## DClinSci Years 1&2

Where you are at and where you are going?



Easy, stress free, "doing ok", no dramas, happy, content

#### Stretch zone

Pushing performance, high effort, improving, excitement, adrenaline, growth

#### Panic zone

Anxiety, worry, bad decisions, irritable, concern, poor performance

#### DClinSci Clinical Bioinformatics Programme Structure

Year 1	Module A1: Professionalism and Professional Development in the Healthcare Environment (30 credits)		Theoretical Foundations of Leadership		Module B1: Genomics Modules 1a(i) 1a(v) (10 credits)	Integration of and For Heal	red Module ( Specialist Scientiil th and Social Care neering; Data Man Science (30 credits)	ic Software In ; Coding and		
Year 2	Module A3: Personal and Professional Development to Enhance Performance (30 credits)		Leaders Quality Imp the Clinical a Enviro	ile A4: ship and rovement in and Scientific ment redits)	Module A5 and Innovati and Socia	on in Health I Care (20	Module B3: Omics (10 credits)	<b>Sha</b> i Applied Health In for Clinical Diagr and Controve		
Year 3	Module B5 Infectious and Rare Diseases (20 credits)	Learni Asses	7: Teaching ng and sment redits)		Section					
Year 4	Module B6 Optional modules: infection diseases, cancer genomics or rare diseases (30 credits)				Section C: Research, Development and Innovation (270 credits over Years 3-5)					
Year 5		Section C: Research, Development and Innovation (270 credits over Years 3-5)								

# DClinSci Physiological Sciences Programme Structure (ManMet)

Year 1	Module A1: Profe Professional Deve Healthcare En (30 cre	elopment i nvironmen	in the	Module A2: Theoretical Foundations of Leadership (20 credits)		Module B1: Advanced History Taking (15 Credits)	VS =	B2 (10) and B4 and RSI = B2 ( Specialist I NP = B2 (15)	4 (10) 20) Units (30)		
Year 2	Professional De Enhance Per	Modu Leaders Onal Development to nce Performance (30 credits)  Modu Leaders Quality Implement to Clinical a Environ (20 cr			nt in	Module A5: Rese and Innovation in and Social Car (20 credits)	Health	Module B3: Therapeutics (10 credits)	Specialist Units (15) RSI = B4 (15) CS, NP and VS = B6 (15)	Module B5: Contemporary Issues in Healthcare Science (20 credits) [Physiological Sciences and Physical Sciences]	
Year 3	Specialist Units (15) CS = B8 (15) RSI = B6 (15) NP = B8 (15) Specialist Units (2 VS = B8 (20)		dule B7: Tead Learning and Assessment (20 credits)	1		Section C: Re					
Year 4	NP = B9 (2 Specialist Units (3 Specialist Units (3	Specialist Units (25) NP = B9 (25)  Specialist Units (30) VS = B9 (30)  Specialist Units (35) CS = B9 (15) and B10 (20); RSI = B8 (15) and B9 (20)							elopment and Inno over Years 3-5)	ovation	
Year 5	Section C: Research, Development and Innovation (270 credits over Years 3-5)										

#### DClinSci Life Sciences Programme Structure

Year 1	Module A1: Profess and Professional Develo the Healthcare Envi (30 credits)	pment in	Section B: Sp	Section B: Specialist Scientific Clinical Programme – FRCPath Part 1 (75 credits)						
Year 2	Module A2: Theoretical Foundations of Leadership (20 credits)	Sec	tion B: Specialist Scien							
Year 3	Module A3: Person Professional Develop Enhance Perform (30 credits)	pment to	Module A4: Leadership and Quality Improvement in the Clinical and Scientific Environment (20 credits)		Section C: Research, Development and Innovation (270 credits over Years 3-5)					
Year 4	Module A5: Research and Innovation in Health and Social Care (20 credits)		Section C							
Year 5										

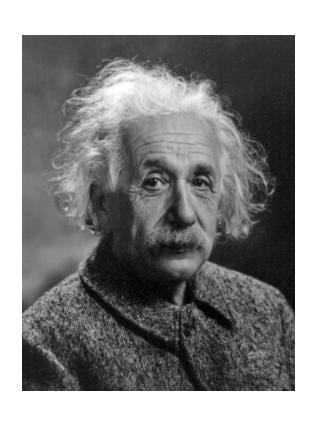
#### Section C Training Workshop Schedule

- Years 1 and 2
  - Induction Introduction to Section C
  - Project Proposal Masterclass
- Year 3-start of third year (Sep/Oct).
  - How to write a literature review
  - How to give a lay talk
  - Section C academic and workplace supervisors meetings
- Years 4 and 5-January each year
  - How to write a thesis
  - How to write a paper
  - How to give a research talk
  - Section C academic and workplace supervisors meetings

