CSC3031
Project Skills: Controlling your Project

John Fitzgerald, Simon Bowen

Announcements

- Classes/guest speakers update:

  - Mon 21st "Involving Users via Design Sprints", Raghda Zahran

- Canvas discussion posts – peer review, future class topics

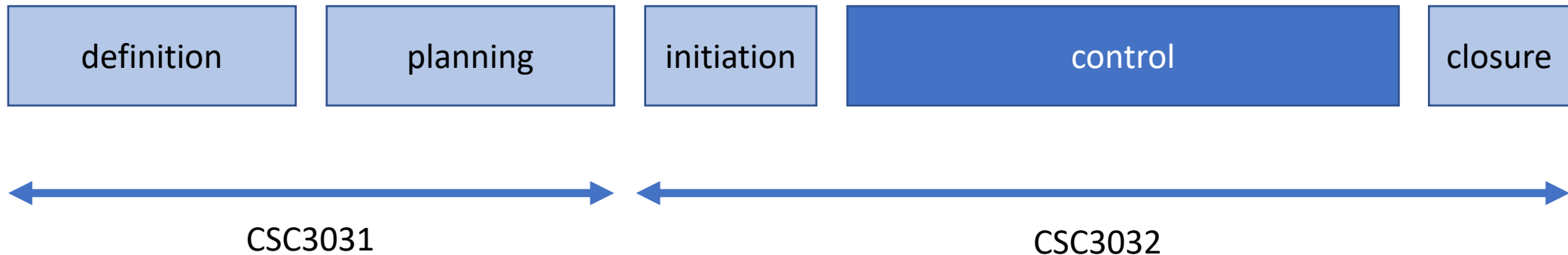- Tutorial slots: Mon, Tue, Thu 16:30-17:30, Fri 13:00-14:00

- CSC3031 FAQs

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Aims

- Controlling your project – the elements involved

- Managing your time

- Working with your supervisor

- Reminder - what your project should achieve

- Dealing with problems

- (Tips from John and Simon)

Recap: the project process

Time →

Resources
(you, your skills,
your supervisor, technology) →

Project management
activities

Research activities

→ Dissertation

→ Product

| definition | planning | initiation | control | closure |

CSC3031 ←———————→

CSC3032 ←————————————————————————→

|			
22	1	31/01/22	Semester 2 Teaching (Start)
23	2	07/02/22	
24	3	14/02/22	**We are here**
25	4	21/02/22	
26	5	28/02/22	
27	6	07/03/22	
28	7	14/03/22	
29	8	21/03/22	
30		28/03/22	Easter break
31		04/04/22	Easter break
32		11/04/22	Easter break
33		18/04/22	Easter break
34	9	25/04/22	
35	10	02/05/22	
36	11	09/05/22	
37		16/05/22	Revision/Buffer Week

B4
B5
B6

Five Project elements
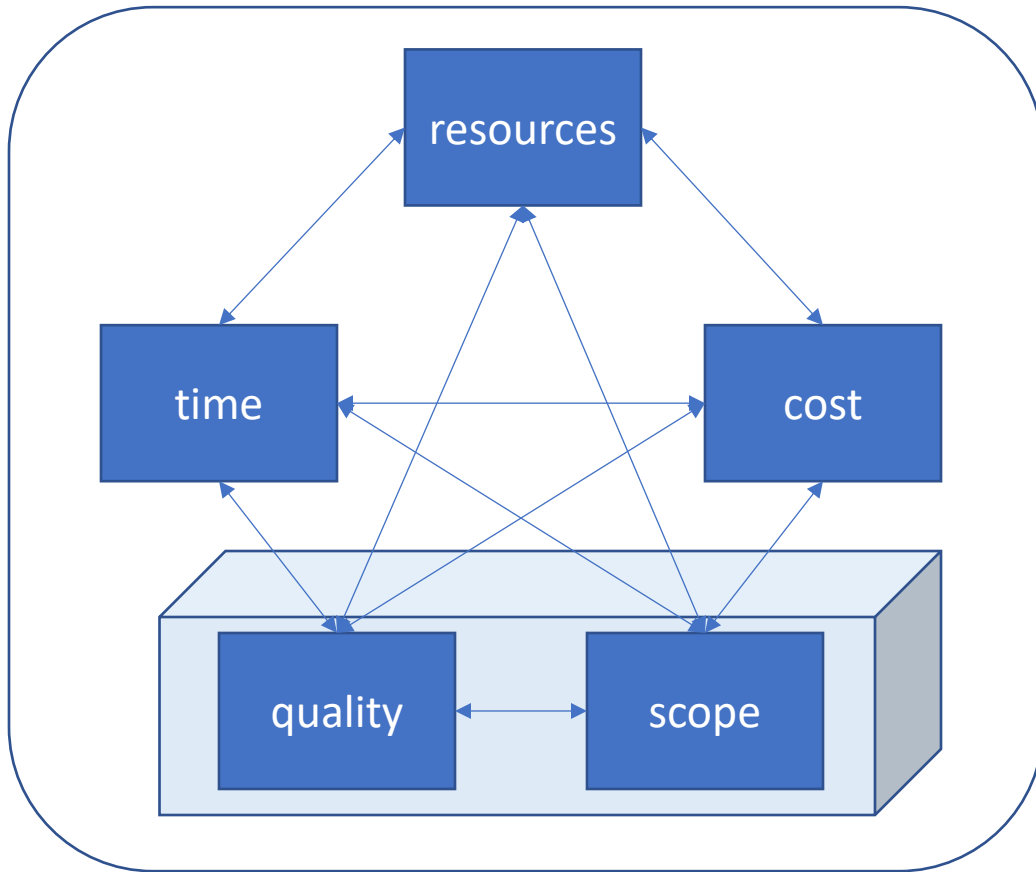
You need to manage and control:

- Resources – you, your supervisor, other advisors, data, software, hardware…

- Time – you have fixed time, how will you manage it?

- Cost – not applicable here, but will be in future

Five Project elements
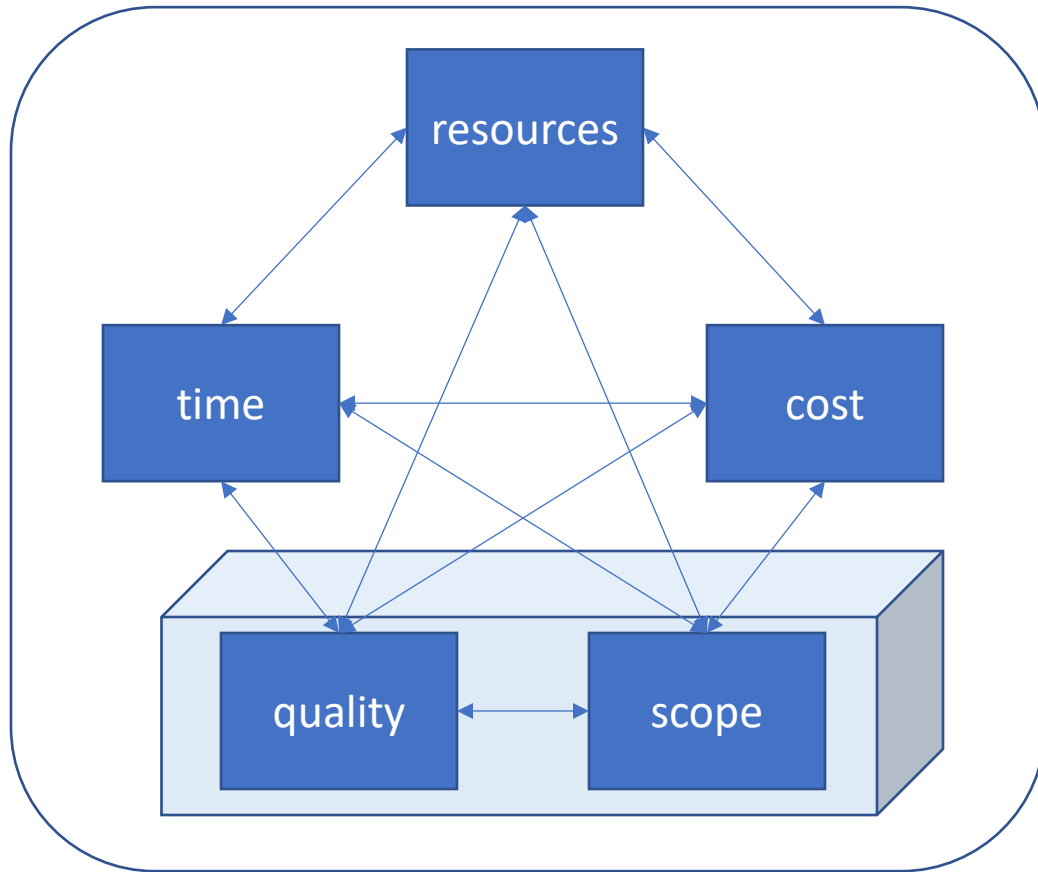

For your project, and what you might build within it:

- Quality – how good/advanced are they? The right level for BSc?

