



# Uncertainty & the Learning Approach

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# Uncertainty, risk and project failure

“Main reason for project failure is that organizations do not recognize the fundamental difference between project novelty and project risk... Novel projects pose unforeseeable uncertainty.”

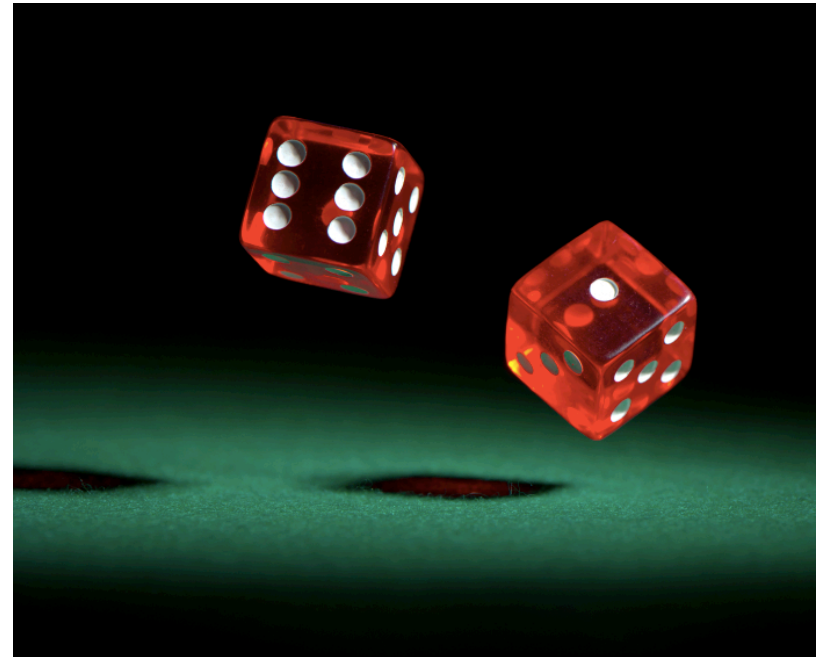
(Loch et al. 2006)



# Risk

We don't know which outcome is going to happen, but we do know the probability of an event's occurrence and the extent of its impact.

→ Enough knowledge to plan (project risk management methods, e.g. contingency planning)



# Uncertainty

The lack of certainty.  
Unknown outcome.

A state of having limited knowledge where it is impossible to exactly describe the existing state, a future outcome, or more than one possible outcome.

Example situation:  
“How might we fight digital piracy?”





