number, if applicable), to which the centre will contribute. The following documents are listed:

- The European Research Area; Communication on Smart Specialisation (COM (2017)376 final)
- Renewed European Agenda for Research and Innovation (COM (2018) 306 final)
- A new industrial policy strategy (COM (2017)479 final)
- Start-up and scale-up initiative (COM (2016)733 final)
- Programme for acquiring new skills: Detailed Action Plan for Sectoral Cooperation on Skills (COM (2016)381 final)
- A renewed EU agenda for higher education (COM (2017)247 final)
- A European Green Deal (COM (2019) 640 final)
- Shaping Europe's digital future (COM (2020) 67 final)
- A Farm to Fork Strategy for a fair, healthy and environmentally friendly food system (COM (2020)381 final)
- A New Industrial Strategy for Europe (COM (2020) 102 final)
- White Paper on Artificial Intelligence — A Europe for excellence and trust (COM (2020) 65 final)
- A New European Innovation Agenda (COM/2022/332 final)
- COUNCIL RECOMMENDATION (EU) 2022/2415 of 2 December 2022 on the guiding principles for knowledge valorisation
- COMMISSION RECOMMENDATION (EU) 2023/499 of 1 March 2023 on a Code of Practice on the management of intellectual assets for knowledge valorisation in the European Research Area
- Other strategic documents at EU level at the Centre's discretion (add the required number of lines)

It is pertinent to make a selective choice, and it is not necessary to refer equally to all the documents

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2.3. The strategic context at the national level

Describe strategic context at national level by indicating the name of the strategic document, and the specific element in this document, to the implementation of which the centre will contribute.

Use the table in the section 2.3 of the Template, to indicate the document and the elements of the strategic document (with respective number, if applicable), to which the centre will contribute. The following documents are listed:

- National Development Programme BULGARIA 2030 (NDR BULGARIA 2030) - <https://www.minfin.bg/bg/1394>
- National Strategy for the Development of Scientific Research in the Republic of Bulgaria 2017-2030 (NRNIRB) - <https://www.mon.bg/bg/53>
- Strategy for the Development of Higher Education in the Republic of Bulgaria 2021-2030 - <https://www.mon.bg/bg/143>
- National Roadmap for Scientific Infrastructure 2020-2027 (NCPNI) - <https://www.mon.bg/bg/53>
- National Strategy for Small and Medium-sized Enterprises 2021-2027 (NSMEs) - <https://www.mi.government.bg/bg/themes/nacionalna-strategiya-za-malki-i-sredni-predpriatiya-mpsp-v-balgariya-2021-2027-g-2194-285.html>
- Digital Transformation of Bulgaria 2020-2030 - <https://www.mtitc.government.bg/bg/category/283>
- Concept for the Development of Artificial Intelligence in Bulgaria by 2030 - <https://www.mtitc.government.bg/bg/category/157/koncepciya-za-razvitiето-na-izkustveniya-intelekt-v-bulgariya-do-2030-g>
- Other strategic documents at national level at the Centre's discretion (add the required number of rows)

It is pertinent to make a selective choice, and it is not necessary to refer equally to all the documents

2.4. The thematic area of ISSS 2021-2027 in which the centre will contribute

Define the activity of the Centre against the thematic areas of the ISSS 2021-2027 * under the Development and Sustainability Agenda for Development and Sustainability.

For the designated thematic area of the ISSS 2021-2027, the applicable specific sub-areas shall also be specified, in the second column of the table. The following thematic areas are listed:

- Informatics and ICT
- Mechatronics and microelectronics
- Healthy Living Industries, bioeconomy and biotechnology
- New technologies in creative and recreational industries
- Clean technologies, circular and low-carbon economy

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It is pertinent that more than one area and sub-area may be identified.

** Pay attention to the changed thematic areas in ISSS 2021-2027 compared to ISSS 2014-2020. In case the thematic area of ISSS 2014-2020, under which the Centre was created and financed under the OPSESG, is changed, take this into account when responding. It is possible to identify more than one thematic area of ISSS 2021-2027. Each Centre set up under one of the thematic areas of ISSS 2014-2020 can assess and identify also contributions under the new thematic area “Clean Technologies, Circular and Low Carbon Economy”, which has been identified as horizontal at regional innovation potential level.*

2.5. The regional context: Centre’s potential and advantages of the Centre

Based on the regional context presentation in point 1.3.2. describe the role of the Centre in a regional context by Level 2 planning regions³, providing the following information:

2.5.1. Brief summary of the established research infrastructure (per region)

Provide a brief summary of the established infrastructure (per region as per the table in the template) as a functional part of the overall research infrastructure of each scientific organisation in the centre;

2.5.2. Collaborative research projects with enterprises

Provide a description of ongoing and/or completed collaborative research projects with industry and/or research projects carried out on the business’s behalf, which took place during the last 3 years.

For each collaborative project identify the scientific organisation that is a part to the centre and the private sector partner or procuring enterprises, describe their contribution and roles in the project. For each enterprise, provide an economic activity code (NACE Rev 2), a place of registration and the locations where the production activities were/are carried out. When identifying locations, report the municipality, region and place the information in the box for the corresponding Level 2 planning region.

