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Project Planning

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Overview

- **Take you through a process for planning projects**

- **For you to do later: Understand how to relate these to your current or potential research projects**

- **On the blog: Consider risk management and evaluation**

What characterises success?

- **What are the features of successful projects?**

- **Reflect on successes and failures – what characteristics can we list?**

What does a good project 'look' like?

- Has a clear and specific objective

- Is ultimately someone's responsibility

- Is any planned undertaking – that is both finite and bounded

- Effective communication

- Motivated, capable team members

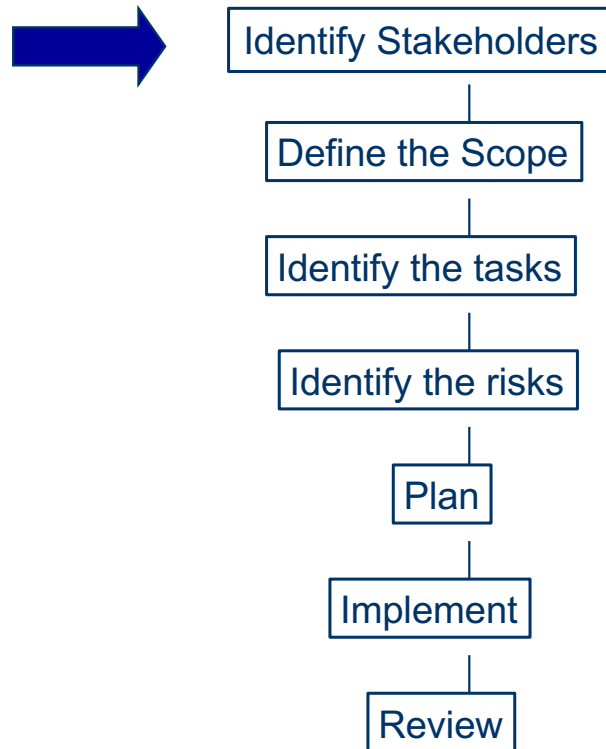potential research projects to develop today?

Project Constraints

- **Most projects operate under constraints or limitations**

- **What are the constraints that operate on your research projects ?**

- **Especially true at the moment – see the productivity session**

Possible constraints

- **Time**
- **Funding**
- **Access to people / resources**
- **Clarity of scope**
- **Questions of validity / originality**
- **Plus others…**
- **… so it is important to understand the environment in which you operate**
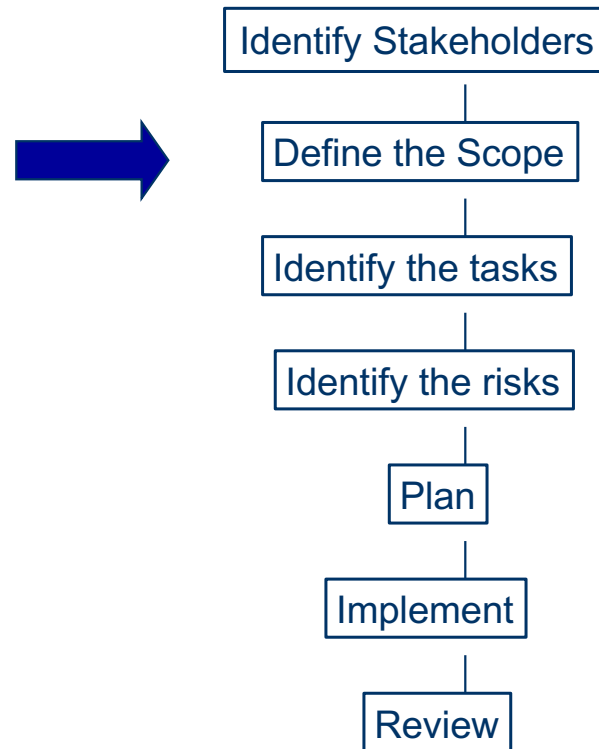
An Overview of Project Planning

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→ Identify Stakeholders

Define the Scope

Identify the tasks

Identify the risks

Plan

Implement

Review

I'm going to rattle through this, but will put supporting materials on the blog later

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Stakeholders

- **Play a role**
- **Have an interest**
- **Are affected by**
- **Can influence**
- **Can support**
- **Affect impact**

