

# Chemistry careers in SMEs

Introduction to project management



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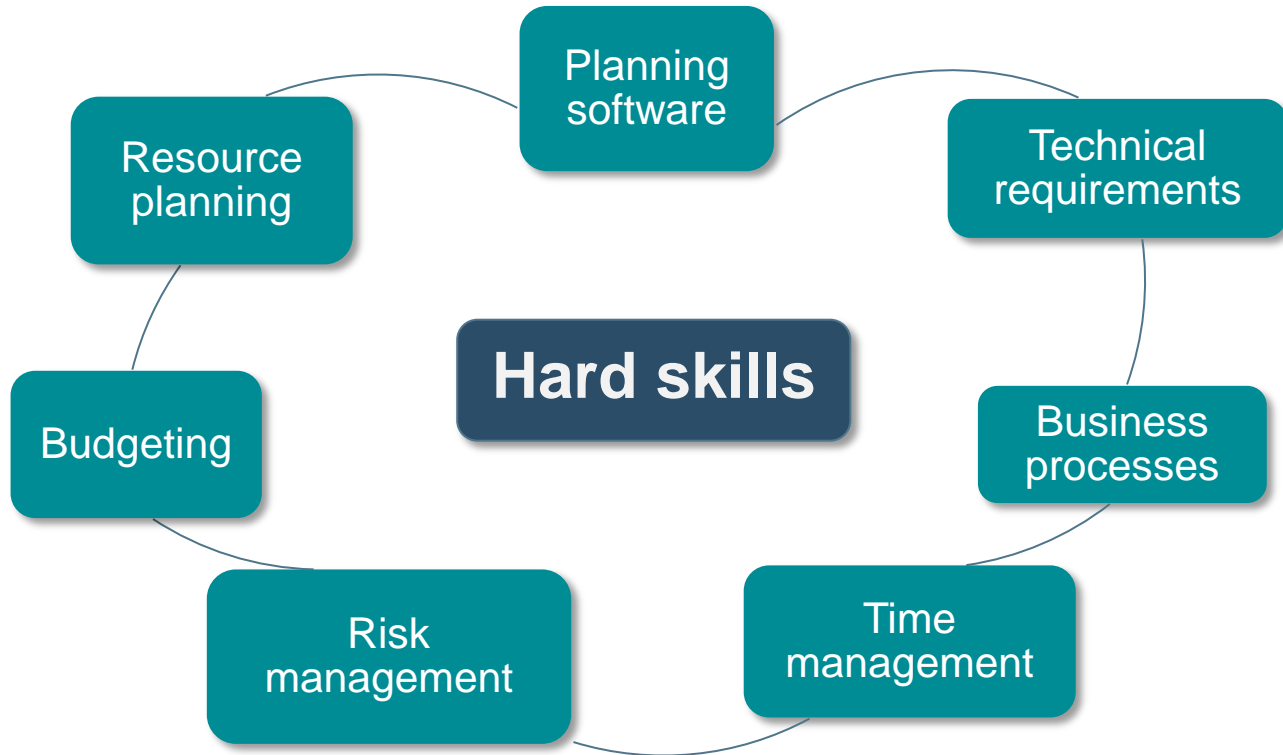


# What is project management?

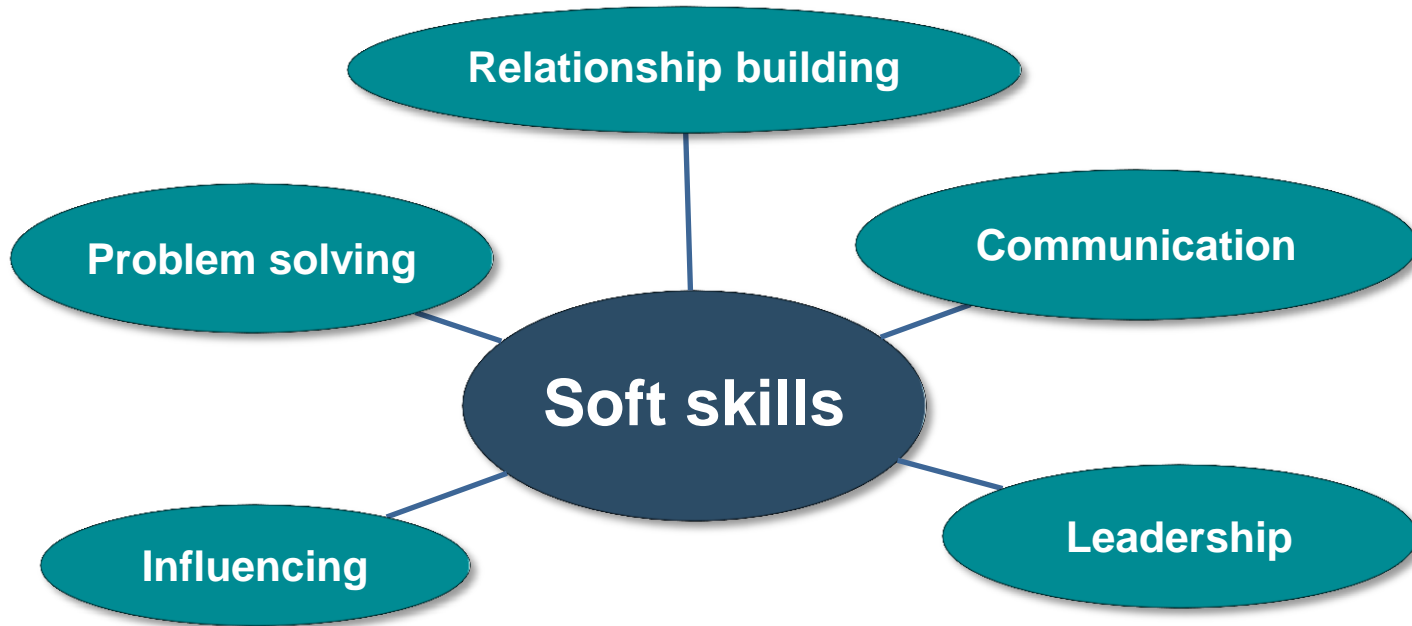
How would you define project management?

