TEYRIS

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INTERNATIONAL WORKSHOP

Sources of funding for Research, Development & Innovation projects

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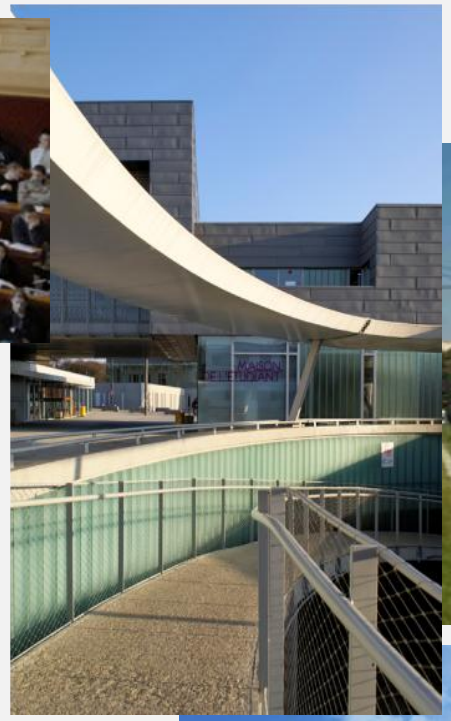
INSA VALOR



université
lumière
lyon 2

Le choix de l'alternance
IUT Lumière Lyon 2

UNIVERSITÉ LUMIÈRE LYON 2 (ULL)

- University of Lyon was founded in 1875, ULL was founded as it is in 1973
- 29 000 students (including 4650 foreign students 16%)
- 13 faculties and institutes
- 220 State degrees (under-, post-, graduate)
- 7 Doctoral schools
- 1200 PhD students
- 33 Research Labs (including 20 University-CNRS research units)
- 2000 teaching staff

UNIVERSITÉ LUMIÈRE LYON 2 (ULL)

- University Lumiere Lyon 2 is part of the University of Lyon
- University of Lyon is the most important French University site outside Paris area.
- University of Lyon brings together in a unifying structure 11 higher education and research institutions of the Lyon/Saint Etienne area.

- 130 000 students
- 11 500 teacher-researchers
- 5 700 PhD students
- 180 public research laboratories

ULL STRATEGY FOR SOURCE OF FUNDING

- Funding opportunities are **continuously investigated according to funding institutions**: internal opportunities, regional, EU frameworks, other international organizations.
- Funding **opportunities are differentiated according to type of calls** (teaching and training, basic research, collaborative research, mobility, infrastructure), or **according to primary beneficiary** (students, researchers, post doc, etc.).
- ULL university **develops public and private research partnerships** at national, European and international level. They can take several forms:
    - Collaborative research contracts
    - Grant agreements (ANR, H2020, Horizon, Erasmus+, etc.)
    - Provision of services or expertise

AGENDA

09h30 to 10h30 Conference

1. **Importance of Funding for Research, Development & Innovation**
2. **Managing Sources of Funding in Universities**
3. **Available Funding Sources and Opportunities**
4. **Strategies for Successful Grant Applications**

10h45 to 11h45 Round Table – Q&A

SOURCES OF FUNDING FOR R&D&I PROJECTS

1. Importance of funding for R&D&I in universities

“External funding is a means, not an end… So why must everyone seek it?”

"La financiación externa es un medio, no un fin... Entonces, ¿por qué debe buscarla todo el mundo?"

1. Importance of SoF for R&D&I

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Universities often rely on **external funding** for research and development for several reasons:

- Expanded research capacities, conduct high-quality research,
- Stimulating Innovation, drive technological advancements,
- Supporting Basic and Applied Research
- Attracting Top Talent
- Fostering Collaboration
- Addressing Societal Challenges (healthcare, Climate change, Industry 4.0…)
- Enhancing Reputation and Prestige (university visibility and impact on global scale)
- …

It plays a vital role in sustaining and advancing the mission of universities as **centers of knowledge creation and dissemination**.

1. Importance of SoF for R&D&I

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Higher education institutions (HEIs) are complex and sophisticated organisations. Most earn revenue from a **variety of sources**, in a majority of OECD countries (*OECD, 2019)* :

- Direct government funding
- Fees paid by domestic students
- International student fees
- **Research grants and contracts**
- Bequests and other forms of philanthropic giving
- Knowledge transfer (such as consultancy services, collaboration with industry…) and intellectual property revenue (such as licensing and patents)
- Trading (such as revenue from investments, charges from providing accommodation to students, sales of services and leasing facilities for conferences)

Other new sources of funding

- Crowdfunding and Public Donations: Innovative methods for raising funds from the public
- Venture Capital and Start-up Incubators: Role of venture capital and incubators in supporting university start-ups

1. Importance of SoF for R&D&I

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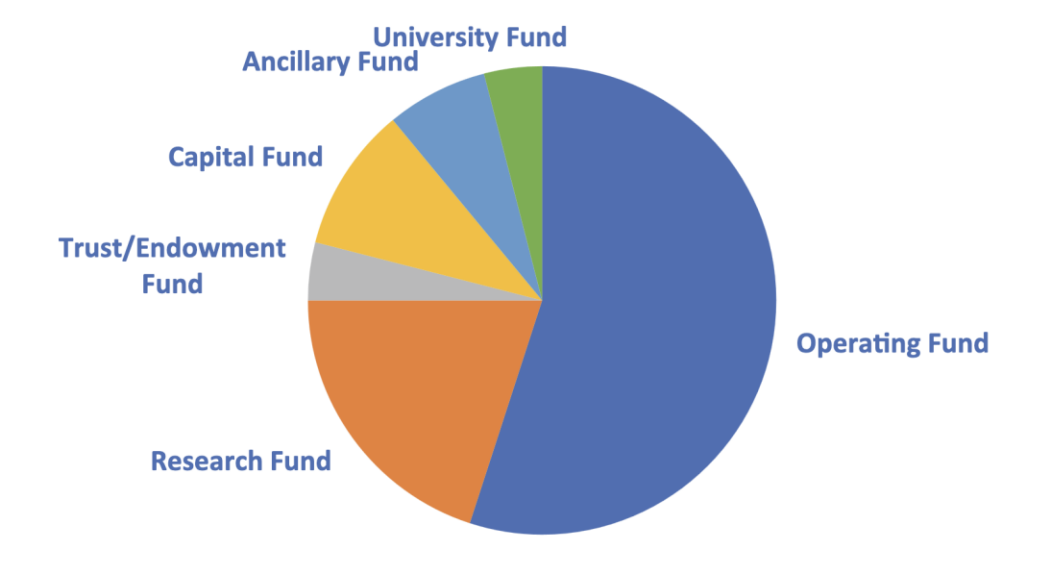
While there is a dedicated **Operating Fund** that oversees the majority of university expenses, there are several funds that help universities categorize their budgetary and resource needs:



Fund distribution of a typical Research University [Hamdullahpur, F., 2021]

- **Operating Fund:** Government grants and student tuition fees
- **Research Fund:** Funds dedicated for research
- **Trust Fund and Endowment Fund:** university has many trusts and endowments, most of which support scholarships, Chairs, and student activities
- **Capital Fund:** Specifically, to support building repairs and related maintenance and alterations
- **Ancillary Fund:** The ancillary enterprises pay the university for space, utilities, administrative services, and maintenance from the revenues they receive
- **University Fund:** A special pocket of funds, raised through a taxation process for each Faculty, is used to fund initiatives proposed by deans.

