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Successful professional doctorate

Dr Kai Uus, MD, PhD

Reader in Audiology

Division of Human Communication, Development and Hearing

School of Health Sciences, Faculty of Biology, Medicine and Health

University of Manchester

Audiology

Semester 1 | Semester 2

Year 1 Sep 15 – Aug 16

- **A1** Semester: 1 30 credits
- **B1** Sem: 1 15 credits
- **A2** Semester: 2 20 credits
- **B2** Audio Sem: 2 10 C
- **B4** Audio Sem: 2 10 C

Year 2 Sep 16 – Aug 17

- **A3** Semester: 1 30 credits
- **B3** Sem: 1 10 C DL
- **A4** Semester: 2 20 credits
- **A5** Semester: 2 20 credits
- **B5** Semester: 2 20 credits
- **B6** Audio Semester: 2 15 credits

Year 3 Sep 17 – Aug 18

- **C1**
- **B8** Audio/ Semester: 1 15 credits
- **B7** Semester: 2 20 credits

Year 4 Sep 18 – Aug 19

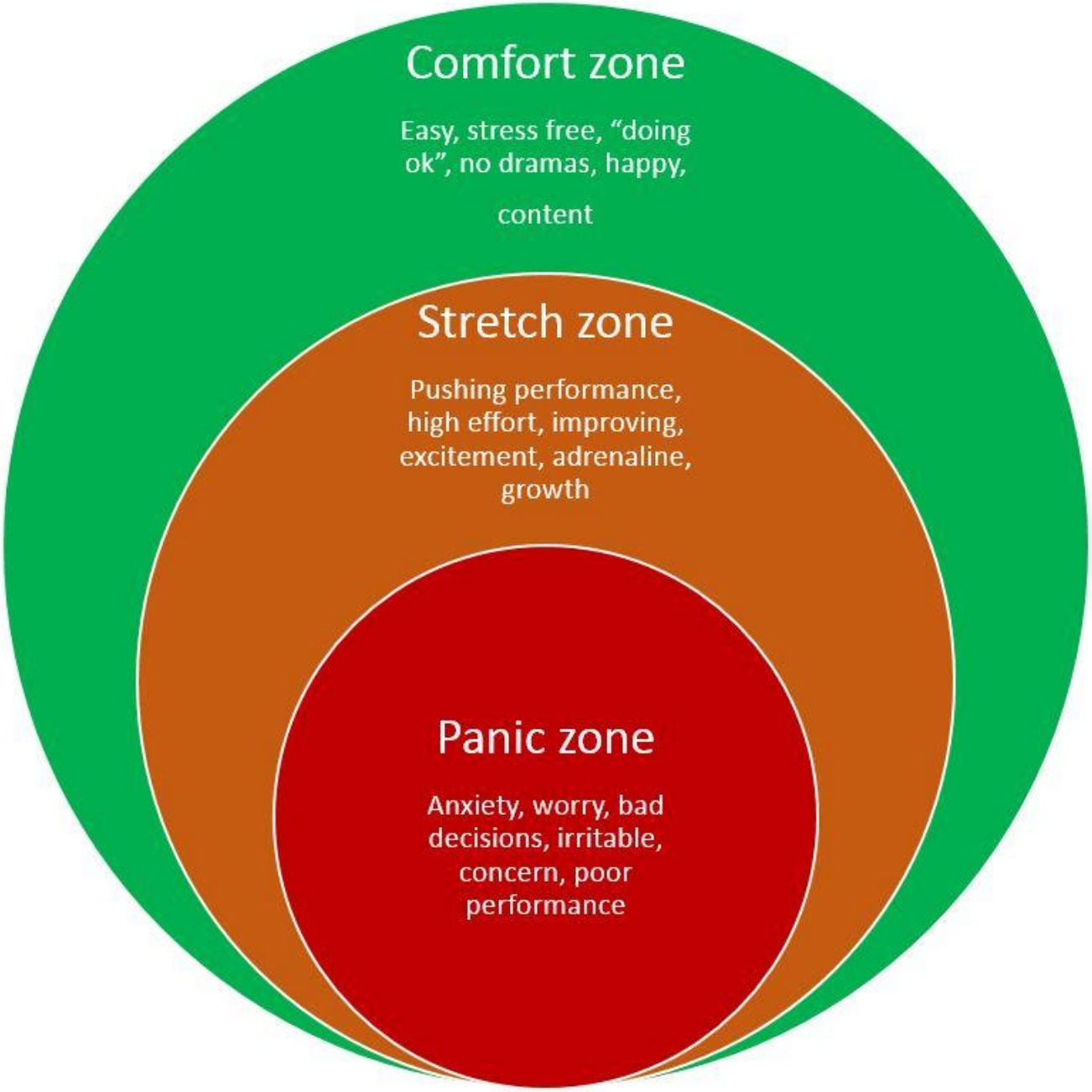
- **C2**
- **B9** Audio Semester :? 25 credits
- **B10** Audio Sem: ? 10 C

