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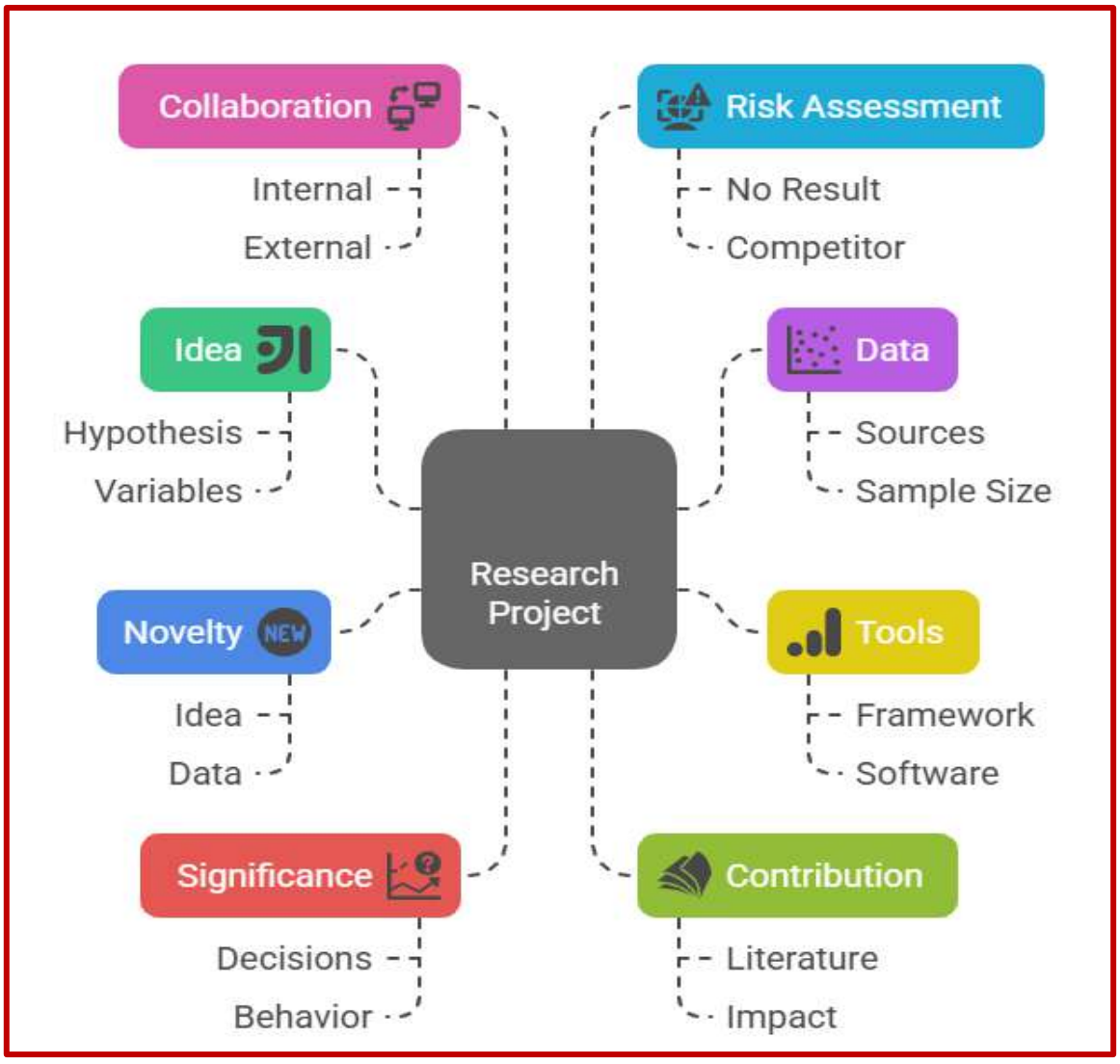
# CHARTING THE PATH FOR RESEARCH SUCCESS: STRATEGIES FOR WRITING WINNABLE PROJECT PROPOSALS

*In this blog, K S Aditya discusses the challenging process of transforming a research idea into a comprehensive, fundable project proposal. Although there is no magic wand to guarantee success or a simple formula, he highlights the key elements of a 'good proposal' and introduces useful frameworks and tools.*