An Overview of Project Planning

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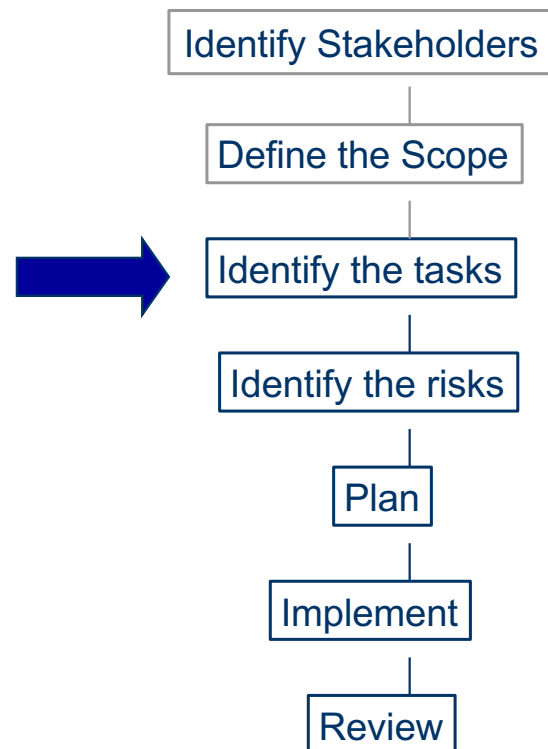# Defining the Scope

- **Moving from your research area (general) to a research question**

- **Which should be**
  - **Specific**
  - **Answerable**
  - **Coherent**
  - **Interesting/valuable**

Scope of your project

- **What are you trying to achieve in your project?**

- **This will be a good thing to talk through with someone**

- **Find a research buddy and explain the central aim of your research project and the motivation for the study**

- Are you clear on the limits of your investigations?

- How will you know when the project is complete?

5 minutes

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Planning and Management Tools

- **Mind Map**

- **Work Breakdown Structure**

- **Risk Analysis**

- **Gantt Charts**

Mind Map

- **Useful at the earliest stage of a project (and throughout, to refocus)**
- **Sets out all possibilities and issues**
- **Helps gives structure to project**
- **Makes linkages more evident**
- **Useful to GENERATE ideas**
- **Is not judgemental or critical**
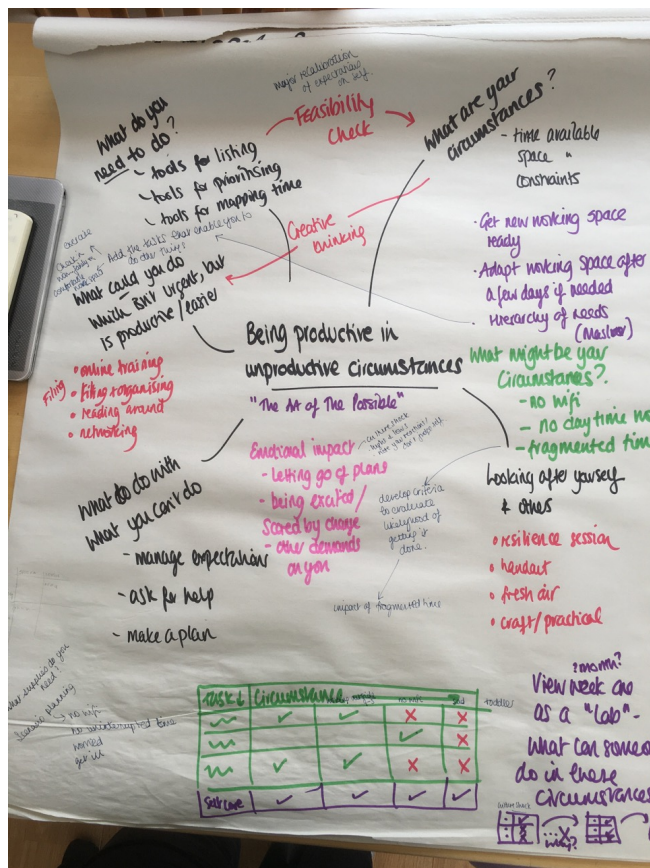
Constructing Mind Maps

- **Use single words or simple phrases for information**

- **Use colour to separate different ideas**
- **Use symbols and images**
- **Using cross-linkages**

Mind Map

For your research topic:
- Set out a mind map which includes the key information surrounding your project
- Include any questions or areas of uncertainty
- Try to suspend criticism or judgement at this stage…

This is a chance to *devise* a potential proje

Work Breakdown Structure

- A technique to identify all tasks associated with a project
- Start on the top (or side) with the project objective
- Add detail using the defined scope
- Identify obvious tasks
- Break these down into elements which can be managed
-
  - Asking "How will I achieve that?" will help you arrive at the level of discrete tasks

