

Scientific Project Management 101

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Agenda

1. What is a project?
2. Defining smart goals
3. Planning & work breakdown
4. Project controlling
5. Understanding conflict
6. Project & people marketing

Project

What is a project?

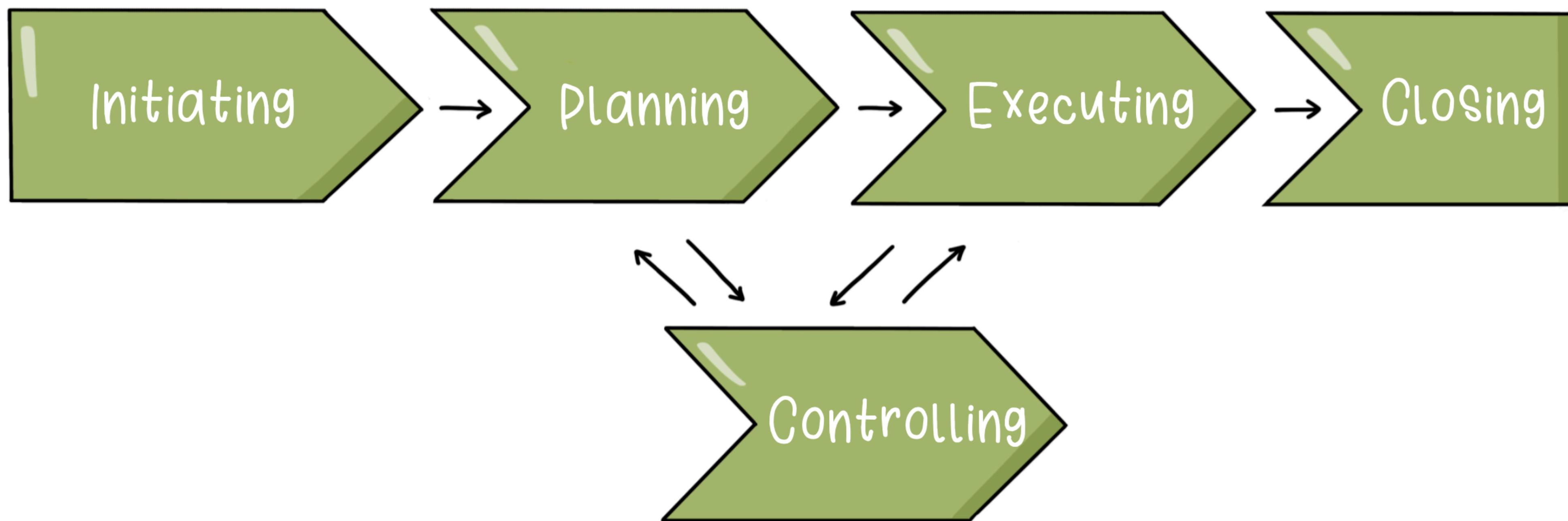
- *Défini*
- *accessible*
- *timeline / temporel*
- *réalisable*

What is a project?

Project = time constraint + novelty

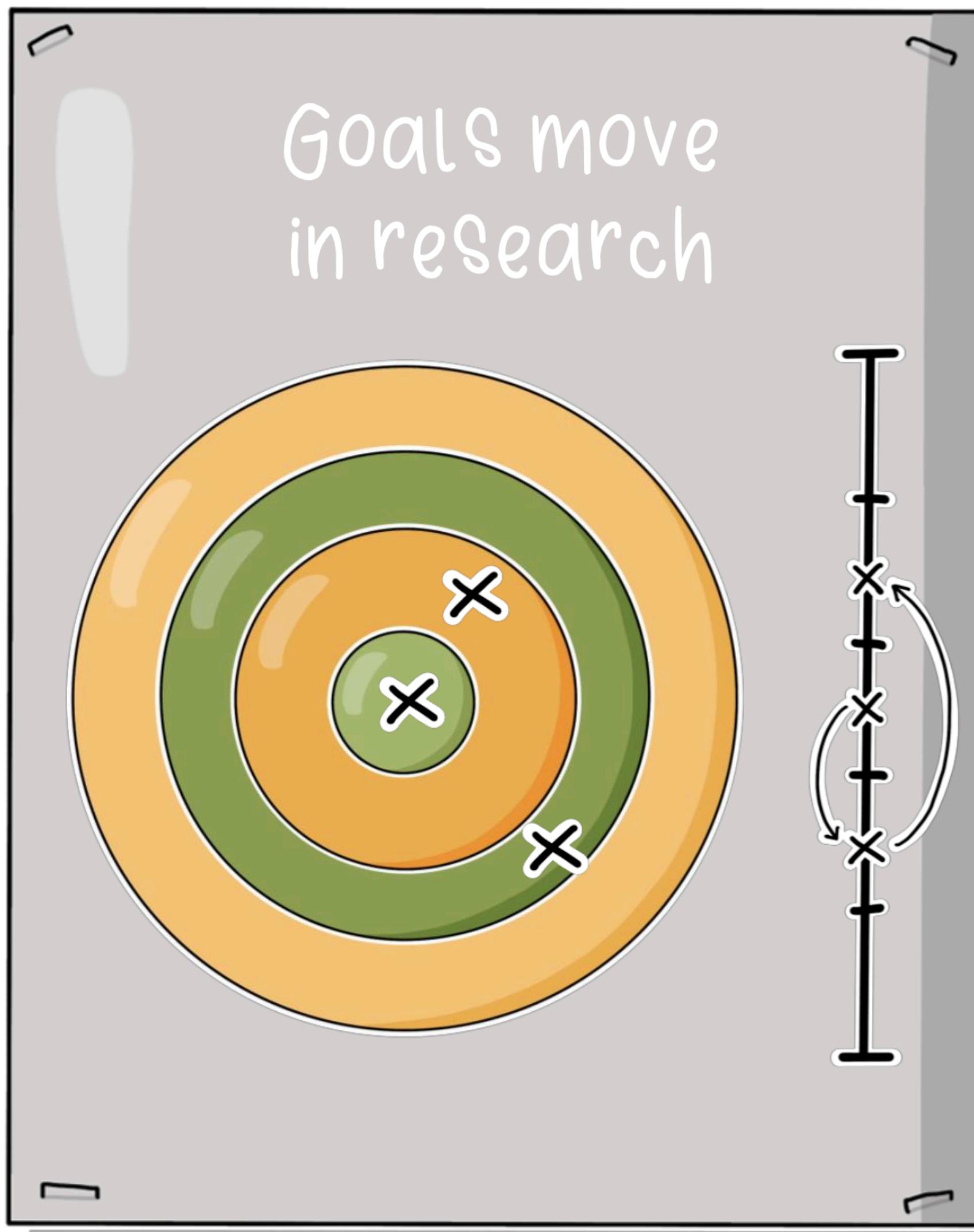
*Project Management is fundamental to conducting work,
in a **planned** and
controlled manner,
and **maximise** the probability of **success**.*