**Visualisation by the author (created with the Napkin AI)**

## CONTEXT

For better or worse, the ability to write project proposals and secure funding has become a crucial aspect of an academic career. Unfortunately, few or no courses in our graduate program teach how to write a proposal and plan research. Although writing a research program for a thesis is a

component, how to write it well is seldom taught, and students are expected to learn as they try to draft it. Moreover, writing a research plan and writing a funding proposal are different in terms of value; when writing a proposal, reviewers have the option to choose from many proposals and select the best. Turning a research idea into a successful project requires more than just inspiration. It demands structured thinking, careful planning, and a clear understanding of what makes a proposal stand out. The purpose of this blog isn't to provide a 'formula for success' in writing a good research proposal, but to point out the different elements that can give an edge to the proposal and to introduce various frameworks and tools that can help translate a research idea into a proposal and also facilitate better control during research execution.

## LET'S START WITH THE BASIC QUESTION: WHY WRITE RESEARCH PROPOSALS?

Writing a proposal can seem like a daunting task, often perceived as too restrictive and time-consuming. I have seen many researchers complain that it is a waste of time. However, a proposal is a valuable tool, not only for the reviewers at the funding agency but also for the researchers themselves. A research proposal is more than just a formality for funding agencies; it serves as a means to achieve their mission or vision. Using a standard research proposal template helps reviewers evaluate projects based on scientific merit, contribution, feasibility, and impact. While not all reviewers will be experts on the proposed research topics or methods, the proposal provides a systematic roadmap, helping them to form a meta-view of the project. For researchers, it encourages critical thinking about their project design, identifying knowledge gaps, and creating a clear plan. Proposals assist in resource planning, risk management, and presenting complex problems in a structured way.

## WHAT MAKES A PROJECT ATTRACTIVE?

Impact is the foundation. Funders seek projects that help stakeholders achieve outcomes previously beyond reach. In the proposal, one should clearly explain how stakeholders will do things differently—what was not possible before, what benefits or advantages these changes bring, and how they will lead to impact. The project's impact should align with the impact the funder seeks. Therefore, understanding the funding scheme—its objectives, expected impact, funding limits, and eligibility—is essential. Aligning your idea with the "funding fingerprint" boosts your chances of success.

**Key Questions Every Proposal Should Address**

- What problem will the proposal solve, and how?
- What are the innovative aspects of research scientifically?
- What will be the tangible results?
- How will success be measured? What will be the impact and to whom (stakeholders)?
- What risks are involved, and how will they be managed?
- What level of effort and expertise is required?
- What resources are needed?

### From Idea to Executable Project: The Pitching Framework

Having a good research idea that addresses a gap in the literature and is practically relevant is necessary to get funding, but it is not sufficient. While writing the proposal, we need to pay attention to many other aspects as well, and having a systematic framework or a checklist helps sharpen the ideas when shaping them into a proposal. One such useful framework, which can also be used for writing a paper, is Dr. Robert Faf's 'Pitching Framework'.

| FOUR | |
|---|---|
| (A) Working Title | (B) Basic Research Question |
| (C) Key paper(s) | (D) Motivation/Puzzle |
| **THREE (IDioTs)** | |
| (E) Idea? | (F) Data? |
| (G) Tools? | |
| **TWO** | |
| (H) What's New? | (I) So What? |
| **ONE** | |
| (J) Contribution? | (K) Other Considerations |

**Table 1: Elements of the pitching framework**

Once we have a basic idea of what to include in the proposal, it is helpful to brainstorm using the pitching framework provided above. On the website, you can also download an MS WORD template with instructions for filling out each column. Many of the items are self-explanatory, and I want to highlight only a few items in Box 1 to show the usefulness of the template.

**Box 1: Using the pitching framework**

Among the 'FOUR' elements, motivation or puzzle is a crucial aspect. A paper or proposal should have a 'hook' – an unsolved puzzle that motivates your research and arouses curiosity in readers. Presenting the research idea as an unsolved puzzle is also a good way to highlight the importance of the research, which can be linked to the expected impact. As the template suggests, aim to write the main motivation in the form of a puzzle of about 100 words. For example, instead of starting with 'In this project, we aim to examine the adoption of solar-powered irrigation systems,' you can start with a hook: 'The majority of the irrigated agriculture in India uses groundwater, and pumping is a major energy consumer. Electricity for pumping, most of which is generated by coal, is either completely subsidized or charged at a flat rate. Solar pumps offer a sustainable alternative that can generate green energy locally at the farmers' fields and are provided to farmers with at least a 60% subsidy on the upfront cost. However, despite the potential and subsidies, adoption remains low.' A more engaging version that highlights not just what we want to do, but also why we want to do it.

