

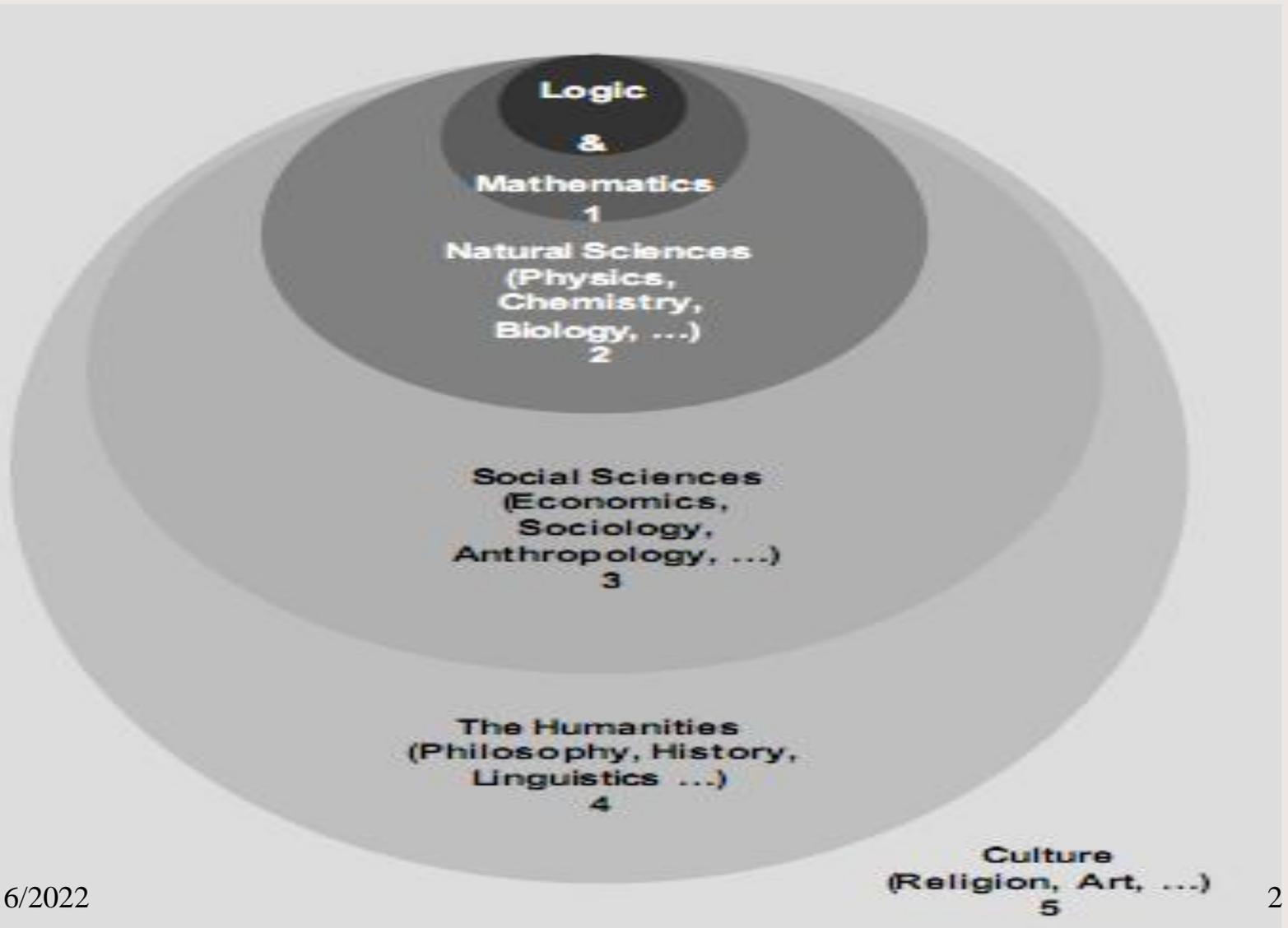
How to Write a Research Manuscript & Grant Collaborative Project Proposal

**Training By
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<https://dpsharma.org>

<http://dpsharma.info>

Logic in Center....



6/16/2022

What Is a Manuscript?

- A manuscript is a draft of a writer's *work*
- *Thesis/Dissertation/Paper/Article*
- *a memoir,*
- *a novel,*
- *a collection of poetry,*
- *a children's story,*
- *a nonfiction book, or something similar.*
- “manuscript” used to refer to a **version** of a book. **Unpublished work**

Essential Attributes in Research?

Attributes of Research-

- 1. New (contemporary),*
- 2. Unique (contemporary),*
- 3. Innovative (contemporary),*

Three Tier Architecture of Science & Scientific Research-

- 1. Theory,*
- 2. Experiment,*
- 3. ????????????*

4. Description & Argumentation

The Dialectics of Research....

- Bertell Ollman (1993) argues that all research is either 1) dialectical or 2) non-dialectical.
- **Dialectical research** may also be thought of as the **opposite of empirical research**, in that the researcher works **with arguments and ideas, rather than data.**
- **Thesis:** This presents the original statement of an **idea**. Very few research contributions can claim total originality..

Most borrow ideas from previous work

- **Antithesis:** This presents an argument to challenge a **previous thesis**.
- **Synthesis:** This seeks to form a new argument from **existing sources**. Typically, a synthesis to resolve the **apparent contradiction between a thesis and an antithesis**.

Which Journal? Reputation

- Is topic of my paper within its **scope and format**?
- Would it match my **audience/theme**?
- Ask **mentor/adviser** or other senior researchers: **appropriateness**
- **Impact Factor**
- **Indexing**
- **Consequences** of wrong decision: time lost; failure to publish (**One Year @ Desk Rejection**)

Calculation for Journal Impact Factor*

A= Total cites in 2015

B= 2015 cites to articles published in 2013-14 (this is a subset of A)

C= Number of articles published in 2013-14

D= B/C = 2015 Impact factor

Impact factor (IF) is a measure of the number of times an average paper in a journal is cited, during a year.

Clarivate Analytics releases the Journal Impact Factors annually as part of the Web of Science Journal Citation Reports®. Only WoS / Science Citation Index Expanded® (SCIE) and Social Sciences Citation Index® (SSCI) receive an Impact Factor.,

What is Journal Impact Factor?

Impact factor is a measure of the number of times an average paper in a journal is cited, during a year.



The higher the number of citations or articles coming from a particular journal, or impact factor, the higher it is ranked.

When deciding the perfect journal for your paper, this metric is an excellent tool to guide you through the process.



On an average, its papers published in 2015 and 2016 received roughly 42 citations each in 2017.