Year 5 Sep 19 – Aug 20

- **C2**

Original programme plan: version 23/01/18

Title	PhD	D Sci. Clin.	Au.D.
Objective	Research: Training Professional Researchers	A programme of advanced study and research which, whilst satisfying university criteria for the award of a doctorate, is designed to meet the specific needs of a professional group external to the university, and which develops the capability of individuals to work within a professional context	Research and development of professional practice [6]
Motivation	Entry to a research career, exploration of a particular area of interest	Progression to registration on the HSS register to apply for Consultant Clinical Scientist Post	"The AuD prepares individuals to become independent clinicians and supervisors of clinical practice who may be employed in clinic, hospital, and university settings and in private practice."
Enrolment	BSc 2:1 or MSc	BSc 2:1 or MSc + Professional qualification in Audiology	MSc Audiology
Availability	Variable	1 in UK	75 AuD programmes offered . 1 in UK (Nova Southeastern University in London)
Subject areas	All	Audiology and Management	Audiology
Origins	1917	2014	1994. Since 2007 replaced MSc as entry qualification to Audiology in US
Cohort	Predominantly self-directed study	Cohort programme	Cohort programme
Typical Cohort Size	Risk of ''lone researcher syndrome''	3	< 20 pa
Taught Time	Small taught component	Large taught component, work based learning	Majority taught component
Structure	Monolithic	Modular	Modular
Breadth of Learning	Single specialist topic	Range of topics within Audiology	Range of topics within Audiology
Depth of Learning	Level 8	Level 8	
Leadership Training	Minimal	Leadership modules through-out programme	Minimal
Thesis Word Count	<80,000	20,000-40,000	No thesis
Research Time	Almost 100%	40%	5% (Research methods module) [7]
Future Career Options	Improved employability	Progression to registration on the HSS register to apply for Consultant Clinical Scientist Post	Mandatory for working in US
Assessment	Single thesis	Module assignments, reflective practice, thesis	Module assignments
Disadvantages	PhD - limited interdisciplinary working and too much compartmentazation of knowledge Gilbert (2004)	Time demands	
Duration	Typical maximum 4 years full time Typical maximum 8 years part time	5 years part time	4 years
Support	2 Supervisors	Academic Supervisor, + 2 Thesis Supervisors	
Funding	Research Grant which may cover course fees, stipend, additional costs OR self funding	Health Education England provides training allowance to employer + tuition fees	


Comfort zone
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

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What is successful research?

- Research which can be presented at national and international meetings
- Publishing your data in peer reviewed journals
- Research that has an impact for health care
- Research resulting in a well-written thesis

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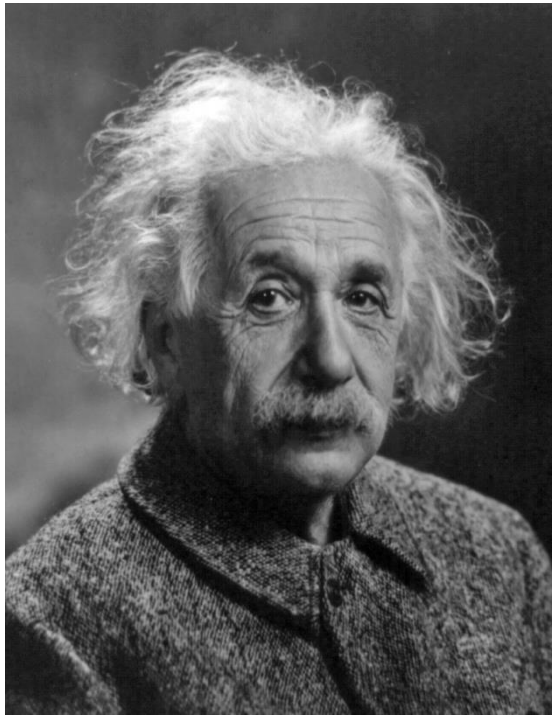
What is an acceptable Research Project?

- *If we knew what it was we were doing, it wouldn't be called 'research, would it?*