- Scope – sufficient breadth? How much have you done? E.g how advanced is your prototype/model/evaluation – functional complexity, resolution of model, comprehensiveness of evaluation
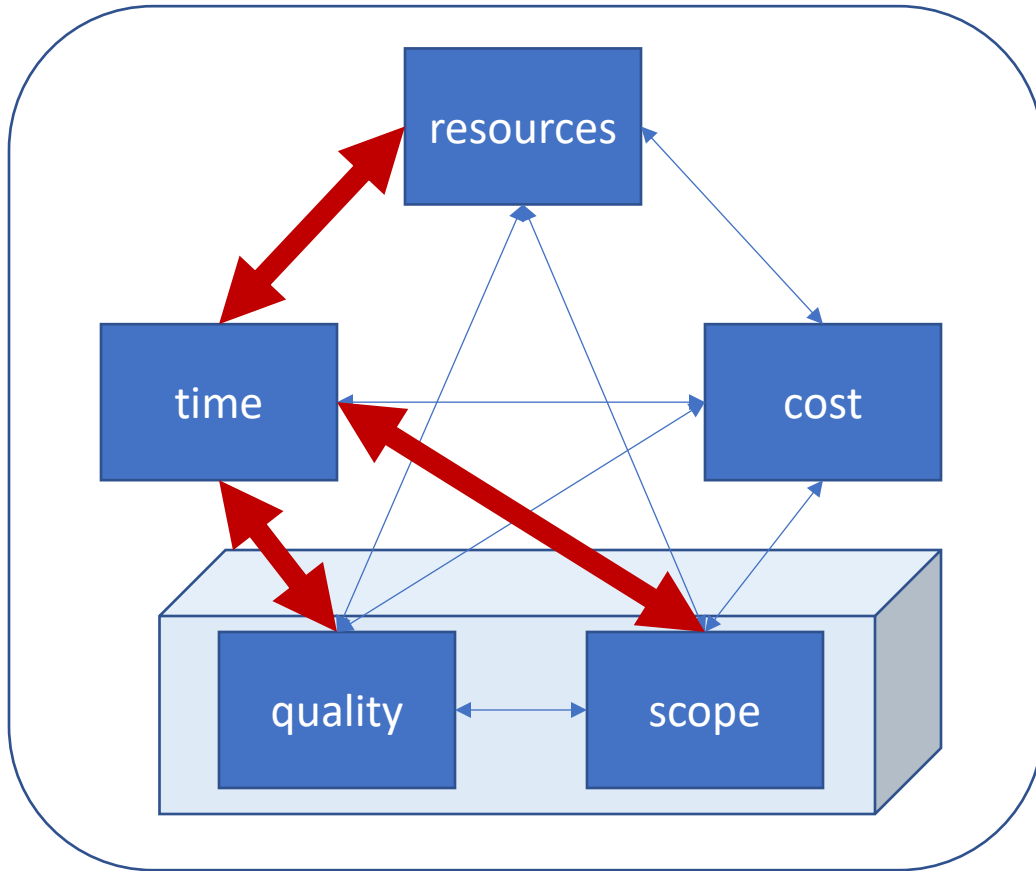
Time vs. Quality
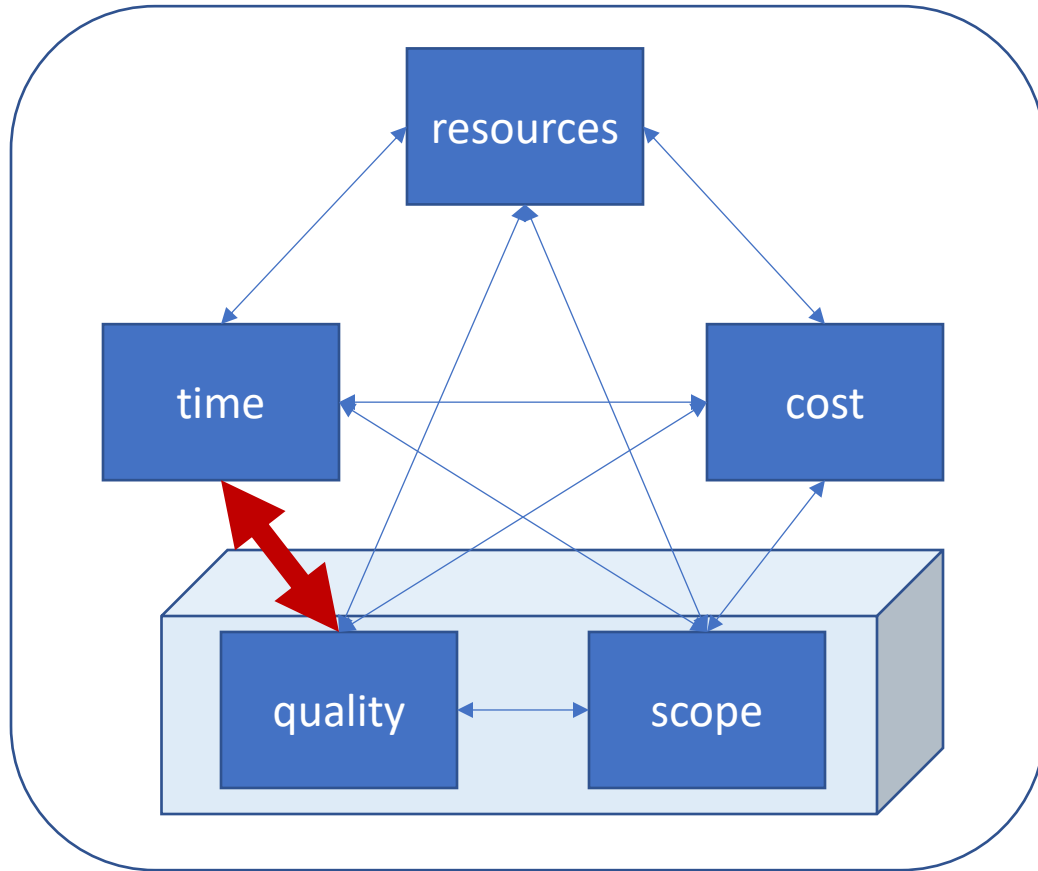
- Reduce time required by lowering quality

