Agile Development

Topic 9:

Estimating and timeboxing in DSDM

Topic Coverage

This topic will cover:

- **How to estimate?**
- **Process of estimation**
- **Estimation in DSDM**
- **Timeboxing and planning**

The Estimating process

There are a number of distinct steps in estimation process:

- Estimate the effort required
- Adjust the effort for environmental factors
- Identify the products and their inter-dependencies
- Schedule the product deliveries and allocate resources
- Adjust the schedule in the light of known constraints

Factors affecting an estimate

- Size of task
- Complexity
- Quality required
- Productivity of people
- Availability of resources
- Experience of people

Who is responsible for estimation?

- It is important that the whole team work together on estimates, as otherwise this is where affecting factors may be missed.

Estimation approaches

- Estimating approaches can be both top-down or bottom up and may include:
  - Task based
  - Product based
  - Algorithmic
  - Non-algorithmic
  - Analogy
  - Expert judgement
  - Standard ratios

The Estimating Approaches - continue

- There are many different ways to identify estimates. It is important to use more than one approach, and often will require many combined approaches to identify realistic estimates.

Agile estimation techniques

- There are many estimation techniques used in agile. Some these are-
  1. Planning Poker
  2. T-Shirt Sizes
  3. Dot Voting
  4. The Bucket System
  5. Affinity Mapping

1. Planning Poker

All participants use numbered playing cards and estimate the items. Voting is done anonymous and discussion is raised when there are large differences. Voting is repeated till the whole team reached consensus about the accurate estimation. Planning poker works well when you have to estimate a relative small number of items (max 10) in a small team (5-8 people).

1. t-Shirt Sizes

This is a perfect technique for estimating a large backlog of relative large items. Especially when you have several concurrent scrum teams working on the same product. Items are estimated into t-shirt sizes: XS, S, M, L, XL. The decision about the size is based on an open and mutual collaborative discussion. This method is an informal and quick way to get an rough feeling about the total size of your backlog.

3. Dot Voting

- When you are faced with a relative small set of items and in need of a super simple and effective technique to estimate you can use Dot Voting. This method has originated form decision making and you can use it for estimating. Each person gets a small number of small stickers and can choose to vote for the individual items. The more dots is an indicator of a bigger size. Works well in both small and large group. You have to limit the number of estimated items.

The Bucket System

- Much faster than planning poker is the Bucket System. This system is a good alternative when estimating a large number of items with a large group of participants. Create several buckets in the sequence of planning poker. The group estimates the items by placing them in these “buckets”. Buckets are usually different sheets of brown paper where you can place the sticky note with the item. But you can also use actual baskets to limit discussion about already processed items.

5. Affinity Mapping

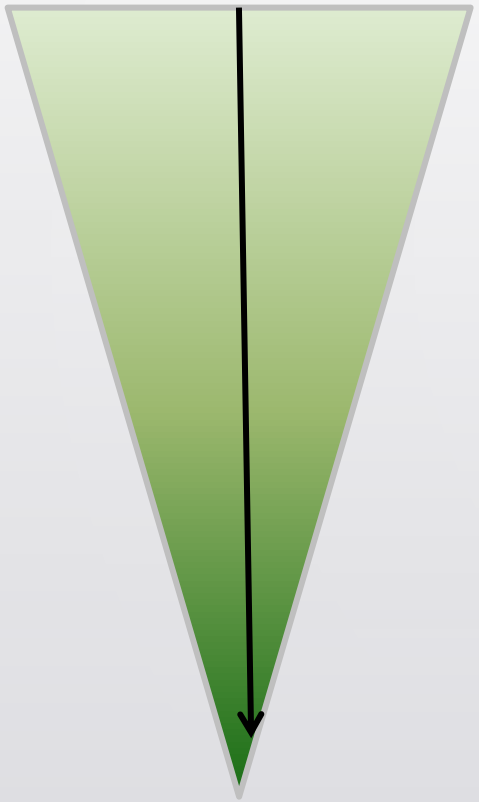
- This method is based on finding similarities in the estimated items. The team is asked to group them together. Best way is to execute this is a visual way and order them form small groups to large. It works best with a small group of people and a relative small number of items. You can assign estimation numbers to the different groups