Source: Hamdullahpur, F. (2021). Making Choices: Matching Sustainable Funding with Strategic Priorities in Higher Education. In: AI-Youbi, A.O., Zahed, A.H.M., Atalar, A. (eds) Int. Experience in Developing the Financial Resources of Universities. Springer

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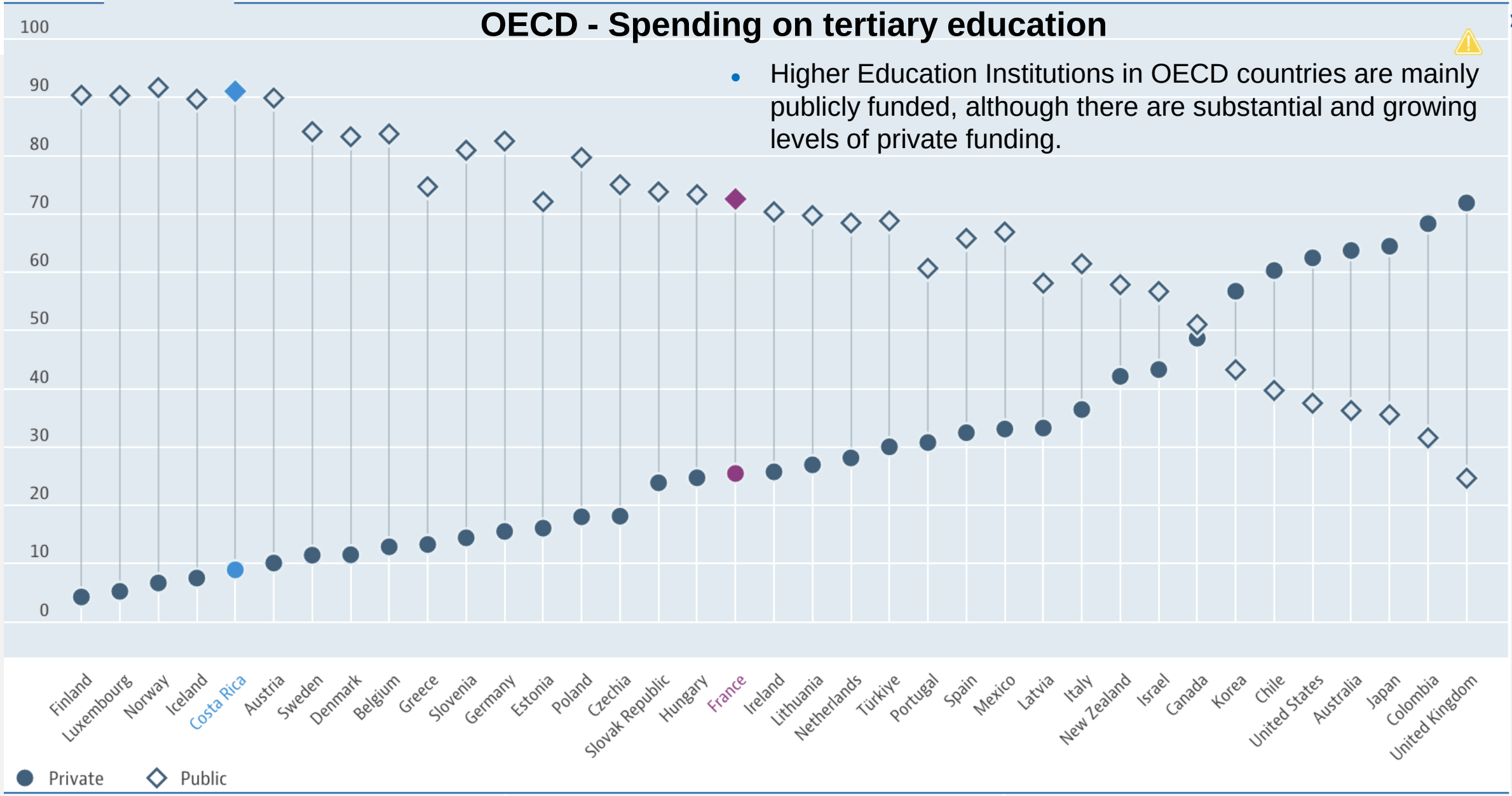
OECD - Spending on tertiary education

- Higher Education Institutions in OECD countries are mainly publicly funded, although there are substantial and growing levels of private funding.



Source: OECD (2024), Spending on tertiary education (2022 indicators). doi:10.1787/a3523185-en

1. Importance of SoF for R&D&I

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"Resource mobilisation is aimed at improving organisations capacity to mobilise funds and involves engagement with stakeholders and management processes and not only the securing of funds" (Johnson et al., 2018)

- Different types of research in different disciplines have different funding requirements: **Basic research**, **Applied research**, **Development projects** and **Innovation initiatives**.

- The main **roles of the Research Management** are:
  - to identify and disseminate research funding opportunities
  - to work closely with researchers since it is vital for securing and managing research funding
  - to optimise research funding strategies

SOURCE OF FUNDINGS FOR R&D&I PROJECTS

2. Managing Sources of Funding in Universities

“The key principles, models, and processes of funding for R&D and Innovation in universities”

"Los principios, modelos y procesos clave de la financiación de la R&D&I en las universidades"