2.5.3. The centre’s expected contribution to the socio-economic development

Indicate the centre’s expected contribution to the socio-economic development of Level 2 planning regions, as defined in the ISSS 2021-2027 (part 5.6. “Regionalization of thematic areas”).

Indicate the envisaged contribution to the priorities and perspectives set out in the integrated territorial development strategy of a level 2 planning region,⁴ focusing on planned

³ According to Article 4(3) of the Regional Development Act: The regions forming level 2 shall be planning regions, not constituting administrative-territorial units and shall have a territorial scope, as follows:

1. North-Western region, made up of the Vidin, Vratsa, Lovech, Montana and Pleven districts;
2. North Central region, made up of the Veliko Tarnovo, Gabrovo, Razgrad, Rousse and Silistra districts;
3. North-Eastern region, made up of the Varna, Dobrich, Targovishte and Shoumen districts;
4. South-Eastern region, made up of the Bourgas, Sliven, Stara Zagora and Yambol districts;
5. South-Western region, made up of the Blagoevgrad, Kyustendil, Pernik, Sofia and Sofia City (Capital City Municipality) districts;
6. South-Central region, made up of the Kardjali, Pazardjik, Plovdiv, Smolyan and Haskovo districts.

⁴ <https://www.mrrb.bg/bg/regionalno-razvitie/strategichesko-planirane/dokumenti/>

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construction of industrial zones, building an environment conducive to innovation, stimulating cooperation between scientific organisations, the public and private sectors in the region and beyond, and developing technology transfer centres. Describe other specific characteristics, development potential or identified needs for innovation activity in the region, linking them to the opportunities for impact or commercialisation of products and solutions resulting from the centre's R & D activities.

2.5.4. The centre's impact on regional development and innovation activity

Present the Centre's potential R&D impact on regional development and innovation activity in the table in the Template.

Estimate the Centre's expected impact on the regional development and innovation activity, by Level 2 planning regions. Quantify the impact by attributing scores which are based on following:

- 3 – the Centre leader organization located in the region
- 2 – the partners are located in the region
- 1 – certain activities take place in the region
- 0 – no location or activities in the region

3. BUSINESS MODEL AND MAIN ACTIVITIES

This part should present the Centre's market and business model to ensure its sustainability in terms of revenue generation, availability of the necessary capacity and resources. It should also present conditions for successful implementation of the planned activities and the achievement of the planned objectives and results. In addition, it describes research activities, organizational structure, financial, human and intellectual capital.

3.1. Identification and characteristics of the target market

This section should present market analysis for the Centre's potential research-based products/services/processes/spin-offs and whether they are marketable and economically viable.

Identify in the target sectors your potential business partners for cooperation, revenue generation, and further application/solution development as well as other stakeholders in the fields of trade, investment, social, environmental, policy making, standard setting, skills, training, etc.

3.1.1. Characteristics of the overall target market and its needs

The characteristics of overall market to which the Centre refers to has to be presented. If the product/service/process/spin-off is so novel that there does not yet exist a market for it, then analyse its commercial potential from the perspective which problem the **product/service/process/spin-off** solves.

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The market analysis comprises **quantitative estimates** of the market volume and **main competitors**. Perform a market analysis, detailing the **historical** and **future development of the market**. The analysis can be presented by economic sector(s) which the Centre targets or by application markets. In the next section a qualitative analysis should indicate potential partners, both commercial and non-commercial.

Complete the table in the Template for each product/service the Centre's aspires to commercialize separately. Focus on the products/services which are well defined. In the table enlist the following parameters:

Products/services the Centre or its spin-offs intend to offer – the Centre's teams should identify product/service categories and their respective markets, potential use-cases, supplementary products/services or products/services to be replaced or otherwise impacted by the new ones, and the entities offering them.

Indicative market – the teams should characterize the target market including the geographical markets, sectors and applications.

Quantitative estimates – both the current volume and future developments estimates of the entire target markets.

Competition – the teams should identify market leaders (if relevant) and main competitors for the considered products/services, both at the level of technologies of product/services and entities working on/offering them for the market.

3.1.2. Identification of existing and potential key business partners

This section should outline the Centre's experience of commercial collaboration with the private sector and its knowledge of potential client companies. Specifically, list your existing or potential future partners for:

- buying/licensing the research-based outputs developed by the Centre's teams in the past;
- Research collaboration;
- Application of the results of the centre's research;

The specific needs of companies and other entities to which the Centre can offer its research activities should be identified.

The entities should be listed in the table in the template for each of the identified products/services.

3.1.3. Identification of key non-commercial partners/stakeholders

This section should present the Centre's experience and knowledge of non-commercial stakeholders by grouping them as follows

- Scientific organisations from other Centres (CoEs and CoCs) and/or scientific organisations outside the Centre;
- Educational institutions that train and host staff in relevant professional fields and have the potential to provide staff to the centre;
- Public authorities, including local authorities, that are part of the innovation ecosystem;
- Other interested parties (to be completed as appropriate).

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3.2. Demand analysis for the Centre products/services

With reference to point 3.1, characterise the products/services/processes planned to be provided by the Centre or its spin-offs, together with information on how they are planned to meet the specific needs of the market and stakeholders and provide high added value to potential consumers.

