



Project Concept to Completion Proposal; Project Management, and Quality Assurance, Data Management

(Capacity Building Training)

ERASMUS+ LETSEMA

28th Oct 2025

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Topics for Discussion

- Grant Proposal Preparation-Brijesh (30 min)
- Project Management and Quality Assurance- Ashmin (40 min)
- Data Life Cycle and Management-Gustavo (30 min)



Writing a Research Proposal/Application

--Sharing reflection from my experiences—

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Whats is Grant Proposal Writing for you?

Grant proposal writing is the process of preparing a structured, persuasive document submitted to a funding organization to request financial support for a specific project, program, or research initiative. It aims to clearly explain **what** you plan to do, **why** it matters, **how** you'll do it, and **how the funds will be used**.



Grant Proposal Writing (GPW) Humor- Because We Need a Laugh

☞ GPW is like writing a wish list... with an expectation-
Santa is in the panel of evaluators.



☞ GPW is not only about understanding state of art, but
also about knowing art of begging in academic style.



Hard Reality of Grant Applications-I

- ❖ Rejections happen—regardless of whether the grant is large or small.
- ❖ Each rejection hurts, as every application demands significant time, effort, and attention to detail.
- ❖ Some success does not guarantee the others. Each proposal is unique and demands equal effort
- ❖ Learning from Failure and Success is key for keep on going
- ❖ In academia, **grant deadlines are often the only deadlines that truly matter.**



Hard Reality of Grant Applications-II

- ❑ **Carol Greider** (American biochemist) learned her grant proposal was rejected the same day she won the Nobel Prize in 2009.
- ❑ **Harold Kroto** (British Chemist) had a funding application denied just hours before being awarded the Nobel Prize in Chemistry in 1996.
- ❑ **Katalin Karikó** (Hungarian Scientist) faced repeated grant rejections and was even demoted before her research on mRNA (messenger ribonucleic acid) vaccines against COVID-19 led to a Nobel Prize in 2023.



We should keep ourselves motivated acknowledging these hard facts

Reflection based on my experiences with Grant Proposal Writing

- Reflection based on my experiences with research proposal writing with transdisciplinary and systems-oriented approach, addressing renewable energy technologies, energy markets, policy design, behavioral dimensions, and broader sustainability issues—with a particular focus on energy efficiency and climate mitigation and adaptation in the built environment.
- Have led and contributed as Principal Investigator (PI) or co-applicant to projects totaling over 53.8 million SEK in funding (FORMAS, the Swedish Research Council VR, the KK Foundation, and the EU).
- Of this, secured 34.2 million SEK as the PI/project manager at LNU.

Name of the project (Click the link for the detail project info)	Funding Agency	Project duration	Budget (MSEK)	Applicant
1. Climate Smart Renovation (CSR) Model for Energy Efficiency and Climate Resiliency	Formas	2025-27	4.0	M
2. How prepared Swedish detached houses to adapt to Climate Change	Formas	2022-25	7.9	M
3. Harnessing Synergies and minimizing Trade-off among Deep Renovation measures and decarbonizing District Heating system.	Formas	2022-25	3.9	M
4. Sectoral preparedness for deep renovation of detached households: from research to practice	Formas	2019-21	2.0	M
5. Sustainable conditions for a circular and bio-based economy	Formas	2018-21	5.04	C*
6. Doctoral school in Sustainable energy engineering (SEED)	VR	2022-25	7.46	C*
7. Low-Carbon Economy Transformation through Sustainable Energy Modernization and Access in Lesotho (LETSEMA)	Erasmus+	2023-26	4.2	C*
8. Promoting building retrofits in through OSS in Germany	Horizon 2020	2020-23	0.671	C
9. FBB- Future Baltic Bauhouse	Interreg South Baltic	2024-27	1.6**	C
10. Circular Trust Building - CTB	Interreg North Sea Region	2023-26	5.0**	C
11. Sustainable housing for strong communities (Strong-house)		2020-22	2.6**	C
12. Scaling up energy renovation through smart design and OSS model	KK-Stiftelsen	2021-24	7.0	C
13. Biogas based poly-generation for rural development in Bangladesh	VR	2011-14	2.7	P

M as main applicant. C* as Co-applicant/Project manager at LNU. P-Participating researcher ** Budget for LNU



Some inspiration for writing proposal

Every big project begins with a small concept note — so start where you are, and let your ideas grow...