Phases of a project



SMART goals

Defining SMART goals



S specific
M measurable
A greed
R realistic
T imed

Defining SMART goals: exercise

S specific

M easurable

A greed

R ealistic

T imed

- Take one step of your Bachelor project
- Formulate that step goal using the SMART method
- preparation time: 5 minutes
- round table: 15 minutes

Retro-engineering of a SMART goal

If putting together in words a SMART goal is hard, start from the figure.

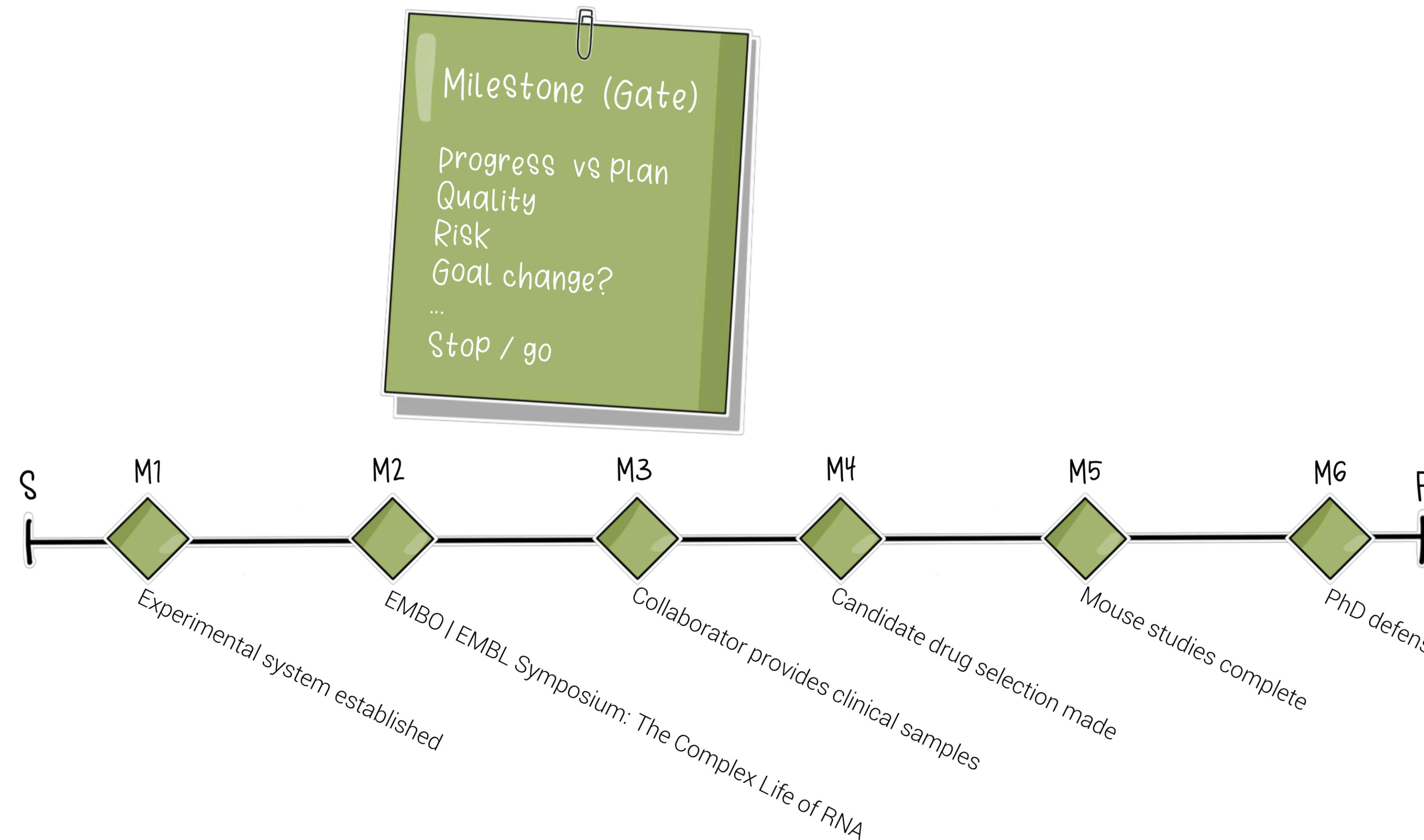
- => a. What figure would allow me to complete my goal
box-plot, scatter-plot, heatmap, alluvial-plot, density-plot?
- => b. Define the axes **precisely**
What is X? What is Y? What are colours? What are the units?
- => c. Work your way back from the figure to a sentence (retro-engineer).
What data? What normalisation? What metadata? What analysis?
- => d. Push it further:
This not only helps defining a goal, but also all the tasks needed