My favourite, though, is TWO: What is the 'Novelty'? and 'So What'? And this is my go-to question for every student presenting their research colloquium. Though it seems simple and commonsensical, we often become so absorbed in the brilliance of our research idea that we forget to consider these basic questions. Let us examine what 'Novelty' entails. Any research should aim to push the boundaries of science—adding what we do not yet know. Therefore, in the proposal, we should be able to highlight what is new in our project. This could involve a new conceptualization, a new method, a new dataset, different stakeholders, etc. We should also explain why it was not done before (what the challenge was) and how we plan to achieve it (through expertise, new tools, access to new data, etc.).

The next big question is 'So what'. Here, one should relate innovative research and results to tangible benefits for specific stakeholders. In the earlier example of adoption, understanding adoption can help suggest policies and course corrections to scale solar pumps in India. Answering 'so what' is crucial to addressing the ultimate question of 'Contribution.'

Contribution can broadly be categorized into two types: practical impact and theoretical contribution (basic research contribution). Communicating the theoretical contribution, in terms of scientific advancement and real-life impact, clearly requires a lot of effort. Although these two aspects together may total around 100 words, getting them right is challenging and involves a lot of reading, writing, and rewriting.

The overall idea is to refine the concept using the pitching framework and then incorporate these details and statements in relevant sections when writing the proposal. The pitching template is provided below. One can also use the 'pitching for engagement and impact' framework developed by the same author. Alternatively, the project team can also use brainstorming to initially generate ideas through 'Walt Disney' and then use the pitching frame to refine the idea.

| **Pitcher's Name** | Your name here | FoR category | Field of Research | **Date Completed** | Insert date here |
|---|---|---|---|---|---|
| **FOUR** | | | | | |
| **(A) Working Title** | Succinct/informative title here | | | | |
| **(B) Basic Research Question** | IN one sentence, define the **key** features of the research question. | | | | |
| **(C) Key paper(s)** | Identify the key paper(s) which most critically underpin the topic (just standard reference details). Ideally, one paper, but at most 3 papers. Ideally, by "gurus" in the field, either recently published in Tier 1 journal(s) or recent working paper, e.g., on SSRN. | | | | |
| **(D) Motivation/Puzzle** | IN one short paragraph (say a max of 100 words), capture the core academic motivation – which may include identifying a "puzzle" that you hope to resolve. | | | | |
| **THREE** CORE ASPECTS OF ANY EMPIRICAL RESEARCH PROJECT, I.E., THE "**ID**IO**T**S" GUIDE | | | | | |
| **(E) Idea?** | Identify the "core" idea that drives the intellectual content of this research topic. If possible, articulate the central hypothesis(es). Identify the key dependent ("explained") variable and the key test/independent ("explanatory") variable(s). Is there any serious threat from endogeneity here? If so, what is the identification strategy? Is there a natural experiment or exogenous shock that can be exploited? Is there any theoretical "tension" that can be exploited? | | | | |
| **(F) Data?** | (1) What data do you propose to use? e.g., country/setting; Why? Unit of analysis? Individuals, firms, portfolios, industries, countries …? sample period; sampling interval? Daily, weekly, monthly, quarterly, annual, … Type of data: firm specific vs. industry vs. macro vs. …?<br>(2) What sample size do you expect? Cross-sectionally? In Time-series/longitudinal?<br>(3) Is it a panel dataset?<br>(4) Data Sources? Are the data commercially available? Any hand-collecting required? Are the data to be created based on your survey instrument? Or by interviews? Timeframe? Research assistance needed? Funding/grants? Are they novel new data?<br>(5) Will there be any problem with missing data/observations? Database merge issues? Data manipulation/ "cleansing" issues?<br>(6) Will your "test" variables exhibit adequate ("meaningful") variation to give good power? Quality/reliability of data?<br>(7) Other data obstacles? e.g., external validity? Construct validity? | | | | |
| **(G) Tools?** | Basic empirical framework and research design? Is it a regression model approach? Survey instrument issues/design? Interview design? Econometric software needed/appropriate for the job? Accessible through normal channels? Knowledge of the implementation of appropriate or best statistical/econometric tests? Compatibility of data with the planned empirical framework? Is statistical validity an issue? | | | | |