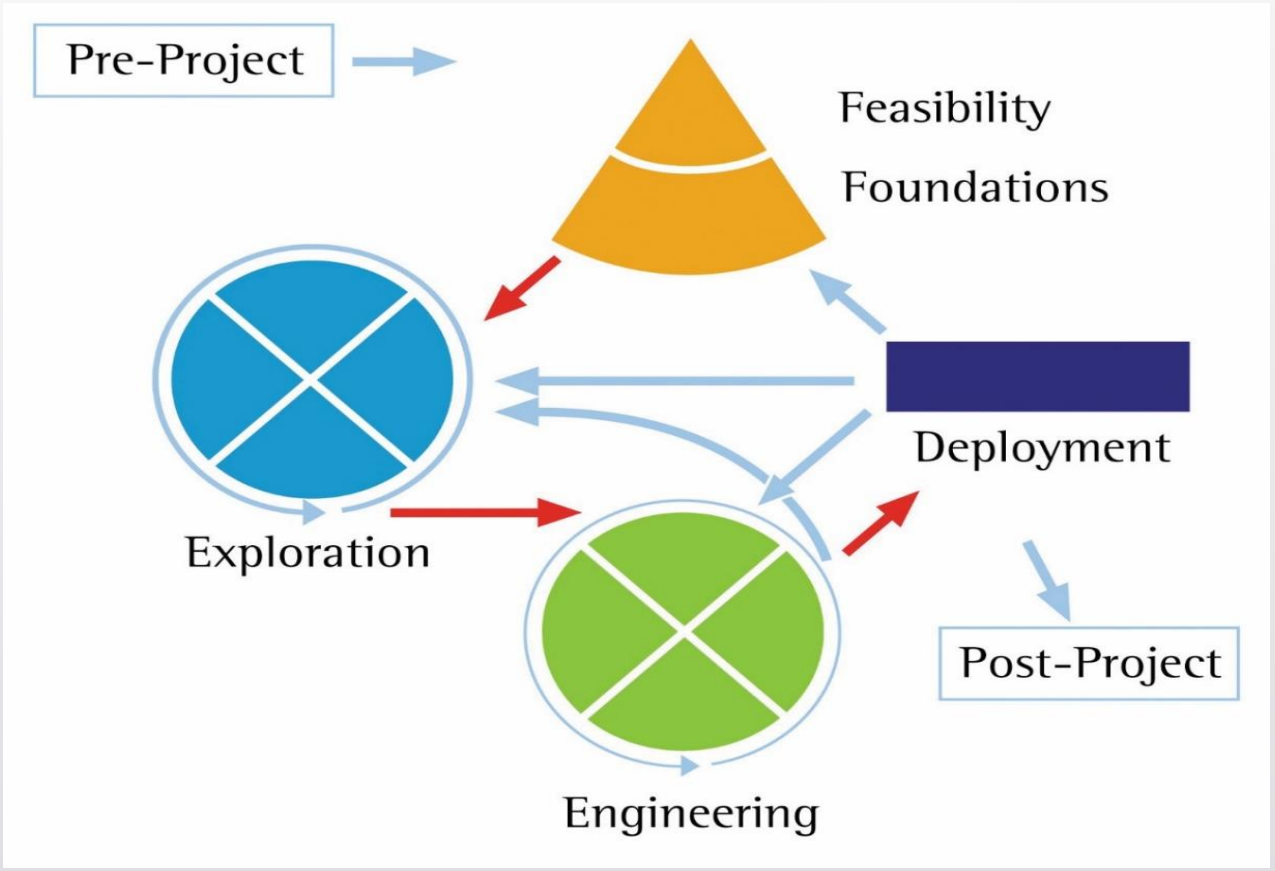
Is it possible to estimate wrong?