Planning

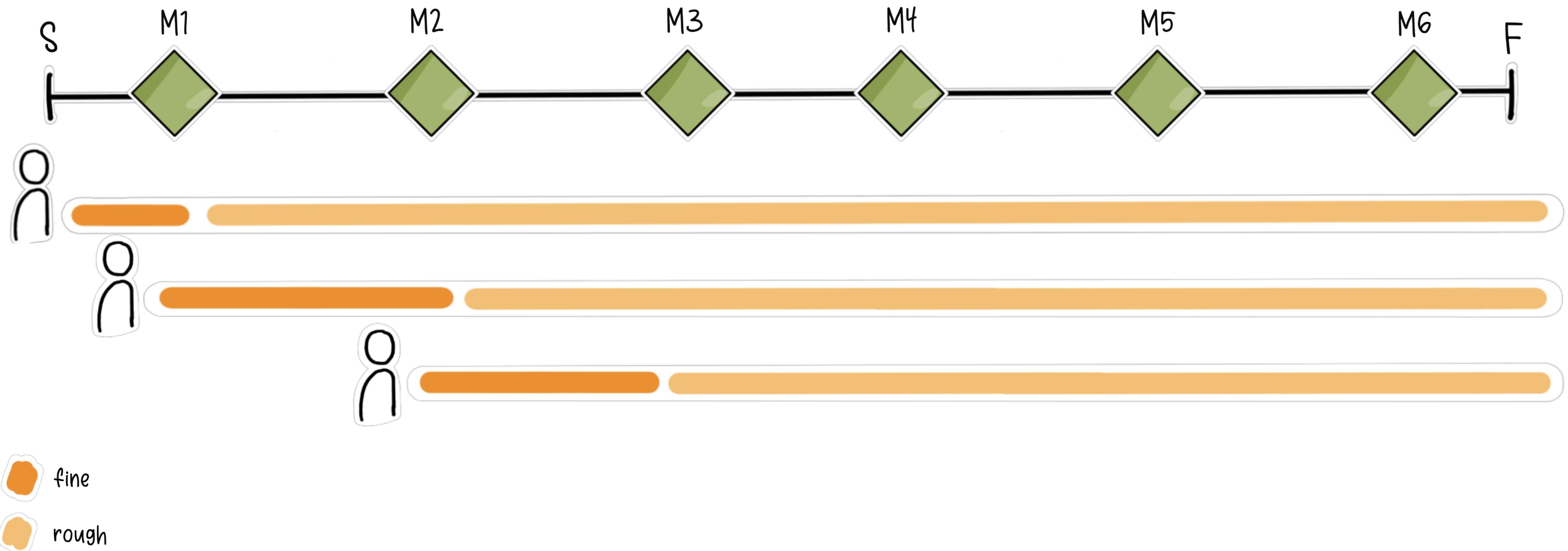
Planning

“Start with the End in Mind”