Note that 2017 impact factors are reported in 2018;

Demo

$$\text{IF}_y = \frac{\text{Citations}_y}{\text{Publications}_{y-1} + \text{Publications}_{y-2}}$$

For example, *Nature* had an impact factor of 41.577 in 2017:^[9]

$$\text{IF}_{2017} = \frac{\text{Citations}_{2017}}{\text{Publications}_{2016} + \text{Publications}_{2015}} = \frac{74090}{880 + 902} = 41.577.$$

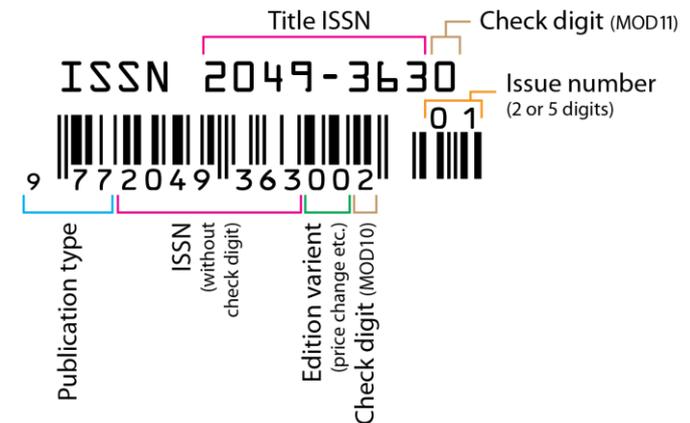
Measuring a Journal Impact Factor

- **Use journal metrics** to understand the impact of a journal:
- **CiteScore metrics** – helps to measure journal citation impact. Free, comprehensive, transparent and current metrics calculated using data from Scopus®, the largest abstract and citation database of peer-reviewed literature.
- **SJR – or SCImago Journal Rank**, is based on the concept of a transfer of prestige between journals via their citation links.
- **SNIP** – or Source Normalized Impact per Paper, is a sophisticated metric that accounts for field-specific differences in citation practices.
- **JIF** – or Journal Impact Factor is calculated by **Clarivate Analytics** as the average of the sum of the citations received in a given year to a journal's previous two years of publications, divided by the sum of “citable” publications in the previous two years.
- **H-index** – Although originally conceived as an author-level metric, the H-index has been being applied to higher-order aggregations of research publications, including journals.

International DOI Foundation



- **The DOI** system was created by the **International DOI Foundation** and was adopted as International Standard ISO 26324 in 2012.
- A **digital object identifier (DOI)** by the [International Organization for Standardization](#) (ISO).
- For [journal](#) articles, research reports, data sets, and official publications, commercial videos.
- This is achieved by binding the DOI to [metadata](#) about the object, such as a [URL](#) where the object is located.
- **An International Standard Serial Number (ISSN)** is an eight-digit serial number used to uniquely identify a serial publication, such as a magazine.
- **Organisation:** ISSN International Centre
- **Acronym:** ISSN-615-682536
- **Check digit:** Weighted sum
- **No. of digits:** 8



A scientific article : critical argument focus

a. **Argument vs. Discussion**

b. Statement of problem;

c. Posing a question/hypothesis/Objectives

d. Presentation of evidence

e. Assessment of the validity of the evidence in the face of ..

a. strengths/weaknesses

b. other evidence

f. Conclusions

Literature Search First

- Why Literature?
- What has been done and what can you say that's new?
- Systematic Review
- Fix Parameters & Review in the Light of Parameters
- Be thorough and critical in your search.

The Title Page

- a. Good Title
- b. Don't use abbreviation
- c. Crystal Clear
- d. Precise / Short
- e. Representative of Problem & Solution
- f. Powerful keywords
- g. Demo

The Process of Paper Writing

- Create an outline first
- Plan on multiple drafts: **(V1, V2, V3...Vn)**
 - Filename with dates
 - One filename written over with new draft
- Tables/figures early: prompt more analysis
- Distribution of work & **Collaboration**
- **Demo**

Anatomy of a Manuscript

- Title page
- Abstract
- Introduction
- Methods
- Results
- Tables/Figures
- Discussion
- Acknowledgements

The Introduction

- Basic Background of Domain
- Demography & Statistics
- **Cover-** Clearly articulation of Problem, Gaps,
- Goal, Hypothesis/ Research Question,
- Scope, Rationale, Limitations
- **Methods, Results, Discussion and Contributions**
- **Demo**



Contd... Introduction..

Introduction 3 paragraphs

- Paragraph #1: What we know
 - Limit to only pertinent references
- Paragraph #2: What we don't know.
- Paragraph #3: What we did to find out
 - Primary and secondary research objectives
 - Preplanned subgroup analyses

Figures

- Number consecutively according to order cited
- High resolution images
- Letters numbers and symbols need to be clear and sufficient size
- Include titles and detailed explanations in legend rather than figure
- Double space legend on separate page

Review of Literature/ Literature survey

- **Write-**
- Conceptual Review
- Related Works Review
- **Meta Analysis-**
- Meta-analysis is a research process used to systematically synthesise or merge the findings of single, independent studies, using statistical methods to calculate an overall or 'absolute' effect.
- Meta-analysis refers to the **statistical analysis** of the data from independent primary studies focused on the same question
- **Aims to generate a quantitative estimate** of the studied phenomenon, for example, the effectiveness of the intervention (Gopalakrishnan and Ganesh kumar, 2013)

The Methods Section

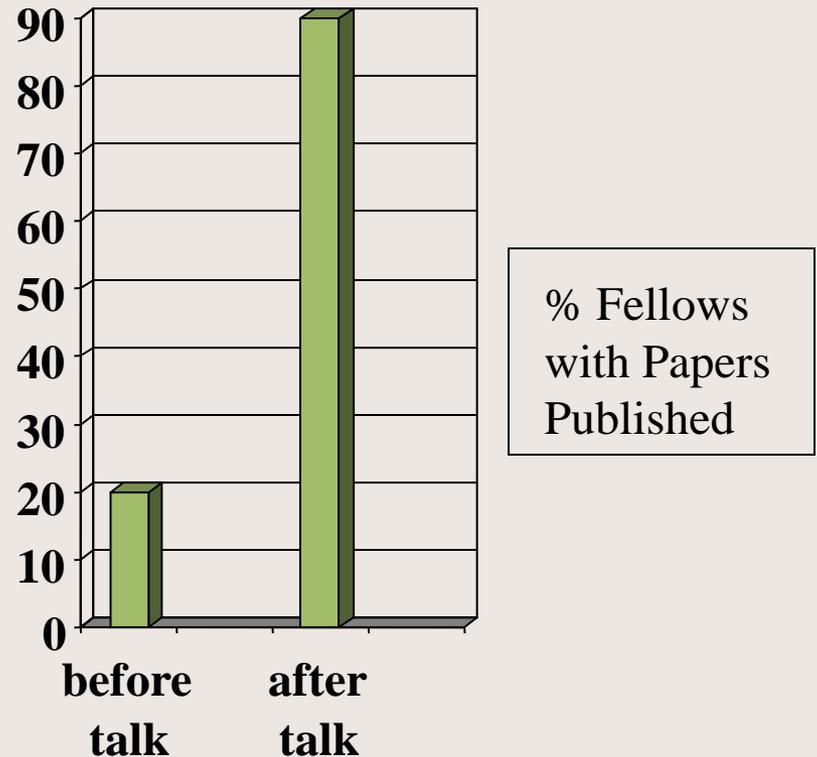
- **Methods- Data Collection, Analysis,**
- **Tools....? Used**
- **Parametric Analysis**
- **Sampling**
- **Limitations of data/experiment**
- **Write clearly**
- **Past tense**

Methods

- Study design
- Subject selection
 - Source population
 - Inclusion criteria
 - Exclusion criteria
 - Rationale for inclusion/exclusion criteria

The Results Section

- Narrative should be logical sequence as fig/table
- Summarize rather repeat all data from table
- Write absolute numbers with percentage
- Organize around tables/figures
- Present tabular results selectively in text
- Past tense
- No interpretation; just the facts!
- Tables should stand on their own



The Discussion Section

- **1st paragraph:** answer question/hypothesis
- **Remainder:**
 - Evidence pro and con: literature review
 - Strengths/limitations of your study
 - Implications of findings (be conservative)
 - Other findings of your study
- **Last Paragraph: conclusion**

Getting Tense!