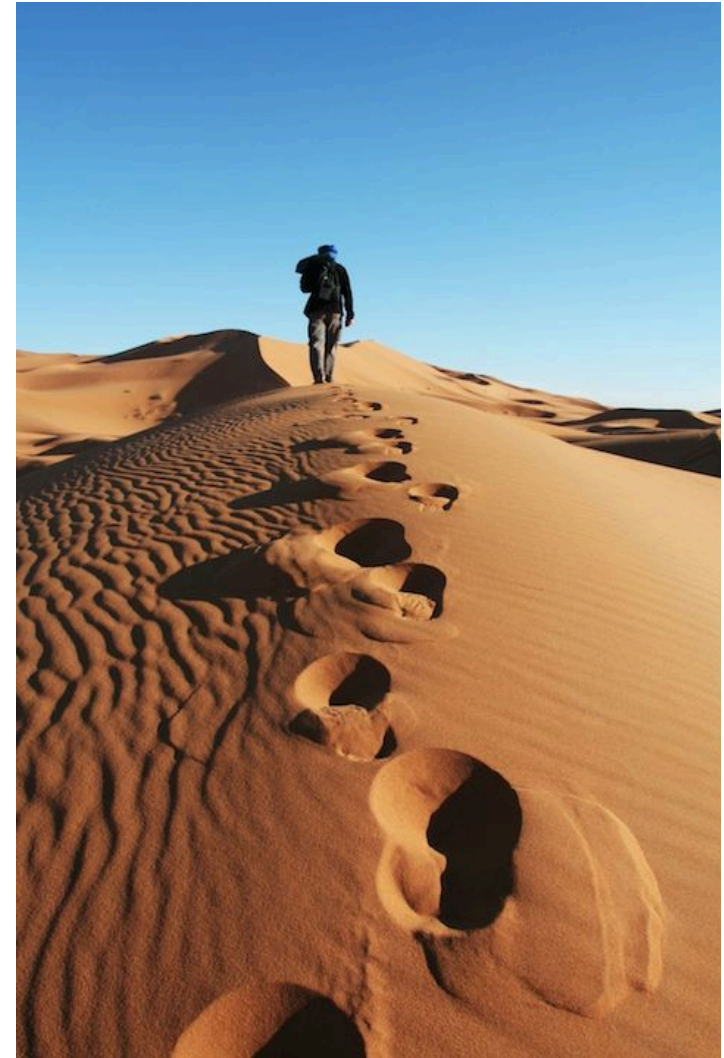
# Uncertainty

We don't know what are the possible outcomes, and we don't know what the probability distribution looks like.

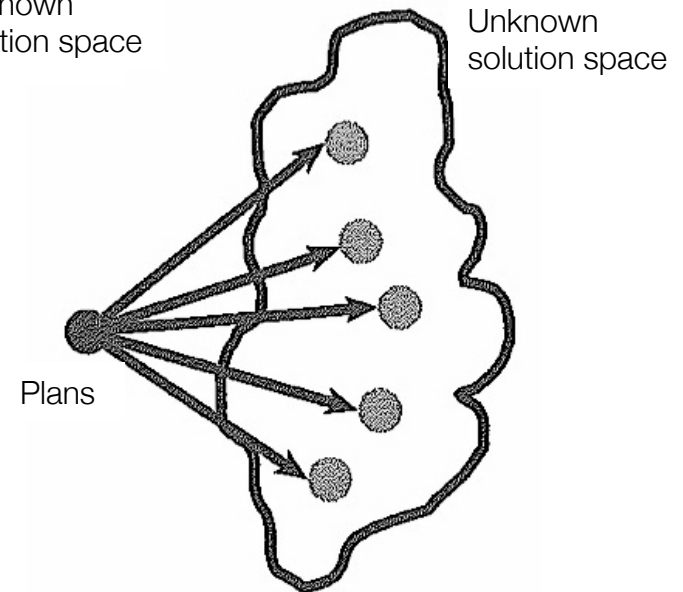
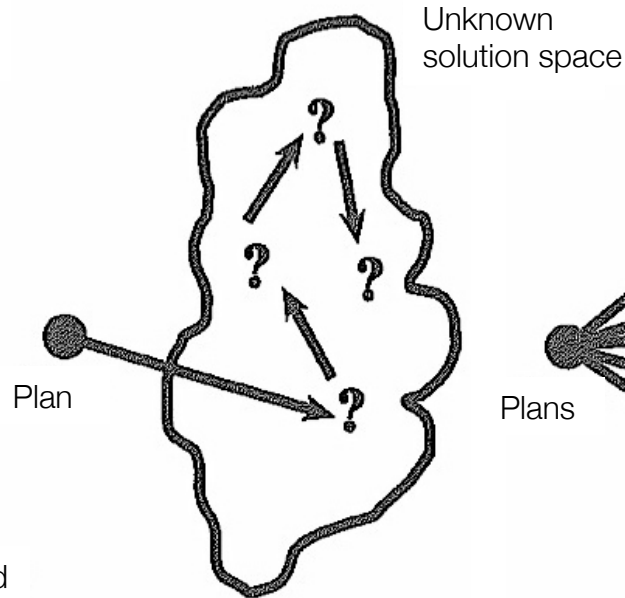
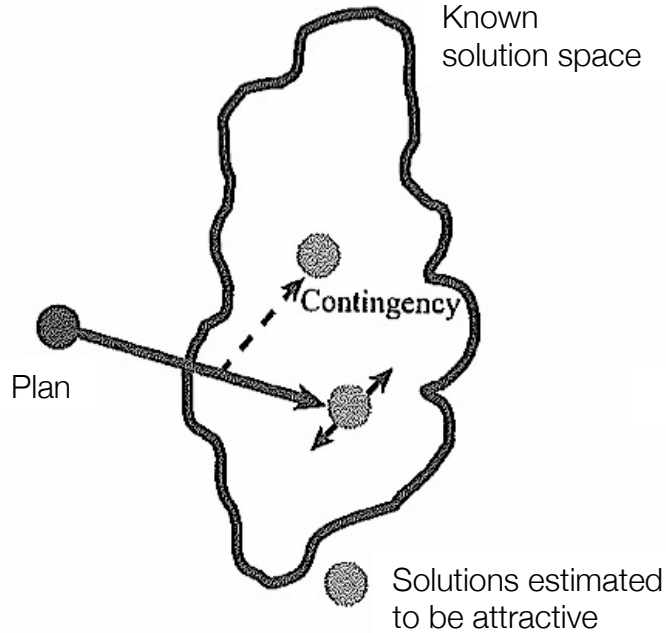
→ Lack of knowledge makes planning inadequate.