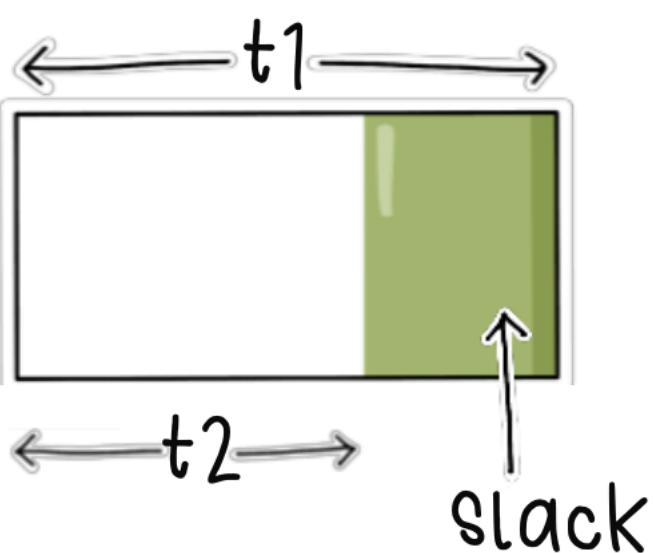
Steven R.
Covey



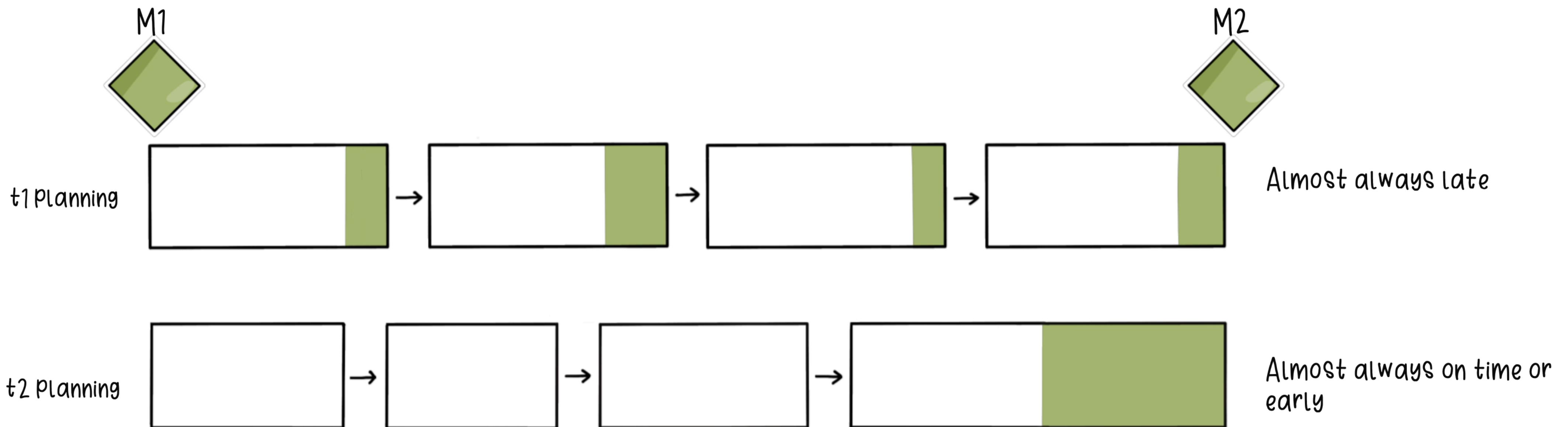
Planning



Planning



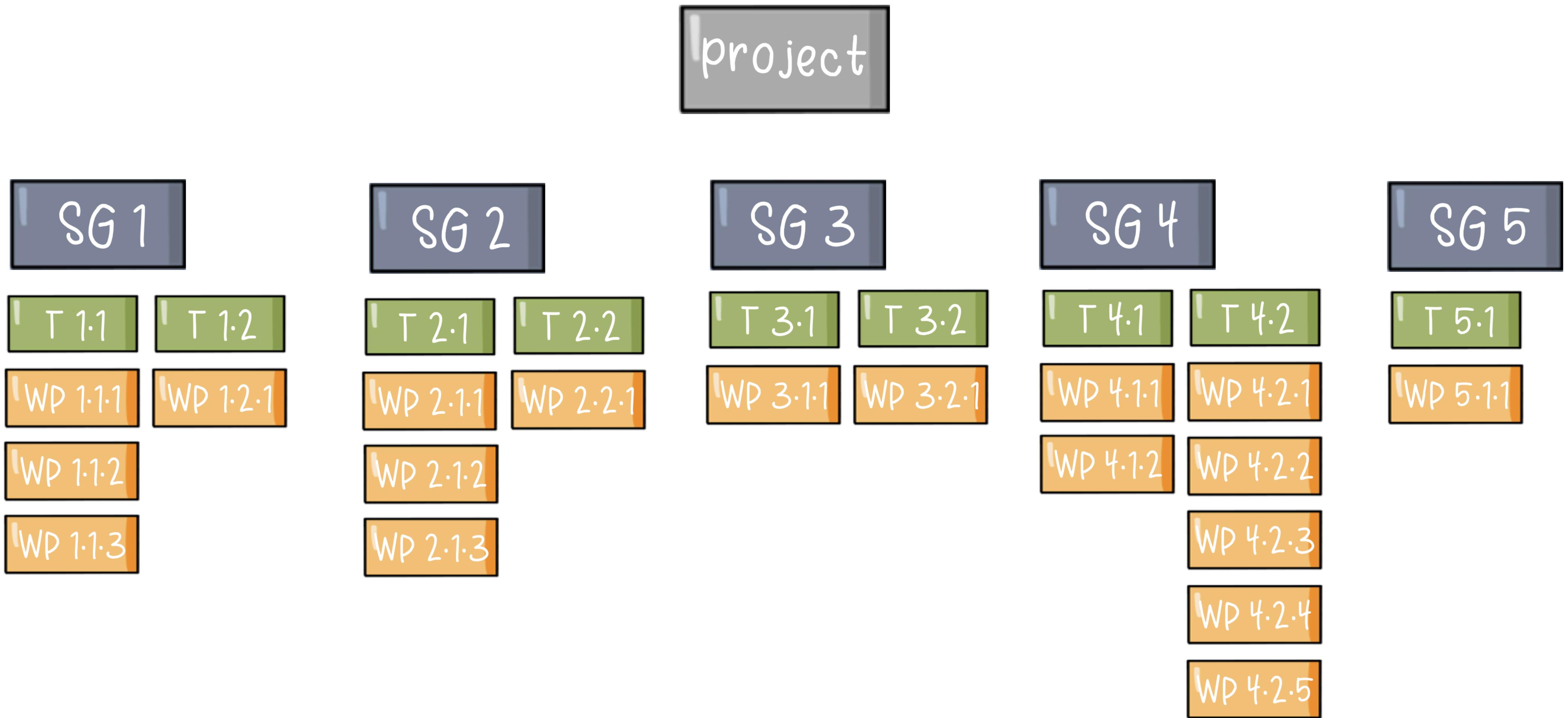
Parkinson's Law
"Work expands to fill the time available."
C. Northcote Parkinson (1958)



Work breakdown



Work breakdown



Work Package Title

WP Nr.

latest start

When is the latest this WP can start without delaying the project?

Duration

how long will the task take? (sometimes this is much longer than the amount of work due to incubation times etc.)

latest finish

By when is the result needed for the project?

WP Description

What will you do in this WP?

Resources

Which resources are needed for the task?

Equipment – what is needed for the work? Which equipment is difficult to access or needs to be booked?

Materials – which materials are needed? What is the ordering horizon?

Which finances need to be considered?

Dependency

From which WPs does this WP require results, in order to start?

Which other WPs rely on outputs from this WP?

Who

who is needed to complete the work? (e.g. technical assistant, post-doc, masters student)

Effort

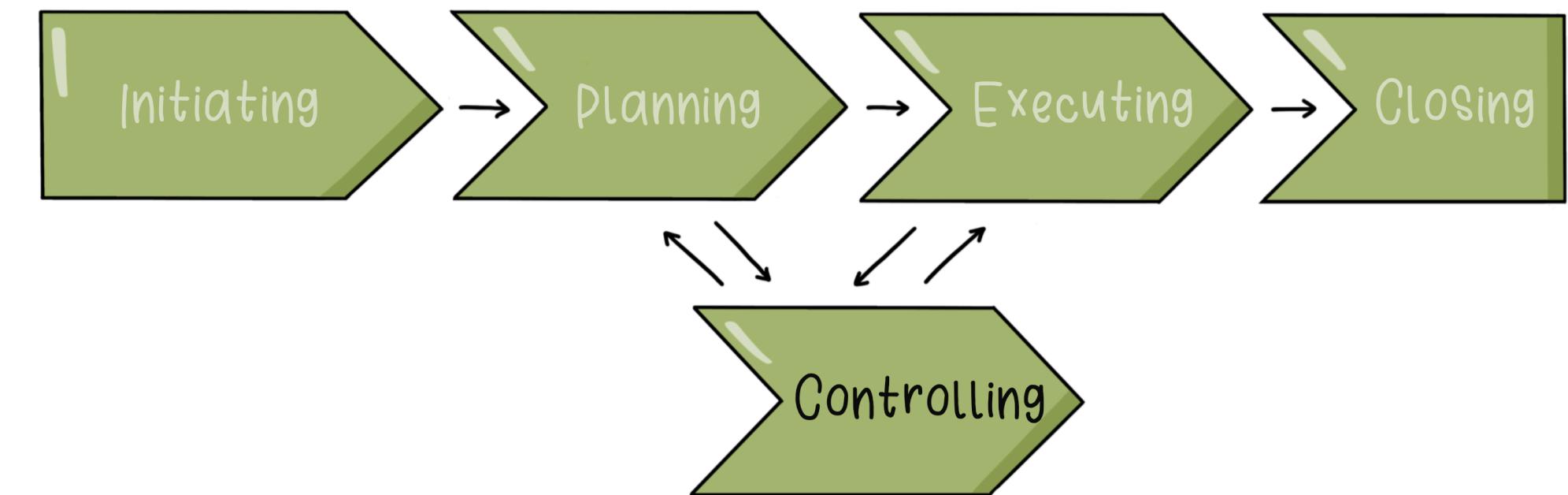
How much work will it take (in days)