#### What is a Research Idea?

If we knew what it was we were doing,

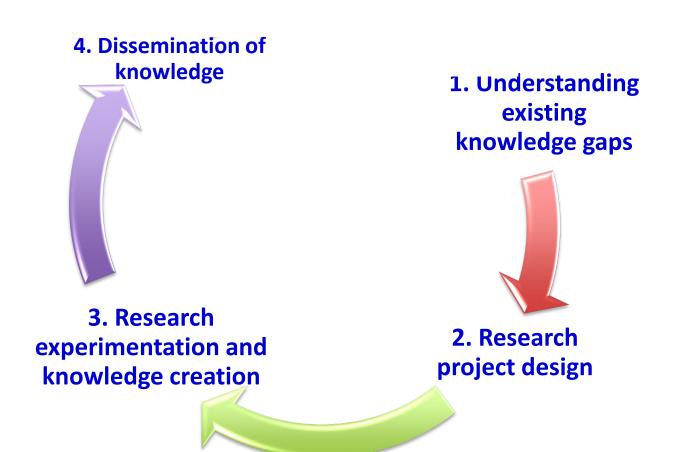
it wouldn't be called 'research,' would it?



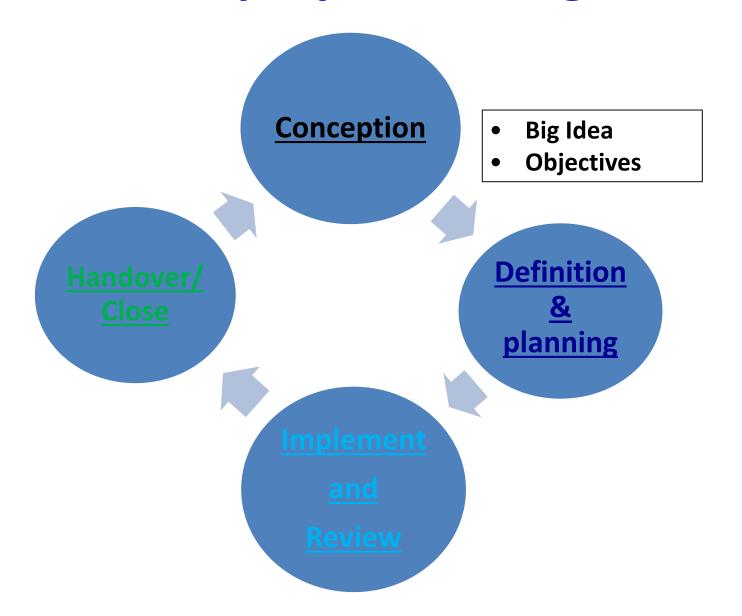
## There is no Eureka moment!



#### **How to Devise your Research Project**



## **Tools for project management**



## What is project management?



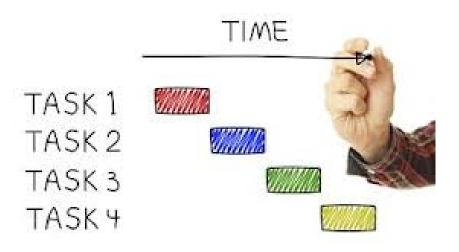
What might be the benefits to you? What might be the barriers for you?