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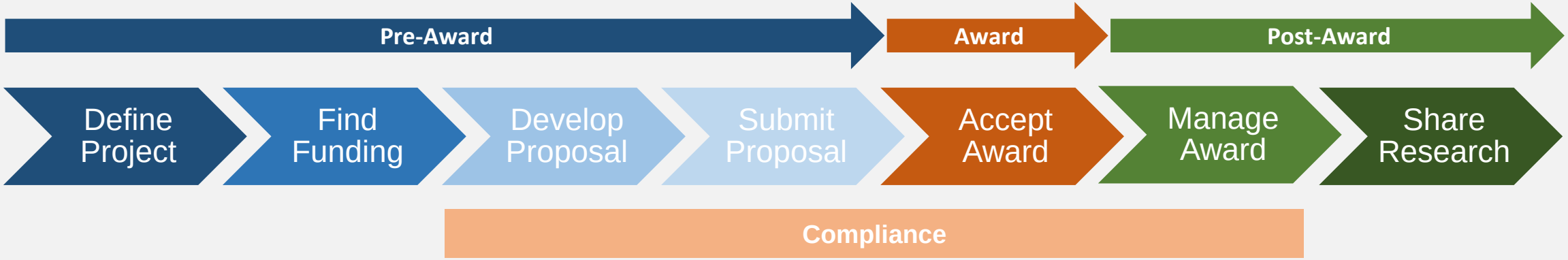
Managing sources of funding for research, development and innovation in universities requires a structured and efficient process

Global Process Overview



Source: *Berkeley University Research Management:* https://vcresearch.berkeley.edu/grant-life-cycle/overview

2. Managing Sources of Funding in Universities

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Detailed view of the overall process

By following this **“ideal process”,** universities can effectively manage SoF for R&D&I, maximize the impact of research investments, and contribute to the advancement of knowledge and societal welfare.

1.Strategic Planning and Prioritization

- Define the research priorities, goals, and objectives
- Identify key areas of research and innovation where funding is needed

Identification of Funding Opportunities

- Monitor and identify funding opportunities
- Maintain a database to track funding opportunities

Grant Proposal Development

- Encourage researchers to develop competitive grant proposals
- Provide support and resources

4.Proposal Review and Approval

- Establish an Internal review process
- Convene a review committee to assess the scientific merit, innovation, impact of the proposal

Grant Management and Administration

- Establish clear guidelines and procedures
- Assign dedicated project managers to oversee budget management

1.Financial Accountability and Transparency

- Implement robust financial management systems to monitor grant expenditures
- Provide regular financial reports to principal investigators to keep them informed (milestones)

Promotion of Collaboration and Partnerships

- Facilitate collaboration between researchers, industry partners, gov. agencies…
- Encourage interdisciplinary collaborations and cross-sectoral partnerships to address complex challenges and maximize the impact of the research outcomes

Impact Assessment and Evaluation

- Develop mechanisms for assessing the impact and outcomes (publications, patents…)
- Conduct periodic evaluations and reviews of funded projects to identify lessons learned, best practices

4.Continuous Improvement and Adaptation

- Regularly review and refine the process for managing SoF for R&D&I projects
- Stay agile and adaptable to respond to evolving needs and opportunities in the research ecosystem

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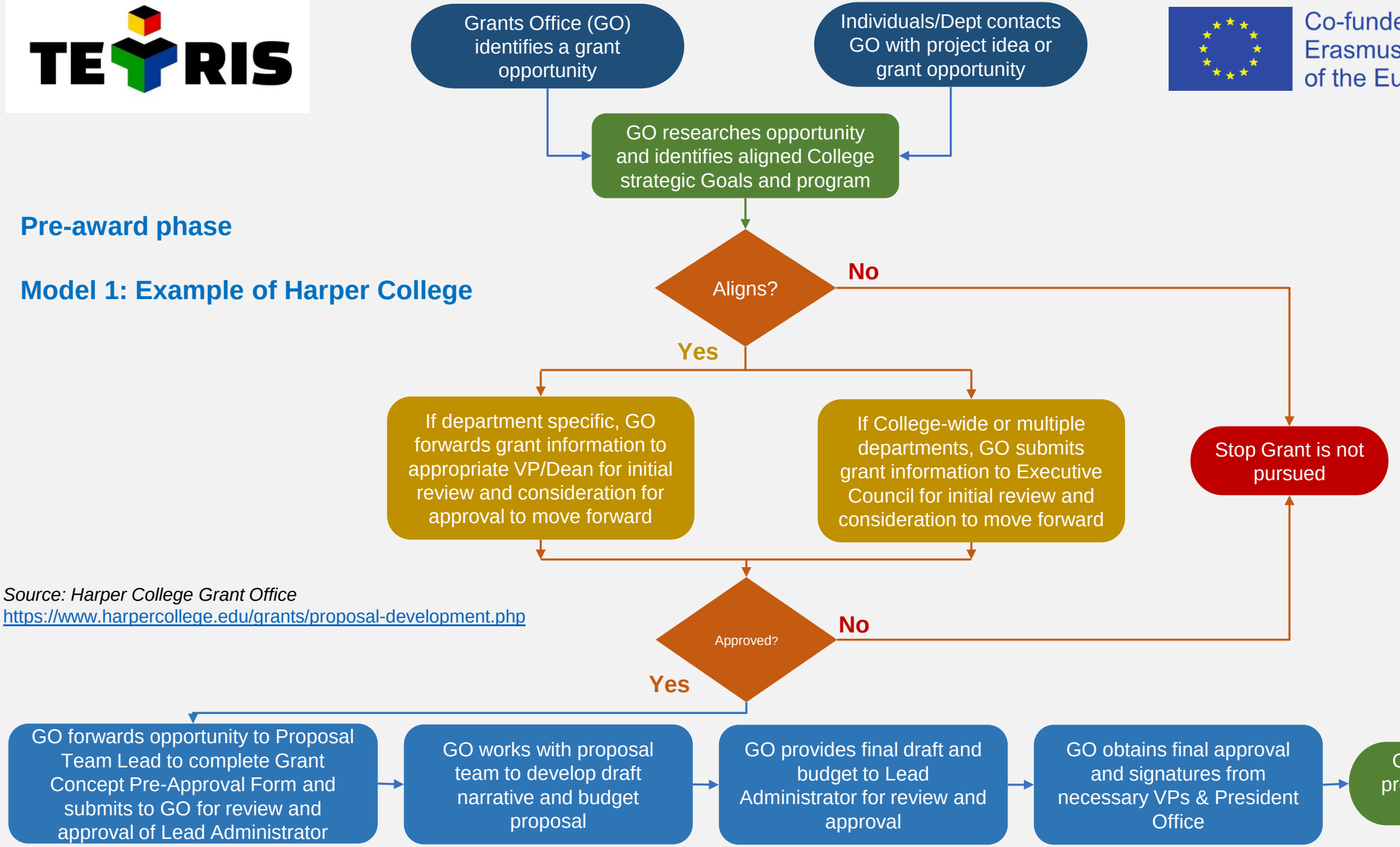
Pre-award phase

Model 1: Example of Harper College



Source: Harper College Grant Office
https://www.harpercollege.edu/grants/proposal-development.php