Outputs

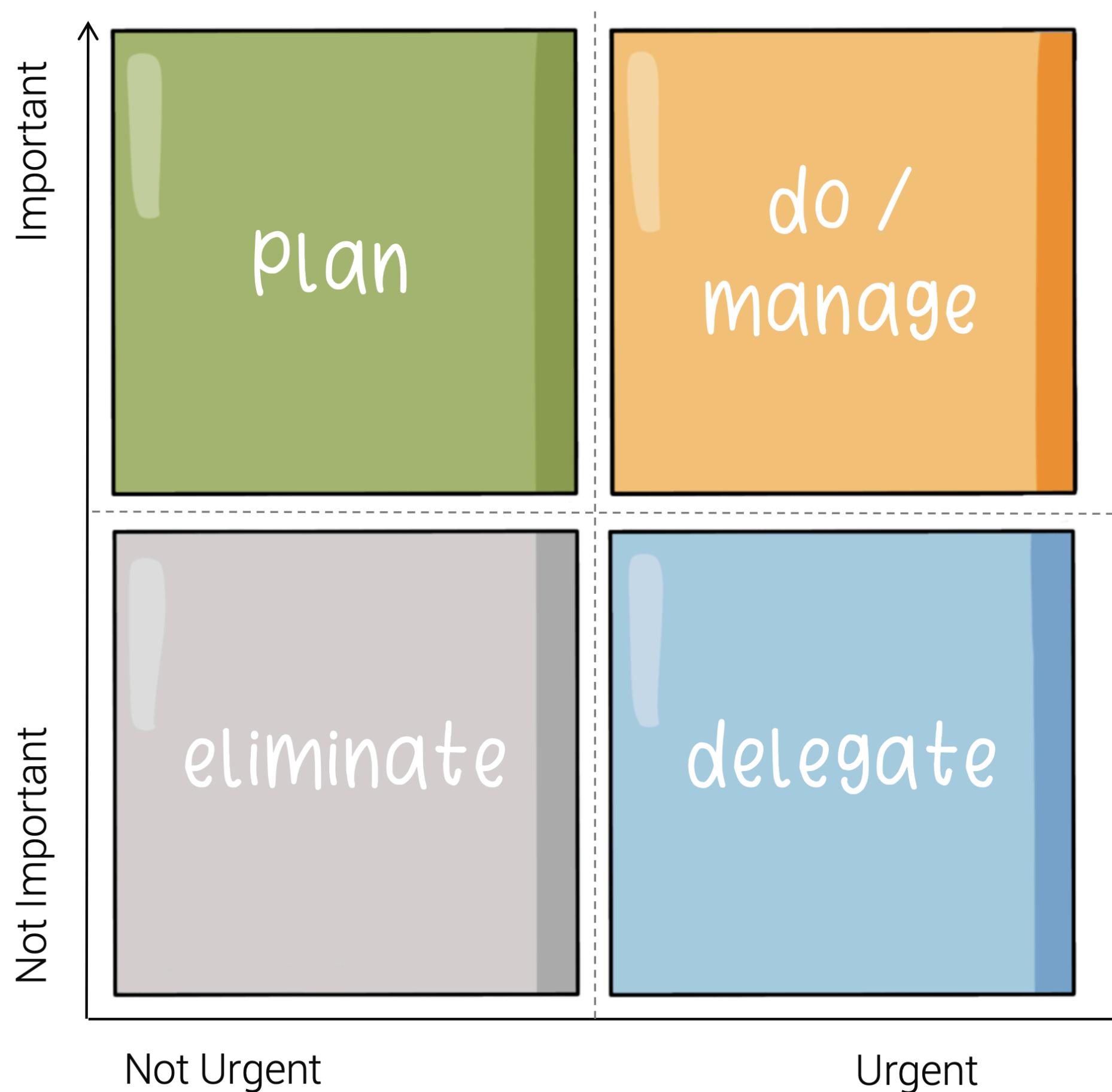
What data, information etc will come from this WP?

Project controlling

Project controlling



Eisenhower matrix:



- **Importance (task related)**
Relates to how this task helps you reach your goals
- **Urgency (time related)**
Relates to how soon the task needs to be completed
- **Do / manage:** Usually the focus of your activities
- **Plan:** Strategically important tasks
- **Delegate:** Delegate where possible
- **Eliminate:** Not worth doing, unless something changes