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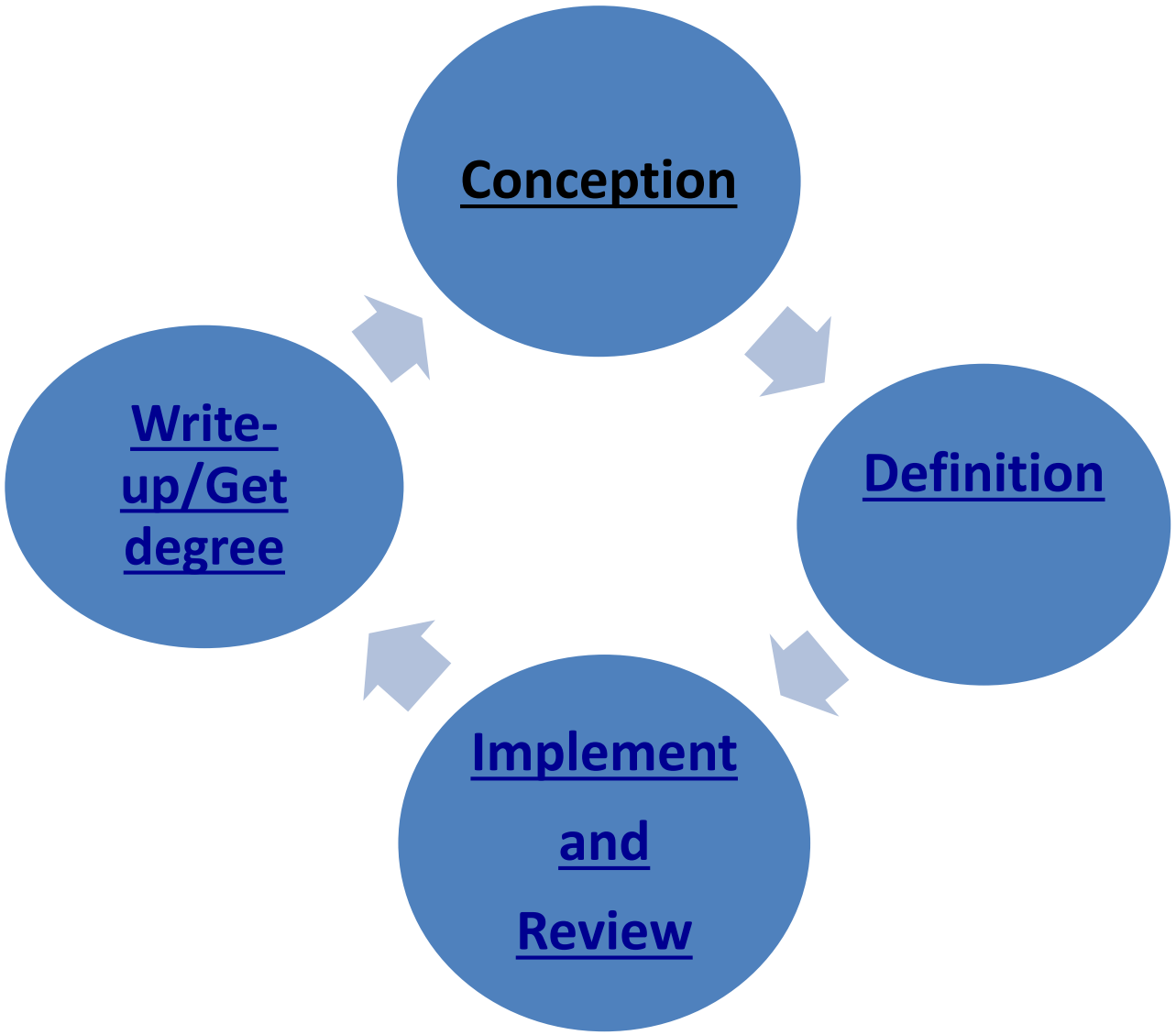
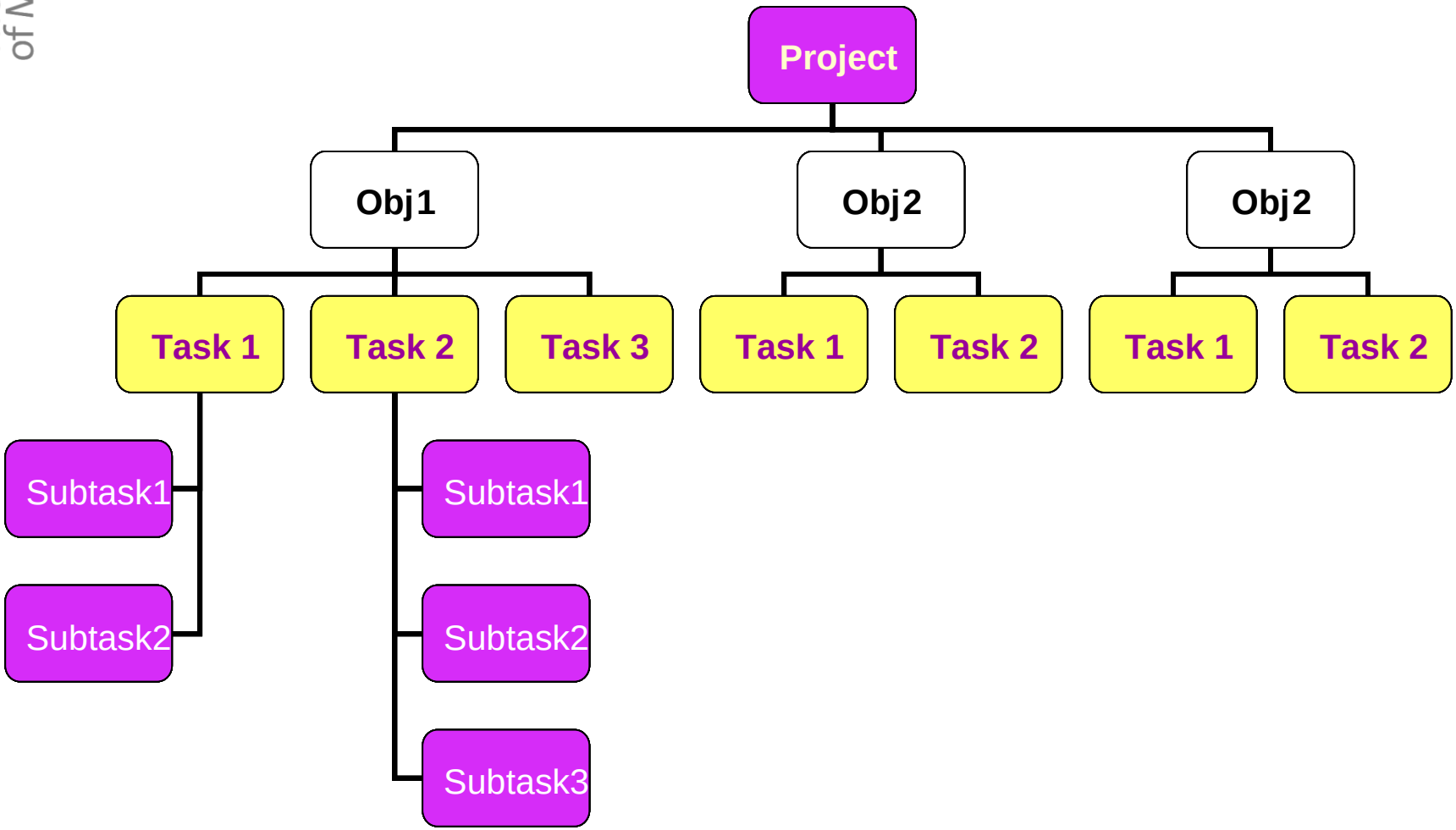
What is an acceptable Research Project?

- **Good Background** showing the importance and clearly identifying where there are gaps in knowledge
- **Critical Evaluation**
- **Synthesis**
- **Hypothesis** leading to Aims and Objectives
- One, two or three sets of data that form chapters in a thesis or one or more papers
- **Discussion** of the outcomes, importance, impact and contextualising

Project management



Feasibility and validity



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Visualisation

- Is it a worthwhile project?
- Think of how you are going to present it
- Think who your audience will be