Uncertainty in projects stems from

- Novelty
- Complexity



# 3 approaches to project management (Loch et al 2006)

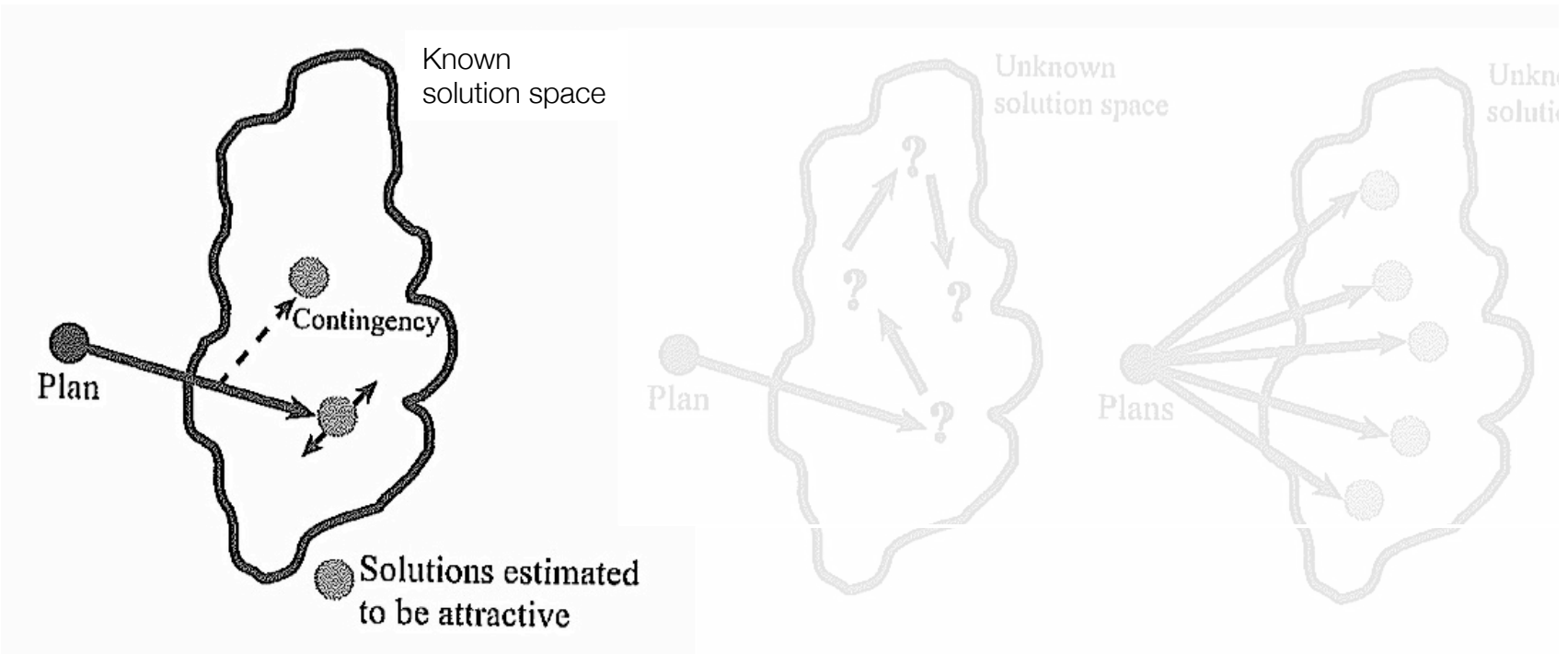


a. The planning approach (with contingency and residual risk)