| **TWO** KEY QUESTIONS | |
|---|---|
| **(H) What's New?** | Is the novelty in the idea/data/tools? Which is the "driver", and are the "passengers" likely to pull their weight? Is this "Mickey Mouse" [i.e., can you draw a simple Venn diagram to depict the novelty in your proposal?] |
| **(I) So What?** | Why is it important to know the answer? How will major decisions/behaviour/activity, etc, be influenced by the outcome of this research? |
| **ONE** BOTTOM LINE | |
| **(J) Contribution?** | What is the primary source of the contribution to the relevant research literature? |
| **(K) Other Considerations** | Is **Collaboration** needed/desirable? – idea/data/tools? (Either internal or external to your institution)<br>**Target** Journal(s)? Realistic? Sufficiently ambitious?<br>"**Risk**" assessment ["low" vs. "moderate" vs. "high": "no result" risk; "competitor" risk (i.e., being beaten by a competitor); risk of "obsolescence"; other risks? Are there any serious challenges that you face in executing this plan? What are they? Are they related to the Idea? The Data? The Tools? Are there ethical considerations? Ethics clearance?<br>Is the **scope** appropriate? Not too narrow, not too broad. |

**Table 2: The master pitching template**

## PLANNING THE RESEARCH: THINKING IN WORK PACKAGES (WP)

Once the scientific details are clear, identify the following elements

- **Objectives:** Set SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals.
- **Milestones:** Define key decision points or phases in the project.
- **Tasks:** Detail the specific activities within each work package.

A Work Breakdown Structure (WBS) helps decompose the project into smaller components, making planning and control more manageable. It clarifies dependencies, aids in resource estimation, and provides a foundation for budgeting. A work package is a smaller unit in the project with a given milestone and set of tasks to reach. The process of WBS is as follows

- Start with the overall project goal.
- Identify the major milestones in the project (you can start with objectives and then break down objectives into milestones if needed).
- For each milestone, create a work package (WP) – assign it a label and a descriptive title (half a sentence long).
- Define the tasks under each WP to achieve the milestone.
- Specify the deliverables, if any.

### Project Scheduling: PERT and Gantt Charts

**PERT (Program Evaluation and Review Technique):** Visualizes tasks, dependencies, and timelines, especially when task durations are uncertain. It helps identify the critical path and manage risks. Usually, PERT is performed after the WBS. It consists of two main elements: time estimation and a chart. Through the PERT chart or Gantt chart, all the Work packages from the WBS can be visualized hierarchically, showing the dependencies between different work packages. The PERT chart focuses mainly on displaying the hierarchy and interdependence between work packages. At the same time, the Gantt chart also indicates the time needed for each work package and the tasks along with deliverables and milestones.

### Risk Assessment and Management

Identify, analyse, and evaluate potential risks—financial, external, technical, and operational. Use a risk probability-impact matrix to prioritize risks and develop contingency plans for those deemed critical. To develop a risk probability-impact matrix, start by listing all project tasks, assess each for potential risks by filling out a probability-impact table, and categorize them within the matrix according to their severity. For example, in data collection, if you identify the data measurement error due to translation and the enumerator's self-interpretation as a risk, then you need to assign a probability (very low to very high) and the possible impact it can have on the research (very low to very high) to the risk. It has to be based on experience, and unfortunately, there is no objective way to do it.