- Increase quality by taking longer

BUT: you only have fixed time

Scope vs. Quality
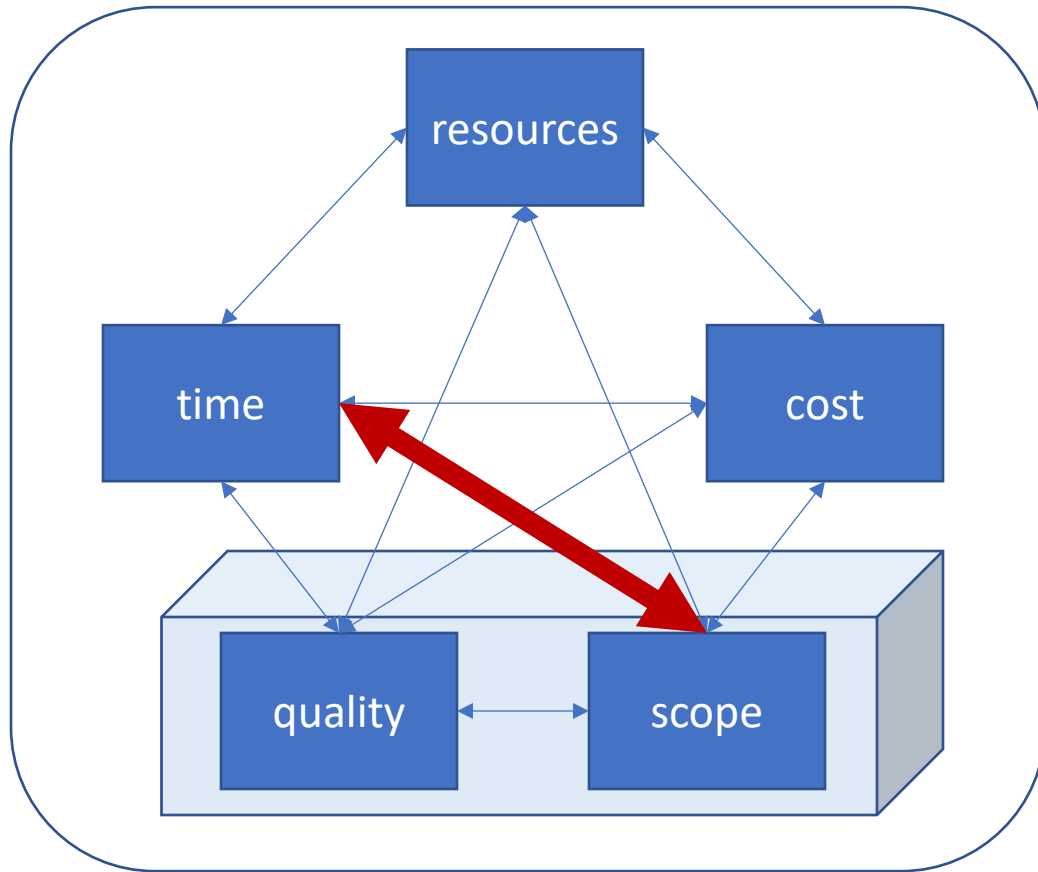
- Reduce time required by not covering so much