b. The iterate and learn approach

c. The selectionist approach

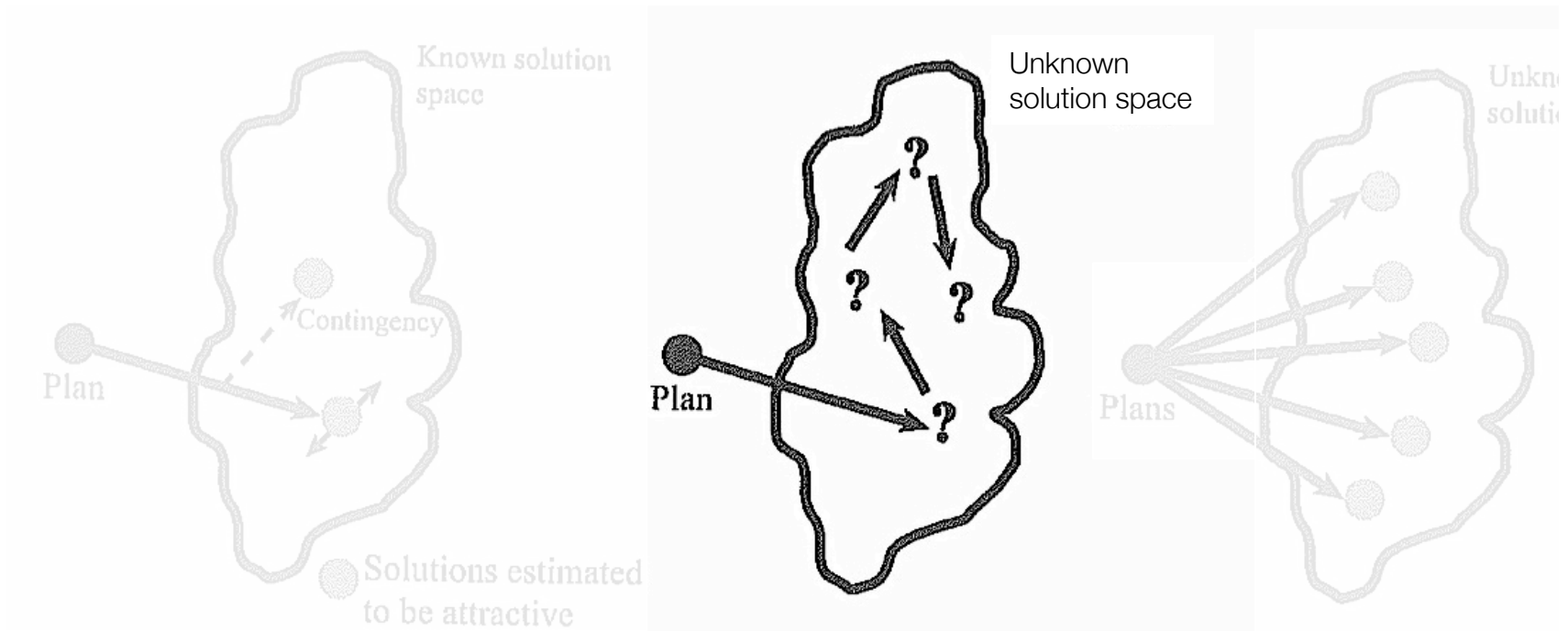
# 3 approaches to project management (Loch et al 2006)



## Planning approach:

- The important problem solving occurs at the beginning and then the emphasis shifts to executing the plan.