Provide figures on the estimated immediate volume of demand for the main products and services that will be the subject of the Centre's future activities. The volume of demand for the Centre's products/services should be estimated and translated into estimated figures for the Centre's cash flows.

The information should be presented in the table provided in the template, for each of the product/service lines:

- Innovative products/services the Centre or its spin-offs intend to offer - The Centre teams should identify the category of products/services they intend to focus on. They should try to name them from a market perspective, identifying potential use cases and the category of market products they relate to or could potentially impact.
- Potential uses - the Centre teams should identify the uses of the products/services.
- Added value - the team should identify the needs/problems to be solved by the innovative product/service, the expected added value and the desired characteristics that differentiate the innovative product/service from those existing in the markets.
- Quantitative estimates of the size of the immediate market - i.e. the market to which the Centre can direct its product/service offer.
- Quantitative estimates of the volume of demand - i.e. an estimate of the volume of resources that may be available to the Centre from the identified target market.

3.3. Grant funding sources

It is requested that potential sources of grant funding are identified in relation to the expected area of research activity presented in Section 4. The sources of potential grant funding should be reviewed and presented in a table as in the template, with at least the following information:

- Name of the funding source
- Priorities of the funder
- Expected time of calls for proposals
- Estimated volume of funding.

4. PLANNED RESEARCH WORK PROGRAMME AND RELATED MEASURES

During the preparation of the project financed by the OPSESG for the construction of the Centre, a Strategic Programme for the Development of Research and Innovation of the Centre

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was developed⁵. Research tasks and activities (work packages, WP) are part of the strategic programme of the Centre. Most of the research tasks and activities, which are part of the scientific programme of the Centre, are not expected to end with the completion of the OPSESG-funded project, and this is an essential element of the long-term sustainability of the Centre.

Additional Centres of Competence/ Centres of Excellence appointed through a specific procedure from the National research infrastructure roadmap and the Sofia Tech Park Laboratory Complex must develop a new Research programme in which work packages are foreseen for implementation with the participation of all members of the formed new centre on the basis of the partnership agreement. The guidance in the following sections for these new centres refers to their new Research programmes.

4.1. Planned research work-packages

The research planned by the Centre should be divided into Work Packages (WP), defined around a specific research problem and leading to identifiable outputs. The work packages should have their institutional leaders, with the entity with the highest proportion of staff in each WP taking responsibility for achieving the expected results. There should also be a person who is the leader of the WP. This person may change later, but the replacement should have a similar level of competence and experience.

The Work Packages will include time and resource plans.

The information for each research WP should include the following

- The current state of the art, which is the starting point for research in the given area,
- the main research problem/challenge on which each work package will focus
- the list of tasks/activities planned in the WP, with milestones (indicated in the Section 4.4),
- the expected research results measured by indicators (see: Section 4.5)
- the methods and approaches to be used and their justification
- the envisaged role of each partner and the use of infrastructure and equipment purchased under the project.

Indicate which of the WPs have been launched under OPSESG and present the progress made to date by providing a detailed overview of the status of each of the works.

4.2. Key scientific personnel

Describe the key scientific staff who will work on the project – work package or complementary measures leaders, heads of research groups/units and other leading researchers. The information should be provided as Annex 3 and includes

- First name and surname

⁵ For the centres financed under procedure BG05M2OP001-1.003 “Complementary support for research organisations with approved projects under the Horizon 2020 Framework Programme, the Widespread-teaming Phase 2 competition” the research activities are described in the Agreement with the European Commission.

Guidelines

- Academic title, scientific discipline
- Professional experience, especially in the areas planned for the Centre and focused on the commercialisation of research.
- 3 to 5 main publications during the recent 10 years
- Achievements in the development of patents and other forms of intellectual property,
- Current employment.

4.3. Planned complementary measures

In addition to the research studies organised in the work packages (as above), the Centre is expected to undertake certain actions, Complementary measures (CM), aimed at making the Centre an efficient research organisation.

In particular, the following complementary measures are expected: purchase of additional equipment, establishment of an organisational framework including all necessary internal rules and procedures, establishment and initiation of internal or external services to support technology transfer, etc.

The complementary measures should be planned with their deadlines and the resources required for them.

4.4. Timeframes

Summarise the work packages in the form of a Gantt chart. You should list all the research WPs and complementary measures, indicating the milestones (using the letter M). The milestone description should be provided in the corresponding table in the template.

The minimum precision in the presentation of the timeframe is suggested in the template and divides the work into tasks as part of work packages/complementary measures and half-years.

4.5. Results to be achieved

Present the expected results (outputs or outcomes) of the research activities, including the number and type by period:

- 2020-2023 - achieved by the Centre (for the new Centre - by the research groups/ units constituting it)
- 2024-2026 - to be achieved by the Centre
- 2027-2029 - to be achieved by the Centre.

Present the information in the form of a table of Key Performance Indicators (KPIs) with specific target values. If necessary, propose additional KPIs⁶ to those included in the table, taking into account the following:

⁶ When complementing the system of indicators, it is recommended to use the guidelines from *the report of the European Commission's Expert Group "Knowledge Transfer Metrics — Towards a European-wide set of harmonised indicators"*.