PAST and PRESENT

- When quoting **previously published work**, refer to it in the *present tense* (e.g. penicillin treats strep throat)
- When describing your *own work*, refer to work in *past tense* (e.g. this research tested a new antibiotic for strep throat)

Quiz: In a good scientific paper

...

A: Writing is in passive voice (e.g. it was found that...).

B. Writing is in active voice (this research /we found that...).

C. Writing mixes active and passive voice.

Quiz: In a good scientific paper

...

- A: A term defined in the methods section is used again and again (a rose, a rose, a rose)-
Consistent Terminology
- B. Various synonyms for a term are used to prevent reader boredom. (a rose, a flower with a thorny stem, a fragrant flower)
- Define a term and use it consistently. Otherwise, you' will confuse the reader.

Proofread before Submitting

- ✓ Are terms used consistently throughout?
- ✓ Do citations in-text match references?
- ✓ Are Syntax and Grammar acceptable?
- ✓ Is the manuscript plagiarism free?
- ✓ Is formatting as per journal template?
- ✓

Writing an abstract

- It's a **capsule**:
 - Domain Introduction (usually 1-2 sentences)
 - Study purpose/Rationale/ Significance/Motivation,
 - Problem statement & Research Gape,
 - Scope
 - Methods (often longest part)
 - Results
 - Discussion- only limited to concluding statement
 - -----
 - **Keywords**
 - **Only use standard Acronyms**

Keep in mind that reviewers are using questionnaires/checklist?

- Does the paper contain **sufficient new material**?
- Is the **topic** within the **scope of the journal**?
- Is it presented **concisely and well organized**?
- Are the **methods and experiments presented** in the way that they can be **replicated** again? **validation**
- Are the results presented adequately?
- Is the **discussion relevant**, concise and well documented?
- Are the **conclusions supported** by the data presented?
- Is the **language acceptable**?
- Are **figures and tables adequate and well designed**?, are there information duplicated? Are they too many?
- Are all **references cited** in the text included in the references list?

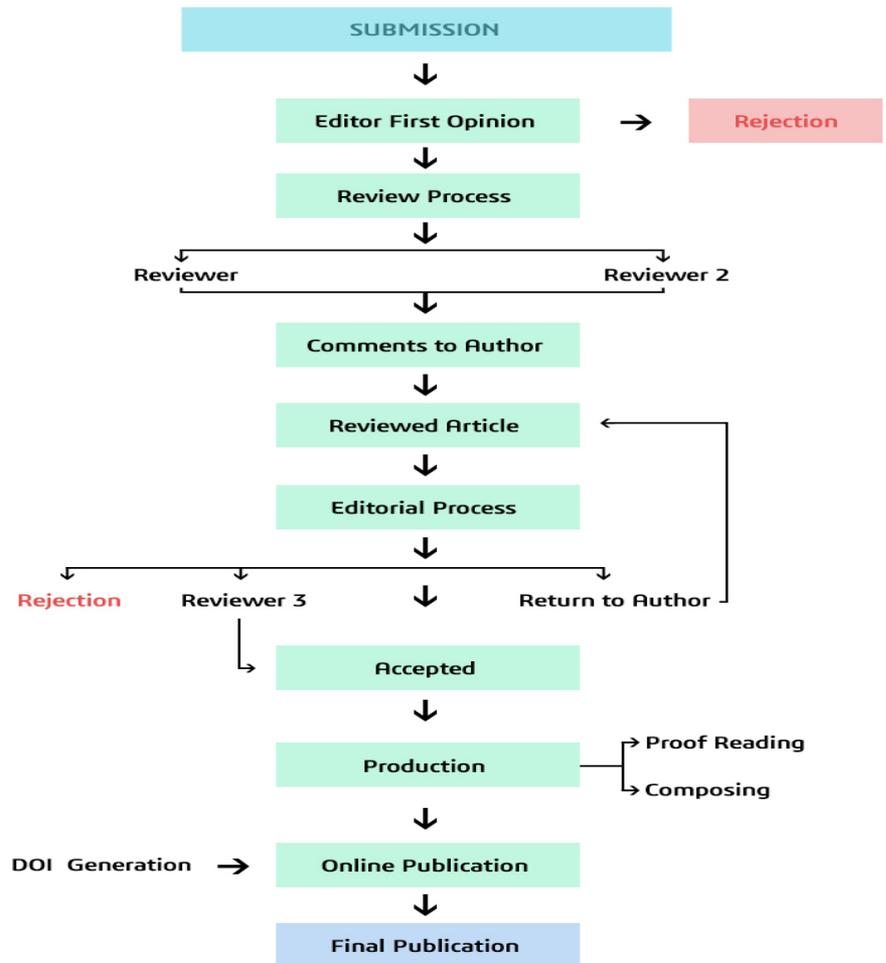
What type of Manuscript to write.

Decide first

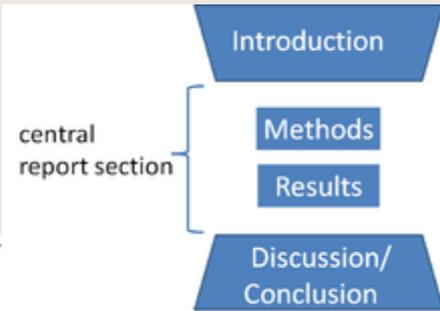
- You have at least three options on the type of manuscript:
- **Full articles, or original articles**, are the most important papers. Often they are substantial completed pieces of research that are of significance as original research.
- **Letters/rapid communications/short communications** are usually published for the quick and early communication of significant and original advances. They are much shorter than full articles (usually strictly limited in size, depending on each journal).
- **Review papers or perspectives** summarize recent developments on a specific hot topic, highlighting important points that have previously been reported and introduce no new information. Normally they are submitted on invitation by the editor of the journal.
- **Case Study/ Editorial**

Getting the Reviews of Your Paper

- “The reviewer is always right.” (whether they are or not!)
- Don't respond quickly.
- Digest reviews.



IMRAD (Introduction, Methods, Results, and Discussion)
is a common organizational structure



The screenshot shows a video player interface for 'Publishing Connect'. The video title is 'How to Get Published #03 - Structuring an Article'. The slide content is as follows:

General structure of a research article

- Title
- Abstract
- Keywords

- Main text (IMRAD)
 - Introduction
 - Methods
 - Results
 - And
 - Discussions

- Conclusions
- Acknowledgements
- References
- Supplementary Data

Two callout boxes provide additional advice:

- Make them easy for indexing and searching!** (informative, attractive, effective)
- Journal space is not unlimited.** Make your article as concise as possible.

At the bottom of the slide, there is a logo for 'ELSEVIER'.

Video player controls at the bottom show: DURATION: 00:00:16 / 00:12:14, a play button, and the word 'PAUSED'. Footer text includes: Time zone: United States - New York, A BrightTALK Channel, User Agreement | Privacy Policy | Help.