Dr Simon Pugh, Project Dexterity Ltd  
Project management consultant

# Project management skills 1



# Project management skills 2





# Stakeholder engagement

- Who are the key stakeholders for your project?
  - Staff
  - Other students
  - Wider community?
- How will you consult them?
- How will you seek their support or endorsement?
- Who influences the outcome of your project?



# Project management principles

- A project is a temporary organisation
- A project is based on deliverables
- Product-based management
- Manage by exception
- Manage and plan in stages
- A project must have a continued business justification



# Project management tools

- PRINCE2™ project management system
- Project specification
- Product breakdown structure
- Timescales and pert charts
- Gantt charts
- Risk analysis

The logo graphic consists of several overlapping, curved segments in shades of teal and light blue, arranged in a fan-like shape on the left side of the slide.

# PRINCE2™

- A stage-gate process
- Manage in stages
  - Review the business case before moving onto the next stage
- Manage by exception
  - Set the parameters for acceptability
  - Only seek project board approval for off-specifications





# Project specification

Before embarking on a project, you need to define a shared vision for the project.

What and Why

When

How

Who

What success will look like?

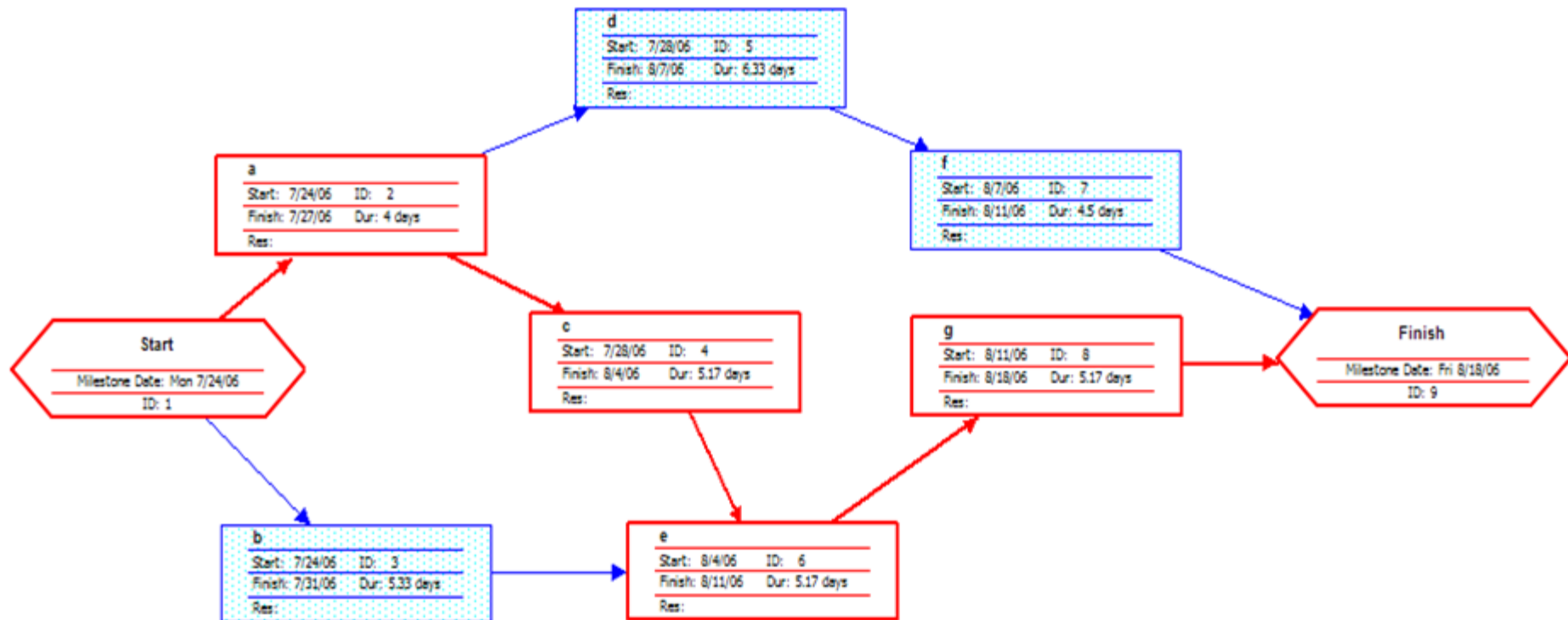
**Ensure stakeholder buy-in**



# Product breakdown structure

- Consider your project outputs as a range of products or deliverables
- You can then manage each of these “products”
- Each product needs a specification – what will success look like?
- Then you can consider how they link to each other

# PERT charts





# Gantt charts

- Gantt Charts are useful for seeing timeline interdependencies of products
- Some aspects of a project cannot be started until a preceding event is completed.
- Gantt Charts provide the **critical path** for the project.



# Gantt chart 1

Clearly shows

- When activities start and finish
- Where a project should be at a given time
- Which activities are parallel
- Critical Paths



# Gantt chart 2

Makes it easier to

- Plan
- Allocate resources
- Check if on schedule

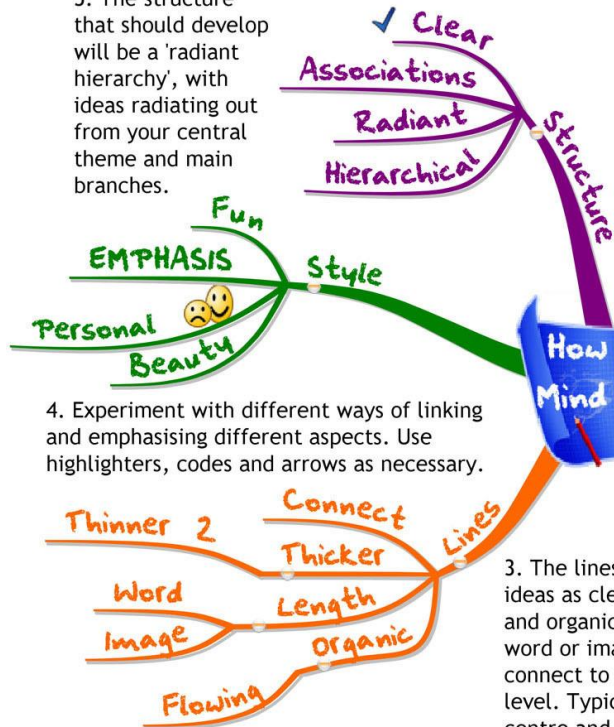


# Mind maps 1

- Effective in the early stages of a project
- Memory aid or information organiser