## Identify the tasks

Break the project down into tasks and sub-tasks

Sub-tasks should be small enough chunks so that you

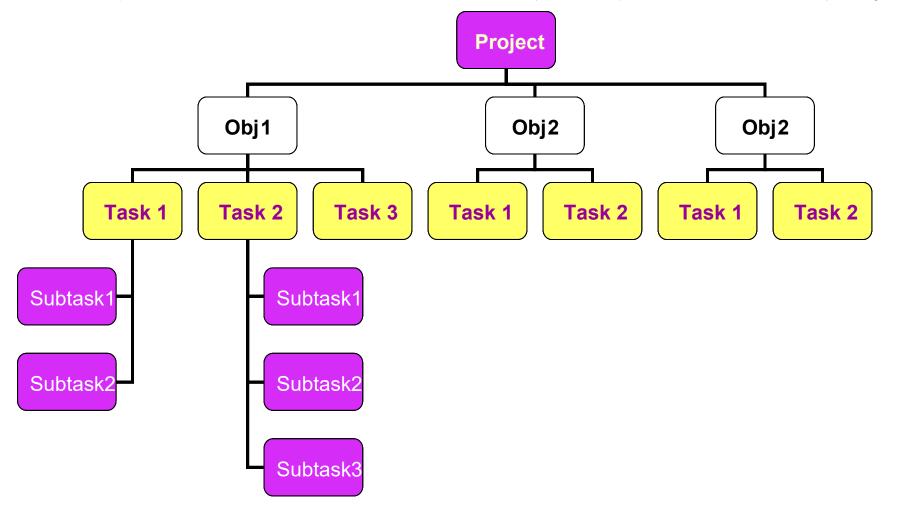
can easily assess your progress





#### Drill Down

Identifying the tasks needed to complete your research project

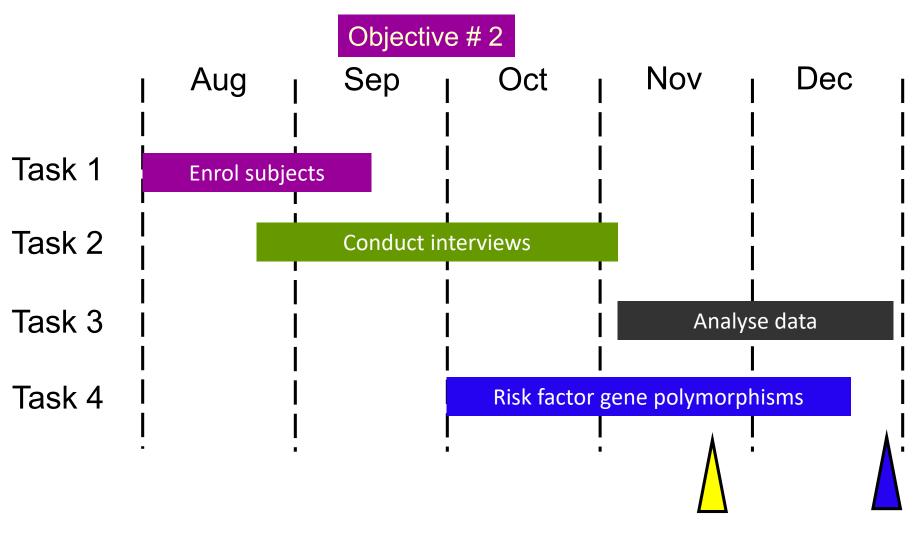


# Gantt charts structure your project and keep you on track

- 1. Use list of tasks from the drill down
- 2. Sequence list of project activities/tasks
- 3. Determine interdependencies or relationships between activities
- 4. Establish duration for each activity
- 5. Determine the project duration (start and completion dates)
- Get feedback on vour plan from kev stakeholders

	Activity   Month   Mon								B 0 41 1				
Activity	Month	Month 2		Month 4			Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13
	<del>- '-</del>		3	4	5	6		- 6	9	10		12	13
Register	•												$\vdash$
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											<b>•</b>		
Transfer viva												<b>.</b>	
Visit from leading professor						•							

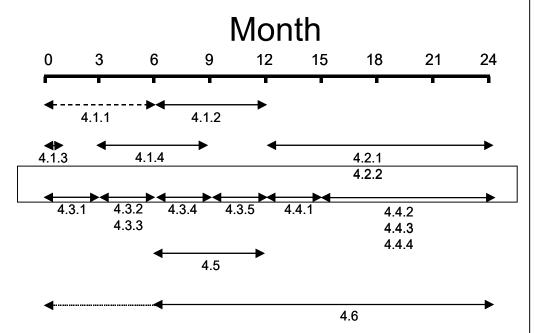
#### Develop a project timeline - Gantt chart