Acknowledgements & Conflict of Interest

References

- Cite primary work over review articles
- Avoid abstracts when possible
- “in press” articles require permission
- Avoid personal communication unless it provides essential information not available from a public source – include person and date
- Check accuracy and formatting

If your paper was rejected...

- **Plagiarism?**
- **Grammar?**
- **Pedagogy?**
- **Quality?**
- **Correspondence?**
- Was it sent out for review?
- If not, consider changing type of journal
- If reviews don't suggest changes, send it out quickly to another journal
- The 3 journal rule.



For More Knowledge...

- **Writing Manuscript**
- **<https://www.elsevier.com/connect/11-steps-to-structuring-a-science-paper-editors-will-take-seriously>**
- **Publishing Ethics Resource Kit for editors-
<https://www.elsevier.com/editors/perk>**

A silver metal spiral binding is visible on the left side of the page, looping through a series of holes in the paper.

Grant Collaborative Proposal Writing

Grant Project

- Project?
- Research based Project?
- Project based Research?
- Research?
- Grant?
- Grand?

Planning & Writing A Grant Proposal /Grant Research Proposal



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Research /Project Grant Proposal..?

- **A road-map/Work plan/Synopsis/Draft plan.**
- **The proposal tells -- What, Why, How, Where, and for Whom the research will be conducted.**
- **The length and complexity of research proposals range widely.**

Collaborative Grant Research/Project?

- **Cross Disciplinary Task or Research?**
- Collaborative research grants are **intended to stimulate cooperative research among scholars who have a focus on a clearly identified research project.**
- Collaborative research projects conduct **new applied science through an end user driven, collaborative process** that results in research, data, tools, or other products that will inform decision making related to a reserve management need.
- **Must** have a **well-defined research question** that the project is designed to answer.
- **How do you write a collaborative grant?**
- Be clear about collaborators' expertise and contributions. ...
- Communicate frequently with your collaborators. ...
- Outsource tasks when possible. ...
- Develop a strategic plan for writing the grant.



Components of Grant Collaborative Project Proposal

| Feature | Abstract | Exe. Summary |
|-------------------|---|--|
| Nature | Abbreviated summary/ Scientific summary | Unique selling point/Managerial |
| Audience | Specialized (researchers) or more readers | Decision makers |
| Scope | Informational/Research/ academic, (thesis/article/patent) | Solicited /unsolicited sales proposals & bids (P&B) |
| Purpose | Quick Information (Ascertain the purpose of the whole document) | Quick Information for Call for action (Persuade readers to buy) |
| Components | | |

Introduction & Rationale

- *Brief description of domain and background summary*
 - Research Motivation- *the situations that give you project idea like-*
 - *Change,*
 - *Betterment*
 - *Socio economic context.*
1. *How will it change the conditions or affect the society/nation/organization economy, operation etc.*
 2. *Why it is urgent and what has already been done to address the problem.*

Contd..... Rationale [Justification, Basis, Motivation]

- The significance & rationale to take a research may be stated as:
- There is no detail local investigation before about the problem
- There is a strong need for local investigation
- To alert decision makers
- To fill the gap in the existing studies
- To resolve some inconsistency in previous research
- The finding may lead to new problem for further study
- To provide basic data / knowledge about the problem

Problem Statement

- Clear,
- Finite,
- Solvable,
- Concise and
- Confined)

How to understand Problem & Plan for Action

- **Problem Tree-**

- | | |
|-------------|----------------|
| 1. Cause- | <i>Fault</i> |
| 2. Problem- | <i>Error</i> |
| 3. Effect- | <i>Failure</i> |

- **Need Assessment**

1. *General Objective (IMPACT (Long term))*
2. *Specific Objective (Outcomes)*
3. *Intermediate Results(Outputs)*
4. *Activities*

IR1-IR1.1, IR1.2,IR1.3....

IR2-IR2.1, IR2.2, IR2.3.....

Research objectives

- **Purpose of research investigation /experimentation.**
- **The objectives flow naturally from the problem statement.**
- **Specific, concrete and achievable**
- **Descriptive study, the objectives can be stated as the research question.**
- **Causal study, then the objectives can be restated as a **hypothesis.****
- **Reasoning- Inductive, Deductive [Data & Theory]**

Research Hypothesis?

- A tentative intelligent guess postulating from the purpose of directing the researcher towards the solution of problem.

A statement which predicts the relationship between two or more variables.

- It is necessary link between theory and investigation, usually stated after an extensive survey of the literature.

Hypothesis can be either:

It is derived from the **deductive logic** of the objectives under investigation.

A) directional or B) non-directional.

– **Directional:** stipulate (specify) the direction of the expected results.

Ex: *The performance of New Model of Machine is significantly better than those which are old & outdated Model*

– **Non-directional:** Does not specify the direction of expected difference or relationship.

Ex: *There is a difference in performance of New and Outdated & Old Models of Machines*

Contd..

- 2. Null Form (of Hypothesis):** Makes a statement that states no relationship.

Ex: *There is no significant difference in the performance of new model of machines & machines which are of outdated and old models*

- 3. Question form (of Hypothesis):** Put the hypothesis in question form.

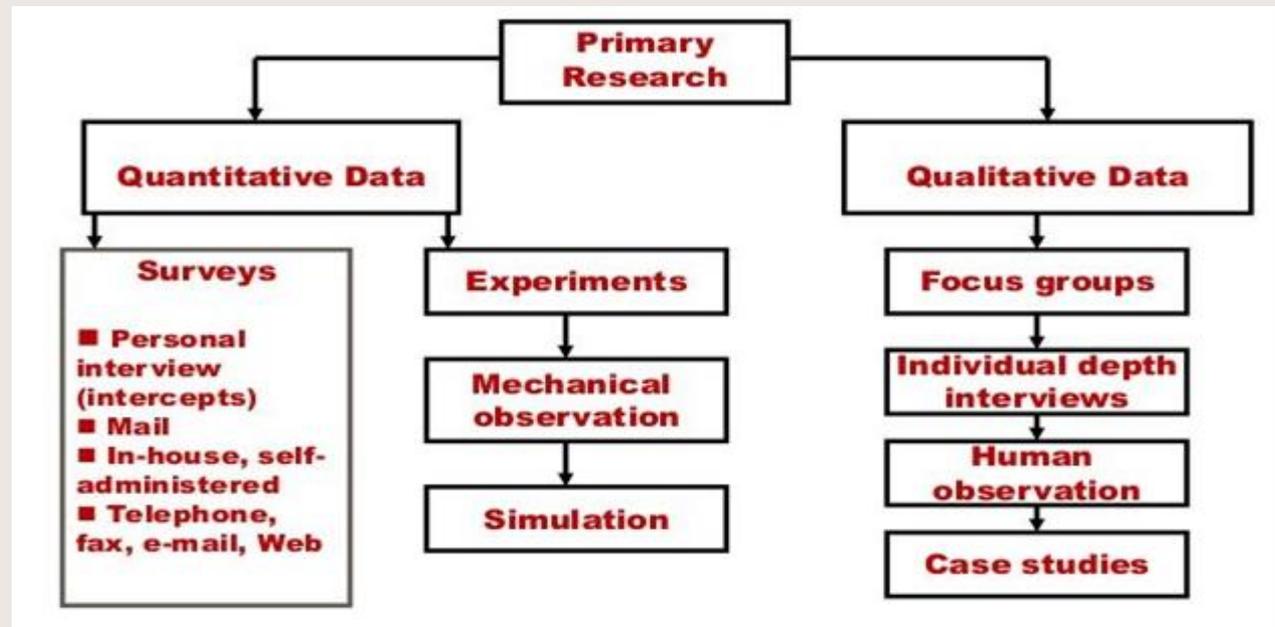
Ex: *Does the change in the Model of the machines affect the performance of the machine?*

- 4. Alternative hypothesis:** This signifies a statement written opposite to the null form, i.e., when the final decision is made at a given significance level if the null hypothesis is to be rejected alternative hypothesis gets accepted, the alternative hypothesis too on equal footing along with the null hypothesis provides direction to the research.