### Effort Estimation and Budgeting

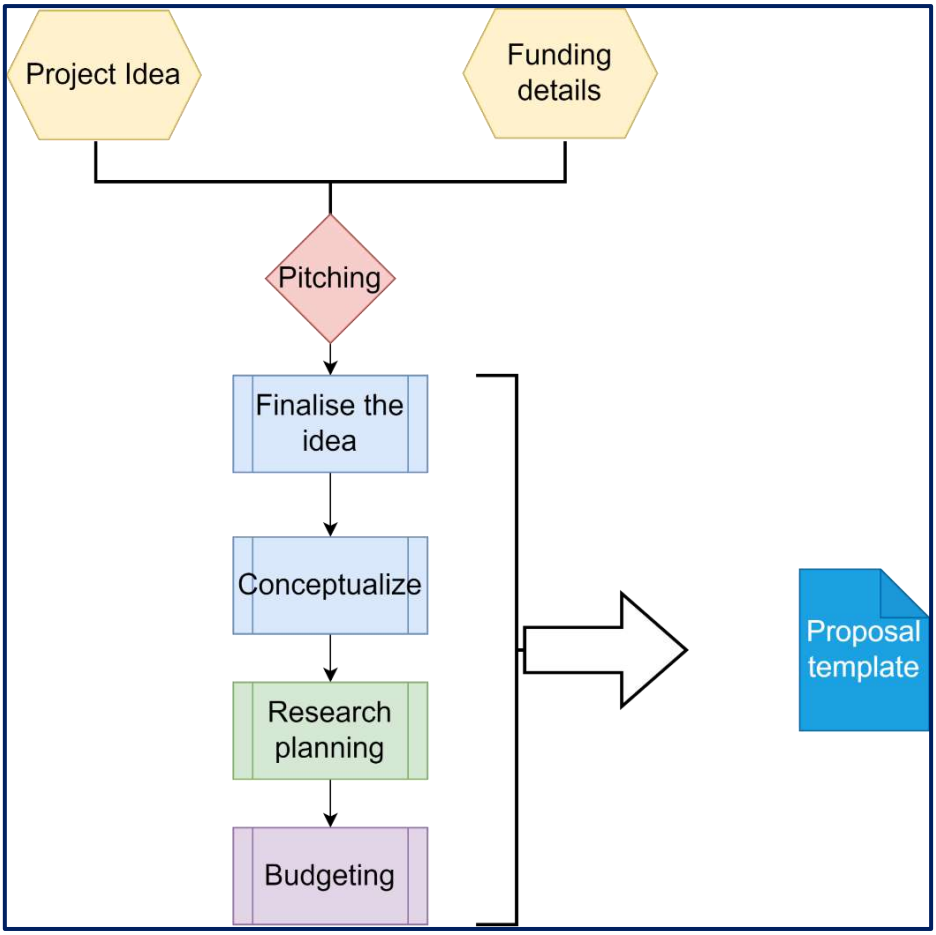
Estimate the required effort in person-hours or person-months, distributing it across work packages and tasks. One can start with the total manpower required for the project (in terms of person-month/person-hour) and then distribute it into different WP, which is called the top-down approach. Standard budget elements typically include personnel costs, equipment, consumables, travel, indirect costs, and contingency funds. It is crucial to follow the funding call's specific guidelines, provide detailed cost breakdowns, and be ready for negotiations to ensure budgeting accuracy and avoid project derailment.

## BRINGING IT ALL TOGETHER: WRITING THE PROPOSAL

Most funding agencies provide a template. Typical sections include context, state of the art, preliminary work, research question and objectives, work programs, data and methods, impact, outcomes, and ethical considerations. Use visual aids like Gantt and PERT charts to give reviewers a meta-picture of your plan. Remember the four S's of a good proposal: Simplicity, Structure, Shortness, and Stimulation.

**Best Practices**

- Start early—it's more about effort than inspiration.
- Make your project scientifically stand out.
- Think critically about the impact and how to align with the project call.
- Pay attention to the project fingerprint—what they are looking for, what is eligible, and what the limits are.
- Involve your team and seek diverse input.
- Avoid setting overly optimistic timelines.
- Plan for uncertainty and include buffers.
- Pay close attention to budgeting details.




## CONCLUSION

In research, careful planning, clear thinking, and good communication are essential for success. Using tools like pitching, work breakdown structures, PERT, Gantt charts, and risk assessment helps researchers understand their project better and create a clear plan to follow. This approach makes it easier to manage the research and gives confidence to both the researchers and the funders. Thorough preparation also helps avoid unexpected problems and delays during the project. When every step is planned and communicated well, it becomes easier to assign tasks and monitor, and the research teams can focus more on achieving meaningful results.

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