Fig.1: Effect of EGF conc

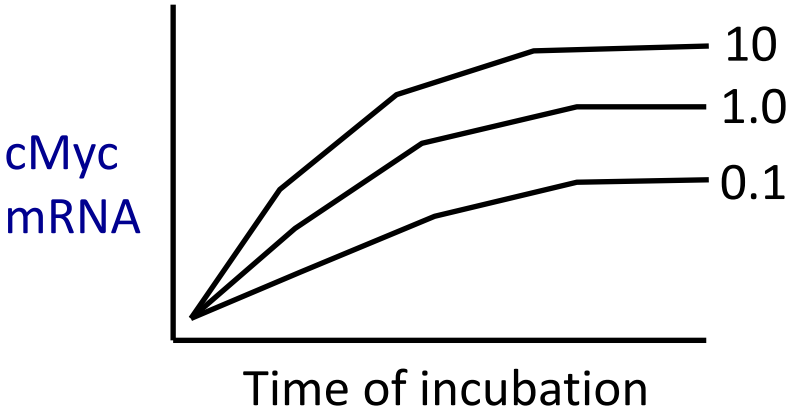

Fig.2: Compare E vs F Cells

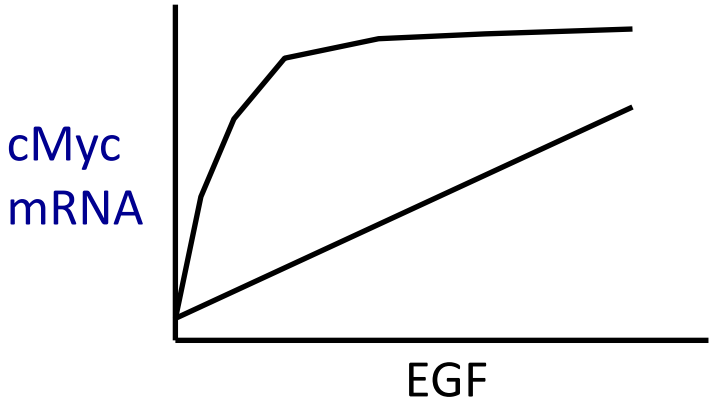

Fig.3: cMyc mRNA

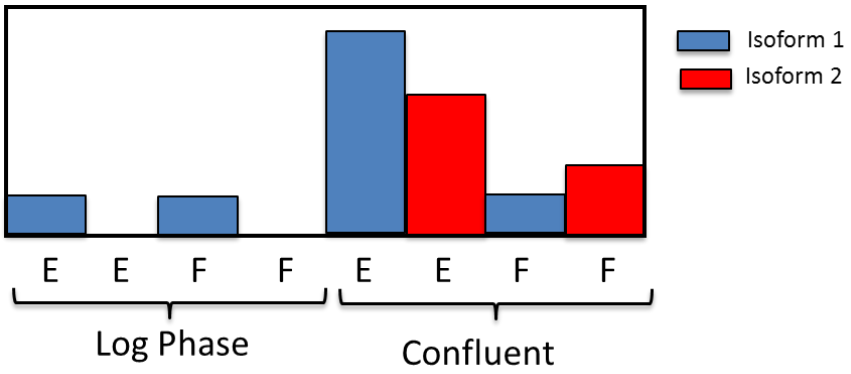

Table 1

serum	% inc
0 %	2
10 %	50
20 %	70

What controls do you need?

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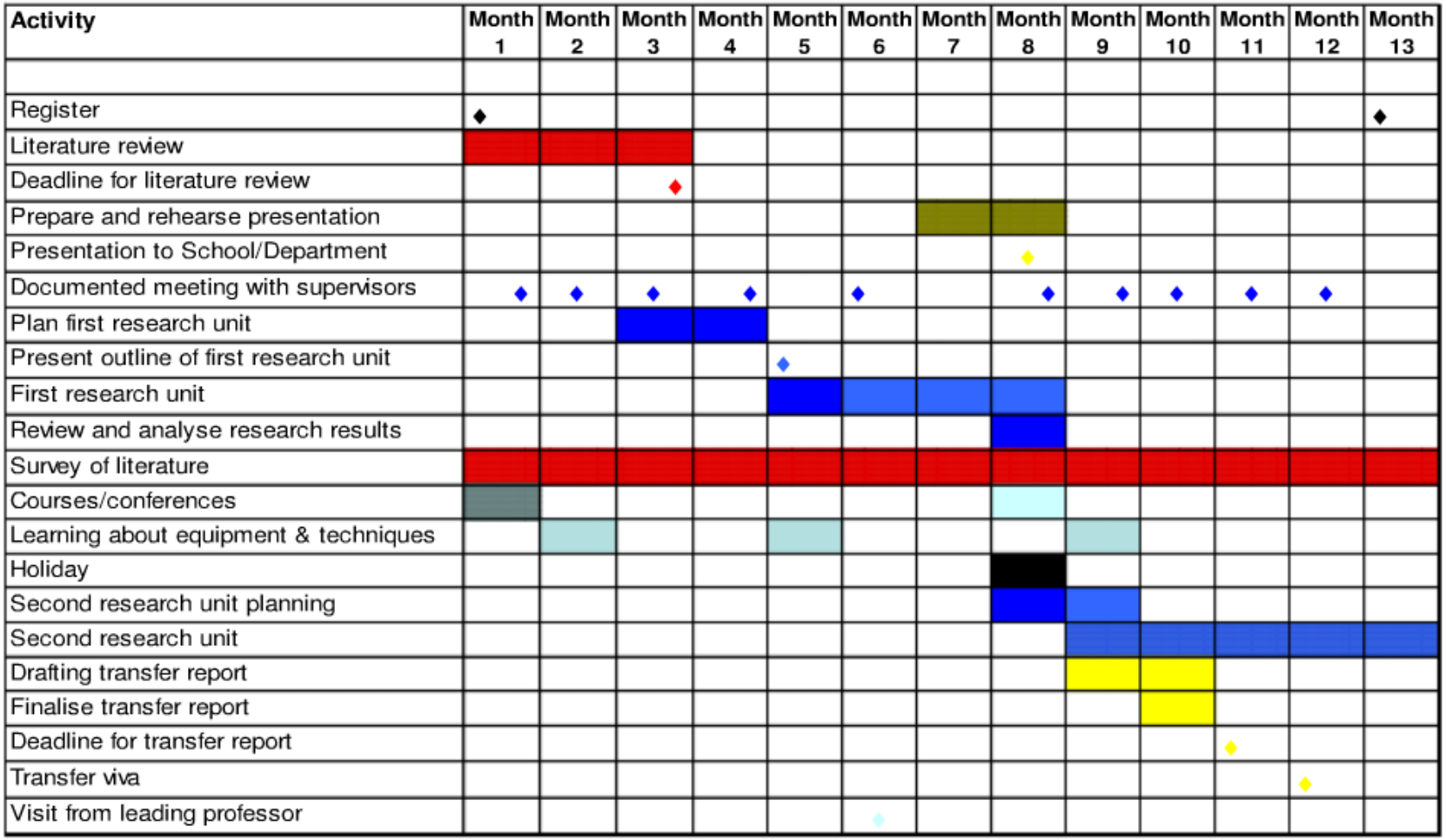
Prioritisation