Ex: *There is significant difference in the performance of machines between those which are of new and old models*

Data Types

- **Primary Data, Secondary Data & Tertiary Data**
- **Qualitative, Quantitative & Mixed**
- **How to Collect**



Research Design & Methodology

- **Research Design:** exploratory research and constructive research
- The design describes what you are going to do in technical terms.
- Considers:
 1. Sample selection and size,
 2. Data collection method,
 3. Instruments/apparatus,
 4. Procedures, and the tools used to analyze data.
- **Research Approach:** different approaches, methods for gathering relevant data and information in the area of research. Qualitative, Quantitative, Mixed
- **Research Methods:**
- **Research Methodology:** The systematic, theoretical analysis of the methods applied to a field of study.



Contd...Nature and form of Research results

- 1. Statistical conclusions,**
- 2. Applied findings,**
- 3. Recommendations,**
- 4. Action plans,**
- 5. Models,**
- 6. Strategic plans**
- 7. New Formula/New Method**
- 8.**

Scope/Limitations & Delimitations

- **Scope of the study- Defining Boundaries**
- **The delimitations** of a study are those characteristics that limit the scope
- The conscious exclusionary and inclusionary decisions that were made throughout the development of the proposal.
- *Delimitation \propto Limitations??*

The questions to consider in the research scope should be:

- *(i) Does the research cover a particular time period & specific geographical area?*

(iii) If the study involves people, what age group, gender and place of origin are to be included?

(iv) Are all dates of publication to be included? And is the research going to cover publications from other countries?

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(vi) Will the research include other languages and scripts?

Logical Framework for Research Project

“Logical framework approach”: *a methodology mainly used for designing, monitoring, and evaluating projects.*

Logical framework

| Intervention Logic | Objectively Verifiable Indicators OVI | Sources of information |
|-----------------------|---|--------------------------------------|
| GENERAL OBJECTIVE | What will you measure to assess progress? | Where will you get your information? |
| SPECIFIC OBJECTIVE(S) | | |
| INTERMEDIATE RESULTS | | |
| ACTIVITIES | | |

Developing an intervention logic

Create a visual of the change process envisaged (taking into account the analysis phase)

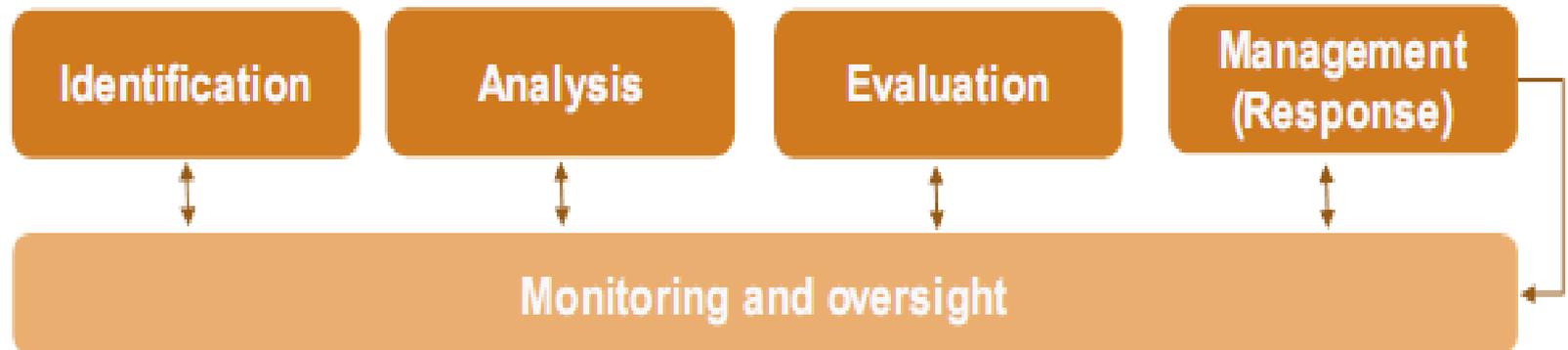
- A. Identify desired change
- B. Identify domains of change and prioritise (in/out)
- C. Map change pathways (detail results chain)
- D. Make assumptions and risks explicit
- E. Determine correct level of ambition (**define objectives**/outputs)

Risk Management

Risk management

Risk =

An uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives. A risk is measured by a combination of the probability of a perceived threat [...] occurring and the magnitude of its impact on objectives



Risk Management

II. Analysis

**Assessing intervention risks:
Determining the risk level**

| | | | | | | |
|--------------------|------------------|--------------|---------|------------|---------|----------|
| Probability | 4-Almost certain | 4 | 8 | 12 | 16 | 20 |
| | 3-Probable | 3 | 6 | 9 | 12 | 15 |
| | 2-Possible | 2 | 4 | 6 | 8 | 10 |
| | 1-Unlikely | 1 | 2 | 3 | 4 | 5 |
| | | 1-Negligible | 2-Minor | 3-Moderate | 4-Major | 5-Severe |

Potential impact

Risk Management

III. Evaluation

Managing intervention risks:
Risk appetite

| | | | | | | |
|-------------|------------------|--------------|----------|------------|------------|------------|
| | | 1-Negligible | 2-Minor | 3-Moderate | 4-Major | 5-Severe |
| Probability | 4-Almost certain | 4-Low | 8-Medium | 12-High | 16-Extreme | 20-Extreme |
| | 3-Probable | 3-Low | 6-Medium | 9-Medium | 12-High | 15-Extreme |
| | 2-Possible | 2-Low | 4-Low | 6-Medium | 8-Medium | 10-High |
| | 1-Unlikely | 1-Low | 2-Low | 3-Low | 4-Low | 5-Medium |

