Project management 101 *by Zavanak*

21. DEALING WITH PROBLEMS

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21.1 What is a problem?

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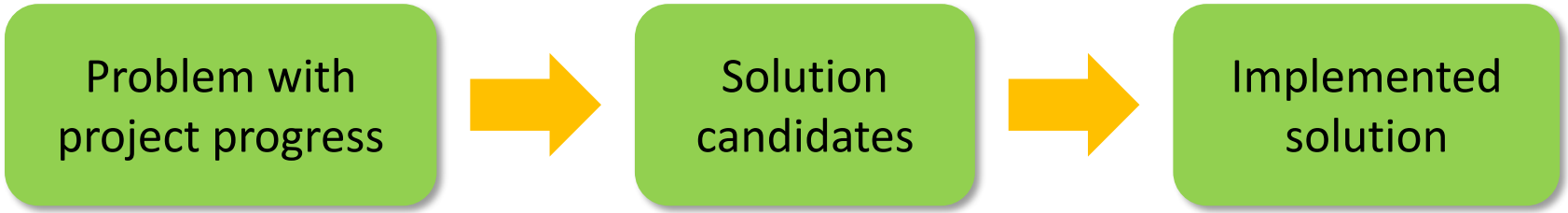
Two scales of problem

A **problem** is a situation which prevents progress being made as planned or a goal being achieved

The problem the organisation faces

The problem the project faces



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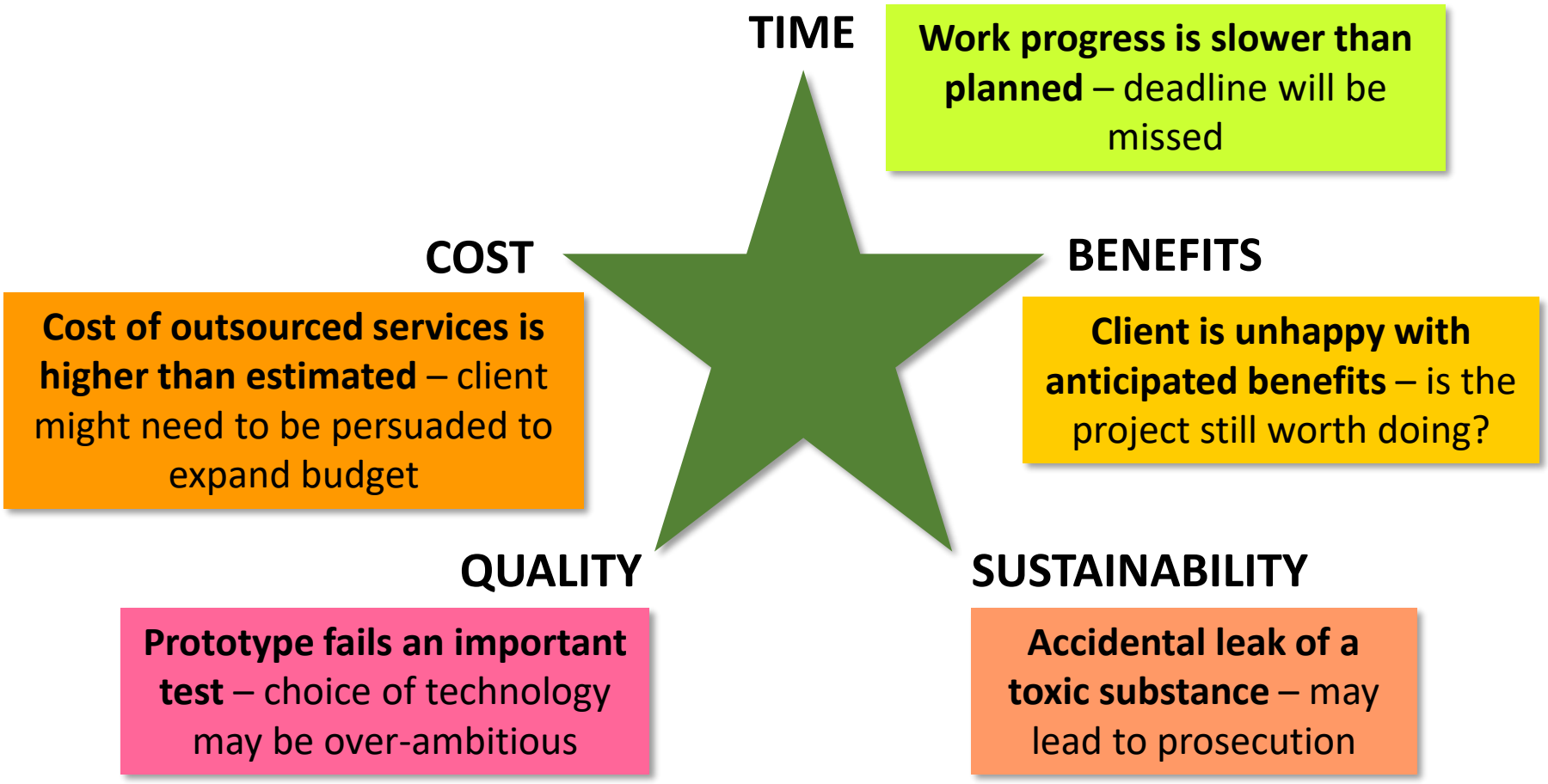
Problems, big and small