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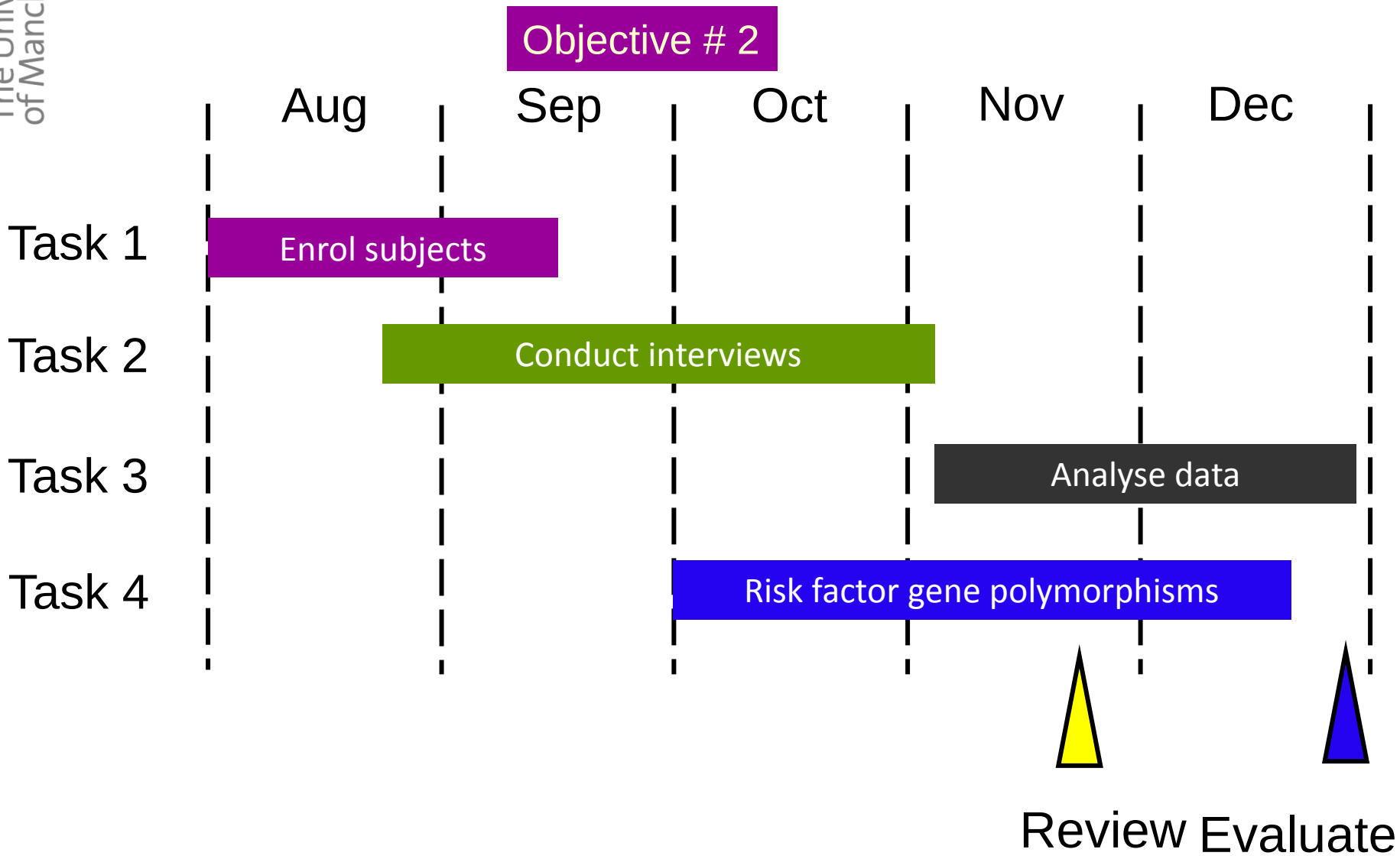
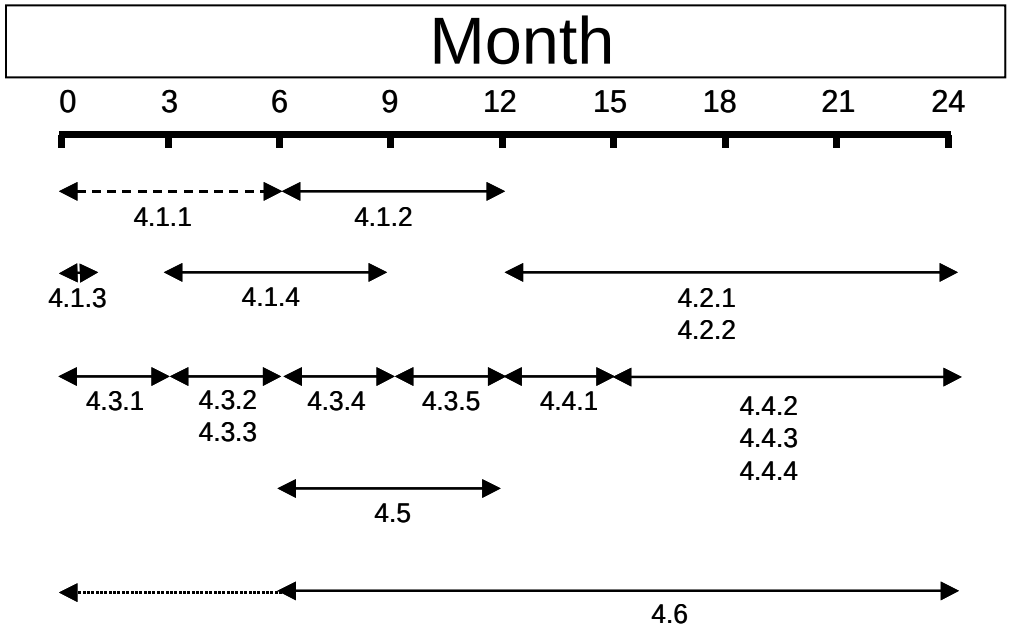
Project timeline – Gannt chart



Example from a 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 Sale 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