Yes estimate can be wrong but not in a large scale it might be slightly wrong. Estimation can be wrong in a large margin due to-

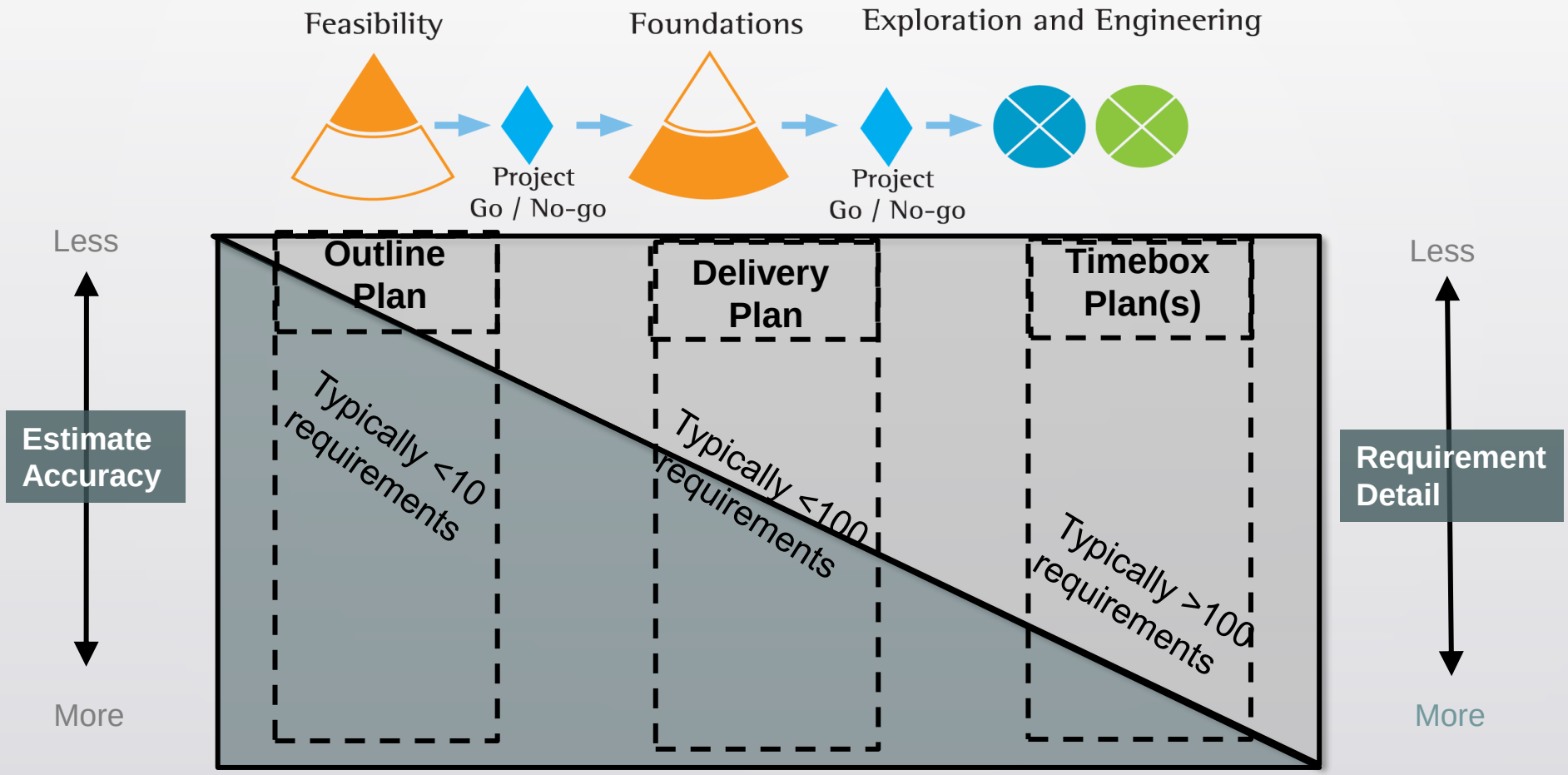
- Inexperience of estimating
- Doing something that has not been done before
- Inadequate techniques
- Optimistic assumptions
- Wrong person making estimates
- Lack of information