- Increase scope by taking longer

BUT: you only have fixed time

Resources (you) vs. Time, Quality and Scope

- Only fixed time available

- SO – improve your time management, work more efficiently

- Thereby improve/attain quality

- Thereby improve/attain scope

Managing your time

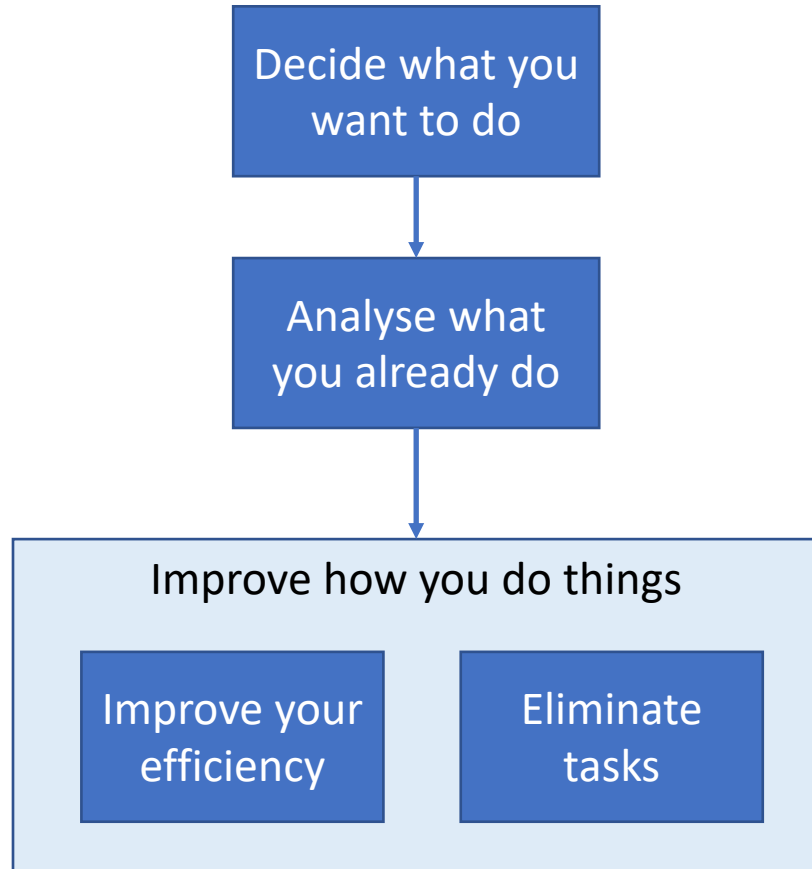- **Essential** time – to stay well: sleep, eat, exercise, socialise...

- Remaining **serviceable** time – to get things (your project) done

- How do you manage your (serviceable) time?

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A time management process

Decide what you want to do

↓

Analyse what you already do

↓

Improve how you do things

Improve your efficiency

Eliminate tasks

Diagram adapted from Dawson (2015)