Review Evaluate

#### Cancer Research UK - Development Grant

#### **Timelines**

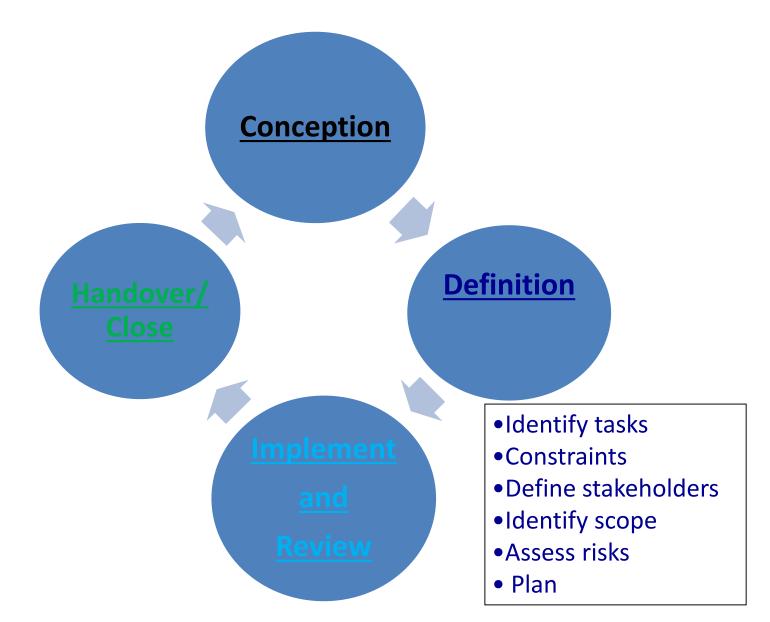


#### Milestones/Deliverables

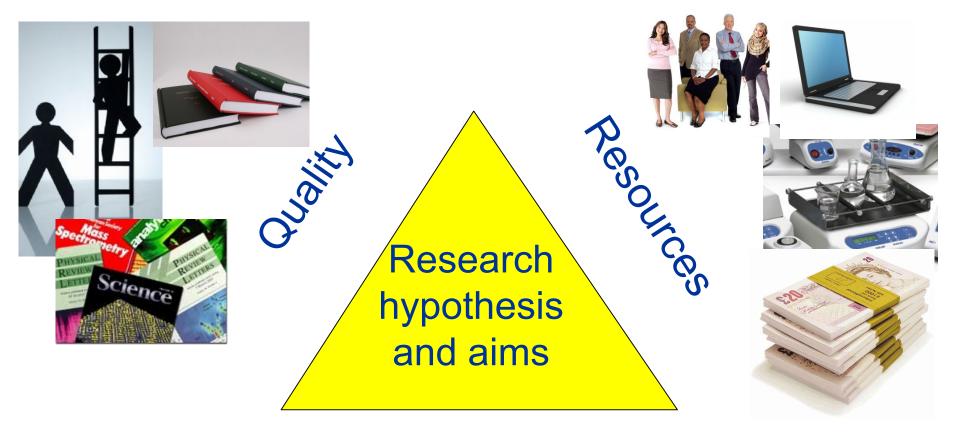
- 4.1.1 Development of cell lines for rh opticin
- 4.1.2 Production and purification of rh opticin
- 4.1.3 Scale up of human adeno-opticin
- 4.1.4 Development of ELISA Assays
- 4.2.1 Proliferation/apoptosis studies
- 4.2.2 Migration, invasion and adhesion studies
- 4.3.1 Comparison of human/bovine adeno-opticin
- 4.3.2 Optimal single dose of (human) adeno-opticin
- 4.3.3 Histological and Western blot analyses
- 4.3.4 Multiple dosing with adeno-opticin
- 4.3.5 Adeno-opticin with HT1080 and MDA468 tumours
- 4.4.1 Pharmacokinetics (rh opticin)
- 4.4.2 Tumour growth delay studies (rh opticin)
- 4.4.3 Window chamber experiments
- 4.4.4 In vivo metastatic model
- 4.5. Immunogenicity studies
- 4.6. Determination of the biologically active sites in opticin

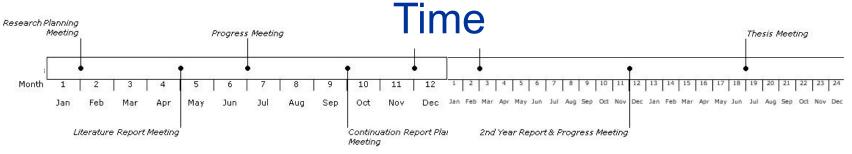
A detailed well designed project plan is one of the sharpest tools available to achieve success