2. Managing Sources of Funding in Universities

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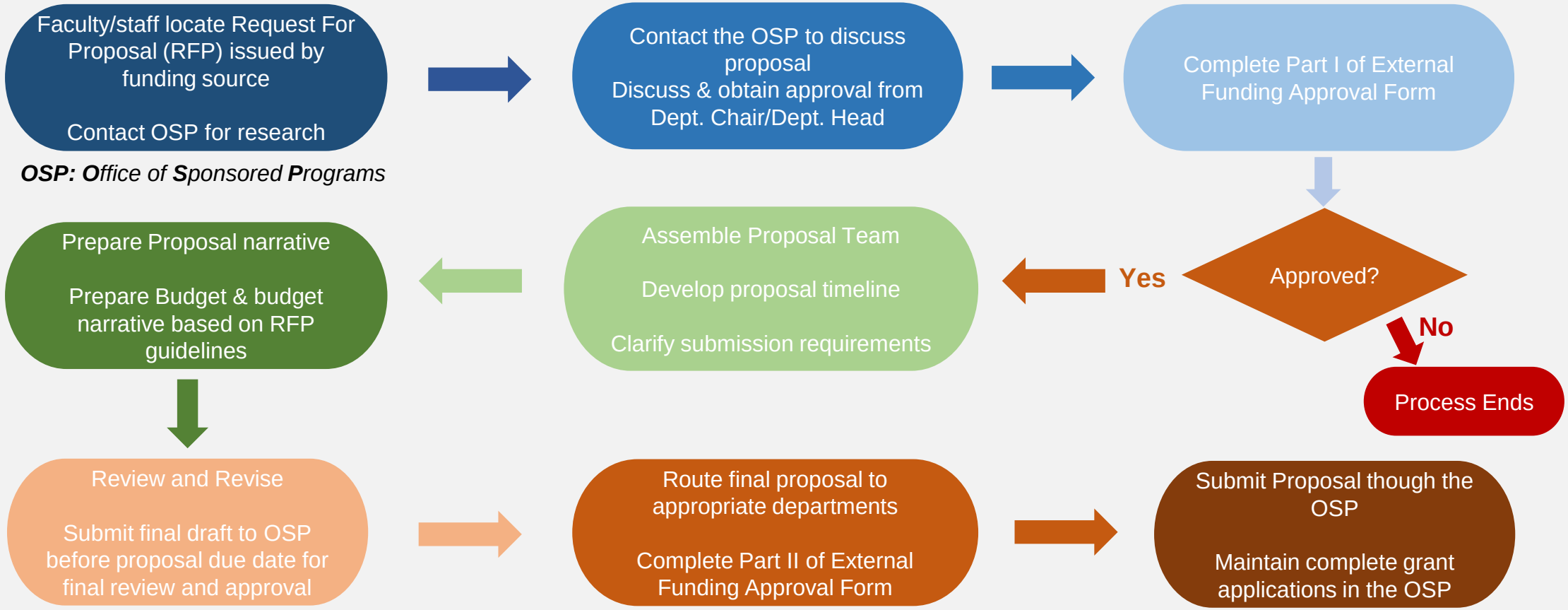
Pre-award phase

Model 2: Example of Lake Superior State University



OSP: Office of Sponsored Programs

Source: Lake Superior State University
https://www.lssu.edu/office-of-sponsored-programs/identifying-funding-opportunities-and-university-procedures/

2. Managing Sources of Funding in Universities

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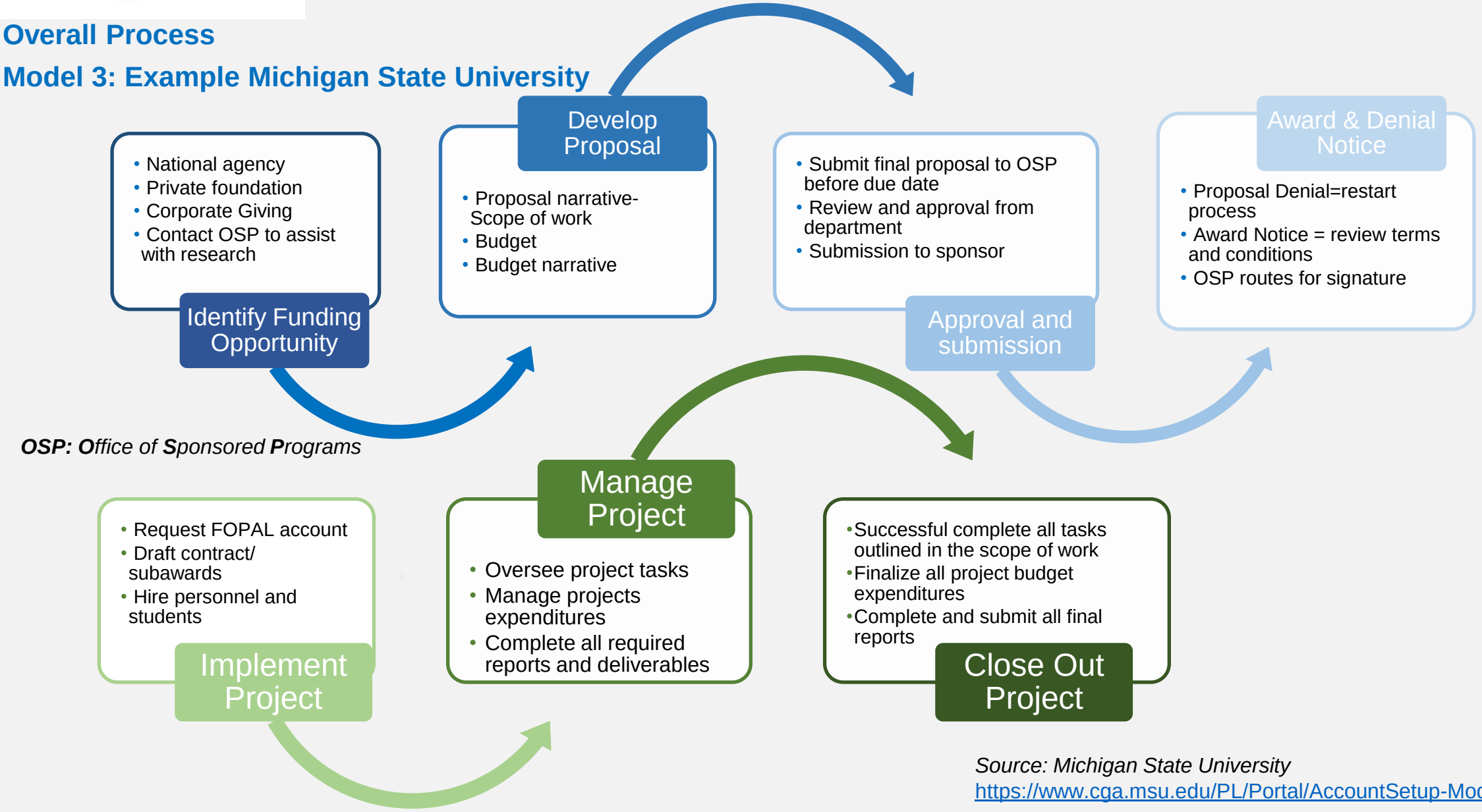
Overall Process