Don't wait for the perfect idea; write, refine, and let your development process shape the proposal...

Prior-Check points for developing proposal to the specific call-I

Eligibility Check

- Need to look at: what kind of projects were funded under this kind of call
- If possible, discuss your idea with the person who have previous experience with the same or similar call from the agencies.
- Confirm whether your institution or consortium is eligible to apply. Some calls may allow multiple submissions, but fund only one per organization.
- Note that previous grant recipients may be restricted from applying as principal applicants in subsequent rounds but might be eligible to apply as Co-applicant.

Alignment check

- Assess whether your research aligns with the **specific objectives and thematic focus** of the call. Review the call text carefully to understand what kinds of projects they are prioritizing.
- Make sure your proposal clearly demonstrates how it contributes to the funder's mission and addresses the core issues outlined in the call.
- Consider whether your approach, setting, and target societal goals are a good match for the types of projects the funder has supported in the past.



Prior-Check points for developing proposal to the specific call-II

Strategic Fit and Readiness Check

- Evaluate whether your team (own team or consortium) has the capacity, partnerships, and experience to successfully implement the proposed work.
- Idea must be developed **along with relevant partners**. Making right match with competence, gender balance regional balance, appropriate societal partners are equally important.
- Think strategically: if you're not currently eligible or ready, it may be better to wait and strengthen your positioning for a future round.



Critical Elements of a Competitive Research or Innovation Grant Proposal (EU, National, or Regional)-I

Alignment with the Call and Policy Priorities

Show clear understanding of the call's goals and how your project supports relevant national, regional, or international strategies.

Clear and Credible Impact Pathways

Define expected outcomes and long-term benefits (social, economic, scientific) and how they will be achieved and measured.

Scientific or Technological Excellence

Highlight the project's novelty, relevance, and sound methodology that advances the current state of the art.

Strong Implementation Plan

Provide a structured, realistic work plan with clear tasks, timelines, deliverables, and responsible partners.

Complementary Partnership (if collaborative)

Assemble a well-balanced team or consortium with the right mix of skills, sectors, and geographic or institutional coverage.

Data Management Plan (DMP)

Outline how project data will be handled (collection, storage, sharing, reuse) in line with FAIR and open data principles.



Critical Elements of a Competitive Research or Innovation Grant Proposal (EU, National, or Regional)-II

Exploitation, Dissemination & Communication Strategy

Explain how results will be shared, used, and made visible to stakeholders, the public, or relevant markets.

Transparent and Justified Budget

Present a cost-effective budget aligned with the work plan, showing value for money and clarity of resource use.

Risk Management

Identify key risks (technical, legal, managerial) and outline mitigation strategies with clear responsibilities.

Ethics and Legal Compliance

Address relevant ethical issues and ensure compliance with legal and regulatory standards (e.g. GDPR, research ethics).

Gender and Inclusiveness

Promote gender balance and diversity in the team and consider inclusiveness from the project design till impact level.

Public Value and Sustainability

Justify public funding and explain how the project delivers lasting benefits, scalability, or long-term use beyond funding.



Proposal Self Evaluation: Critical Inquiry Framework for Research Proposals

1. Problem Identification

- Does the proposal demonstrate that the research addresses a genuine gap in knowledge or a problem of societal, industrial, or scientific significance?
- Does the proposal establish the urgency and importance of the problem in order to justify funding?
- Does the literature review critically evaluate existing work to highlight how this project is distinct?