## **Tools for project management**

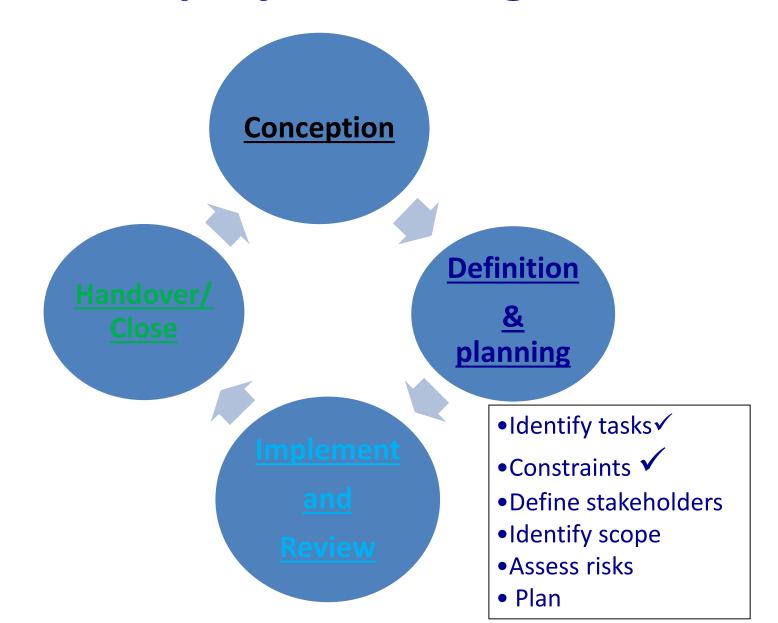


### Apply this to your research project





## **Tools for project management**

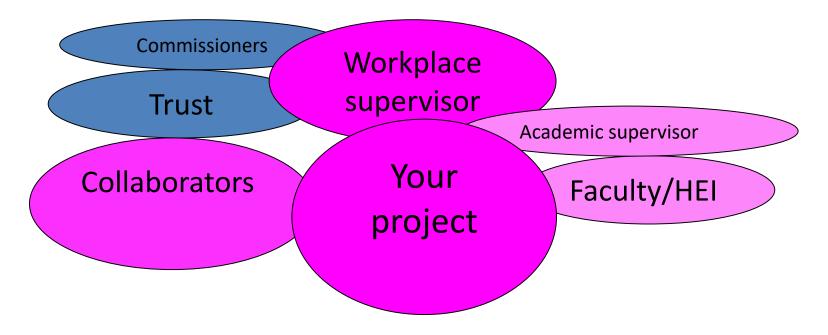


## **Engage all of the stakeholders**



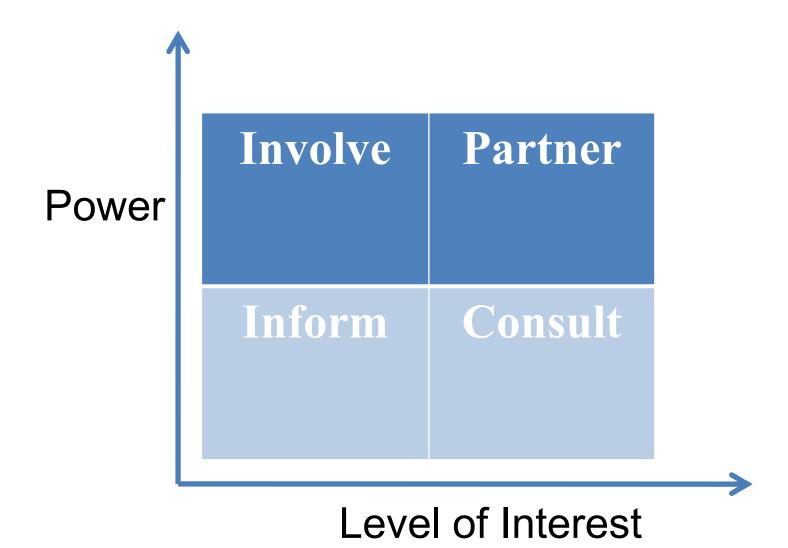
#### Engage all stakeholders in your research

Who will be affected?
Needed for support?
Interested in the outcomes?



How do you manage your stakeholders expectations?
Think about reporting and communication - help each to appreciate the value of the project throughout

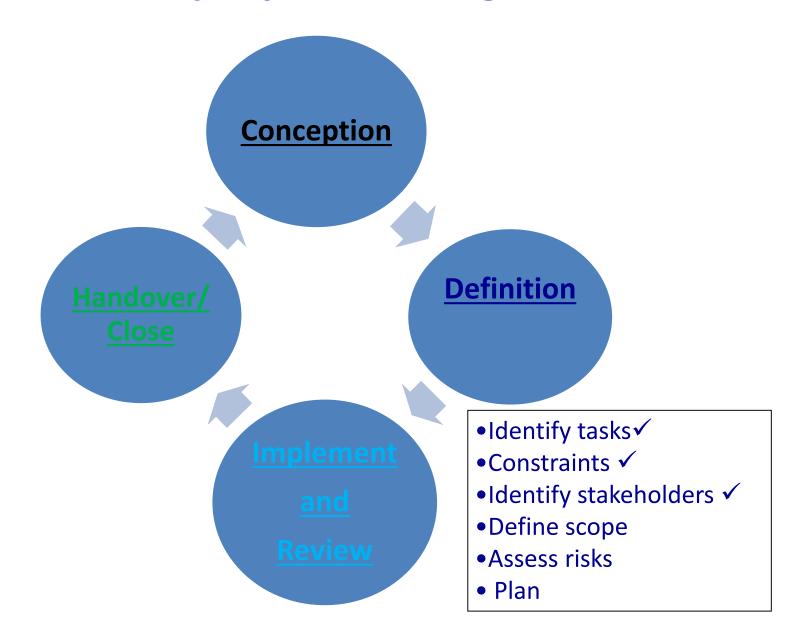
#### **Engage all of the stakeholders**



#### What do you need to know about stakeholders?

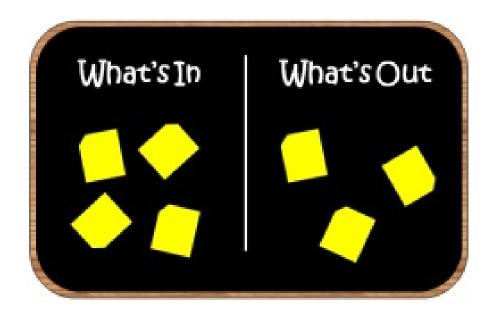
- Who are your stakeholders?
- What resources do they bring to the project?
- What do they expect in return?
- How much power does each stakeholder have?
- What's their level of interest?
- How are you going to engage them?
- How can you manage them?
- Are there potential conflicts between the interests of stakeholders?

### **Tools for project management**



## Clearly defining scope!

- Scope = what needs to be done
- Defines the boundaries of the project
- Confirms common understanding
- The scope should be agreed by <u>all</u>
- Get agreement up front