- List questions or points to clarify

WBS Sample

- https://simplyeducate.me/2013/09/14/how-to-use-a-mind-map-to-prepare-your-research-proposal/
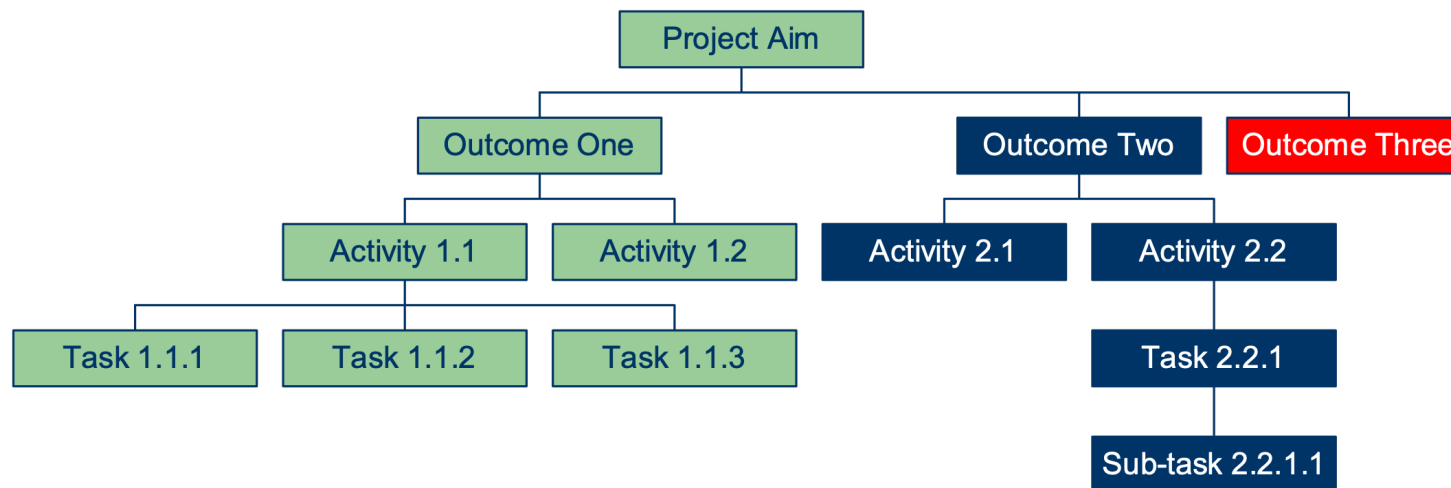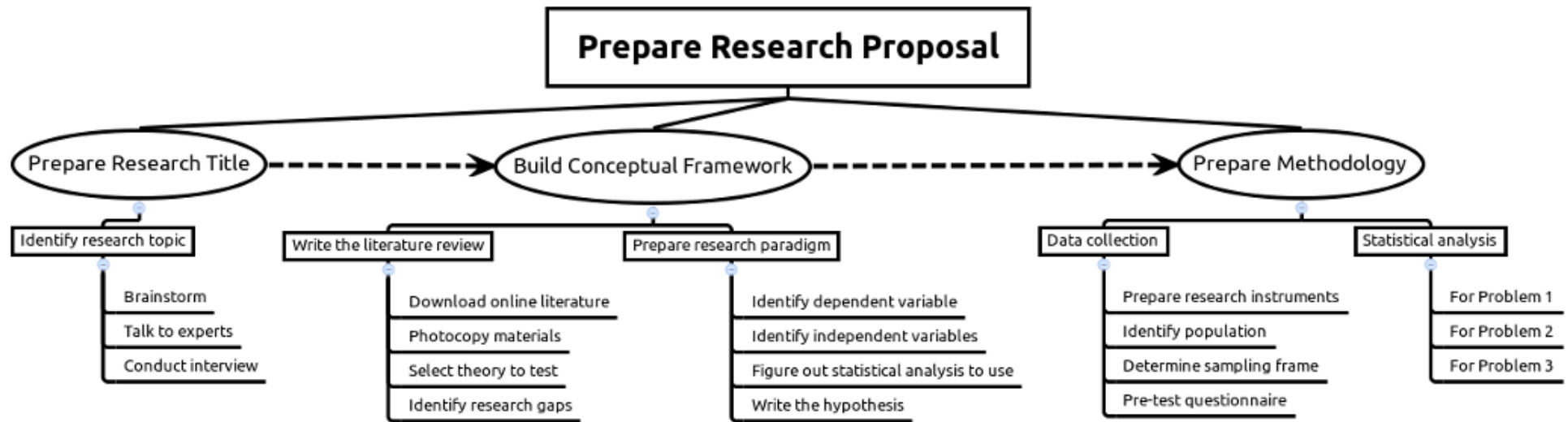
Adding layers