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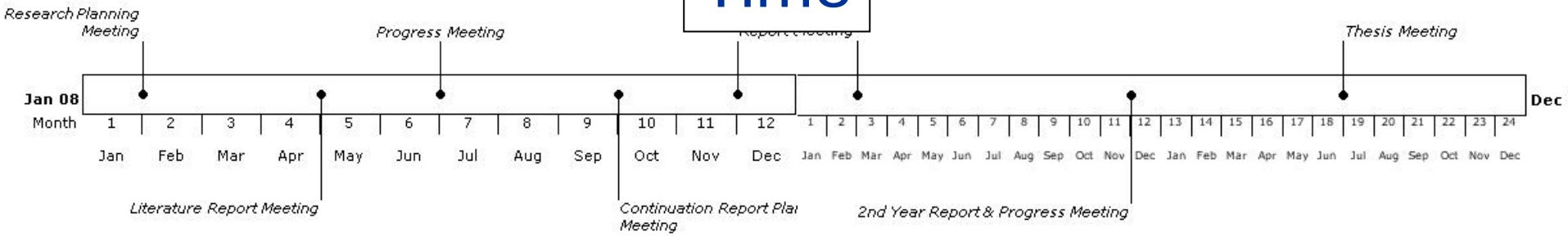
Triangle of Constraints

Quality

Research aims

Resources

Time



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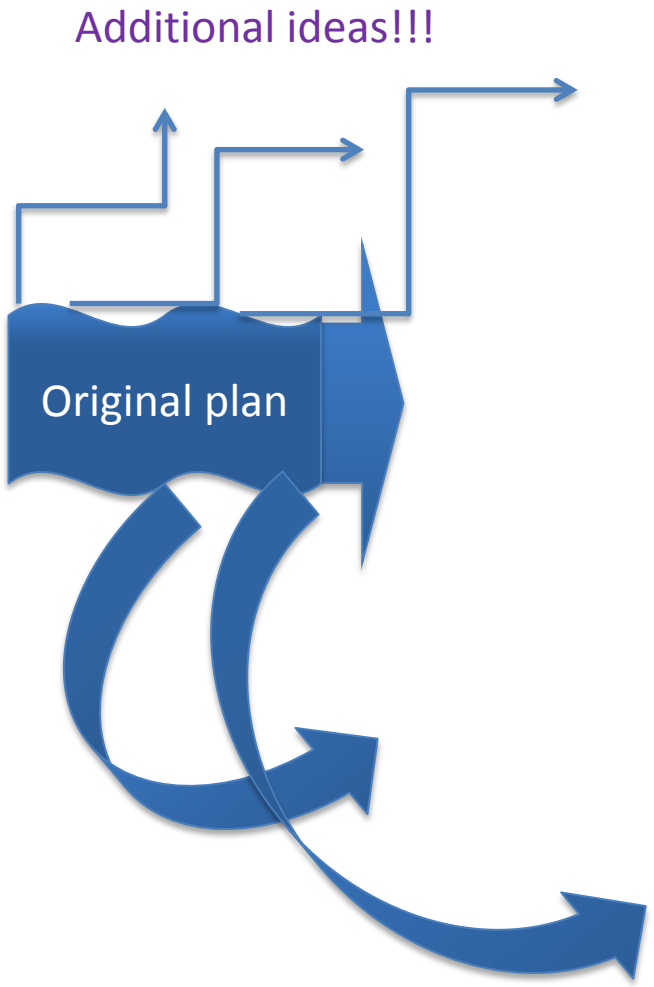
Beware of Scope Creep

If you need to change the scope, ensure that:

- Everybody is aware of the impact on the schedule and outcomes of the project



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This is project management- at a distance/in a team?

Opportunity for greater success
BUT
Greater risk of things going wrong!!!

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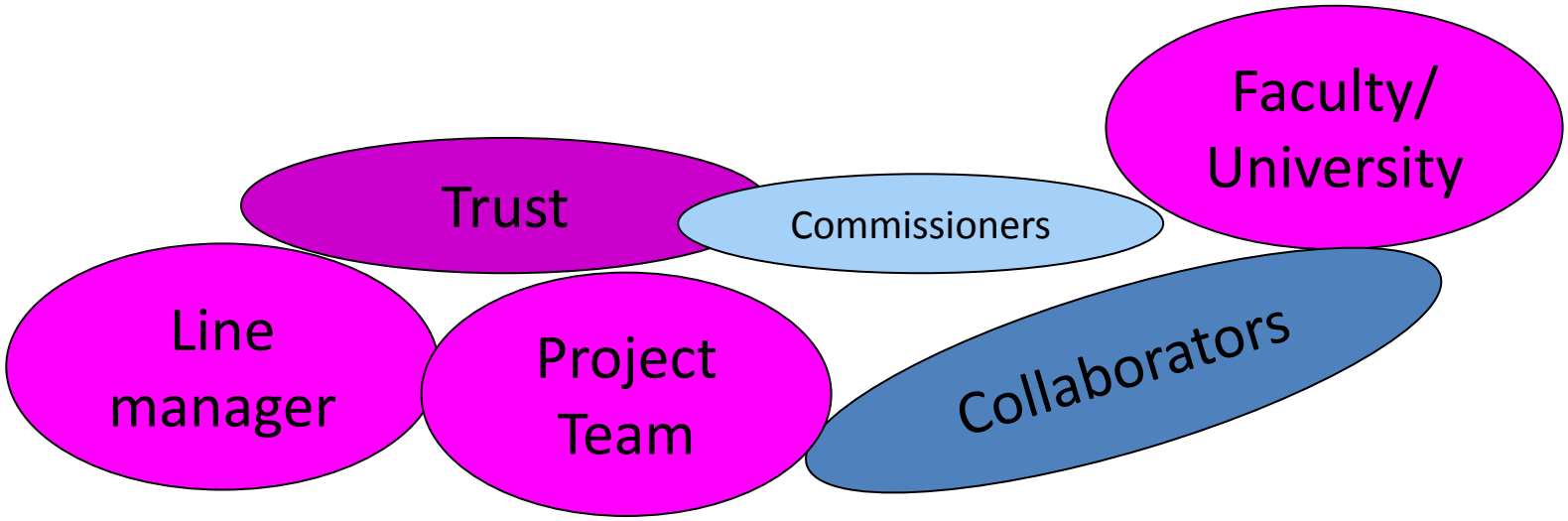
Engaging Stakeholders

Who will be affected?
Who will be needed for support?
Who will be interested in the outcomes?