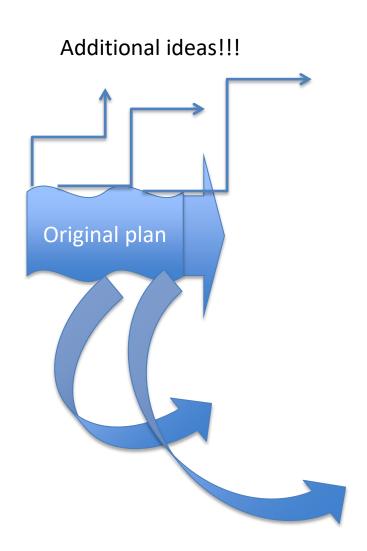


## Beware scope creep

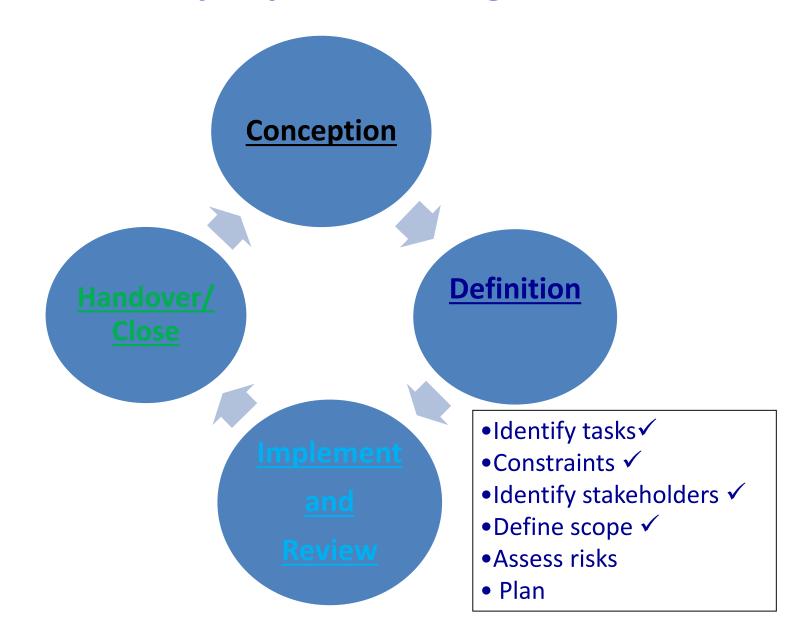
 <u>Most</u> common reason for projects delivering late/over budget

## If you need to change the scope ensure that:

- Changes are beneficial to project
- · Everybody is aware of
  - impact on schedule
  - outcomes of project



### **Tools for project management**



## The reality of research

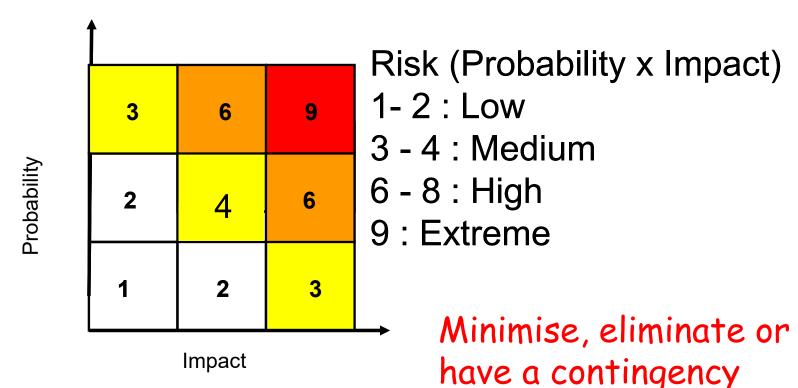
- ·Things go wrong!
- The direction of your research may change based on your results
- New data emerges from your research field



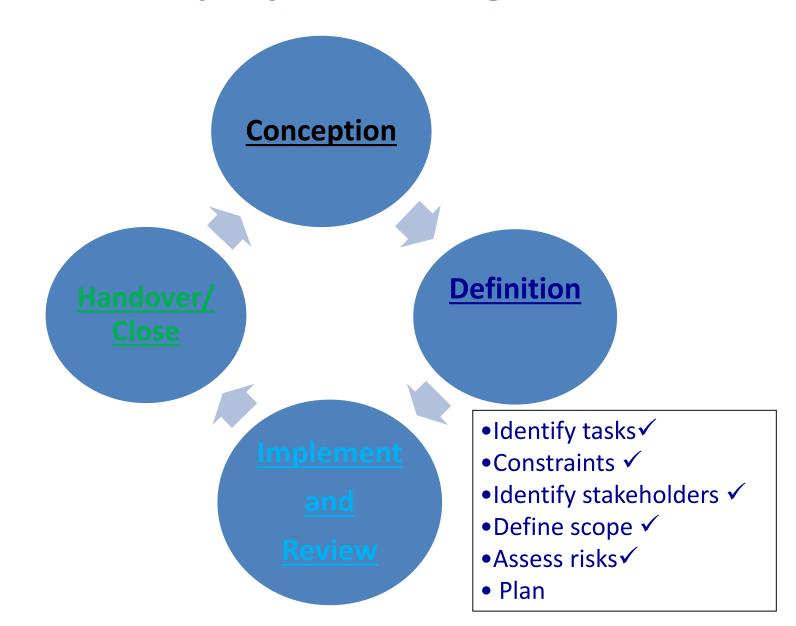
Your project plan must anticipate all of this and more...

## Risk analysis: What could go wrong?

- · Identify the risks then prioritise them
- Probability how likely is it to happen
- Impact how serious is it?