Model 3: Example Michigan State University

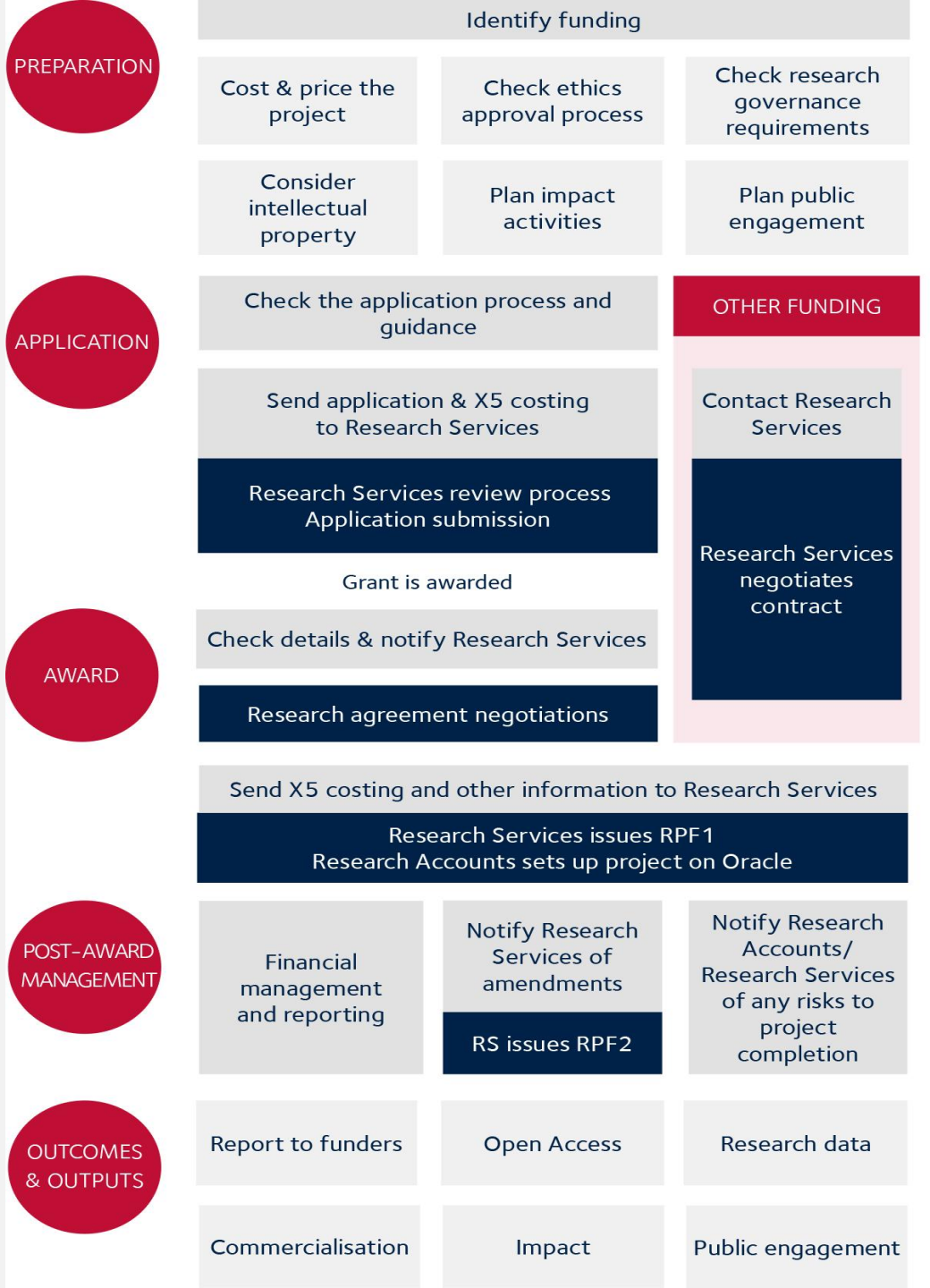


OSP: Office of Sponsored Programs

Source: Michigan State University
https://www.cga.msu.edu/PL/Portal/AccountSetup-Modifications.aspx

Detailed view of the overall process

Model 4: Example University of Oxford



Source: University of Oxford
https://researchsupport.admin.ox.ac.uk/research-process-overview

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- **X5** is the costing, pricing and approval tool used to support the costing of externally funded research
- **RPF 1:** Research Project Form
- **RPF 2:** Research Project Form 2: interim report

2. Managing Sources of Funding in Universities

Recommendations (1/2)

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1. Develop a Research Strategy

- A strategy that aligns with the university's overall goals and priorities
- Define the types of research you want to support
- Develop strategies for the long-term sustainability of research funding

1.1 Define the goals and needs

- Define your R&D&I objectives
- Assess your funding requirements

1.2 Networking & collaboration

- Build & maintain strong relationships within the research community, funding agencies, industry partners, & potential donors
- Attend conferences, seminars, and networking events relevant to TTO
- Encourage collaboration among researchers within the university and with external partners.
- Promote public engagement and communication about research activities.

1.3 Budgeting and financial Management

- Develop clear budgeting guidelines for research projects.
- Ensure that researchers understand how to manage project funds, including reporting requirements and financial accountability

1.4 Training & Capacity Building

- Offer training and capacity-building programs to enhance the research skills of staff and researchers

1.5 Grant Management Software

- Invest in grant management software to streamline the application, approval, and reporting processes for research grants.

1.6 Continuous Monitoring & Adaptation

- Regularly review your funding strategy and adapt to changing research priorities and opportunities
- Stay informed about emerging funding sources and trends in R&D&I

2. Managing Sources of Funding in Universities

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Recommendations (2/2)

2. Create a Research Funding Management Office

- Define roles and responsibilities
- Develop Procedures (SOPs)
- Establish a Funding Opportunity Database
- Staff Training
- Collaborate with & Support Researchers
- Reporting and Evaluation
- IPM & Ensure Compliance
- Promotion of Funding Opportunities & Networking

2.1 Identify Funding Sources

- Research and compile a list of funding sources
- Maintain a database and share it with researchers

2.2 Technology Transfer & Commercialization

- Create mechanisms for TT and commercialization of research outcomes.
- Setting up a TTO or collaborating with local industries to bring innovations to market

2.3 Support & Resources for researchers

- Inform researchers about the support and resources available to help them find and secure funding

2.4 Project Selection & Evaluation

- Explain the process for selecting research and innovation projects for funding.
- Discuss evaluation criteria used by funders to determine project eligibility.