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

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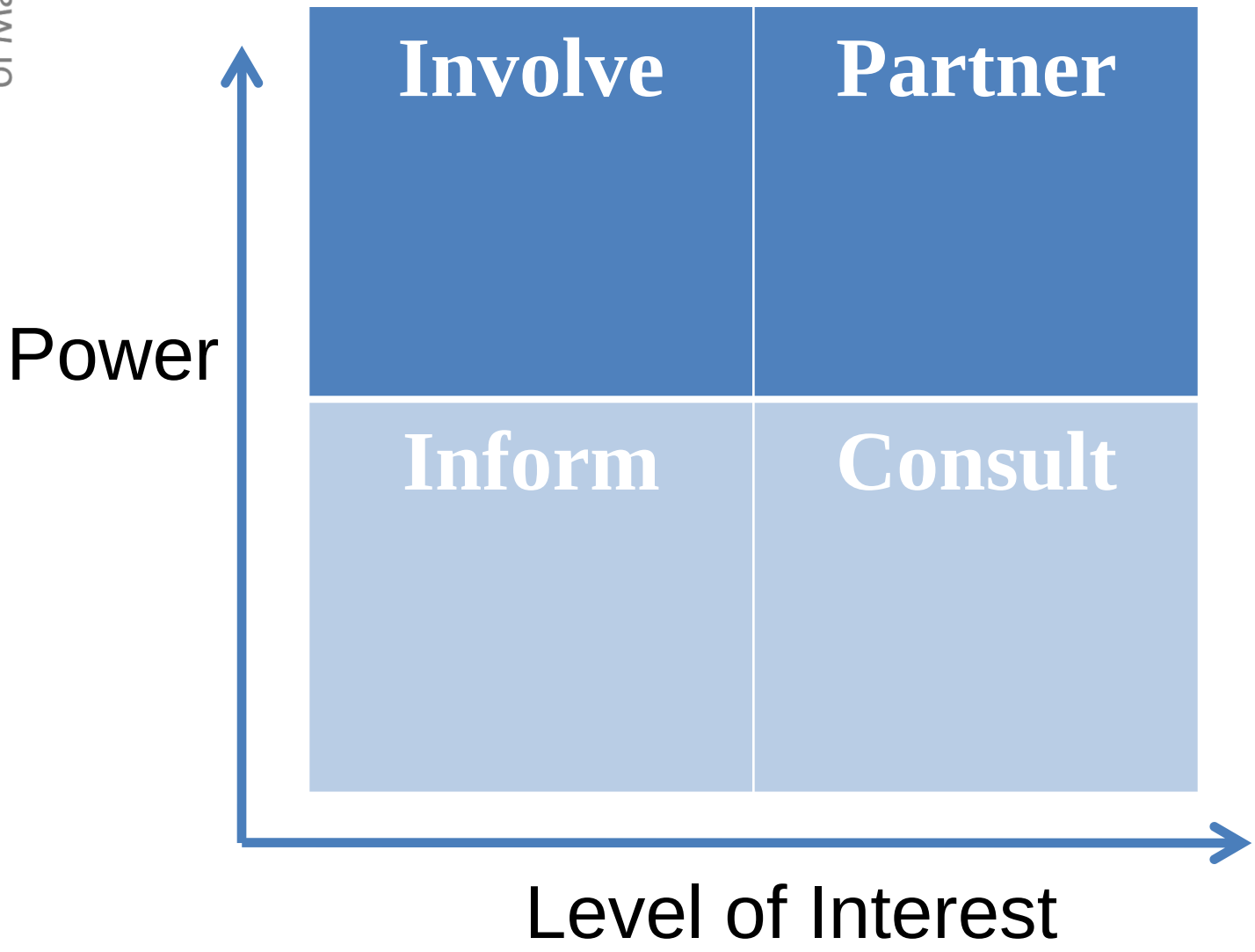
Engaging Stakeholders



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What do you need to know?

- What resources are you lacking to complete the project?
- How much responsibility does each supervisor have?
- What's their level of interest?
- How are you going to engage with each supervisor?
- Do you need to manage them?
- Are there potential conflicts between you and a supervisor? How do you resolve this?
- Are other collaborators involved and have you been involved in establishing guidelines with them eg author on a paper?

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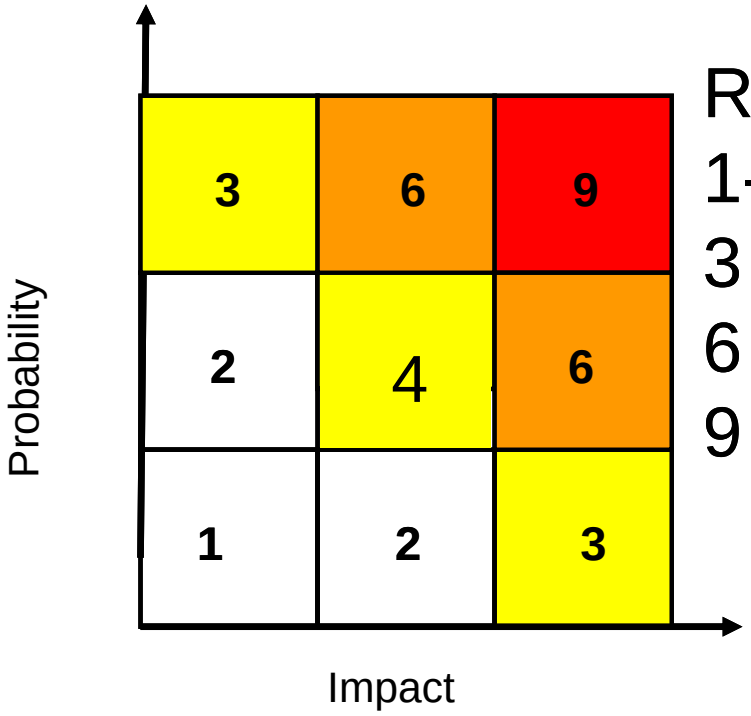
Risk analysis