### **Tools for project management**



## Struggling to develop a plan?

#### This can suggest:

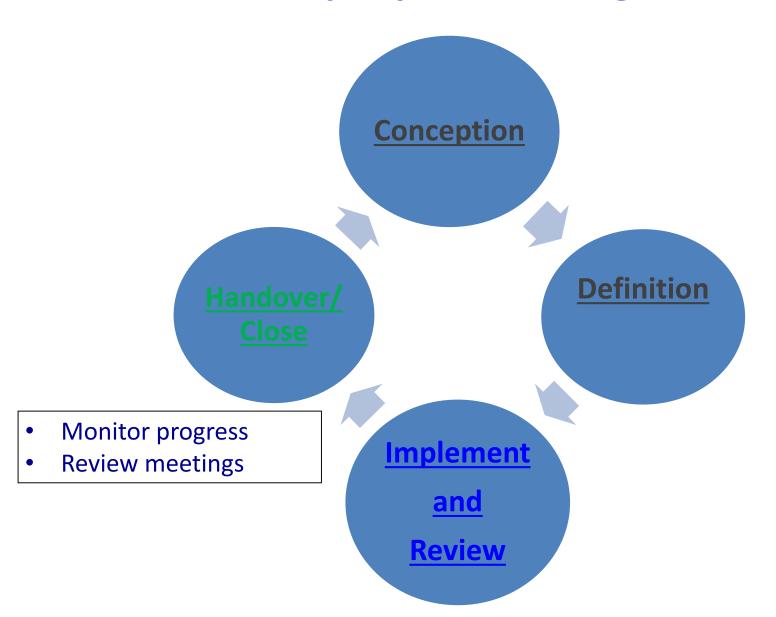
- · Your project objectives are unclear
- You're unconvinced about the project
- The project is too large
- Unsure of your responsibilities
- · Need additional support or experience



#### So

Increase resources and engage your whole team

#### **Tools for project management**



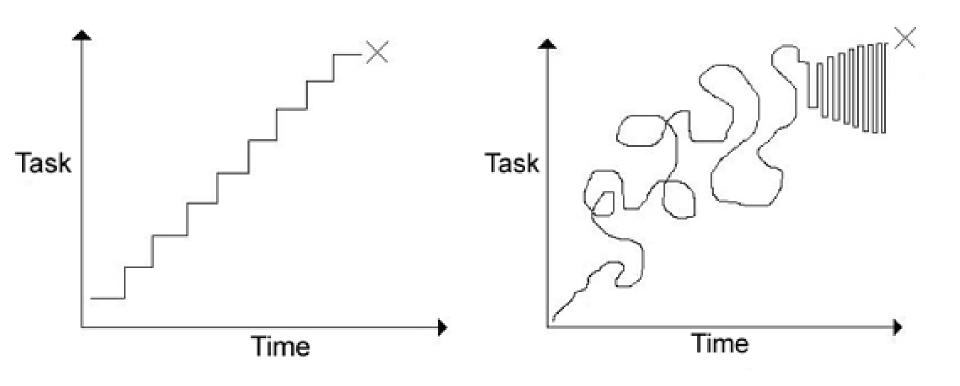
## How will you monitor progress?

- Decide on an appropriate communication/monitoring system (type and frequency)
  - steering group meetings
  - regular project team meetings
  - weekly/monthly updates (paper or email)
- Are key milestones being met?
  - on time?
  - on budget?
  - is there a need to reassess plan?
- Constant communication and transparency even when things go wrong

## Tips on monitoring

- Be systematic evaluate against deadlines
- Identify tasks which are slipping
- Identify areas where additional resources might help
- Identify unexpected conflicts on resources (e.g. lab equipment / technicians)
- Identify critical activities and prioritise
- Update project plans when things change, and always work with latest version of the plan
- Most importantly BE HONEST

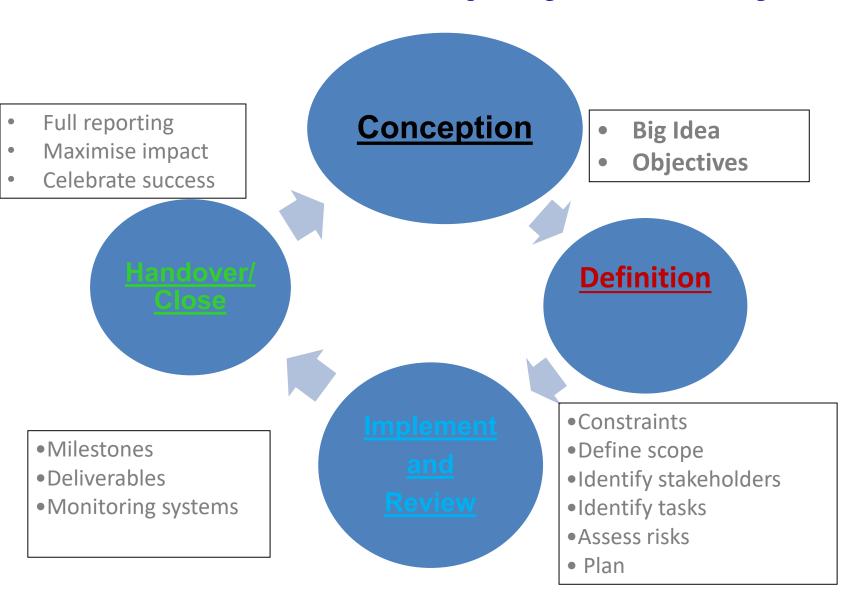
## Are you a planner or a punter?