2.5 Funding application & proposal writing

- Describe the steps (process) for applying for funding
- Provide training support
- Provide tips and Best Practices

2.6 Compliance and Accountability

- Address the importance of compliance with funding guidelines & regulations
- Highlight the consequences of non-compliance
- Implement robust ethical standards and compliance measures for research projects

2.7 Managing & reporting funding

- Discuss financial Mgmt. principles & reporting requirements for funded projects
- Explain the importance of tracking & reporting on how funding is used
- Establish a rigorous review process for research proposals

2.8 Monitoring & Evaluation

- Develop systems to monitor and evaluate the progress and impact of research projects
- Regularly assess whether projects are meeting their objectives and making meaningful contributions

2. Managing Sources of Funding in Universities

Summary: The 16th Commandments

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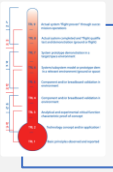
Strategic planning

Diversify Funding Sources

Continuous Scanning and Monitoring

Proposal Development Excellence

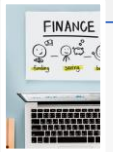
Collaborative Approach



Technology Readiness Assessment

Impact Focus

Match Funding Sources to Project Goals



Financial Accountability

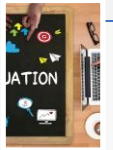
Resources Optimization

IP Management

Ethical Consideration

Post-funding Communication

Knowledge Transfer & Commercialization



Evaluation & Learning

Sustainability & Long-Term vision

Adhering to these good practices can enhance your university's ability to secure funding, efficiently manage resources, and drive meaningful innovation and research outcomes.

Summary: The 16th Commandments

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- **Strategic Planning:** Begin with a well-defined R&D strategy that aligns with your organization's goals and mission. Clearly articulate the objectives, priorities, and desired outcomes of your R&D efforts.
- **Diversify Funding Sources:** Don't rely solely on one source of funding. Seek a mix of public and private sector funding, grants, partnerships, and collaborative opportunities to reduce dependency and manage risk.
- **Continuous Scanning and Monitoring:** Establish a system for ongoing monitoring of funding opportunities. Stay informed about new grants, competitions, and programs related to your field. Tools like funding databases and newsletters can be invaluable
- **Proposal Development Excellence:** Invest in the development of high-quality grant proposals. Craft compelling narratives that clearly convey the significance and potential impact of your R&D project
- **Collaborative Approach:** Explore collaborative projects with industry partners, other research institutions, or international counterparts. Collaborations can enhance access to funding and resources while promoting knowledge sharing
- **Technology Development Readiness Assessment:** Assess the readiness level of your technology or innovation using established frameworks like Technology Readiness Levels (TRLs). This helps align funding requests with the maturity of your project
- **Diversify Project Portfolio:** Maintain a diverse portfolio of R&D projects, including long-term, exploratory research, and shorter-term, applied projects. Balance high-risk, high-reward endeavours with more predictable initiatives.
- **Impact Focus:** Emphasize the potential societal or economic impact of your research in grant proposals. Demonstrating how your work addresses real-world challenges can make your project more attractive to funders

Summary: The 16th Commandments

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- **Match Funding Sources to Project Goals:** Choose funding sources that align with the specific goals and requirements of your R&D project. Tailor your proposals to meet the criteria of each funding opportunity
- **Financial Accountability:** Implement robust financial management practices to track and account for how funds are used. Ensure compliance with grant terms and reporting requirements
- **Resources Optimization:** Optimize the allocation of resources, including personnel and equipment, to maximize the impact of your R&D projects. Avoid duplication of efforts
- **Intellectual Property Management:** Develop a clear strategy for managing intellectual property (IP) resulting from your research. Understand the IP policies of funding agencies and protect valuable discoveries appropriately.
- **Post-Funding Communication:** - Keep funders informed of project progress, challenges, and successes. Maintain open lines of communication throughout the project.
- **Knowledge Transfer and Commercialization:** - Explore avenues for technology transfer and commercialization of research outcomes. Consider licensing, spin-off companies, or partnerships with industry for scaling innovations.
- **Evaluation & Learning:** Continuously evaluate the impact and outcomes of R&D projects. Use this feedback to improve future project proposals and practices
- **Sustainability and Long-term Vision:** - Consider the long-term sustainability of your R&D initiatives. Seek opportunities to secure ongoing funding for successful projects.

3. Available Funding Sources and Opportunities

Focus on EU Grants Opportunities

3. Available Funding Sources and Opportunities

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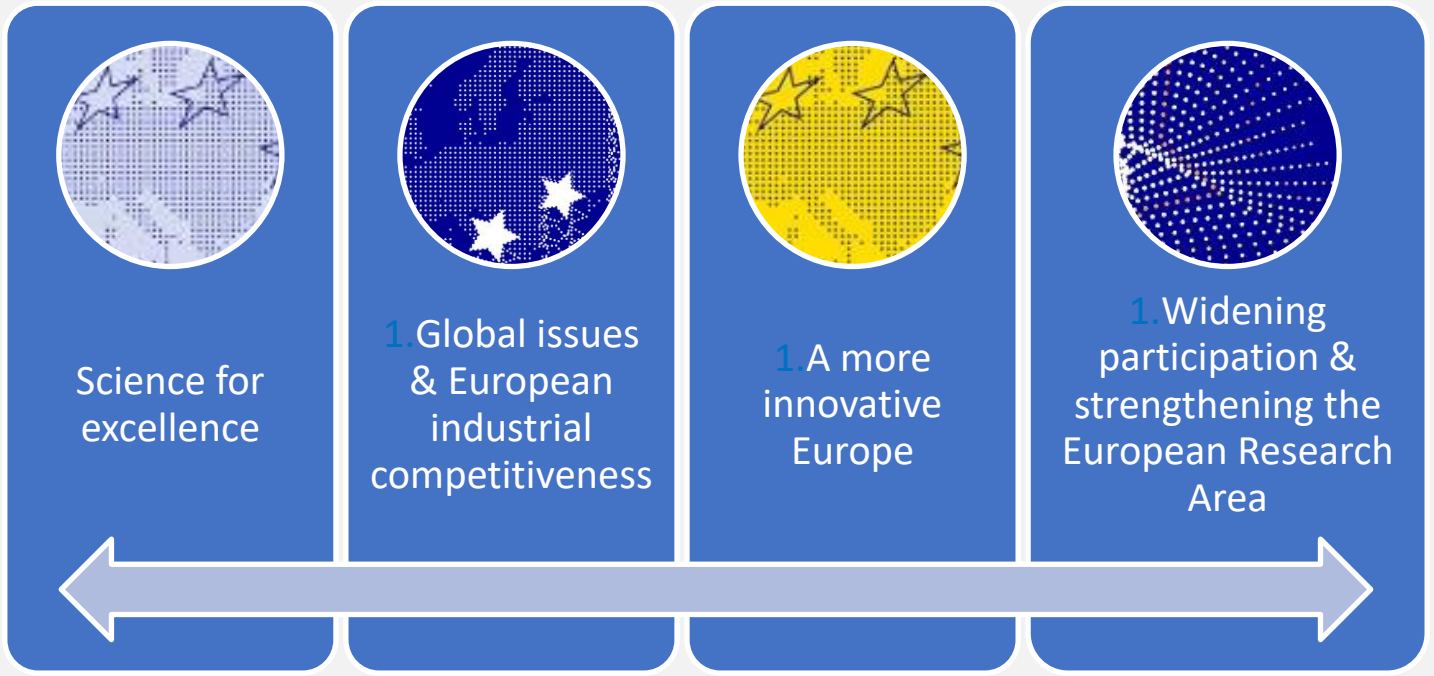
"European Funding"