Guidelines

- The KPIs must take into account the specificity of the Centre and be able to be used in the future as a tool to compare and improve the progress and impact of the Centre itself;
- The indicators will be adapted to report on the Centre's progress in annual reports, which will allow benchmarking of the Centre's performance;
- The KPIs should be broader than traditional measurement indicators such as number of patents, licences, spin-offs, revenues, etc.
- The defined indicators will be set in a time frame consistent with the strategic and operational plans of the Centre.
- Periodic external assessment of progress against the indicators should be considered as part of a mechanism to track sustainability and improve the Centre's progress.

5. ORGANISATION AND GOVERNANCE

5.1. The organisational structure

Describe the organisational structure and decision-making procedures. Quote specific internal documents of the Centre (internal rules, procedures, etc.). Present the organisational structure in the form of an organisation chart.

Present the operational capacity of the Centre. Describe how and whether effective innovation management has been achieved so far. How and whether effective management is integrated into the governance structure, in particular in relation to the Centre's partner funding bodies. Demonstrate the presence of a strong and active management team at infrastructure level, not just at project level. Suggest how you plan to improve the operational capacity of the Centre.

Describe how the administrative and research functions are separated; how the work of the territorially distributed administrative and research units (departments, laboratories, including the newly built buildings (campuses) if applicable) is organised. Provide any rules for operation of these new buildings/campuses if those exist.

Explain how the Centre's electronic management structure ensures effective management, monitoring and control at project and infrastructure level.

Provide information on how the Centre's governance structure ensures sound coordination, including effective involvement of the Centre's partner funding bodies, and whether the Centre's management ensures joint action and synergy between partners.

5.2. Proposal for a legal entity or other appropriate form

Identify the appropriate legal form for the future sustainable functioning of the Centre, based on the Centre-specific recommendations of the JRC Strategic Evaluation or on the general recommendations of JRC Report.

This point should justify that the legal form of the Centre has been identified as a result of a thorough internal evaluation with alternative proposals for an appropriate legal form for its future functioning. When considering the proposal, the following should be taken into account

- the partner/organisational structure of the Centre and, as a consequence, the specific powers and responsibilities that you consider most appropriate to be transferred or assigned to the legal entity;



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- explain how the identified legal form will ensure the decision-making autonomy of the Centre, complemented by a description of an appropriate governance model, management and expert capacity building;
- provide information on how the identified legal form will not hinder the centre's cooperation with the business community;
- provide information on how the identified legal form/legality is appropriate in terms of funding programmes/instruments that would be eligible beneficiaries.

One of the following legal forms should be chosen:

1. Association based on a partnership agreement of research organizations under the definition of "research and knowledge dissemination organisation" under item 16, letter ff) of the Framework for State aid for research and development and innovation (Framework 2022) , registered on the territory of the Republic of Bulgaria.

Research organizations must have signed a partnership agreement as a Center of Excellence or as a Center of Competence at the time of submitting the project proposal under the procedure under the PRIDST.

For the realization of the results of the research, of innovation activity or of rights to objects of intellectual property, as well as for other general activities within the Center, the participants in the association - higher schools or scientific organizations, should create a non-profit legal person determined to conduct activities to the public benefit The Non-profit legal person conducting activities to the public benefit under the conditions and in accordance with the Non-Profit Legal Persons Act (NPLPA). When registering the non-profit legal person (NPLP), the following conditions must be taken into account:

- all members of the center (leading partner and partners) should participate in the establishment of the NPLP;
- representatives of each organization in the center should participate in the management board of the NPLP;
- in the statute of the NPLP, it is defined as an organization for research and dissemination of knowledge in the sense of item 16, letter ff) of the Framework for State aid for research and development and innovation (Framework 2022)
- NPLP to be a partner under the partnership agreement;
- for the performance of its functions, and with a view to guaranteeing sufficient administrative capacity in the registered NPLP, at least 1 full-time manager must be appointed to it within 6 months from signing the contract according to the present procedure.

2. Higher school or institute under Art. 26b of the Higher Education Act, defined as an organization for research and dissemination of knowledge in the sense of item 16, letter ff) of the Framework for State aid for research and development and innovation (Framework 2022), registered on the territory of Republic of Bulgaria.

3. A Non-profit legal person conducting activities to the public benefit under the conditions and in accordance with the Non-Profit Legal Persons Act, which is defined as an organization for research and dissemination of knowledge in the sense of item 16, letter ff) from the Framework for State aid for research and development and innovation (Framework 2022), registered on the territory of the Republic of Bulgaria.

Guidelines

5.3. Existing staffing and material resources; buildings, equipment

The information described in this point should, on the one hand, be linked to the actual state of the Centre's research infrastructure and equipment acquired with OPSESG funding and, on the other hand, identify the need to acquire new equipment to carry out research and tasks in order to achieve stability and sustainability of the Centre.

Additional Centres of Competence/ Centres of Excellence appointed through a specific procedure from the National research infrastructure roadmap and the Sofia Tech Park Laboratory Complex should describe in this section the available research infrastructure and equipment in each of the organizations participating in the new centre, which will be used as a basis for the implementation of the new Research programmes. In the following sections, they should justify the necessity of new research infrastructure and equipment to implement the work packages, following the indicated guidelines.