### Summary: research project planning

- Project planning
  - should be a tool not a straightjacket
  - should be dynamic with regular, fixed reviews of progress
  - helps research team communication
  - checks on common understanding
    - Between you and stakeholders
       (line manager, team, collaborators, funders)
  - helps to ensure research dissemination
    - Papers, presentations, Follow up funding

## Phases in the project lifecycle



What makes a Collegiality good project Subject knowledge Team working Research methods: theoretical knowledge People management Research methods: practical application Supervision manager? Information seeking Mentorina Information literacy and management Influence and leadership Languages Collaboration Academic literacy and numeracy Equality and diversity Working with others Knowledge base Analysing Communication methods Synthesising Communication media Critical thinking Publication Evaluating Problem solving Teaching Inquiring mind Engagement, Knowledge and Public engagement Intellectual insight influence and impact intellectual abilities Enterprise Innovation The knowledge and skills to The knowledge, intellectual Policy Argument construction work with others and ensure abilities and techniques Society and culture Intellectual risk the wider impact of research to do research Global citizenship Domain A Domain D Health and safety Domain C Domain B Professional conduct Enthusiasm Ethics, principles and sustainability Perseverance Research governance Personal Legal requirements Integrity and organisation effectiveness Self-confidence IPR and copyright The knowledge of the The personal qualities and Self-reflection Respect and confidentiality standards, requirements approach to be an effective and professionalism to do Attribution and co-authorship researcher Responsibility research Appropriate practice Preparation and prioritisation Research strategy Commitment to research Project planning and delivery Time management Professional and Finance, funding Risk management Responsiveness to change career development and resources Work-life balance Income and funding generation

Financial management

Infrastructure and resources

Responsiveness to opportunities

Networking

Reputation and esteem

Resonation and esteem

Responsiveness to opportunities

Networking

Reputation and esteem

WWW.Vitae.ac.uk/RDF.conditioned to the second s Income and funding generation

www.vitae.ac.uk/rdf



#### Project planning and delivery

Uses project management techniques effectively to deliver timely results across a range of projects.



I apply effective project management through the setting of research goals, intermediate milestones and the prioritisation of activities. I act on decisions agreed with my supervisor/line manager.

I deliver results.

#### Phase 2

I am able to independently define a manageable research project.

I understand project management cycles and am able to draw on a range of project management techniques and tools.

I allow for wider public access to and long-term preservation of research information/findings.

I manage problems and conflict.

#### Phase 3

I am able to define large research projects, drawing up long-term plans for research.

I use a range of project management strategies.

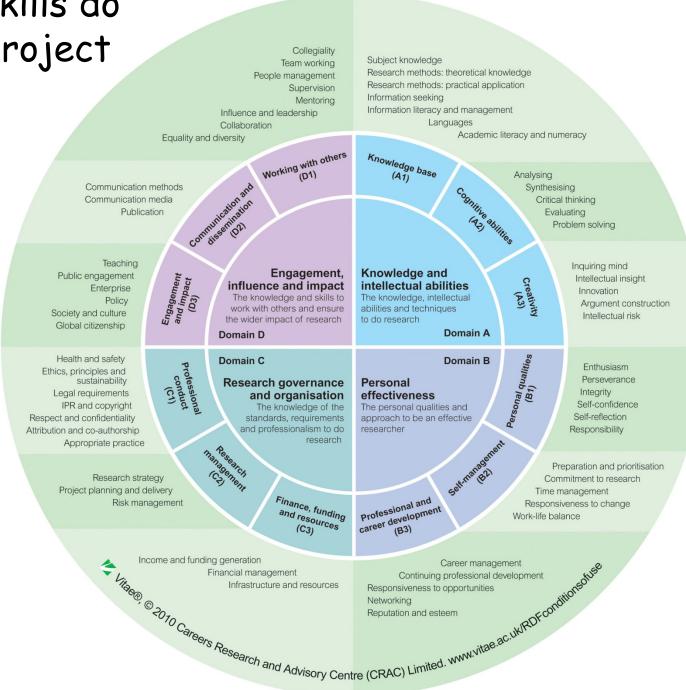
I am able to clarify priorities, setting expectations and keeping the project on track.

#### Phase 4, 5

I effectively manage multiple research projects and both the research agenda and bureaucracy for various projects.

I am able to take unpopular but evidence-based appropriate decisions.

What other skills do you use as a project manager?



#### A project isn't successful until it's finished!







What one thing will you take away from today's session?