- **Ideas of budget will become clearer as the detail emerges**

- **Responsibilities should also be considered early – who does what?**

100% Rule

- **A WBS includes 100% of the work defined by the project scope and captures ALL deliverables**
  - **Includes any project management required !**
- **The sum of the work at each 'child' level must equal 100% of the work represented by the 'parent'**
- **WBS should not include any work that falls outside the scope of the project**
- A WBS is not an exhaustive list of work. It is instead a comprehensive classification of project scope

Your own WBS

- **Complete your own WBS as far as you can, for your project**

- **Your aim is to build a foundation for the next stage of the project planning process**
  - **The length of time for each task can be estimated**
  - **You can organise your chart by deliverables or phases of the project**

Develop your project budget with the experts…

- https://www.ed.ac.uk/research-office/winning-research-funding
- Training, 1:1 support, past applications

Develop your idea

At the 'develop your idea' stage, we help you think about what you need to do to grow your idea into a fundable proposal.

Identify funding

At the 'identify funding' stage, we help you to understand the funding landscape, your funding options and the best fund to fit your idea.

Craft your application

At the 'craft your application' stage, we work closely with colleagues in your local Research Office to provide you with the supporting roots that enable your idea to grow and blossom.

Manage your award

At the 'manage your award' stage, we help you get your project started.

Find my Research Funding Specialist

Winning research funding is a team effort. Together with colleagues in local Research Offices, we provide you with the expertise that will help you secure research funding. Find contact details for your Research Funding Specialist and your local Research Office.

Successful research funding applications

We offer access to successful applications to our researchers, to provide inspiration and real-life examples to colleagues in the process of crafting their own application.

But what is missing so far ?

What really happens in research ?

- Things go wrong
- The direction has to respond to results
- New ideas may emerge in your field

- Your project planning must either anticipate or cope with risks…

Risk Analysis

- **Identify potential risks**
- **Assess likelyhood of risk**
- **Assess magnitude of risk**
- **Develop response**
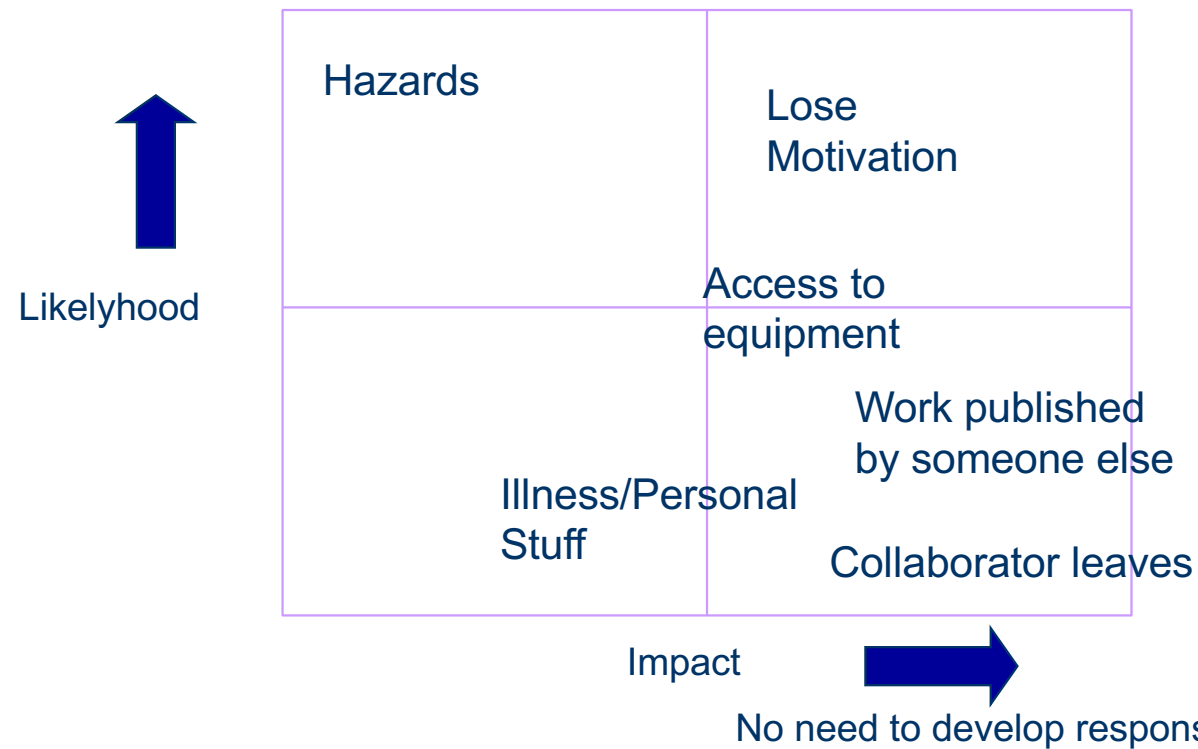 - **minimise, eliminate or develop contingency plans**