Provide a brief description of the buildings constructed/refurbished and equipment purchased/acquired at the Centre, focusing on the distribution of the research infrastructure by region and by laboratory, including the number and qualifications of the research staff (researchers) directly involved in the R&D activities of the research infrastructure Centre/laboratory.

Justification of the need for additional investment in the existing research infrastructure from the perspective of the intended research and innovation tasks of the Centre. A detailed list of new equipment should not be provided at this stage, as such a list will be requested for submission with the applications under the PRIDST procedure. The need for additional investment should be outlined in general terms. Justify how the need for new investment in equipment is linked to the objectives and tasks of the Centre and how the new equipment will build on what has already been purchased, without constituting a replacement.

5.4. Plan to use the research infrastructure

Provide a plan for the use of the new research infrastructure. Short description should be included in the Programme and, if necessary, a more detailed description may be provided as Annex 7 (optional).

The research infrastructure plan must be in line with best practice and technology, consistent with the annual budget and based on a clear timetable. The timetable and annual budget should include all modes of use and mandatory maintenance periods, taking into account the requirements of different users (e.g. the need for a rapid and specific industrial response or the need to plan a series of basic research experiments). The use of research infrastructure by third parties should not be to the detriment of the Centre's own research programme.

In line with the recommendations of the JRC in the report "Strategic assessment of the Bulgarian CoEs/CoCs and recommendations for their future development", the plan for the use of research infrastructure can possibly combine several centres organised in groups of similar or complementary thematic areas and, where appropriate, carry out joint marketing to industry. Therefore, the plan may identify key infrastructure to be shared within a horizontal platform between CoCs and CoEs of major research facilities and key scientific equipment acquired in the 2014-2020 programming period. The aim is to achieve transparency, avoid duplication of equipment and support synergies between scientific infrastructures; this means

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that it is advisable to cluster research infrastructures and equipment according to criteria of uniqueness, commonality and mode of operation.

The clustered research infrastructures must have an availability platform, clear rules for users and an hourly rate for use. These rules may include, for example, CAPEX (capital expenditure) and OPEX (operational expenditure) costs for the equipment concerned, as follows

- ✓ acquisition and commissioning costs, including the training of scientific and technical staff;
- ✓ insurance and maintenance;
- ✓ depreciation reflecting expected replacement costs;
- ✓ hourly/daily costs of the equipment;
- ✓ consumables;
- ✓ personnel costs

The plan should include rules for establishing usage rates for different users and a basic percentage of time and priority of use among the following users

- ✓ Core group of the centre: use of the research infrastructure at no additional cost during the project period. After the end of the project, overheads will be charged for each project by the main project partners;
- ✓ Third-party research organisations vis-à-vis the Centre's organisations (other universities, public institutes) The practice is to charge these third parties (research organisations) for overheads such as depreciation of equipment used, running costs and other costs incurred during use by third party research organisations;
- ✓ The private sector: the use of research infrastructure by the private sector is charged at an appropriate price, usually the market price for economic activities or its equivalent (full cost of using the research infrastructure, including depreciation costs, plus a profit margin). Different rules apply in the Effective Collaboration scheme where the activities are non-economic.
- ✓ Individual doctoral researchers - it is recommended that short term access for free use of the infrastructure should be given to doctoral researchers whose research organisations will have to cover the basic consumables and running costs.

5.5. Capacity for generation of Intellectual Property

This point should present the research achievements of the Centre. Assess the market-oriented research and innovation capacity of the research organisations within the Centre in a national and international context, as evidenced by measurable outputs such as patents or similar assets.

Present the scientific organisations at the Centre that have the highest potential and capacity to carry out market-oriented research in a national and international context.

Describe the main scientific achievements in the field coherent with the ISSS that have been achieved to date by the Centre's research teams working on the Centre's work packages and with the Centre's support.

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Compare what has been achieved so far with what was planned, focusing on deviations and reasons for deviations from what was planned.

5.6. Policy and regulations for Intellectual Property

The following documents can be used:

- *Commission Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations*)

<https://op.europa.eu/en/publication-detail/-/publication/4cc4d955-3140-442e-b1e6-104abd0a5fd8>);

- *JRC report “Strategic assessment of the Bulgarian CoEs/ CoCs and recommendations for their future development”*

https://ec.europa.eu/regional_policy/en/information/publications/reports/2021/strategic-evaluation-of-the-bulgarian-centres-of-competence-and-centres-of-excellence)

- *Commission Recommendation (EU) 2023/498 of 1 March 2023 on a Code of Practice on standardisation in the European Research Area*

<https://op.europa.eu/en/publication-detail/-/publication/0b3b1229-bc8b-11ed-8912-01aa75ed71a1/language-en/format-PDF/source-search>

- *Commission Recommendation (EU) 2023/499 of 1 March 2023 on a Code of Practice on the management of intellectual assets for knowledge valorisation in the European Research Area*

<https://op.europa.eu/en/publication-detail/-/publication/3cee9cbb-bc8b-11ed-8912-01aa75ed71a1/language-en/format-PDF/source-search>

Until the new “Code of Practice for the smart use of intellectual property” is finalised, the Code from 2008 can be used.