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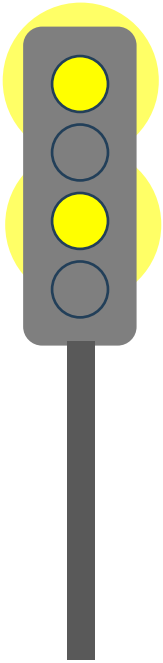
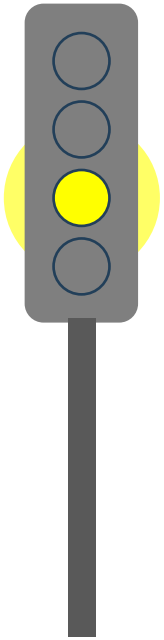
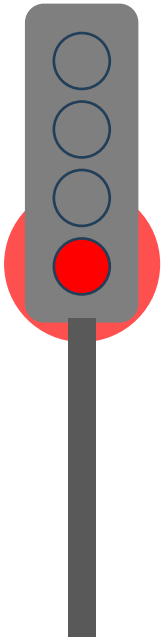
The urgency of the problem



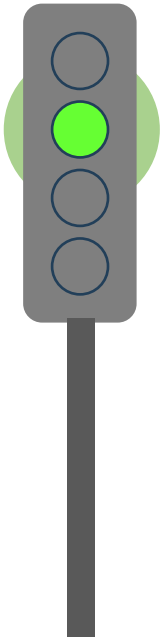
The problem **emerges gradually**, perhaps because monitoring is weak



The problem **requires urgent action** but does not threaten the project



The problem is **acute**, and critical to the survival of the project



The problem actually **creates an opportunity** to enhance the project in some way

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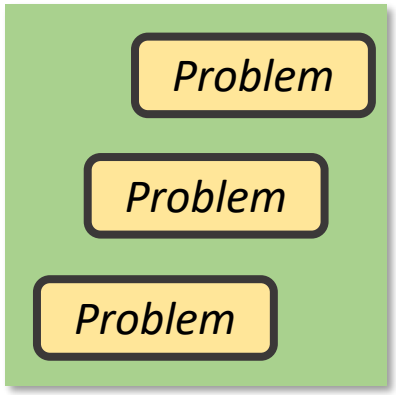
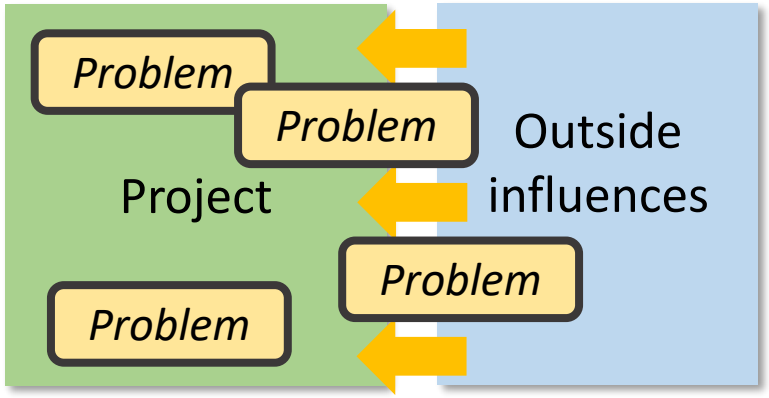
Where the problem comes from