Risk Management

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Likelyhood

Impact

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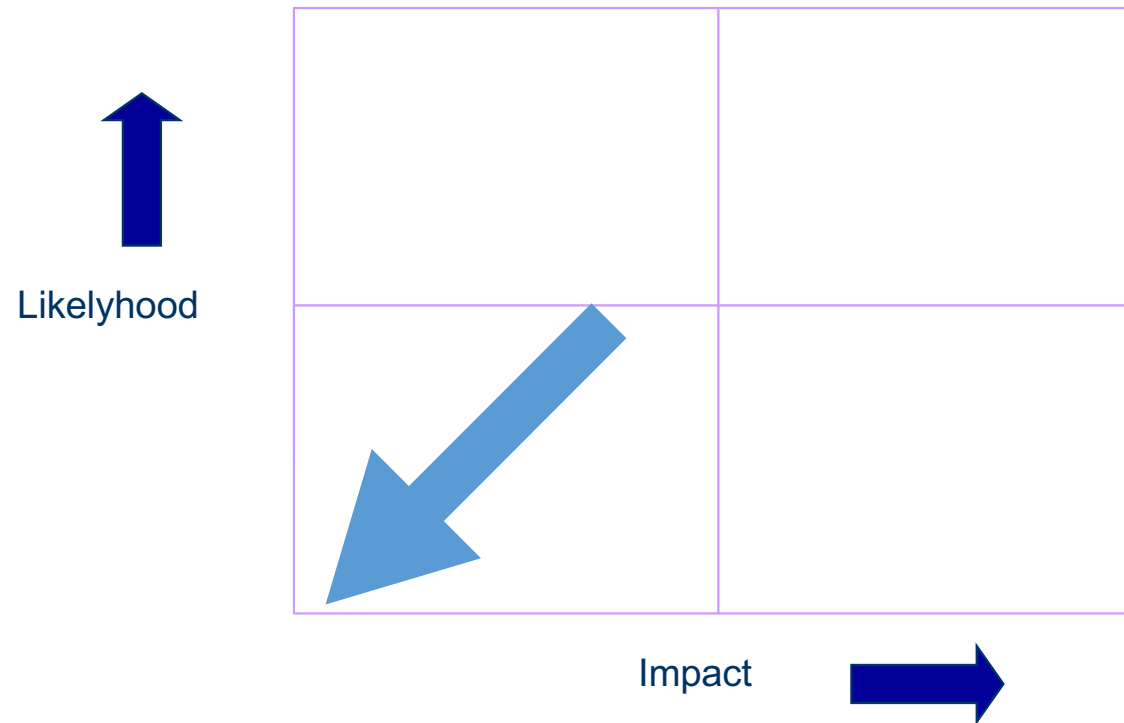
Risks – from previous sessions
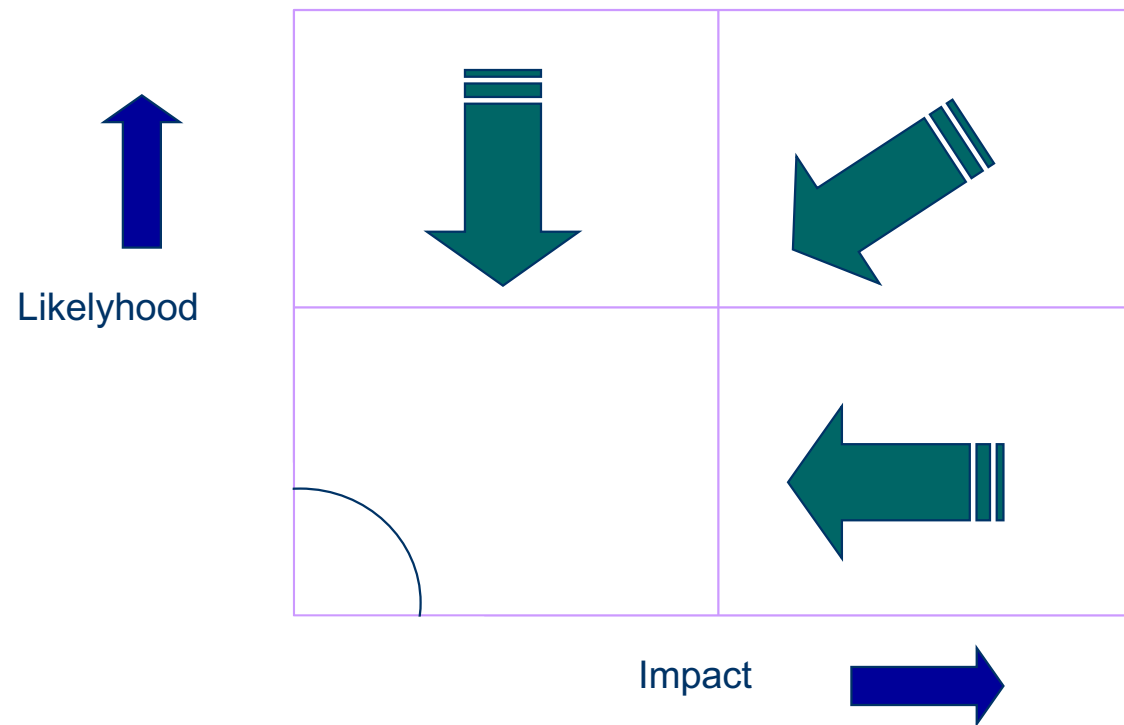
- **It doesn't work**
- **Runs over-time**
- **Loss of motivation**
- **Insufficient funding**
- **Delays from suppliers**
- **Health and safety**
- **Recruiting participants (subjects of research)**