Deliverables

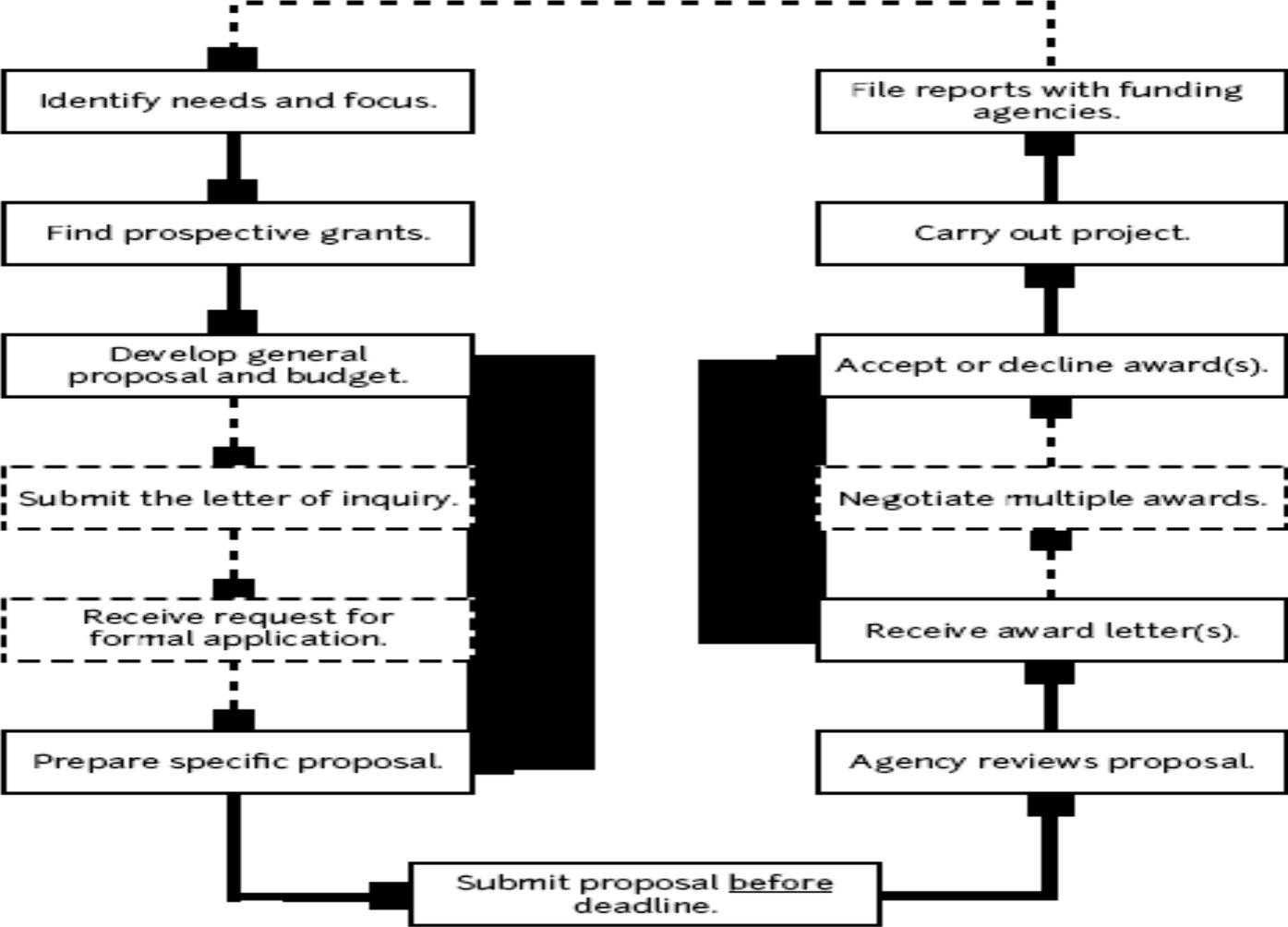
- *Measurement instruments*
- *Enhanced Apparatus*
- *Re-Engineered Design*
- *Process Efficiency model*
- *Algorithms*
- *Automated system with extended features*
- *Computer programs / prototypes*
- *Comparative evaluation*
- *Other technical reports*

How to write: Effective Grant Proposal?

- Write a **strong cover letter**
- Start with a short **executive summary**
- Introduce your organization
- Write a **direct problem statement**
- State your **goals and objectives**
- Project design: **methods and strategies**
- The evaluation section: **tracking success**
- **Risk & Remedies**
- Other **funding sources** and sustainability
- **Outline a project budget**

End to End Process of Grant Project

Diagram 1. The Grant Writing Process



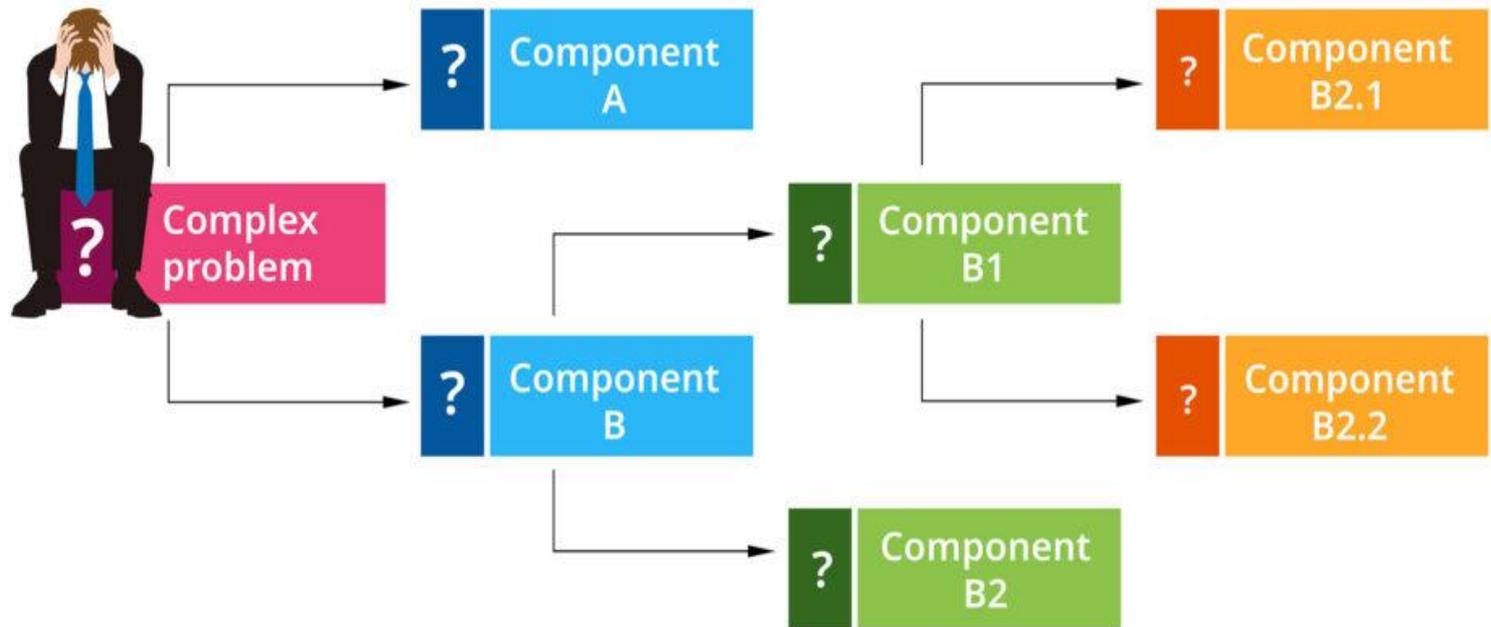
- - - - - Dashed lines indicate possible additional steps.

What are logic trees used for?

- A Logic Tree is **an organizational tool that you can use to diagram all the possible causes of a failure event.**
- The structure of the **Logic Tree is hierarchical** so that you can easily reference **which event caused what effect.**
- Each cause or effect is represented by a **labelled icon, called a node.**

What is a logic tree?