2. Purpose & Justification

- Does the proposal explain why limited research funds should be allocated to this project instead of others?
- Are the expected impacts, whether theoretical or practical, clearly articulated?
- Is the justification supported with solid evidence rather than overstated claims?

3. Methodological Design

- Are the chosen methods rigorous, ethical, and cost-effective in addressing the research questions?
- Does the proposal demonstrate consideration of alternative approaches and justify the chosen design?
- Are the underlying assumptions critically examined, along with their possible effects on outcomes?



Proposal Self Evaluation: Critical Inquiry Framework for Research Proposals

4. Feasibility & Resources

- Are the proposed timelines and budget realistic and achievable?
- Does the proposal provide evidence of access to the required expertise, tools, and collaborations?
- Are potential risks acknowledged, with strategies to mitigate them?

5. Expected Output, results & Impact (ORI)

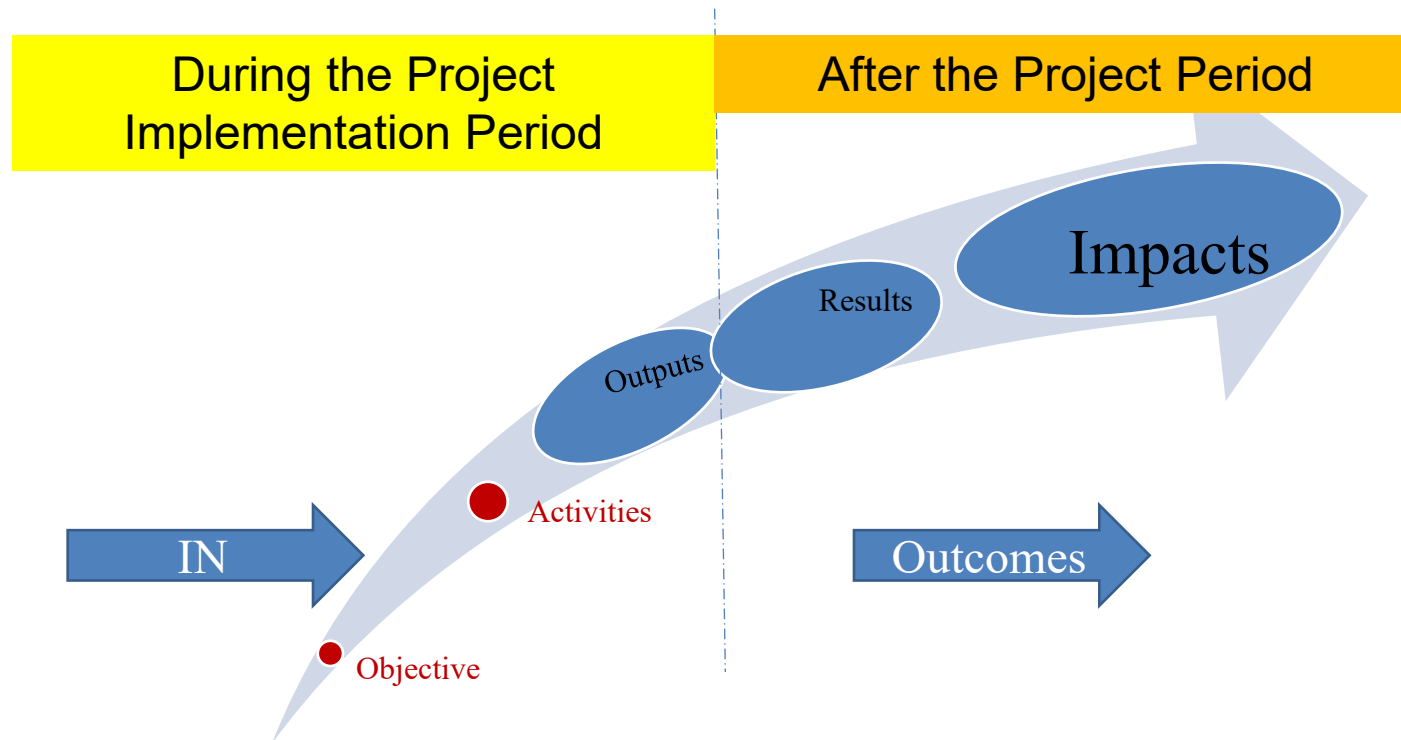
- Does the proposal specify how success will be measured in terms of outputs, results and Impact?
- Have the KPIs convincing and clear to measure those ORI?