- **Poor collaboration**
- **Data quality poor**
- **Inaccurate data**
- **Staff absence**
- **Other groups publish the work before us**
- **Politics - treading on the toes of others**

Risks – from previous sessions

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Hazards

Likelyhood

Lose Motivation

Access to equipment

Work published by someone else

Illness/Personal Stuff

Collaborator leaves

Impact

No need to develop response yet…

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Risk Management

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Implement

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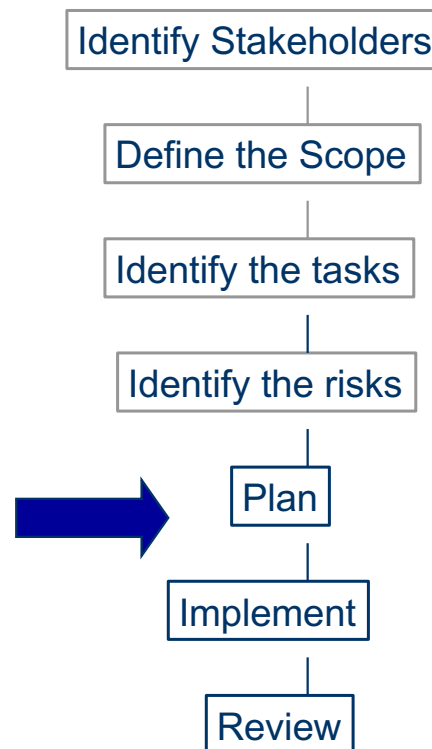
note time

Gantt Charts

- **Lay out the tasks that need to be completed**
- **Show when these tasks should be carried out**
- **Assist the allocation of resources**

- **Estimate time for each task**
  - include: project management, detailed planning, liaison with experts, meetings, information gathering

Activity	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
Register	▪▪												▪▪
Literature review	███	███	███										
Deadline for literature review			▪▪										
Prepare and rehearse presentation							███						
Presentation to School/Department								▪▪					
Documented meeting with supervisors	▪▪	▪▪	▪▪	▪▪	▪▪			▪▪	▪▪	▪▪	▪▪	▪▪	
Plan first research unit			███	███									
Present outline of first research unit					▪▪								
First research unit					███	███	███	███					
Review and analyse research results								███					
Survey of literature	███	███	███	███	███	███	███	███	███	███	███	███	███
Courses/conferences	███							███					
Learning about equipment & techniques		███			███			███					
Holiday							███						
Second research unit planning								███	███				
Second research unit									███	███	███	███	███
Drafting transfer report									███	███			
Finalise transfer report										███			
Deadline for transfer report										▪▪			
Transfer viva												▪▪	
Visit from leading professor						▪▪							

Your Gantt Chart

- **Use your WBS and the risk analysis to map your project tasks against a timeline**