Improving the estimate





Estimating in the DSDM Lifecycle



What is a Timebox?

A timebox is a fixed period of time, at the end of which an objective has been met.

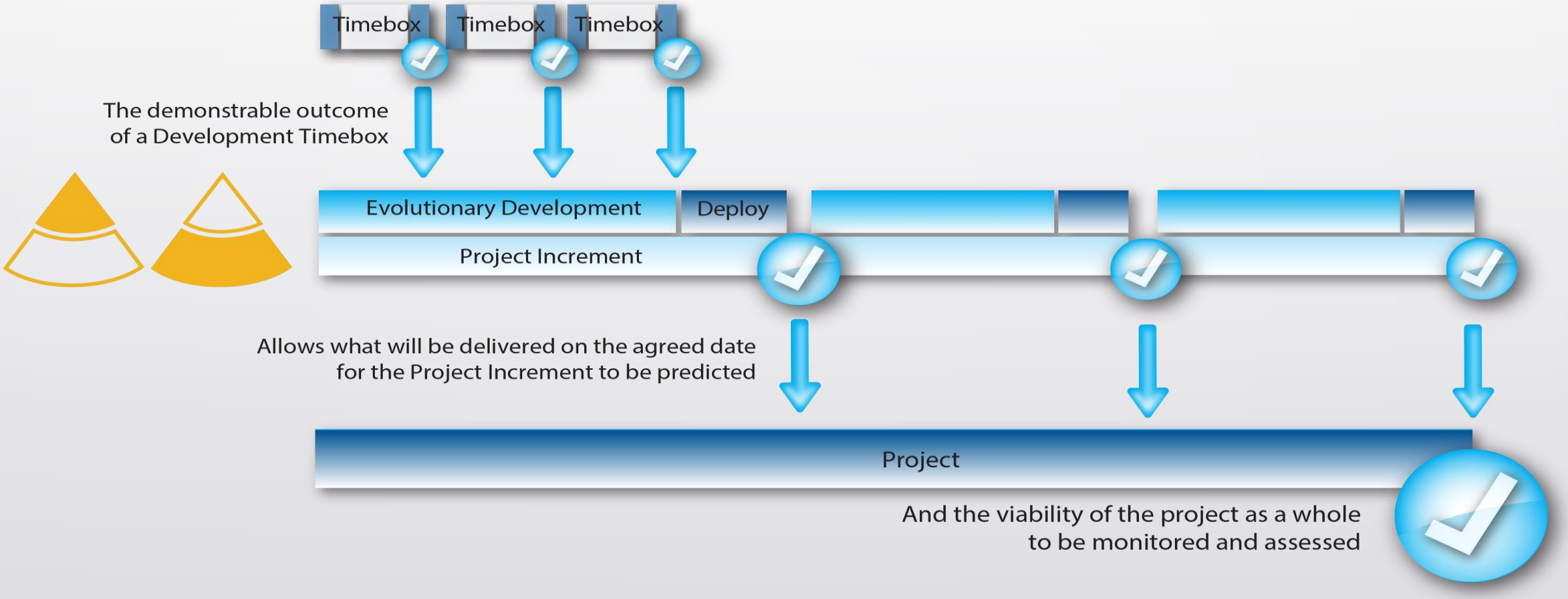
- The time available dictates work done
- The aim of a timebox is to make something useful
- A timebox is product-focused, not task-focused