Closed system



- We can think within the clear boundary
- **Power structures are obvious**
- We must understand the processes, then seek an answer
- **Amenable to linear problem-solving**
- Risk of being too specific – system may be more open than we think

Open system



- **Boundary unclear – limits on options may be a constraint**
- Power structures are complex
- **We must understand the whole system, then seek an answer**
- Linear problem-solving is likely to produce sub-optimal solution

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Clear problems and fuzzy problems*

Clear problem

- Fairly stable, bounded
- **Easily definable**
- Generic solutions may be available
- **Candidates can be tested and screened in or out**
- Can be evaluated against objective criteria
- **Effectiveness of a solution will be clear**

Fuzzy problem

- Highly complex, unbounded
- **Incapable of clear definition**
- Unique in fundamental ways
- **No optimum solution is possible, there will always be trade-offs**
- Any attempted solution may change the nature of the problem, or create new ones

** Coined as 'tame' and 'wicked' problems by Rittel & Webber, 1973*

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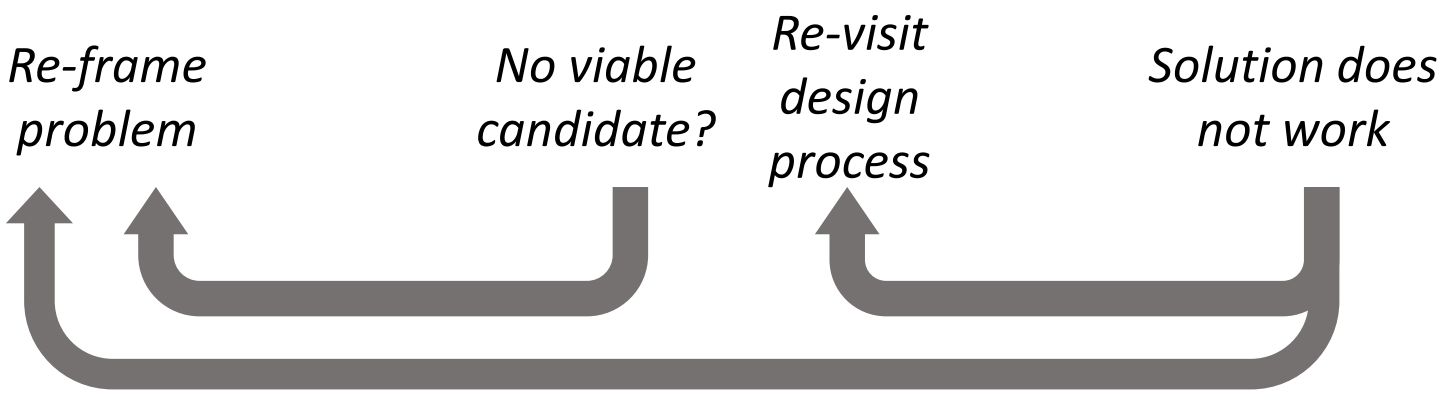
Tackling a clear problem

Definition → **Design** → **Decision**

- Gather information
- **Generate alternative problem definitions**
- Select the most promising one

- Look for ready-made solutions
- **In their absence, develop candidates**

- Evaluate the candidates and their likely consequences
- **Best looking solution is chosen and implemented**