- Also useful for stimulating creativity

# Mind maps 2

5. The structure that should develop will be a 'radiant hierarchy', with ideas radiating out from your central theme and main branches.



4. Experiment with different ways of linking and emphasising different aspects. Use highlighters, codes and arrows as necessary.

1. Start at the centre of a blank, landscape page, ideally with a colourful image to represent your subject.

How to make a mind map

<http://bit.ly/1Bp4QtL>

2. Use words and pictures throughout your map. Wherever possible use single KEY words, printed along a line. Each word or picture sits on its own line.

3. The lines make the associations between ideas as clear as possible. Make them flowing and organic, each line the same length as the word or image. Always ensure that lines connect to the end of the line at the previous level. Typically lines will be thicker at the centre and thinner further out.

Image credit: [www.mind-mapping.co.uk](http://www.mind-mapping.co.uk)





# Activity

- You are going to organise the university graduation ball



# Task 1

In your group

Produce a mind map for the preparation and the event

5 minutes



## Task 2

- Drill down and specify the components of your “project”
- What’s your timeline?
- 10 minutes



## Task 3

For the tasks you have listed rearrange them to reflect the various interdependencies of your tasks

5 minutes



# Task 4

- Draw up a plan for the first stage
- What will success look like?
- What will be essential to pass through the “gate” to the next stage?



# Risk

- Risk analysis should be done at all stages of a project
- Anticipate what may go wrong to try to minimise problems
- Based on known risks and previous experience
- **Risk = Probability × Impact**



# Risk management strategy

- Identify
- Assess (estimate and evaluate)
- Plan
- Implement
- Communicate



# Strategies for dealing with risk

- Avoid
- Fall-back/contingency
- Transfer
- Accept





# For your group project

- What is your project about?
- What are the first stage tasks?
- Who are your stakeholders?
- Think about managing by exception
- Do you have a shared vision for your project?



# Summary

You should now have some project management tools and strategies to help you with your tasks for this module.



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