- Horizon Europe is the framework program for research and innovation for the period 2021-2027 (It follows on from the H2020 program). https://www.horizon-europe.gouv.fr/
- This framework program has a budget of €95.5 billion over 7 years (+30% compared to the H2020 program).
- Activities are carried out through **Calls for Projects**.
- It is structured around **4 pillars**:



3. Available Funding Sources and Opportunities

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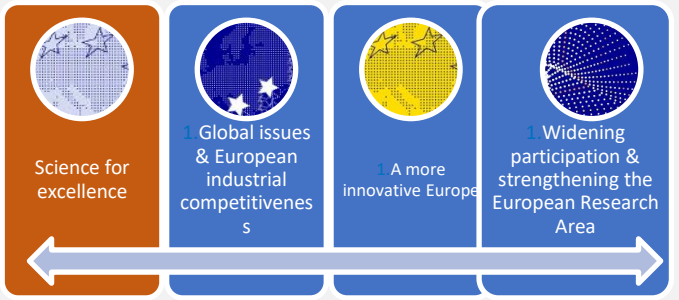
"European Funding"

Pillar 1 - Science for excellence



- The Science of Excellence pillar supports fundamental research projects through the **European Research Council (ERC)** and mobility, training through research and career development actions through the **Marie Sklodowska Curie Actions**.

- It also supports the networking, access and development of research infrastructures.

1. **MSCA - M**arie **S**klodowska **C**urie **A**ctions
2. **ERC - E**uropean **R**esearch **C**ouncil

3. Available Funding Sources and Opportunities

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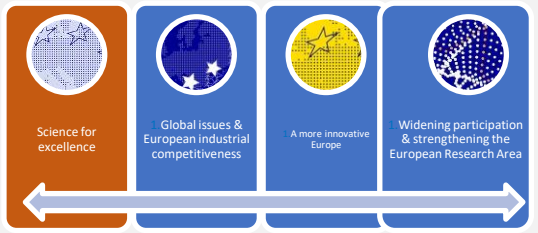
"European Funding"

Pillar 1 - Science for excellence



1. **MSCA - M**arie **S**klodowska **C**urie **A**ctions

Objectives

- Promote researchers' careers through the acquisition of new knowledge and skills.
- Encourage the mobility of researchers between countries, sectors and disciplines.
- Facilitate synergies and bring research closer to the general public.

a. Postdoctoral fellowship program

The aim is to develop and relaunch the careers of great potential researchers, given their experience, by strengthening the skills and innovative potential through individual research projects in international and cross-sectoral mobility in all fields of research. Two types of mobilities:

- **European Fellowship (EF):** to a European institution (member states and associated countries) for 12 to 24 months
- **Global Fellowship (GF):** to a third country ("secondment") for a period of 24 to 36 months

b. Doctoral Network Program

This program, aimed at doctoral students, supports joint research and doctoral training programs implemented by partnerships between universities, research institutes, companies and other socio-economic players.

The aim is to develop the transferable skills of researchers opening up career prospects in the academic and non-academic world through international, interdisciplinary and intersectoral collaborations (4 years)

3. Available Funding Sources and Opportunities

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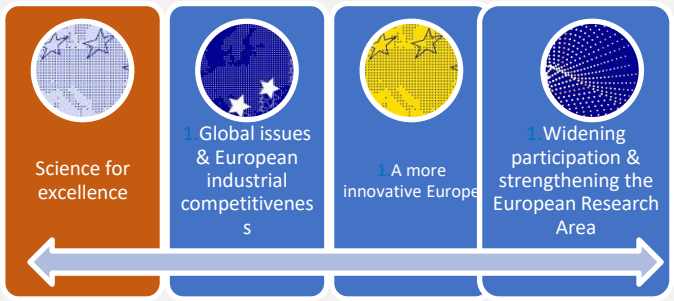
"European Funding"



Pillar 1 - Science for excellence

2. ECR - European Research Council

ERC Web site

The **European Research Council (ERC)** funds exploratory research projects at the frontiers of knowledge, in all fields of science and technology. A single evaluation criterion: **Scientific Excellence**.

The **ERC** is a "white" scientific program, with no thematic constraints and entirely "bottom-up". Researchers must carry out their research in one of the EU member states or in one of the countries associated with Horizon Europe, without any nationality criteria.

The ERC program offers five types of individual grants:

- Starting Grant, for researchers who have completed their thesis 2 to 7 years previously;
- Consolidator Grant, for researchers whose thesis is more than 7 years old and up to 12 years old;
- Advanced Grant, for established researchers;
- Synergy Grant, for collaborative projects involving two to four researchers at any stage of their career;
- Proof of Concept, dedicated to supporting the valorization of the results of an ERC project still in progress or recently completed.

3. Available Funding Sources and Opportunities

"European Funding"

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Pillar 2 - Global issues and European industrial competitiveness

The "Global Issues and European Industrial Competitiveness" pillar aims to support work and research related to societal issues such as, among others, health, an inclusive, creative and safe society, digital, industry, as well as food, bioeconomy and natural resources.