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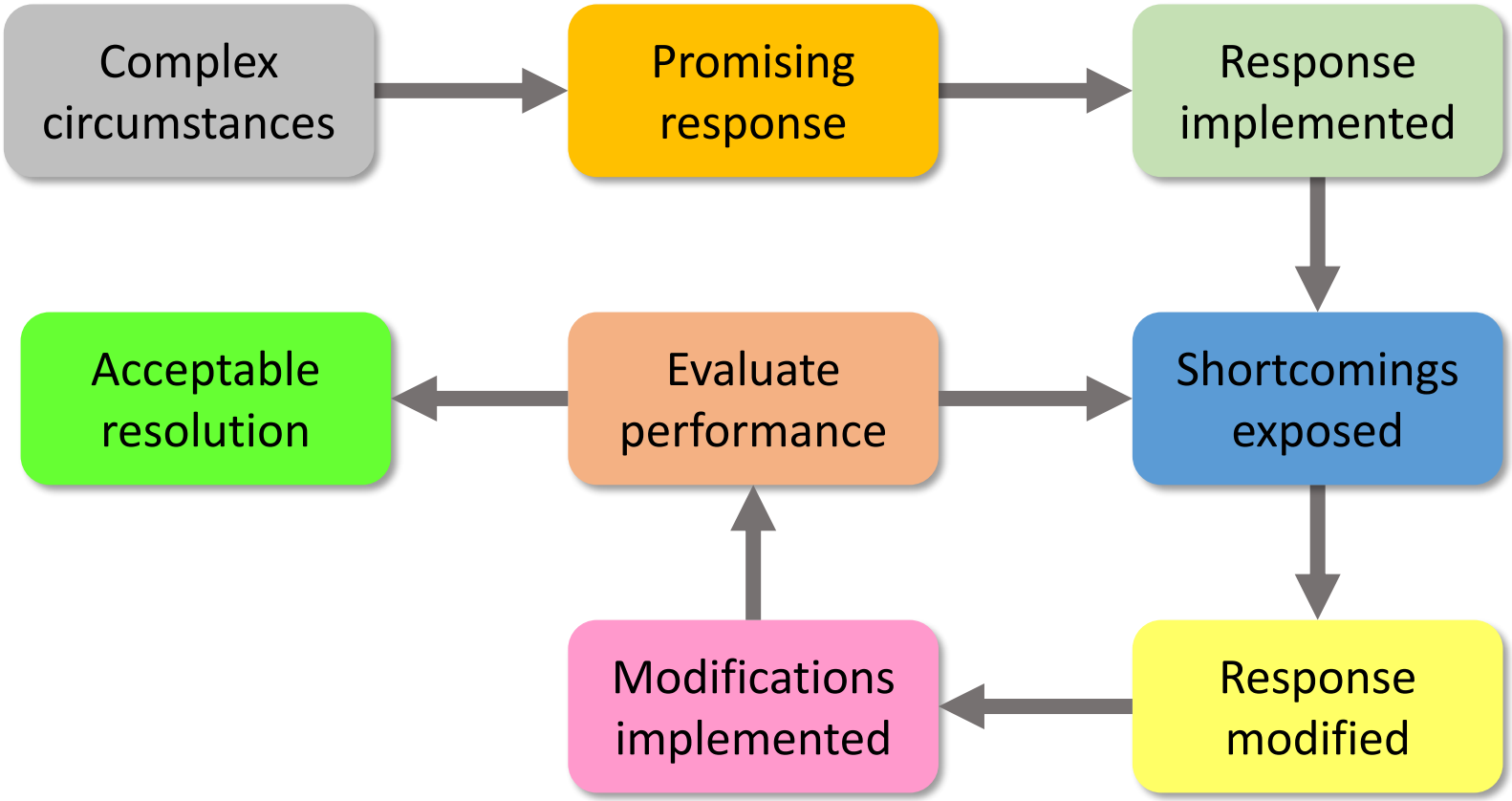
Tackling a fuzzy problem



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Types of problem-solver

Temporary bridge collapses under excavator

Stabiliser – contains the situation, understands what's happened and is happening

Rescue the driver. Make the site safe and secure.

Reactor – puts in place a quick solution that is a temporary defence against immediate conditions

Recover excavator. Shore up bridge. Hire replacement equipment.

Constructor – develops a long-term solution which may render the temporary fix redundant

Strengthen bridge. Capture relevant learning from the episode.