6. Dissemination, Exploitation & Communication

- Are the research findings planned to reach the right audiences through appropriate channels and formats?
- Does the proposal identify potential applications or practical uses of the results and strategies to implement them?
- Are communication strategies designed to engage stakeholders effectively while ensuring transparency and ethical responsibility



Project Input-Output Chain



Use of Logical Framework Analysis (Log-frame) in Proposal

- LFA is a key tool for designing structured, results-oriented project proposals.
- It outlines objectives, activities, and expected results using a log-frame matrix.
- Includes indicators, means of verification, and key assumptions.
- Ensures logical consistency and clear linkages between project components.
- Aligns proposals with donor expectations and supports effective monitoring and evaluation.

Narrative Summary	Objectively Verifiable Indicators (OVIs)	Means of Verification (MOVs)	External Factors (Assumptions)
<p>Overall Objective <i>The development objective of the project is to enhance urban resilience to climate change while also addressing immediate problems related to sanitation, access to clean water and energy, and improving welfare in slum areas of Bangladesh.</i></p>	<ul style="list-style-type: none"> • <i>Less numbers of people suffering from sanitation problem.</i> • <i>Increase access to clean water in the slum areas.</i> <p><i>Increase Small and medium-sized enterprises (SMEs) in the selected slum areas.</i></p>	<ul style="list-style-type: none"> • <i>Reports from health centers</i> • <i>Annual reports/progress report of Khulna Water Supply and Sewerage Authority.</i> • <i>Registration record & Annual report of Bangladesh Small and Cottage Industries Corporation, Khulna.</i> 	<ul style="list-style-type: none"> • <i>Favorable political, social and market conditions.</i> • <i>Availability of equity and public interest to invest in the new technological systems.</i>
<p>Purpose <i>1. Develop and demonstrate a poly-generation system using municipal organic waste to improve sanitation, provide safe drinking water and electricity for income-generating activities.</i></p>	<p><i>1. Two poly-generation systems operating with Faecal sludge and Municipality Solid waste (MSW) will be installed and demonstrated.</i></p>	<p><i>1. Feasibility study report. Testing and commissioning report of the poly-generation system.</i></p>	<ul style="list-style-type: none"> • <i>Favorable political, social and market conditions.</i> • <i>Availability of equity and public interest to invest in the new technological systems.</i>
Activities			
Inputs			



Conventional vs. Futuristic Research Themes-Lesotho (Near-Future Focus)

Conventional Research Themes

1. Renewable Energy Expansion

- Solar, wind, and hydropower mapping
- Rural electrification through mini-grids

2. Climate Change and Water–Energy Nexus

Assessing hydropower vulnerability• Water conservation and adaptation planning

3. Urban Energy and Green Growth

Energy-efficient buildings• Waste-to-energy and clean mobility pilots

Futuristic Research Themes

1. Smart and Decentralized Energy Systems

- AI-driven microgrids and IoT-based energy monitoring
- Blockchain-enabled community energy trading
- Integration of hybrid renewables with smart storage

2. Climate-Resilient and Regenerative Energy Systems

Predictive modeling for drought and water flows• Nature-positive energy infrastructure•

3. Net-Zero and Smart Urban Futures

Energy-positive city designs• Smart city modelling using digital twins



- ❑ Let's collaborate to address the global challenges we are currently facing and those yet to come.
- ❑ Together, we can begin developing a joint proposal for upcoming Swedish, Nordic, or EU-level funding calls.





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