- **Include in your chart any deadlines, milestones or deliverables**

Monitoring Progress
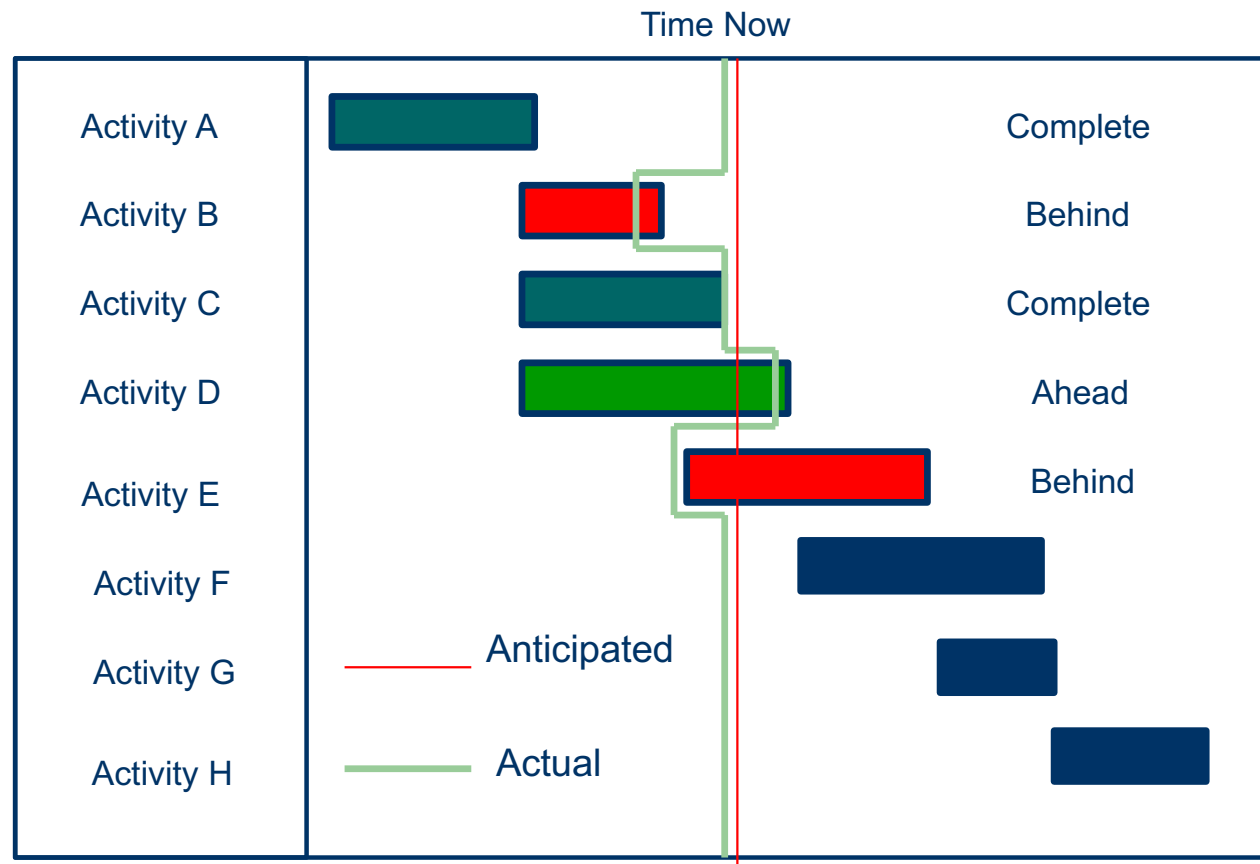
Reporting on Progress

- Progress against plan
- Identify activities which are slipping
- Identify areas where additional resource might help
- Identify unexpected conflicts on resource
- Keep critical activities on track
- Update project plans when things change, and always work with latest version of the plan

- BE HONEST

Keeping on track

Have a system for
- **Monitoring progress against milestones**
- **Managing and motivating team**
- **Monitoring budget**
- **Being flexible as project develops**
- **Dealing with problems**

Behind Schedule ?

- **Report the implications of delays**
- **Discuss changes in plans**
- **Direct resources**
- **Avoid persecution**
- **Respond early**
- **Be flexible**
- **Involve the whole project team**

Problems planning?

- **Difficulty planning the project may indicate**

  - insufficient depth of understanding of project objectives
  - not convinced of project objectives
  - unsure of responsibility or not enough experience

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Other factors

- **Allow time for 'Warm-up' at start of new project**

- **Ideas come out at the planning stage…**
- **… so if you have a new idea, make a plan**
- **Understand your role**
- **Review - achievement of task and process**