Present short characteristics of the policy and rules concerning intellectual property rights management. As an annex to the Development and Sustainability Programme present the current documents on *Intellectual Property Policy and Rules* (Annex 4), which is part of the Centre’s long-term strategy and main objective. The policy must contain the following components:

- Rules under which intellectual property assessment will be carried out, showing access to technology transfer specialists with experience in the assessment of intellectual property rights (IPR) and licensing negotiations.
- Structure and resources devoted to the IPR team
- Method by which the assessment will be carried out. The main methods of IPR assessment are a cost-based method, a market-based method and an income-based method.
- Clear rules for the team of researchers and young scientists regarding the discovery of new ideas of potential commercial interest, ownership of scientific results, accountability, management of conflicts of interest and relations with third parties;
- Rules for the identification, use and protection of intellectual property in accordance with the strategy and mission of the scientific organisation and with the aim of maximising socio-economic benefits.

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Submit as an annex to the Development and Sustainability Programme “*Policy and rules for exploitation and commercialisation of research results, including a knowledge and technology transfer structure*” (Annex 5) with a dissemination and technology transfer plan, including intellectual property rights management, to outline the strategy for knowledge management and protection; demonstrate capacity building for technology transfer, open access and dissemination plan, etc.

Comply with the applicable state aid rules defined in the financing provided for the construction and upgrade of the research infrastructure of the centre.

When preparing the policies and regulations to this point, you must take into account the specifics of the legal form and the organisational structure of the centre.

The policies and regulations must enable the participants in the partnership, collectively and individually, to take advantage of the market opportunities arising from the centre’s research results.

The plan for wide dissemination of research results (publication/dissemination policy/plan) through open-access publications annexed to the policy and the rules must take into account the possible protection of IPRs.

The above-mentioned plan may include:

- ✓ open access, such as free online access, using the model ‘green’ or ‘gold’ access, etc. to scientific publications resulting from the activities of the Centre⁷;
- ✓ types of data to be generated/collected by research projects;
- ✓ standards to be used;
- ✓ how this data will be used and/or shared/made available for verification and re-use. If the data cannot be provided, explain why;
- ✓ how the data will be stored;
- ✓ a way to cover the costs of data storage;
- ✓ how data will be made accessible, compatible for operating purposes and reusable (FAIR).

Attach appropriate agreement templates between partners and identified stakeholders to ensure the lawful management of (among other things) ownership, access and dissemination of research outputs (intellectual property rights, research data, etc.) to policies and regulations.

5.7. Pricing policy

An important part of the business plan is the definition of the revenue model, i.e. a plan for generating revenue from the product/service, including different revenue generation mechanisms, sources and pricing. Possible revenue models should be considered, such as

⁷ Open access publication (also called “gold” open access) means that the article is provided immediately in open access mode by the researcher. The related costs are usually shifted from readers and instead to the university or research institute to which the researcher is affiliated or to the funding agency supporting the study.

Self-archiving (also referred to as “green” open access) means that the published article or the final peer-reviewed manuscript is archived by the researcher in an online repository before, after or together with its publication. Access to this article is often delayed (but not necessarily) (“embargo period”), as some scientific publishers may wish to recoup their investments by selling subscriptions and charging “pay to download/review” fees during the “embargo period”.

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transaction-based model, licensing, pay-per-use, and applied to different types of products offered to the market.

Pricing of research services and products must comply with applicable state aid legislation.

In addition, as part of the commercialisation strategy, it should be demonstrated that common policies and planning rules have been established and implemented in the organisations setting up the Centre, at least as far as the activities carried out under the umbrella of the Centre are concerned. The founders of the Centre (partner organisations within the Centre) should adhere to a common set of rules to ensure the sustainability of the Centre. The uniform rules must also apply when entering into contractual relations with third parties "under the umbrella" and on behalf of the Centre.

5.8. Human resources

Describe the research, administrative and technical staff by presenting a staff structure by category (R1, R2, R3 and R4) defined in the EC Communication "*Towards a European Framework for the Career Development of Researchers*" in the leading organisation and by partner. It is appropriate to use organigram form to present the structure of the human resources.

Based on the Centre's management mechanisms and human resources in place to date, identify concrete measures and actions for improvement. Provide the Centre's human resources information, including a description of the following mandatory elements:

- a. A staff management system, including the role of the responsible staff;
- b. Key personnel management functions;
- c. The skills and knowledge necessary for staff members and how these competence requirements have been or will be met by recruitment methods;
- d. Methods and indicators for monitoring and evaluation of staff performance;
- e. Processes preventing the loss of key staff will not lead to deviation from planned objectives, activities, results and budget;
- f. Mechanisms for attracting the scientific staff according to the needs of specific projects/contracts of the Centre. Such mechanisms should aim at preventing massive fluctuation of personnel and retaining their interest in the Centre allowing for maintaining their capacities (scientific, infrastructure and administrative) and sustainability;
- g. Information on whether the Centre has a developed "Regulations for the Institutional Implementation of the "European Charter for Researchers" with a "Code for the Appointment of Researchers". In this point, present the information applicable to the centre according to the general principles and requirements of the cited documents, which are observed by the centre in the appointment, in the selection of the researchers, in their financing and remuneration, as well as in relation to their professional development.
- h. Information on remuneration methods to ensure the effectiveness and efficiency of staff (e.g. contract and/or full-time recruitment for which of the posts is suitable and for which posts it is not effective). How the recruitment mechanisms correspond to identified sources of funding and to changes and specificities in the market environment (including the labour market);
- i. Plans concerning staff satisfaction surveys.