Decide what you want to do

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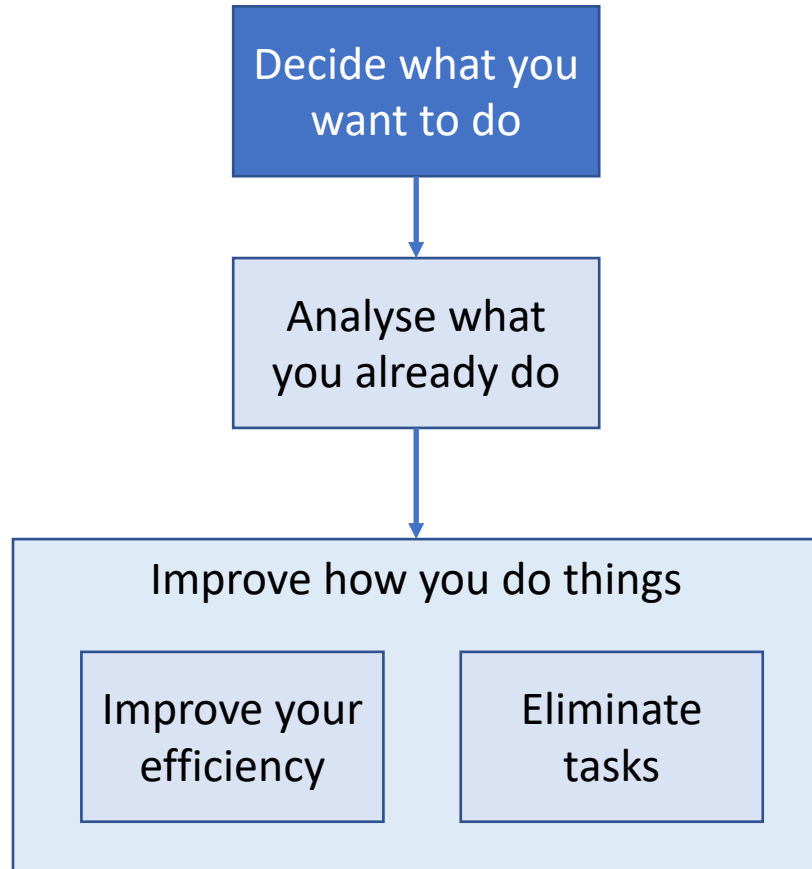
- Work goals
  - Your project's aims and objectives, workplan
  - Importance and urgency
- Don't forget personal goals (self, family, community)

Diagram adapted from Dawson (2015)