# 3 approaches to project management (Loch et al 2006)

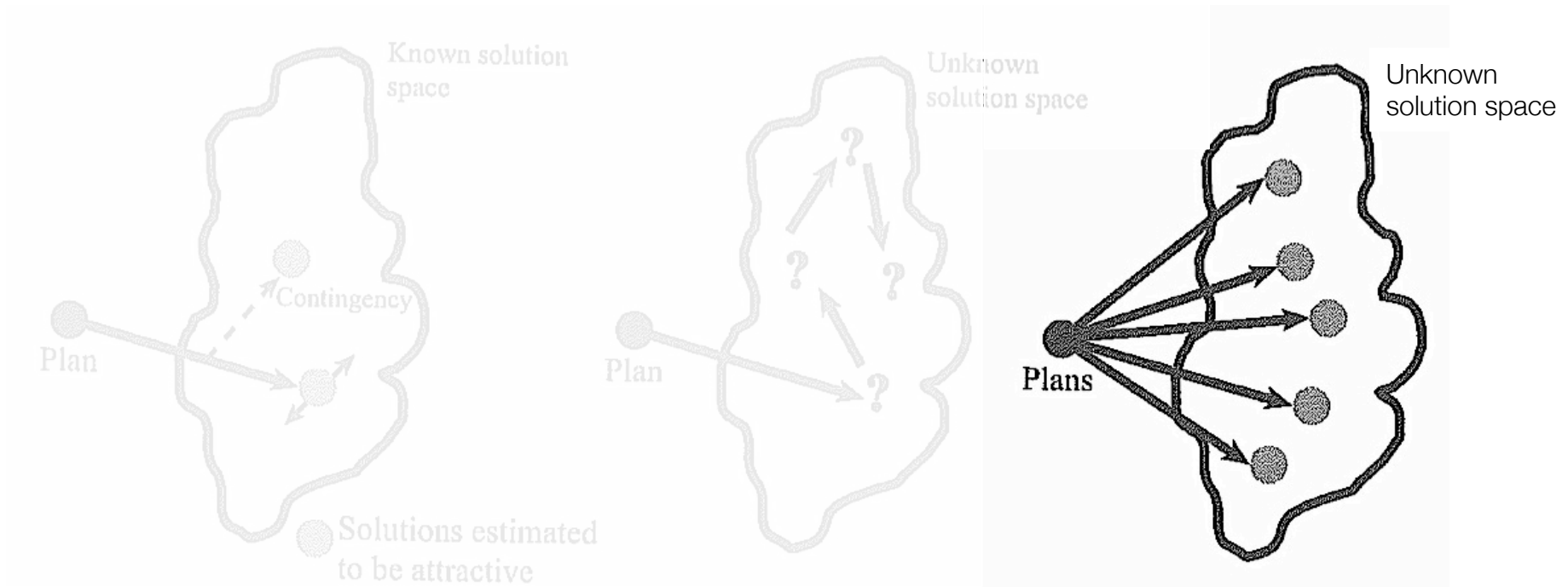


## Learning approach:

- Start by moving toward one outcome (the best that can be identified)
- Remain prepared to repeatedly and fundamentally change both the outcome and the course of action as you proceed, and as new information becomes available.



# 3 approaches to project management (Loch et al 2006)

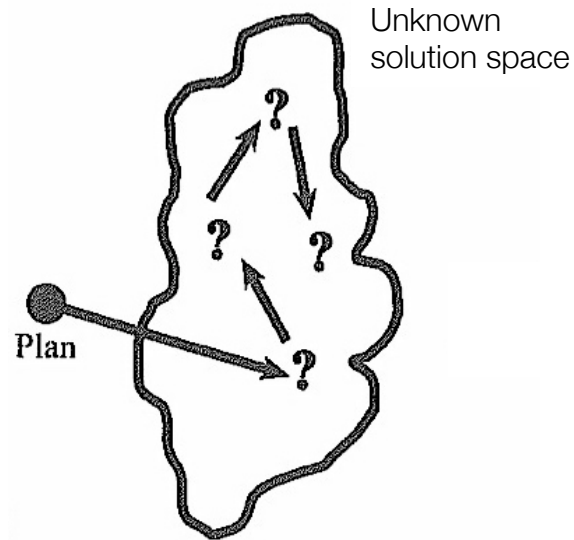


## Selectionism

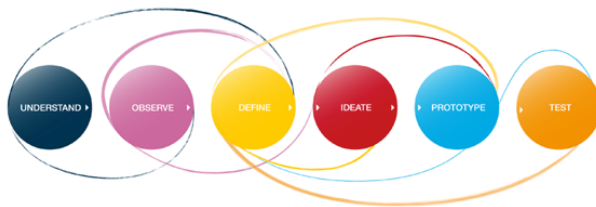
- Pursuing multiple approaches, independently of one another, and picking the best one ex post.