Risk (Probability x Impact)

1- 2 : Low

3 - 4 : Medium

6 - 8 : High

9 : Extreme

Minimise, eliminate or have a contingency

The reality of research

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

The project plan must anticipate all of this and more…

Struggling with progress

This can suggest:

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

- *Respond to delays early*
- *Consider implications if you adapt the plan*
- *Can you increase resources and/or engage others*

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Monitoring progress

- Your Workplace supervisor:
  - Should decide on an appropriate communication/monitoring system (type and frequency)
    - steering group meetings
    - regular project team meetings
    - weekly/monthly updates (paper or email)
- Your Academic Supervisor
  - Take responsibility for deadlines on University system
  - Adapt planning timelines from PhD and fix meetings
- Constant communication and transparency- particularly when things go wrong

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Research project planning

- Project planning
  - should be a tool not a straightjacket
    - should be dynamic with regular, fixed reviews of progress
  - It can help research team communication
  - It can check on common understanding
    - Between workplace supervisor and academic supervisor but also with line manager, team, collaborators, funders)
  - It helps to ensure research dissemination
    - Papers, presentations, Follow up funding

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Supervisor interaction

- Usually by skype or teleconference.
- One meeting each year is important/preferable
- Who sets the dates for meeting?
- What happens if project not going well-who identifies this? Who do the supervisors get help from?
- Academic supervisor should take lead on reading drafts of thesis.

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Supervisor roles

Workplace Supervisor

- Detailed knowledge of the project background
- Understanding of the constraints on the student
- Usually close by to give day–to-day advice

Academic Supervisor

- Understands the academic process for Doctoral degrees
- Has experience of supervising PhDs/MDs
- Understands the constraints
- Can find the University person to provide guidelines for the degree

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Advice

Your Academic supervisor

- Contact administrators re guidelines
- Liaise with Programme Directors about project content
- Contact MAHSE about deferrals

Your Workplace supervisor

- Liaise with line manager about time constraints
- Contact NSHCS on HSST
- Get advice on funding from the Commissioners

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Examination process

- Decide now when thesis should be submitted
- Determine the appropriate format now and perhaps modify with time
- Six months to go - suggest external examiner by discussing at supervisory meeting
- Which of your supervisors will read which parts of the thesis?
- Ensure care is taken to meet the University submission requirements
- Get advice from academic supervisors on the examination process at viva
- Celebrate!!!!!

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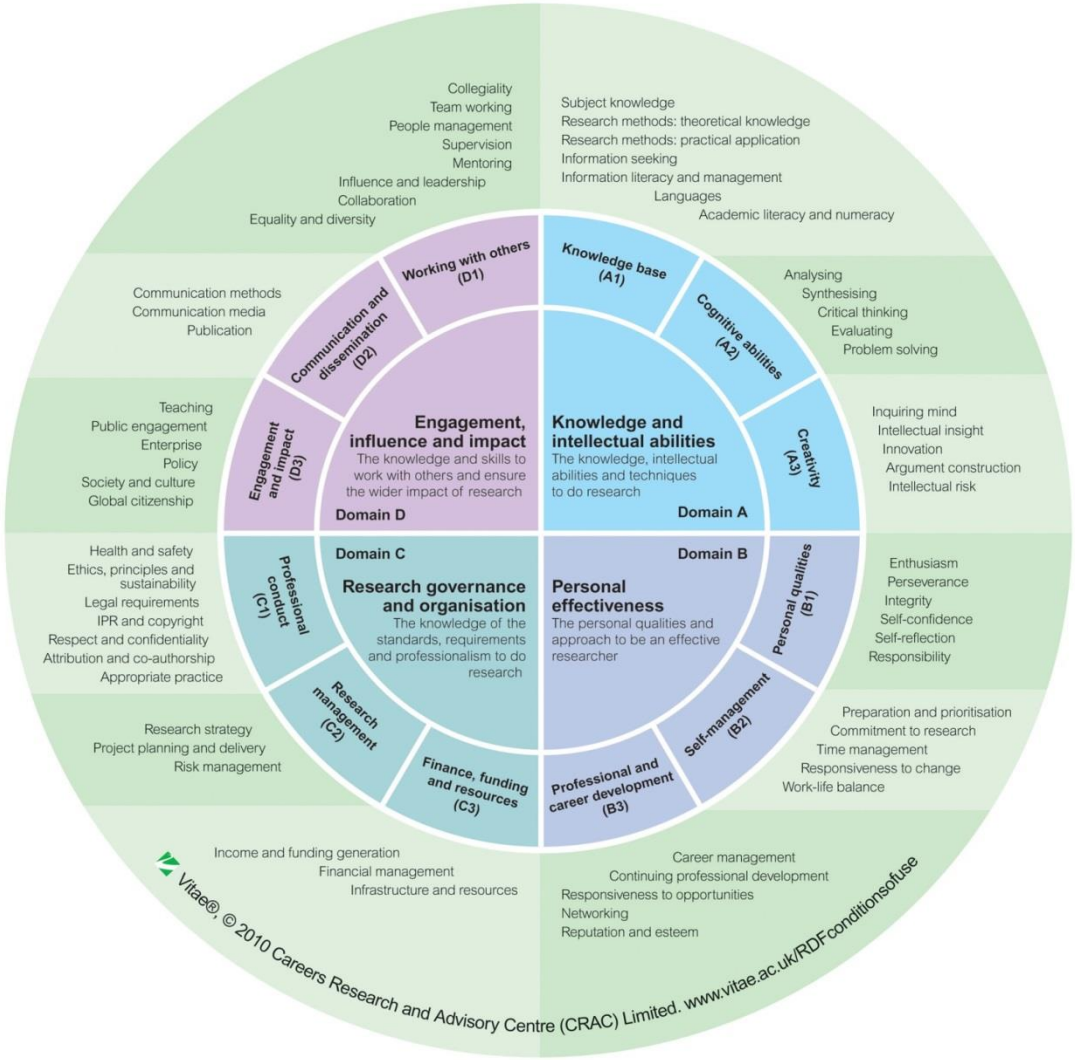
What skills you will learn?



www.vitae.ac.uk/rdf

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The project is only successful when it's finished