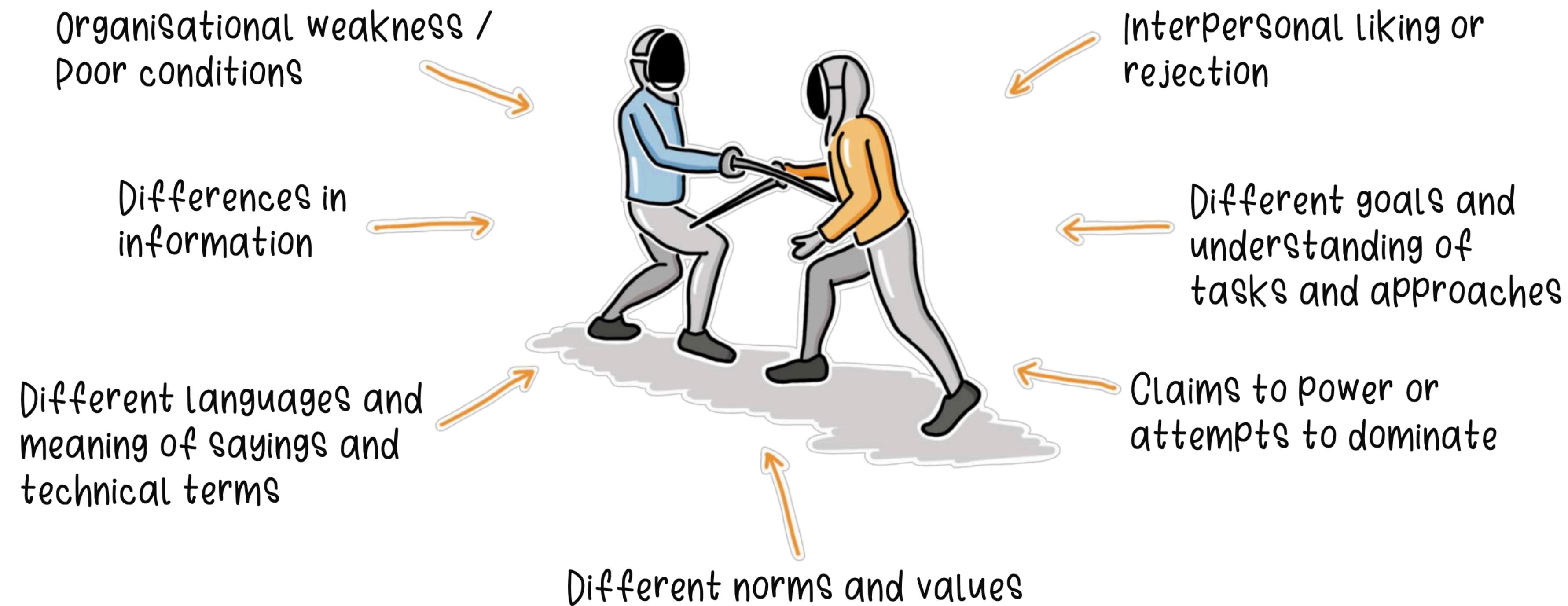
Conflict

What is a conflict?

- *<group inputs>*

Conflict definition & origins

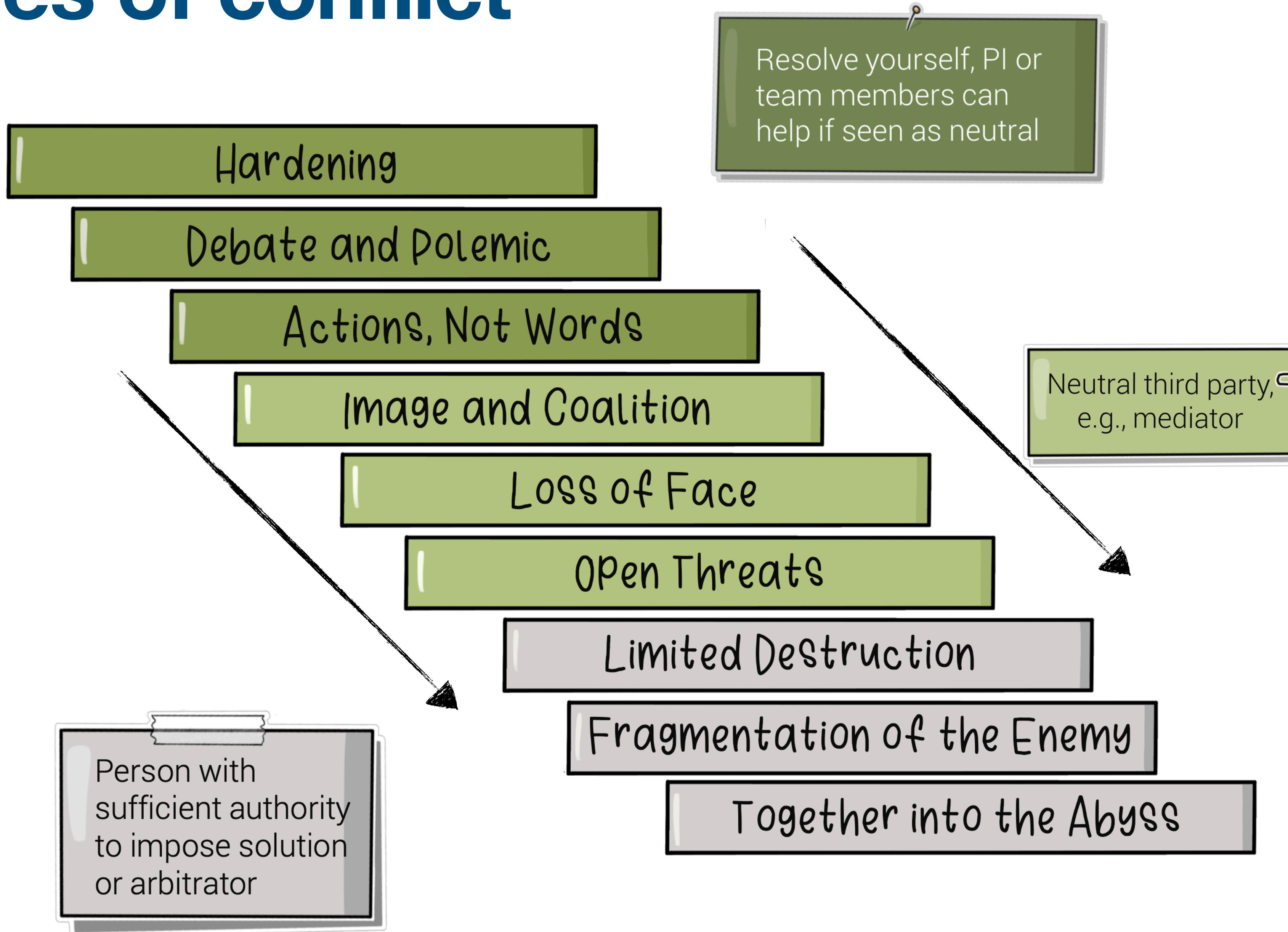
! Conflict ≈ disagreement + unpleasant emotion