# Learning approaches

The iterate and learn approach

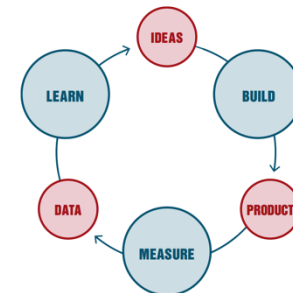


*Design Thinking*



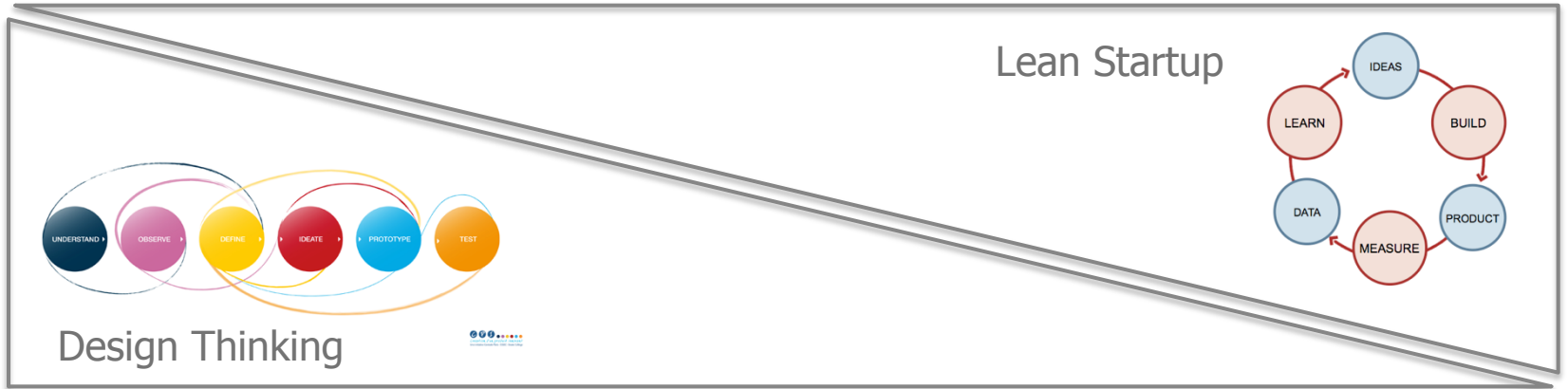
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*Lean Startup*