Review – not just at the end of a project…

- **It is vital to invest some time in reflecting regularly**

  – **was the plan overly optimistic?**

  – **what will you do differently next time?**

And finally… The Project Life Cycle

- **How it can seem**
  - **Enthusiasm**
  - **Disillusionment**
  - **Panic**
  - **Search for the guilty**
  - **Punishment of the Innocent**
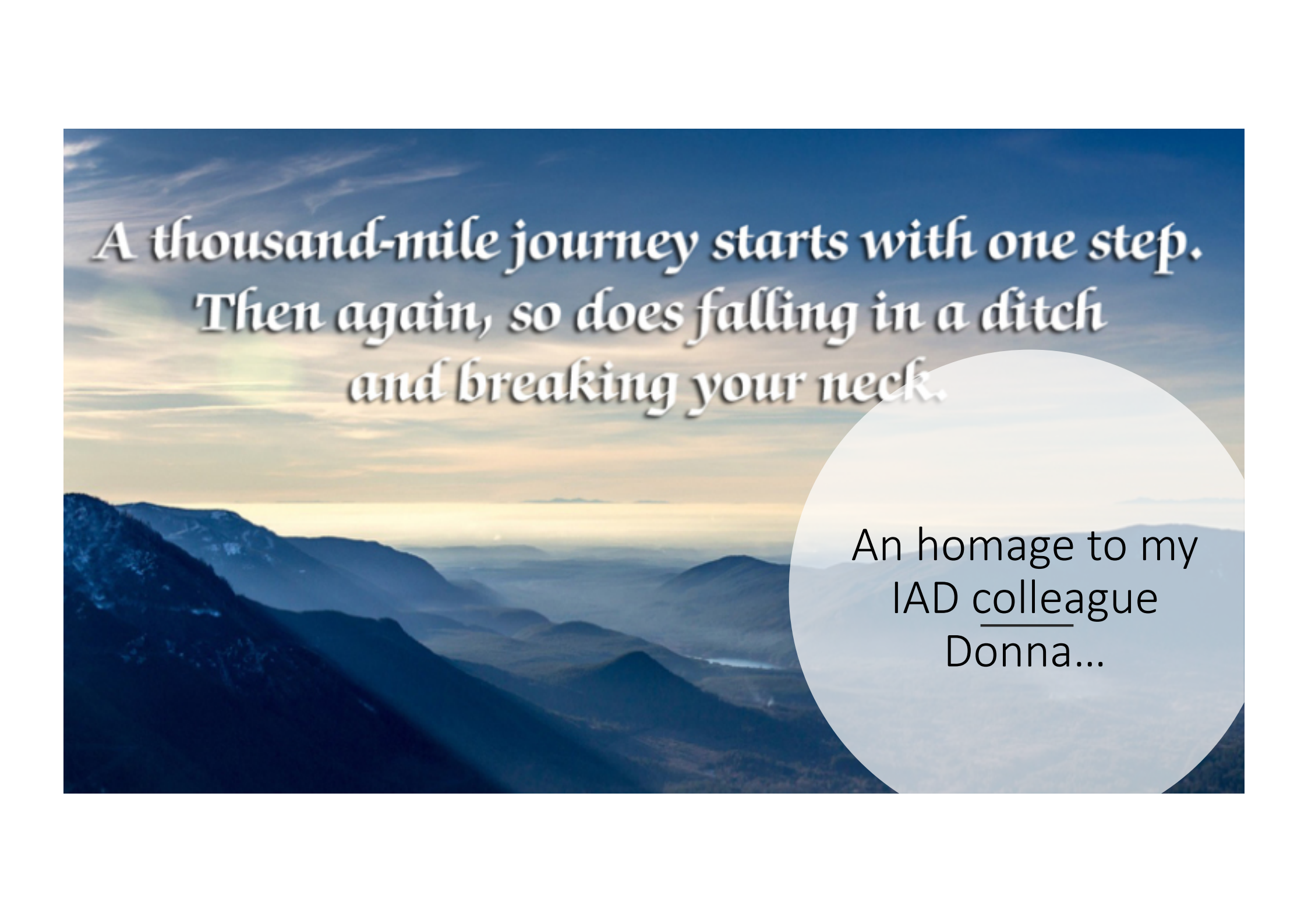 - **Reward for the hangers-on**

  - from http://www.lboro.ac.uk/service/std/myrp/myrp.html

The Project Life Cycle

- **How it should be!**
  - Preparing for the project
  - Agreeing / sharing objectives
  - Project Planning
  - Organisation
  - Implement - Control - Adjust
  - Reflect and Evaluate

- **Enjoy your research !**

Finally!

- Look after yourself
- Check out the other sessions on https://blogs.ed.ac.uk/iad4researchers
- Do as much of this with pen and paper as a strategy for digital rationing
- Get some fresh air
- Take the weekend off

- Suggestions for next session welcome!

A thousand-mile journey starts with one step.
Then again, so does falling in a ditch
and breaking your neck.

An homage to my IAD colleague Donna...

Today's Vinyl Offering...

Birmingham Blues...