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Human resource management activities should be presented within a timeframe and linked to the main stages of the Centre's development.

5.9. Measures to increase the Centre's impact

Measures to increase the Centre's impact should be included in the “*Plan for the development and commercialisation of the own portfolio of intellectual property rights*” should be provided as Annex 6.

The following documents can be used:

- *Commission Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations*)

<https://op.europa.eu/en/publication-detail/-/publication/4cc4d955-3140-442e-b1e6-104abd0a5fd8>

- *JRC report “Strategic assessment of the Bulgarian CoEs/ CoCs and recommendations for their future development”*

https://ec.europa.eu/regional_policy/en/information/publications/reports/2021/strategic-evaluation-of-the-bulgarian-centres-of-competence-and-centres-of-excellence

- a. To promote the use of publicly funded research results and maximise their socio-economic impact, present in short (and in detail in the annex) all possible transfer mechanisms (such as licensing or setting up spin-off companies) as well as all transfer partners (such as spin-off companies or other companies, other public research organisations, investors, innovation support services/agencies), and choose the most appropriate ones.
- b. (Show that the Centre has access to professional knowledge transfer services or has hired consultants, experts in law, finance and trade, as well as intellectual property protection. In case the Centre intends to carry out technology transfer activities with own resources, it is necessary to demonstrate that it has internal capacity to do so.
- c. In addition, show that you are building capacity of current technology transfer office staff through continuous training of Technology Transfer Office (TT) staff. The focus should be on effective TT procedures and established TT channels, sources of funding, modern business development methodologies, creation of spin-off companies and raising funds to finance early-stage technologies (crowdfunding, early-stage financing, etc.), business planning, control and negotiation, and procedures for monitoring the use of research infrastructure.
- d. Provide a plan (in the annex) for licensing activities in order to harmonise practices within the Centre and ensure transparency in all transactions. Operating licenses must include adequate compensation, financial or other. You need to define the participants and responsibilities in the licensing process (management personnel, key researchers, technology transfer experts, others). Apply model licensing agreements with the observation of the requirements under State aid rules concerning “indirect aid”.
- e. Rationalise the process of setting up spin-off companies and encourage scientists and researchers to leave the security of laboratories and engage in commercial activities regarding the creation of spin-off companies even if not part of the active management of these projects.
- f. Determine the long-term relationship between spin-off companies and research organisation.
- g. Provide (in the annex) rules on the distribution of profits from knowledge transfer revenues between the public research organisation, the relevant department and inventors.

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6. FINANCIAL ANALYSIS

The financial analysis should be provided in an MS Excel format (as per the template in Annex 1) with formulas unlocked to allow for its review and evaluation, including verification of the financial results obtained.

When preparing the financial analysis, the main categories of cash flows should be included, such as:

Operating cash flows, including revenues and cash inflows.

Costs, including both investment (CAPEX) and operating costs (OPEX).

Relevant cash flows should be introduced until year 2033.

6.1. Historical figures

The financial information should be based on the presentation of a set of historical figures reflecting 3-5 years of activity prior to the project application. If the figures do not exist for the centre, they should be taken from the bodies whose activities the centre is taking over and presented cumulatively.

6.1.1. Cash-in flows, by source

Provide characteristics of the main categories of cash flows.

If the information cannot be provided from the Centre's cash flows, the historical data of the entities constituting (funding) the Centre should be provided to the extent that they will be transferred/attributed to the Centre. It is expected that the data should go back 3-5 years.

6.1.2. Costs by category

Provide characteristics of the main categories of cash outflows (expenditure). The cost structure should reflect the expected cost structure of the Centre.

If the information cannot be provided for the Centre, the historical data of the entities constituting (funding) the Centre should be presented to the extent that they will be transferred/attributed to the Centre.

6.2. Forecasted figures

Estimate the planned and realistic forecast cash flows for the coming years up to and including 2029.

6.2.1. Cash-in flows (incl. revenues) by source

Provide characteristics of the major categories of cash inflows.

The quantification and description of cash flows under this item should identify their main sources. It should also indicate the financial support needed to ensure the sustainability of the centre, taking into account, in addition to the identified financial sources, all co-financing

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agreements of the centre (including those concluded before the preparation of the business plan but with a period of implementation within the timeframe of the current business plan, as well as planned new ones); co-financing in kind by source/type and its links to operating costs, and an explanation of any conditions or limitations attached to such funding.

A table showing one possible way of presenting cash flows is provided in the financial template (Annex I). Except for an annual inflow in a given category of inflows, a method of estimation or reference to relevant agreements/awards/contracts and justification of the volumes based on certain assumptions (e.g. reference to past experience) is expected.

It is important to reconcile the information provided with the aggregated results presented in the financial template (Annex I).

6.2.2. Costs by category

Provide characteristics of the main categories of expenditure by cost category.