Hi

The measure of progress: learning & the amount of relevant information

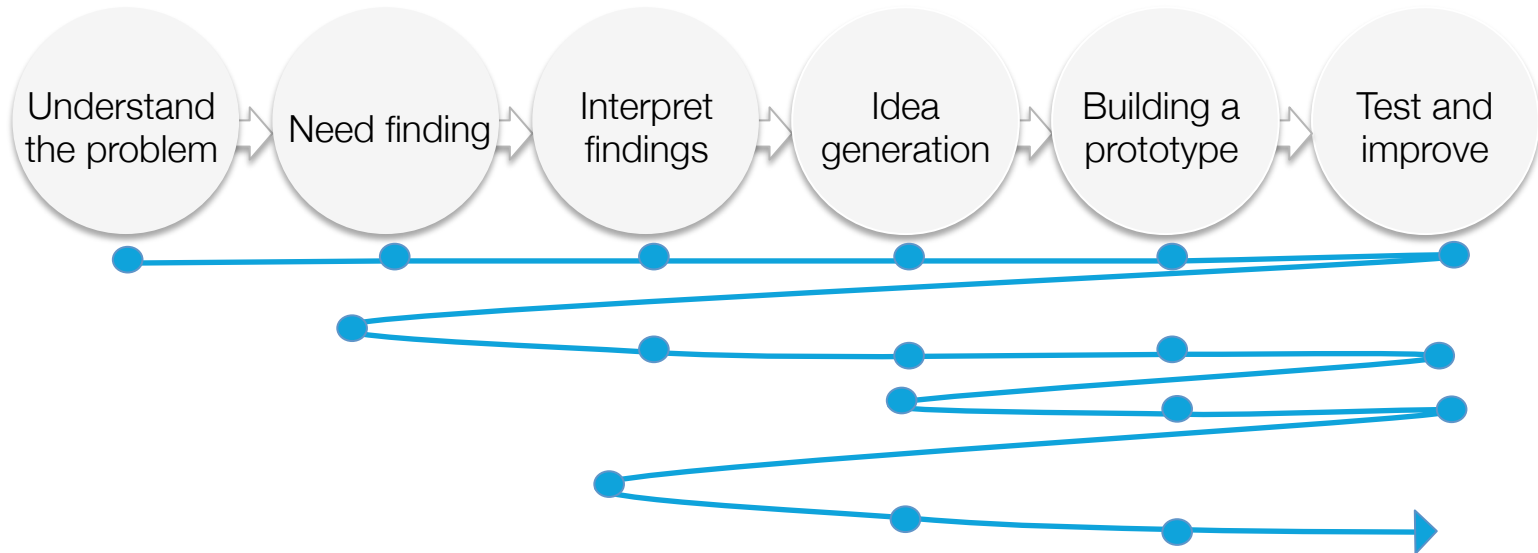


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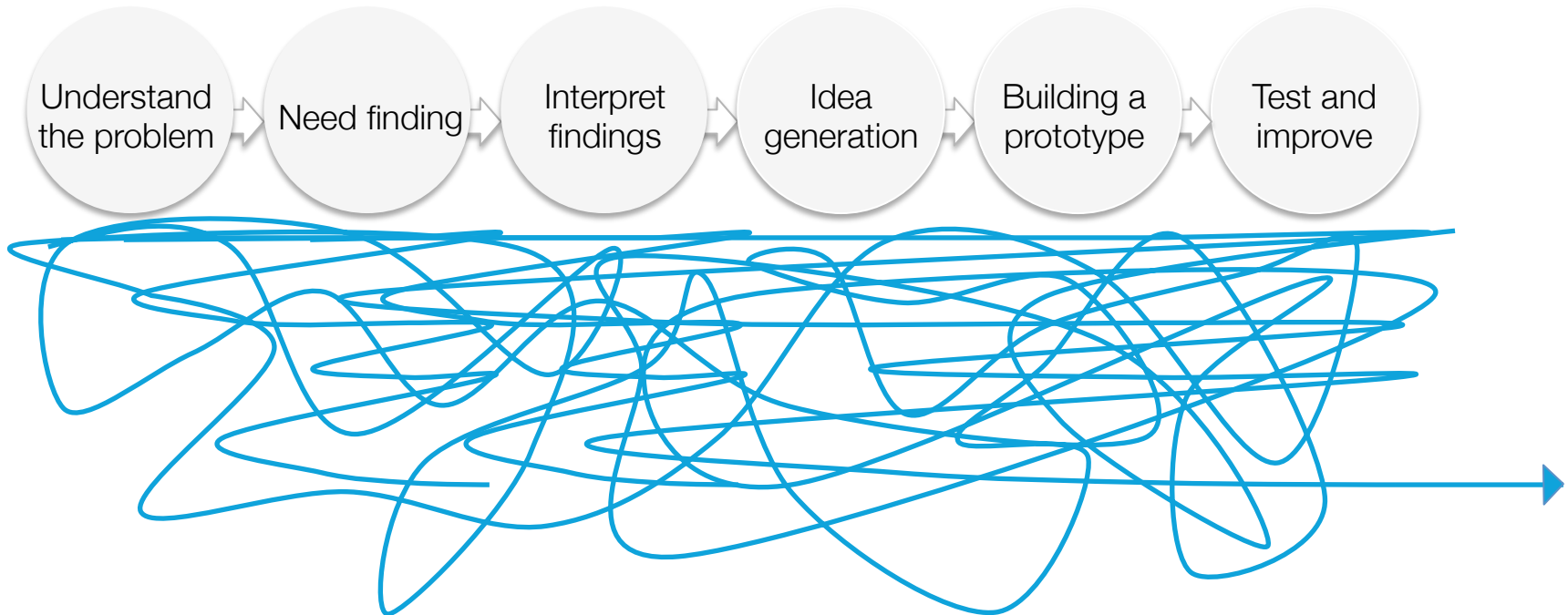
Time spent on the project