The Mindset for Timeboxing

"Creative people in many walks of life have a deadline. A magazine writer, television producer or seminar developer creates material for a certain date, Whatever else happens,

they must not fail to meet the deadline." ***James Martin***

The Delivery Plan



Structure & Size of DSDM Timebox

Timeboxing

As a rule of thumb, within timeboxes within an increment:

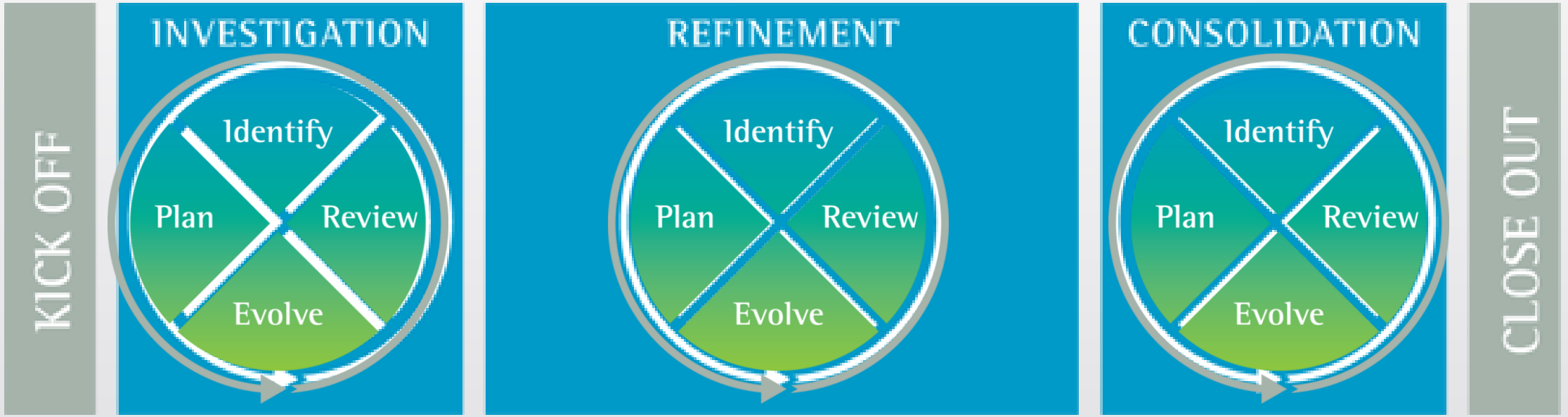
Must Have	approximately 60% of effort
Should Have	approximately 20% of effort
Could Have	approximately 20% of effort

The estimated effort in the 'Must Haves' should never be above 75% (except in rewrites of well-documented systems).