The table with an indication of a possible way of presenting the inflows is available in the financial template (Annex I). Except for an annual volume of costs in a given category, it is expected to present a method of estimation or reference based on certain assumptions. It is appropriate to ensure consistency with the description of the Research Work Packages (section 4.1) and the planned Complementary Actions (section 4.4), in particular as regards personnel costs.

It is important to reconcile the information provided with the aggregated results presented in the financial table (Annex I).

6.3. Financial sustainability

It is expected that the financial sustainability analysis in the annex will demonstrate that the cumulative cash flow of the centre will be zero (0) in all years of the analysis. A brief confirmation that this is the case or an explanation of why the result is different should be provided.

7. RISK MANAGEMENT PLAN

Identify potential risks, rank them in order of importance and identify appropriate measures to minimise and/or control and/or manage these risks. The risk management plan should cover at least the following risks:

1. *Demand risks*

2. *Design risks*

3. *Management and procurement risks*

3.1. Delays in obtaining planning permission;

3.2. Unsettled property rights - is this related to intellectual property rights or ownership of physical capital?

3.3. Delays in obtaining intellectual property rights or exceeding the estimated cost of obtaining them;

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3.4. Procedural delays in selecting a supplier and signing a procurement contract;

3.5. Difficulties in supply, whether during construction or operation or both.

4. *Construction risks*

4.1. Project delays and cost overruns during installation of scientific equipment separate delay and cost risks as the causes and consequences are different;

4.2. Lack of ready-made solutions in response to needs arising during the construction or operation of the infrastructure;

4.3. Delays in ancillary activities beyond the promoter's control.

5. *Operational risks*

5.1. Insufficient number of academic staff/researchers;

5.2. Unforeseen complications in the installation of specialised equipment is construction risk; but problems in the operation of specialised equipment is operational risk.

5.3. Delays in bringing equipment into full and reliable operation Construction risk; problems in achieving full capacity - Operational risk

5.4. Unintended environmental impacts/accidents this can also occur during construction

6. *Financial risks*

6.1. Insufficient financial commitment at national/regional level during the exploitation phase;

6.2. Inadequate forecasting of financial income - materialised income lower than expected, not just poor forecasting;

6.3. Failure to meet user demand - does this mean that your offer does not meet market demand in terms of quality or quantity? The consequence is a lack of revenue, which is a financial risk, but the current wording would go under demand risk;

6.4. Insufficient funds for patent and trademark registration.

6.5. Loss of existing customers/users due to competition from other research centres - also a demand risk.

7. *Risks related to the sustainability of research results as a result of the established and functioning research infrastructure - this is a demand risk*

7.1. Obsolescence of part of the centre's equipment (due to delays in the execution of public procurement contracts, commissioning of equipment or other reasons) and thus under-utilisation of the established research infrastructure - demand risk;

7.2. Mismatch between research results and products and market expectations/stakeholder demand - demand risk;

7.3. Slow or late market uptake of innovation (with insufficiently flexible design cycles) - demand risk;

7.4. Insufficient commercialisation of research results compared to what was originally planned, which essentially means lower than expected revenues, as already mentioned;

7.5. Difficulties in identifying/finding potential clients and concluding research contracts - demand risk.

Assess the risk by rating the potential impact of the above risks (and any additional risks you may have identified) and the likelihood of their occurrence on a scale of 1 to 5:

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Weight	Probability of occurrence	Influence of Risk
1	There is almost no probability of occurrence.	Insignificant influence of the respective risk
2	Probability is below average	Influence is below average
3	Average probability	Average Influence
4	Probability is above average	Influence is above average
5	It has already happened due to an event.	Catastrophic influence

Prioritise the project risks:

Columns 2 and 3 are to be filled in for each risk according to the scale in the previous table.

- Prioritise the project risks before identifying measures to address and/or manage these risks:
- *Priority 1 - Critical risks:* These are the risks that have both factors and are estimated to be greater than or equal to 3. They require immediate attention and detailed consideration of risk management activities.
- *Priority 2 - Contingency risks:* Risks that need to be managed before "systemic risks" because their impact may be significant, although the likelihood of their occurrence is lower than that of "critical risks".
- *Priority 3 - Systemic risks:* These risks have a high probability of occurrence but a relatively low impact. Precautions are usually taken against such risks. The effect of accumulation should be considered, e.g. a series of small problems with a high impact in the event of accumulation or systemic disruption.
- *Priority 4 - Irrelevant risks:* Risks for which both factors have been scored below 3. Based on the risk suitability level, they may or may not receive attention, depending on available resources and stakeholder requirements.



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List of annexes

Annex 1 Financial analysis – Excel format

Annex 1a Budget calculation for the projects of the existing CoE and CoC to be funded under PRIDST with Methodology for determining the budget of the existing CoE and CoC to be funded under PRIDST

Annex 2 (to p. 1.5) Addressing the Centre-specific recommendations of JRC - completed separately for each centre

Annex 3 (to p. 4.2) Key scientific personnel

Annex 4 (to p. 5.6) Intellectual Property Policy and Rules

Annex 5 (to p. 5.6) Policy and rules for exploitation and commercialisation of research results, including a knowledge and technology transfer structure

Annex 6 (to p. 5.9) Plan for the development and commercialisation of the own portfolio of intellectual property rights

Annex 7 (Optional to p. 5.4) Plan to use the research infrastructure