# Exploration & Learning

Case in the Master in Entrepreneurship and Innovation program, 2013

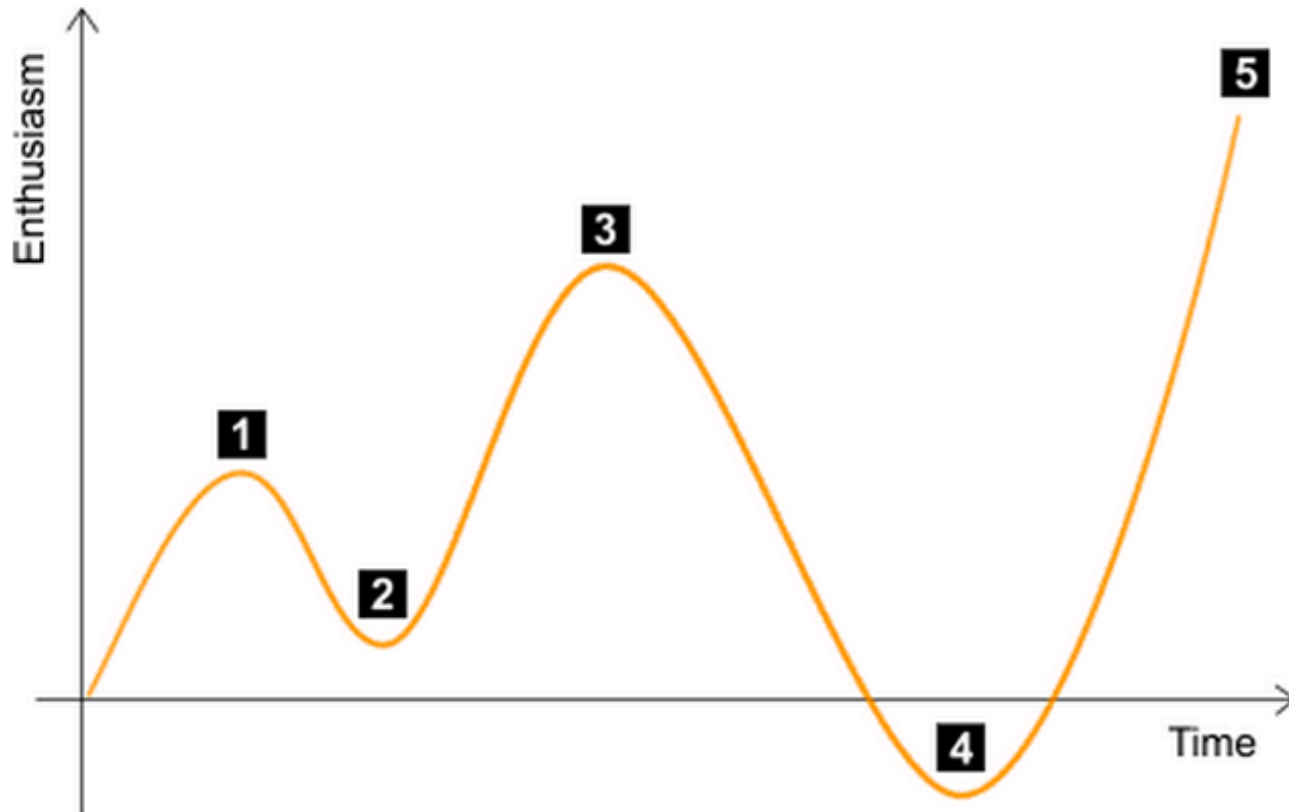


# “The jungle”





# IDEO: innovation mood chart



**1** "OK, let's give it a whirl!"

**2** "It's harder than it looks."

**3** "It seems to be working!"

**4** "We're reaching the point of no return. Do we really want to do this forever?"

**5** "Hey, we're starting to get really good at this."

# The Creative Process:

1. This is awesome

2. This is tricky

95%  
OF TIME {

3. This is shit

4. I am shit

5. This might be ok

6. This is awesome



# Emotional Experience of Experimentation







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