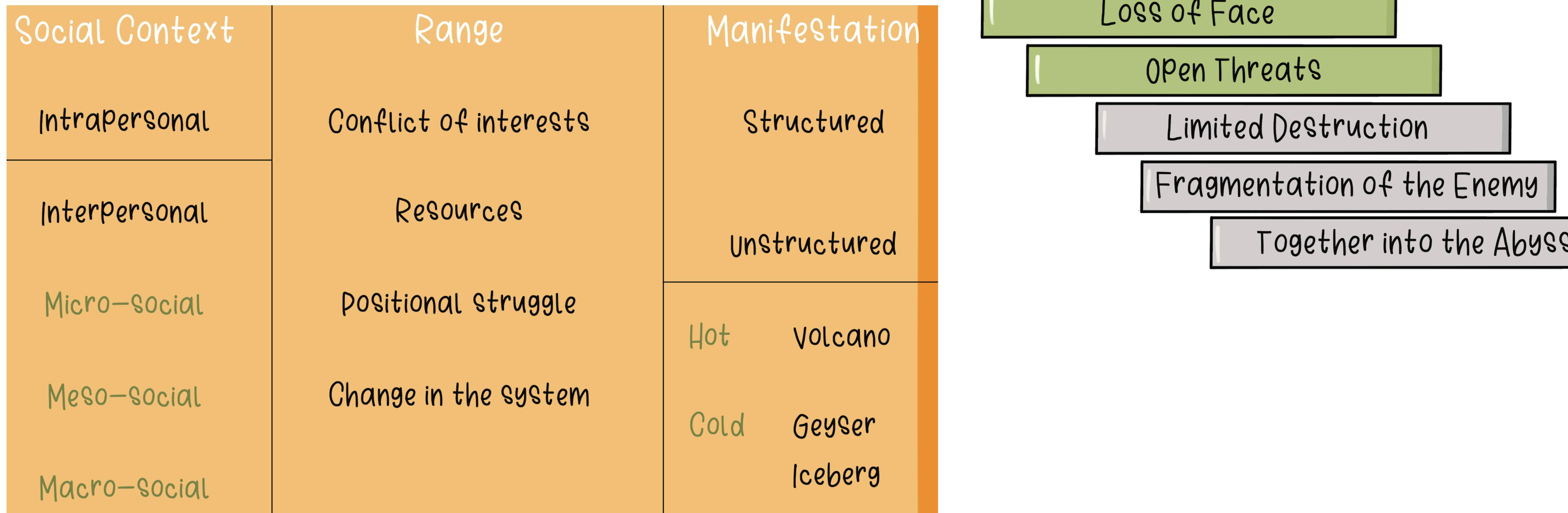
Conflict taxonomy

Social Context	Range	Manifestation
Intrapersonal	Conflict of interests	Structured
Interpersonal	Resources	Unstructured
Micro-social	Positional struggle	Hot Volcano
Meso-social	Change in the system	Cold Geyser
Macro-social		Iceberg

Stages of conflict



Stages of conflict



Conflict: exercise

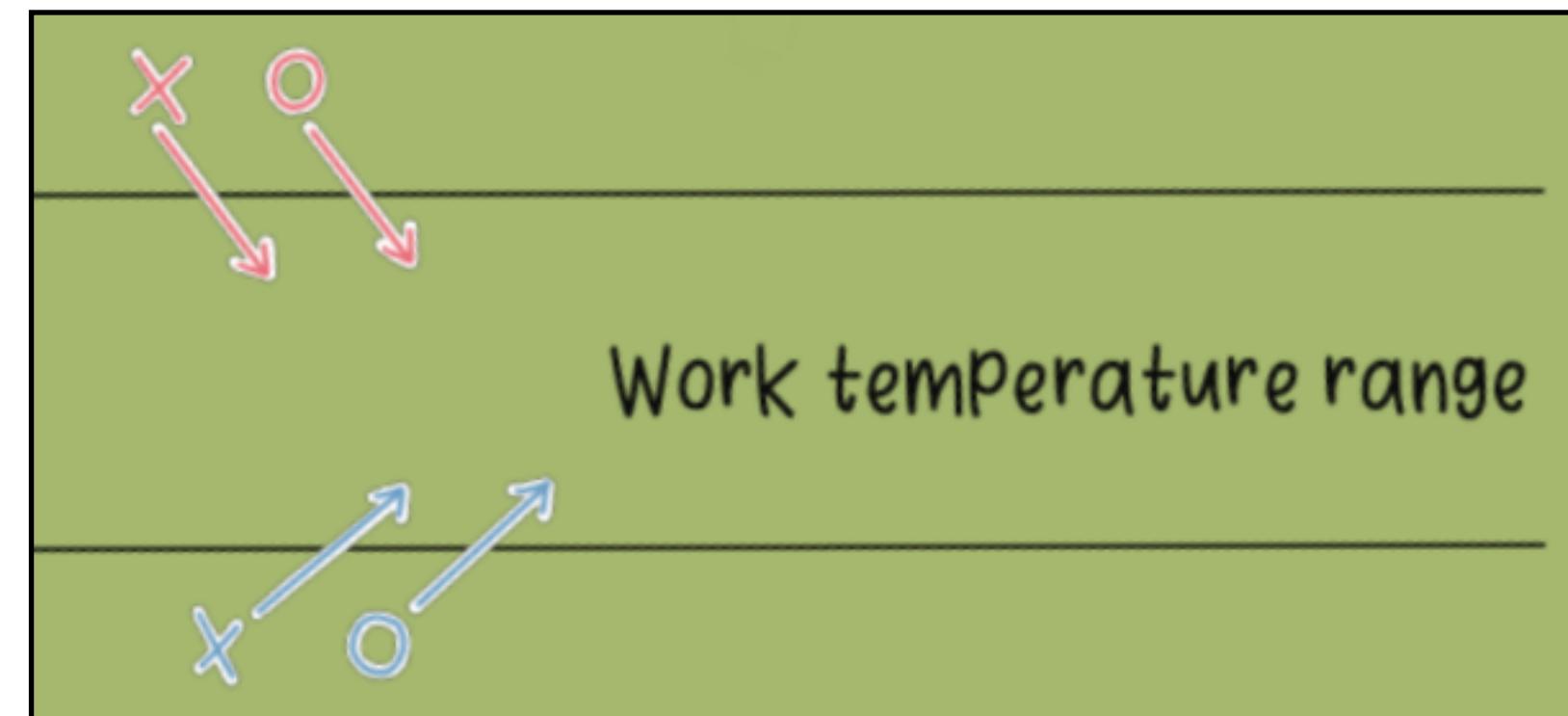
1. Try to identify a conflict that you had experienced during your Bachelor project. This can also be a conflict you heard about from a friend, partner, etc.
2. Characterise the conflict using the conflict taxonomy
3. Identify the conflict stage
4. What was done to resolve the conflict? Was it successful?