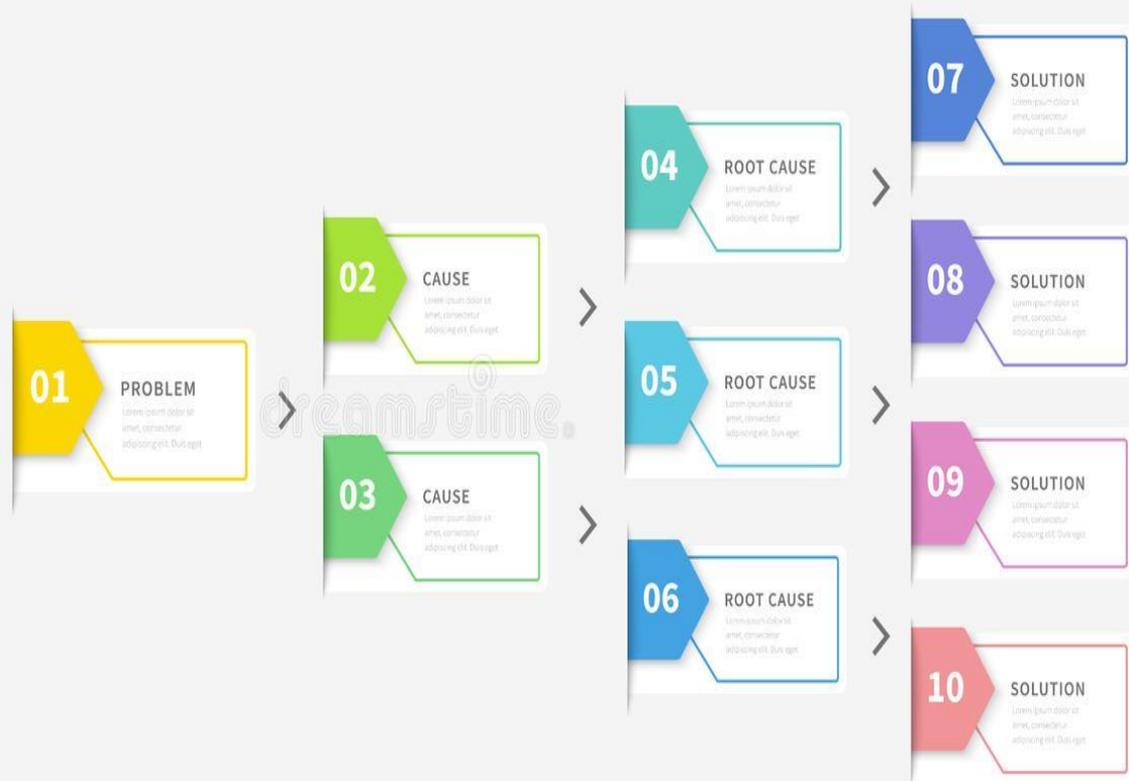
A **critical thinking** framework that **breaks** down complex **problems** systematically



Logic Tree

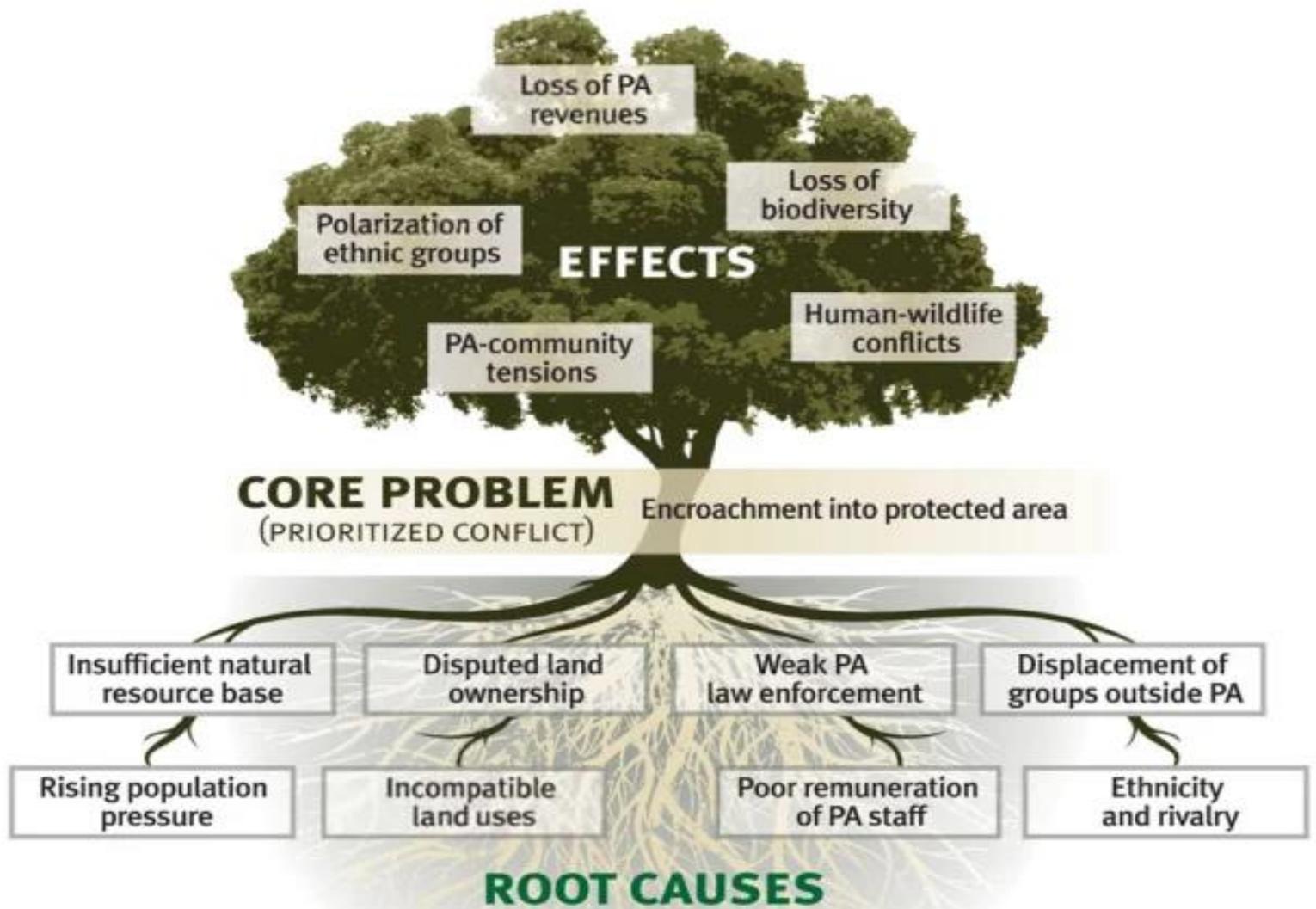
LOGIC TREE DECISION

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur quis neque vitae purus malesuada iaculis.



Problem Tree

- The **problem tree+ the objective tree** and analysis of strategies, is a methodology of **three steps for identifying main problems, along with their causes and effects,**
- It helps project planners to **formulate clear and manageable objectives** and the strategies of how to achieve them.