Analyse (reflect on) what you already do

```
┌──────────────────┐
│  Decide what you │
│    want to do    │
└──────────────────┘
          │
          ▼
┌──────────────────┐
│   Analyse what   │
│  you already do  │
└──────────────────┘
          │
          ▼
┌──────────────────────────────────┐
│    Improve how you do things     │
│  ┌────────────┐  ┌────────────┐  │
│  │ Improve your│  │  Eliminate │  │
│  │  efficiency │  │    tasks   │  │
│  └────────────┘  └────────────┘  │
└──────────────────────────────────┘
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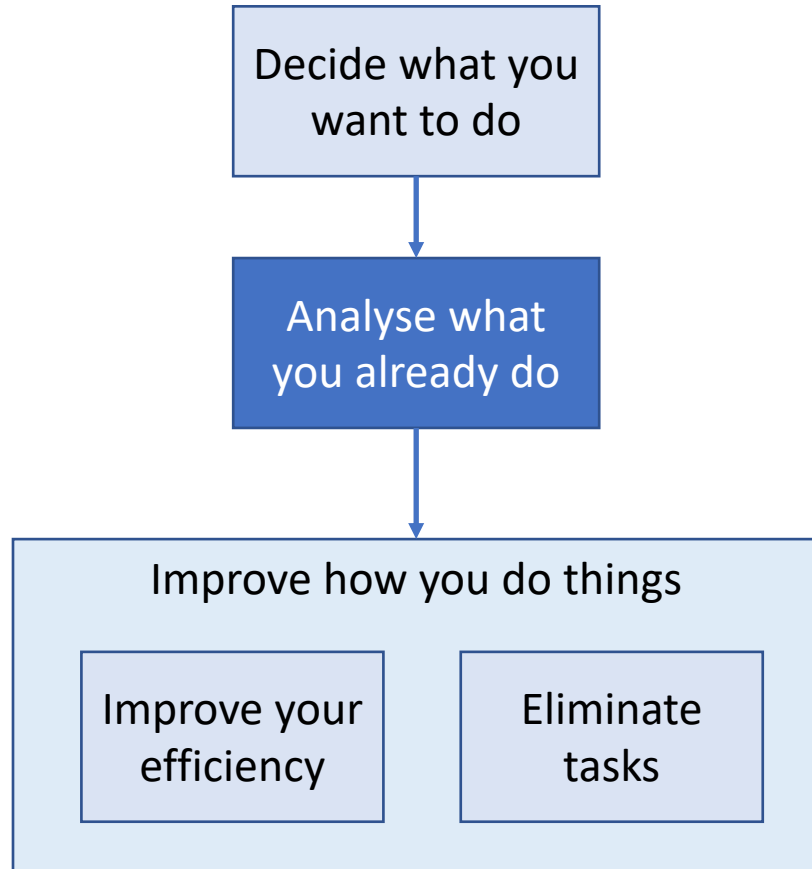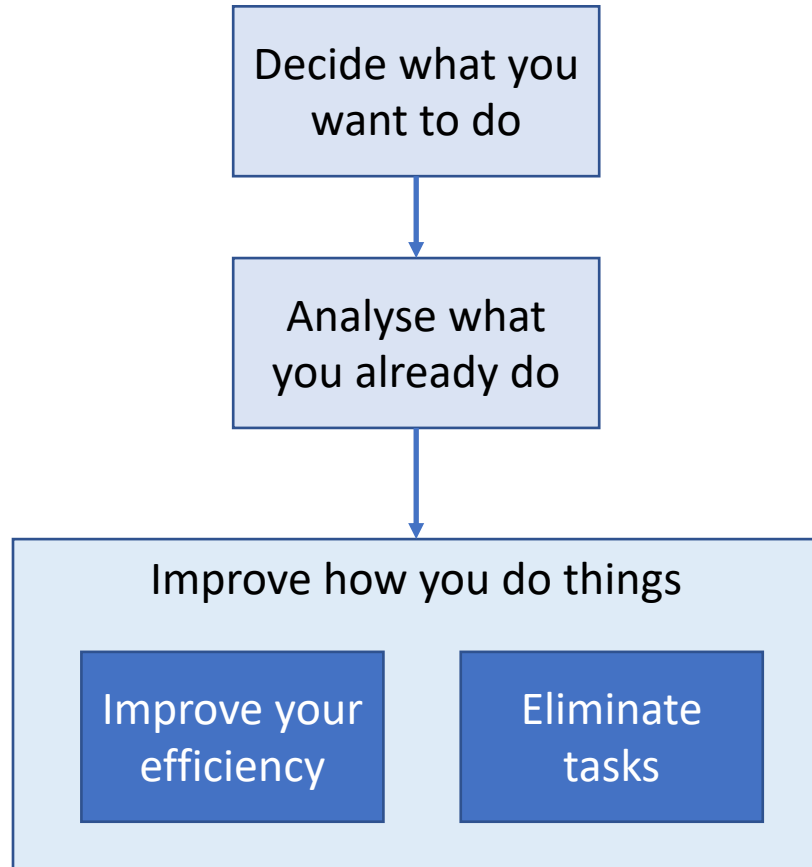
- How do you structure your day?

- How much time do you spend on different types of activities?

- When do you tackle urgent and important tasks?

- Perhaps keep a time log of your activities (Dawson, pp172-174)

- When (where and how) do you work most effectively?

Diagram adapted from Dawson (2015)

Improve how you do things

Decide what you want to do

↓

Analyse what you already do

↓

Improve how you do things

- Improve your efficiency
- Eliminate tasks

- Eliminate what you don't need to do (now, ever)
  - (Delegate to someone else)
  - Ditch

- Be more efficient at doing what you do have to do

	Important	Unimportant
Urgent	High priority. Must do.	Minimise such tasks.
Non-urgent	Don't ignore. Schedule to do. May become urgent.	Abandon or 'bottom of the list'

Diagram adapted from Dawson (2015)

Using your time more efficiently

- Dealing with procrastination

  - Remind yourself why you're doing this – your motivation

  - Subdivide into manageable tasks

  - Reward yourself once task complete

- Use 'grains of time' – easy, simple tasks in between times

- Finish tasks!

- Reduce interruptions – hide away (physically, virtually – email, messaging etc. …)

- Don't be a perfectionist – good enough is GOOD enough.

- Take breaks

- Be organised – use the tools that work for you

Working with your supervisor

Your expectations of your supervisor:

- To read your work in advance

- To be available when needed

- To be approachable, open, and supportive

- To be constructively critical

- To have good knowledge:
  - Of conducting computing projects
  - Relevant to your project topic (or be able to refer you elsewhere)

Your supervisor's expectations of you:

- To arrange regular meetings

- To maintain a regular work pattern

- To discuss progress and problems fully (and honestly)

- To be independent

- To take account of advice

- To send suitably developed work for feedback

Using your supervisor effectively

Academic staff are busy. So, maximise the time you have together by:

- Preparing for your meetings – notes from previous meetings, an agenda:
  - Progress made
  - Problems encountered
  - 'Discoveries' – new tools/papers/data, people met and expertise shared