NB: What is discussed here stays here.

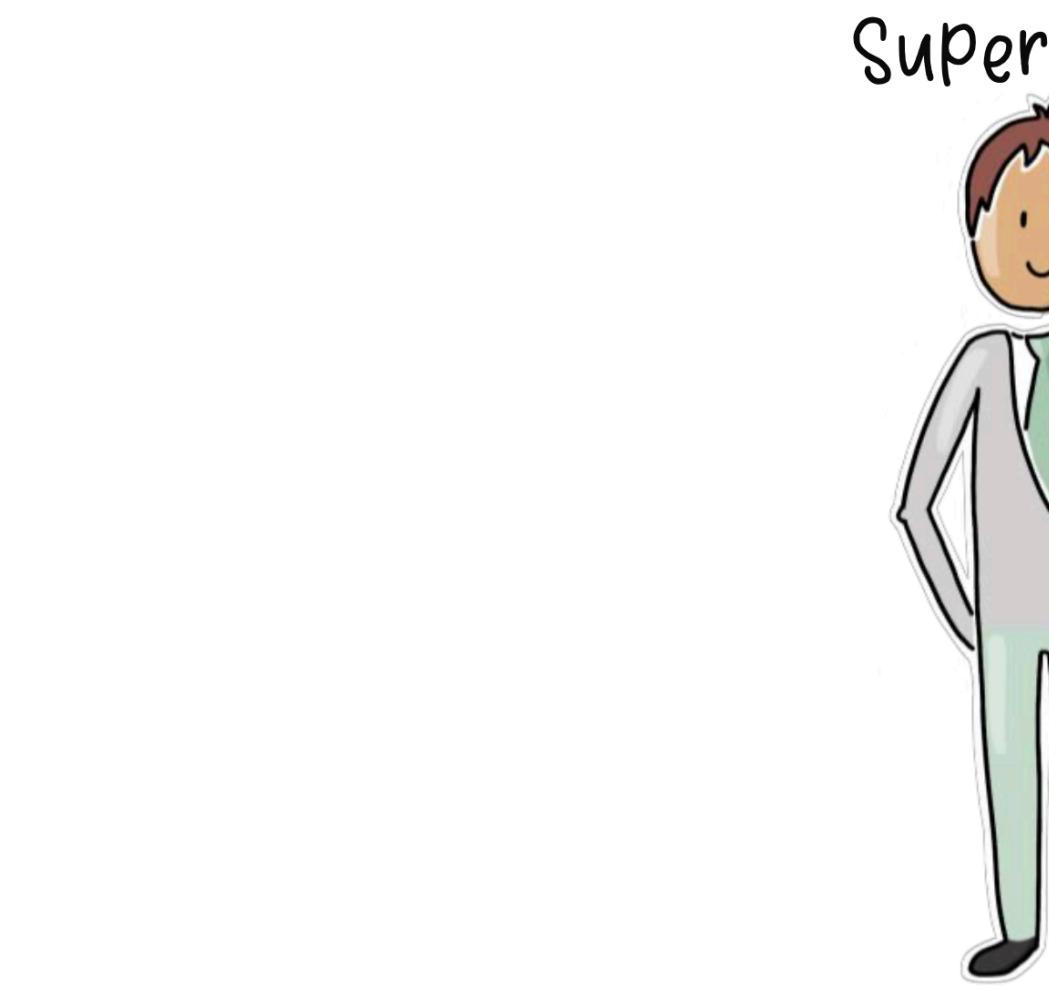
- preparation time: 5 minutes
- round table: 15 minutes

Conflict resolution

1. Identify conflict stage
2. Decide who should intervene
3. Mediation or Arbitration?
4. Bring parties into working temperature zone
5. Ensure each party understands the other's position
6. Identify future working relationship
7. Get commitment from all parties
8. Clarify what happens if there is non-compliance

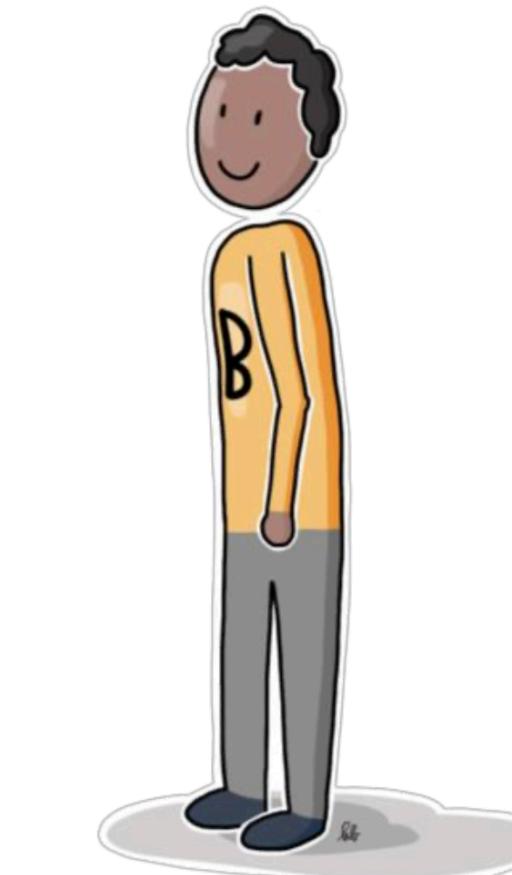


Conflict conversation



Equidistant
from A & B

1. Why we're together
2. I will ask A to start
3. Before responding, B summarises what A said
(check with A it's ok)
4. B responds
5. Before responding, A summarises what B said
(check with B it's ok)
6. Continue to resolution



Project & People Marketing

Project marketing



Important for you now:
People marketing

1. LinkedIn
2. Google Scholar
- (3. Twitter)

Project marketing: exercise



Present your bachelor project in 2 minutes using the SUCCESS method

- preparation time: 5 minutes
- round-table: 15 minutes

Questions?