Grant & Collaborative Project so Crucial

- What is difference between **Grant & Grand Proposal?**
- Research **Budget** Shrinking
- Focus on **External** Funding
- **Not Easy** to have Professional Proposal
- **Attract** Decision makers and **Crack** Competition

Seek answers to the following questions:

- What are the current trends?
- What are the current limitations and restrictions?
- What subject areas were awarded funding recently?
- What are the future plans of the funder?
- Who are the decision-makers/assessors?
- What review processes do they follow?

Some points to remember

- Funding bodies look for good researchers.
- Think of them as potential investors in you and your ideas.
- You must 'sell' your idea: Be enthusiastic about the work!
- Why should they give a grant? See it from the funder's point of view.
- Remember that you are NOT begging.
- You have ideas, they have money.

Secondary selection Criteria

- Good track record of funding
- Priority in new researcher
- Market Value
- Business Risk
- Credentials of Investigator(Chief)

Writing Grant Application - Formal Structure

Essential Contents:

- Statement of the problem.
- Summary of current developments in the field.
- Statement of what is new about the project.
- Indication of the extent to which the research builds on previous work by you and by others?
- In certain cases, assurance that you are aware of existing work in the field despite no exhaustive literature review being available.

Ethical Aspects

- Make sure your proposal addresses relevant ethical considerations.

Evaluation

- How will you measure the success of your project?
- Distinguish between monitoring & evaluation. *Monitoring is part of the project management while evaluation is formal assessment of the outcome of a project.*

Personnel

- Explain the staffing requirements in detail and ensure that this make sense.
- It is essential to provide brief details of the relevant qualifications and experience of the staff.
- To minimise expenses, the plan should include the phasing out of staff whenever their tasks are completed.

Budget

- The application should include an itemised budget setting out the costs year by year.
- A cost justification for each item should be given.
- The budget should be exhaustive.
- If additional funding from other sources is sought then this should be made clear.

Timing

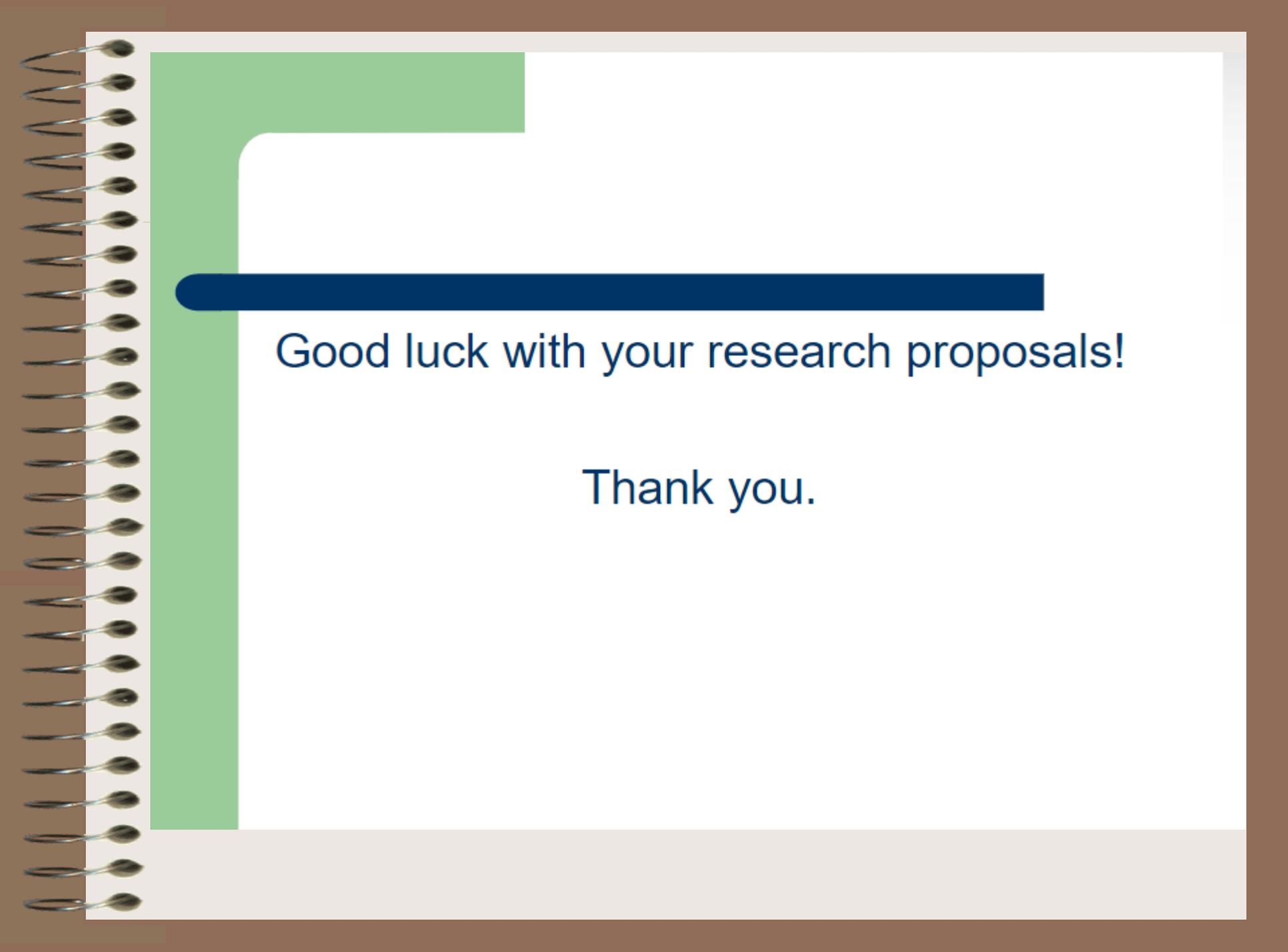
- The individual tasks should be sequenced logically and allocated realistic durations.
- Detailed reasoning should be given for the task sequence and durations.

What do the 1-9 scores mean?

| Impact | Score | Descriptor | Additional Guidance |
|--------|-------|--------------|---|
| High | 1 | Exceptional | Exceptionally strong with essentially no weaknesses |
| | 2 | Outstanding | Extremely strong with negligible weaknesses |
| | 3 | Excellent | Very strong with only some minor weaknesses |
| Medium | 4 | Very Good | Strong but with numerous minor weaknesses |
| | 5 | Good | Strong but with at least one moderate weakness |
| | 6 | Satisfactory | Some strengths but also some moderate weaknesses |
| Low | 7 | Fair | Some strengths but with at least one major weakness |
| | 8 | Marginal | A few strengths and a few major weaknesses |
| | 9 | Poor | Very few strengths and numerous major weaknesses |

Generic Components of Research/Project Grant Proposal

- *Title:*
- *Executive Summary/ Abstract*
- *Introduction and Rationale*
- *Problem statement*
- *Research Objective: Development objectives and indicators of achievements*
- ***Related Work/Literature Review***
- ***Significance***
- ***Research Design and Methodology***
- *Budget estimate: Accurate and realistic cost estimates will help to win*
- *Schedule (WBS): A summary of the planned activities to achieve to achieve the objectives*
- *Beneficiaries*
- *Limitations & Delimitations*
- *Project management & evaluation*
- *Risk and Remedy*
- *Outputs/deliverable : Largely tangible items but also intangible items that related to the objectives.*
- *References*
- *Appendix- CV of Chief Investigator*



Good luck with your research proposals!

Thank you.