Type of project: Collaborative projects: at least 3 partner organizations from 3 different EU or associated countries. In addition to these 3 partners, organizations from other countries might be able to join the consortium. Usually, 5 to 8 partners.

The Call for Projects are published on the EU website "Funding & tender opportunities"

6 Clusters are defined:

1. **Cluster 1 – "Health"**
2. **Cluster 2 – "Culture, creativity and an inclusive society"**
3. **Cluster 3 – "Civil security for society"**
4. **Cluster 4 – "Digital, Industry and Space"**
5. **Cluster 5 – "Climate, energy and mobility"**
6. **Cluster 6 – "Food, bioeconomy, natural resources, agriculture and environment"**

3. Available Funding Sources and Opportunities

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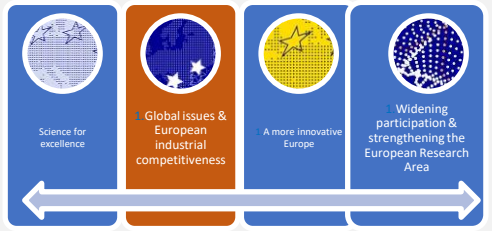
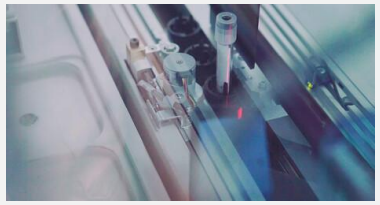
"European Funding"



Cluster 1 – "Health"



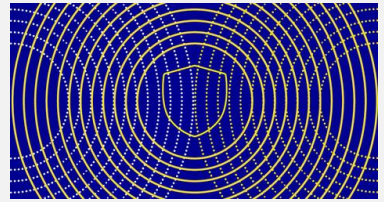
- Lifelong health
- Environmental and social health determinants
- Rare and non-communicable diseases
- Infectious diseases, including poverty-related and neglected diseases
- Digital tools, technologies and solutions for health and healthcare, including personalized medicine
- Healthcare systems

Cluster 2 – "Culture, creativity and an inclusive society"

- Democracy and governance
- Cultural heritage
- Economic and social transformation

Cluster 3 – "Civil security for society"

- Disaster resilient societies
- Protection and safety
- Cybersecurity



3. Available Funding Sources and Opportunities

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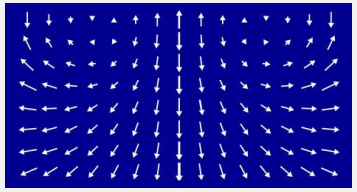
"European Funding"

Cluster 4 – "Digital, Industry and Space"

- Manufacturing technologies
- Key digital technologies
- Emerging generic technologies
- Advanced materials
- Artificial intelligence and robotics
- Next-generation Internet
- Advanced computing and megadata
- Circular industries
- Clean and low-carbon industries
- Space, including Earth observation

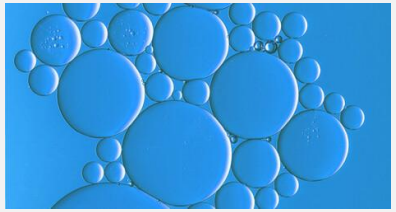
Cluster 5 – "Climate, energy and mobility"

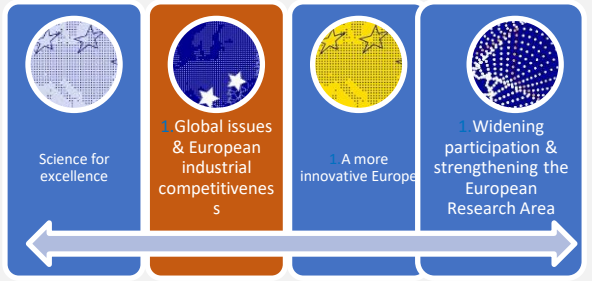


- Climatology and climate solutions
- Energy supply
- Energy systems and networks
- Buildings and industrial facilities in energy transition
- Communities and cities
- Industrial competitiveness in transport
- Clean, safe and accessible transport and mobility
- Intelligent mobility
- Energy storage

Cluster 6 – "Food, bioeconomy, natural resources, agriculture and environment"

- Environmental observation
- Biodiversity and natural resources
- Agriculture, forestry and rural areas
- Seas, oceans and continental waters
- Food systems
- Bio-innovation systems in the EU bioeconomy
- Circular systems





3. Available Funding Sources and Opportunities

“European Funding”

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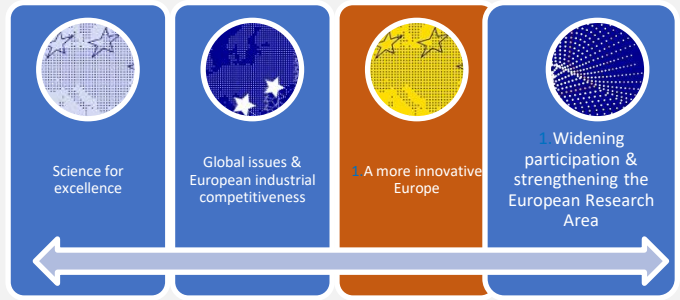

Pillar 3 - A more innovative Europe

With the creation of the European Innovation Council, this pillar aims to support innovation.

In particular, it will be implemented through a new panel of more flexible instruments specifically dedicated to this type of activity: Pathfinder (via subsidies for disruptive technological projects) and Accelerator (mixed EIC financing to support the growth of start-ups).

The Call for Projects are published on the EU website “Funding & tender opportunities”

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Sources of funding Databases

- There are databases with funding opportunities, also with advanced search features such as for example:
  - EU research grants: https://research-and-innovation.ec.europa.eu/funding/funding-opportunities_en
  - Pivot: https://pivot.proquest.com/
  - Grant Resource Center: https://aascu.org/resources-expertise/grc/
  - Sponsored Programs & Information Network (SPIN): https://spin.infoedglobal.com/
  - Foundation Directory Online: https://fconline.foundationcenter.org/
  - Funding your research and international mobility in the Social Sciences and the Humanities: https://fundit.fr/en
  - …

SOURCE OF FUNDINGS FOR R&D&I PROJECTS

4. Strategies for Successful Grant Applications

The TTO INSAVALOR Example

Dr Hakim FERRIA
European Projects Manager
RM Roadmap Ambassador for France
INSAVALOR

AGENDA

09h30 to 10h30 Conference

1. **Importance of Funding for Research, Development & Innovation**
2. **Managing Sources of Funding in Universities**
3. **Available Funding Sources and Opportunities**
4. **Strategies for Successful Grant Applications**

10h45 to 11h45 Round Table – Q&A


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