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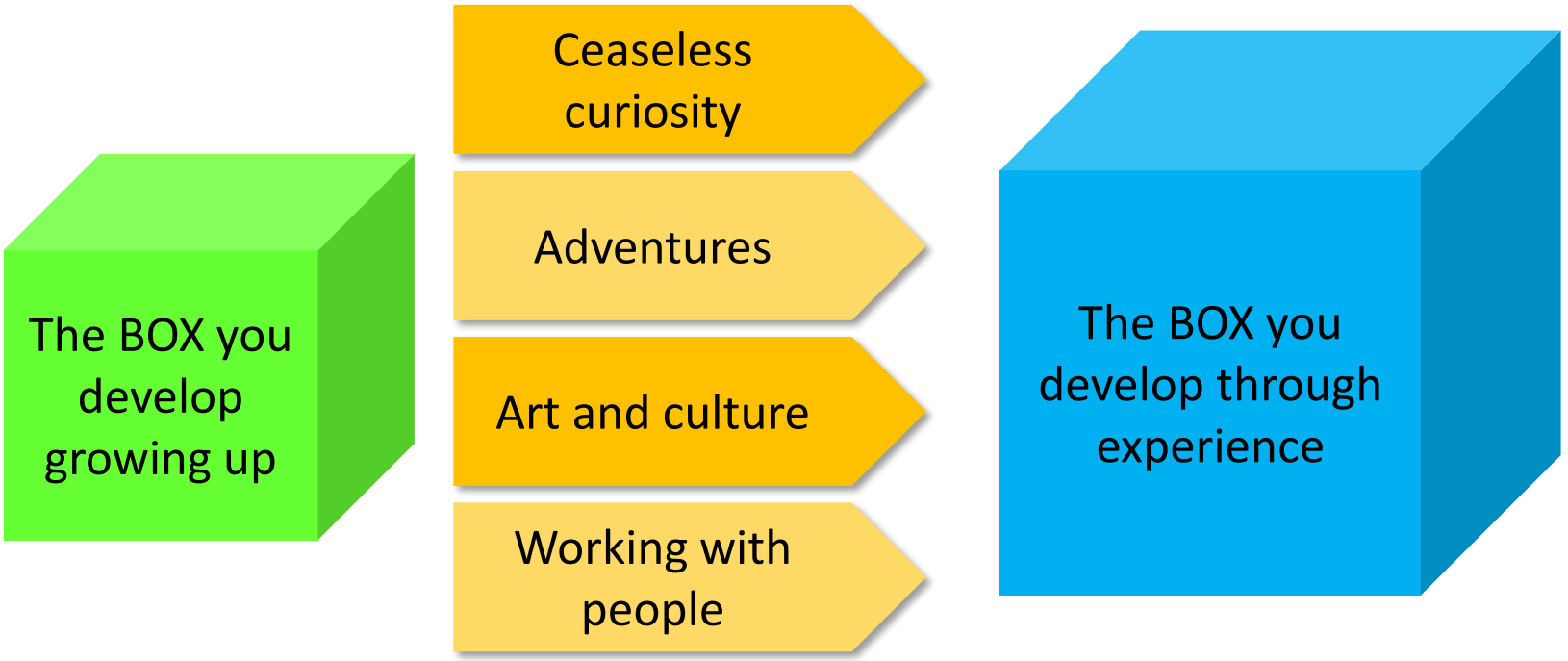
How to think outside the box



It probably does not equip you to solve the problem at hand.

This bigger box will be more likely to contain possible approaches to the problem.

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Innovative thinking

Invention = creating something entirely new

Innovation = devising a novel solution to a problem

Improvement = coming up with an incrementally better way of doing something

- Always innovate to stand out
- **Constantly keep the end-user in mind**
- Give people space and time to innovate
- **Encourage a critical friend atmosphere**
- Expect managers to foster innovation
- **Do it, try it, fix it**
- Do not be highly risk adverse – some ideas will fail
- **Be constantly learning**

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Doing nothing

Consider the consequences of doing nothing at all.

That could be the best approach if:

- **the risks involved in an attempted solution are bigger than the risks of enduring the current circumstances**
- an intervention stands a high chance of making the situation worse
- **stakeholder or political intervention may prevent a good solution being implemented**
- the benefits may not be worth the investment required.

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