Planning The Project

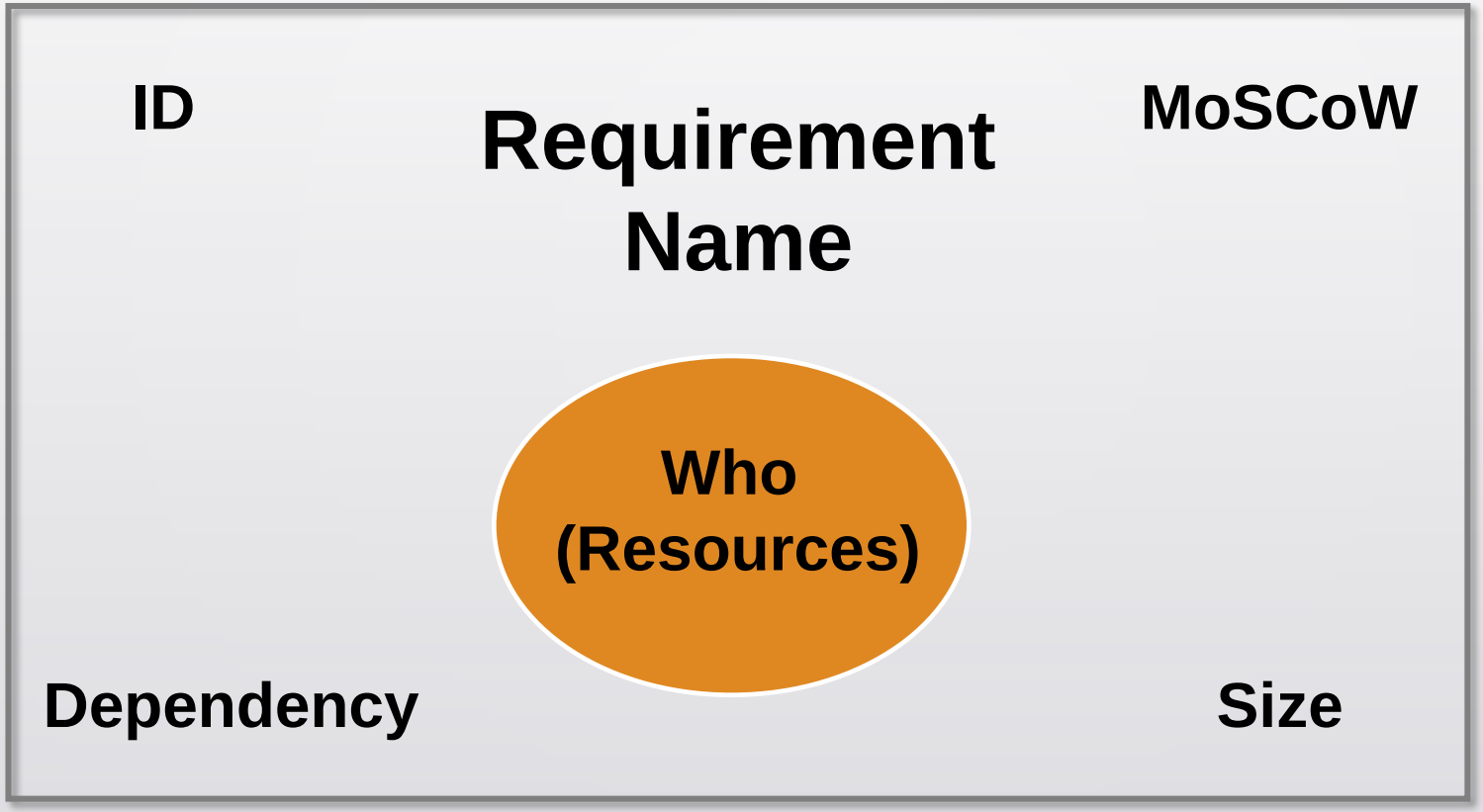
- ***Outline Plan*** created in Feasibility
- ***Delivery Plan*** created in Foundations, showing timeboxes within the increment
- ***Timebox Plans*** showing detailed activities within timeboxes, to monitor progress within timeboxes
- ***Deployment Plan*** 'outlined' in Outline and Delivery Plans, created during Exploration and Engineering

Timebox Plans



Timebox Planning - a suggestion

What we need to know …



Summary

- In this lecture, we looked at:
  - How do we estimate? - The class exercises allowed us to consider how we estimate and why experts should be responsible
  - The estimating process – we looked at how it is important to go through set steps; consider the affecting factors; work on them as a team and to ensure you use more than one approach.

More reading Resources

- PROJECT PLANNING AND CONTROL, Agile business.org

https://www.agilebusiness.org/page/ProjectFramework_16_ProjectPlanningandControl(Last accessed 21st November 2020)

- TIMEBOXING, Agile business.org

https://www.agilebusiness.org/page/ProjectFramework_13_Timeboxing (Last accessed 21st November 2020)

End of Topic ☺

Any Question?