  - Plans for what next, even if tentative
- Making notes during meetings (Zoom or Teams recording?)
- Know when you'll next meet
- Follow the advice
  - Your supervisor has experience and expertise
  - It is often worth trying something, even if you discount it later

Your Supervisor will not …

- Design, test or debug your products
- Write sections of your dissertation for you
- Teach any background material
  - It is up to you to research relevant material
- Remind you to attend meetings

Reminder - what your project should achieve

- **Your Capstone** demonstration of your interests, skills and abilities

- **Independence** – at last you are in charge (scary, but exciting)
  - Employers will rely on you to work independently and will expect you to exercise independent judgement.

- **Thinking** – you will be more critical in the way you look at information and literature

- **Learning** – you will be able to find things out for yourself and you will develop your abilities through professional channels

- **Technical Skills**, from organising your project to the core computer science within it

- **Personal Skills**, including communication and time management.

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Problems you might face, and what to do about them

- Losing momentum, confidence or motivation

- Personal problems

- Hardware failure

- Data availability

- Participant availability (users, evaluators, collaborators)

- Disappointing results

- Scope (feature) creep

- Refocus your motivation, **fine tune** to interests, resources

- Talk to someone (personal tutor, supervisor). People and processes to help.

- Back-up data often, have alternative tech/data/participants

- Allow time to repeat. Unexpected or negative results are still results.

- Remember **good enough**. Aim is your project, not your product.

Simon's Tips

- Do your rocks first (or the sand will take over)
  https://youtu.be/v5ZvL4as2y0

- Do something, however small – progress is progress

- Tick off your tasks, recognise your progress

- When you are done, stop

- Take breaks, even when you are busy
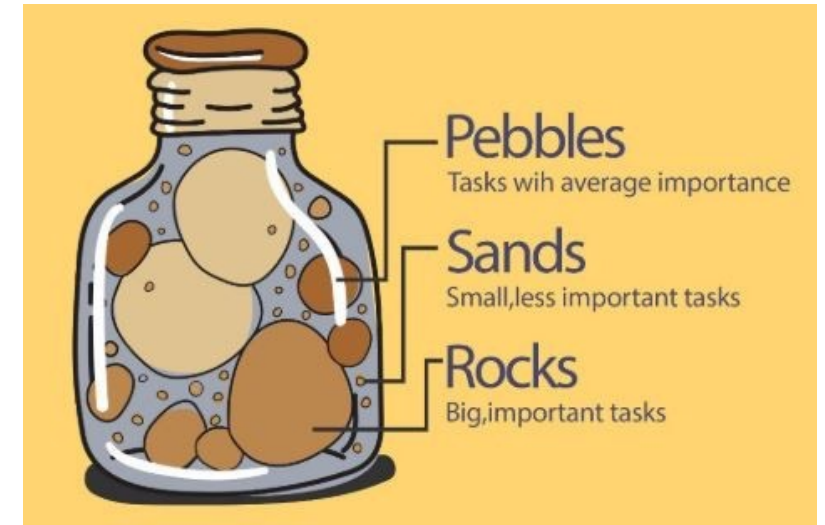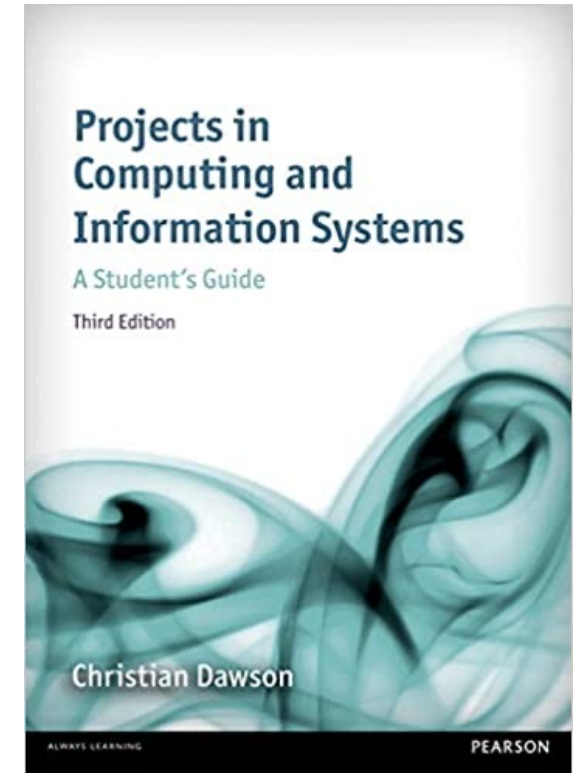
- Doing something different often gets you unstuck

Illustration from this web page

John's Tips

- Keep in touch with your supervisor
  - Even if you haven't made progress – stay in contact anyway
- Start writing early
  - Don't let your dissertation become a burden – get something started
  - Get feedback on a page or two of text – identify and correct problems before they get repeated through your dissertation.
- Try to stay ahead of your plan – it will do wonders for your confidence.

Further Reading

Dawson, (2015) Projects in Computing and
Information Systems: Chapter 7

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