



# CSE5PM

# Workshop 2

Semester 1, 2024

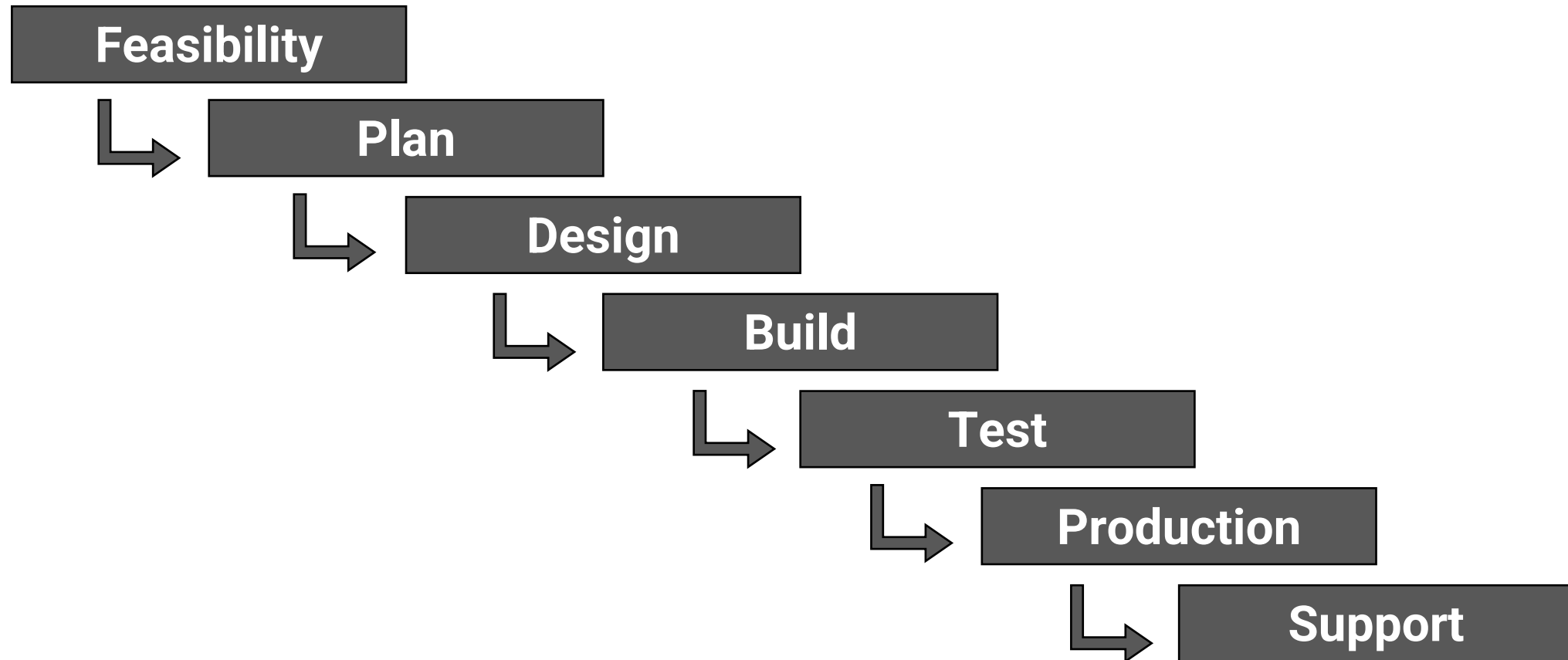
# Project Management Approaches



# Traditional / phased / waterfall

- **All planning completed upfront**
- **Linear/sequential in nature**
- **Mid-project changes difficult**
- **Assumes fixed requirements**

# Traditional / phased / waterfall



# Traditional / phased / waterfall

## Advantages

- Thorough planning and insight into the critical factors for success are the hallmarks of this approach.
- Accurate timelines and budgets are usually features of traditional project management (senior managers love this!)
- The extensive documentation involved means project knowledge more readily transfers and key person risk is reduced

## Disadvantages

- The need for precision means this model is not suited to complex projects where forecasting is difficult.
- The longer the project the harder it is to set accurate timelines, so allowances for contingencies in scheduling is required
- Does not have the flexibility to adapt to fast changing and dynamic environments.

# Lean Project Management

- **‘Lean’ is a concept focused on maximising value and minimising waste**
- **Where ‘value’ is what the customer or client are willing to pay for**
- **Project philosophy centres on delivering on client core needs rather than full project objectives (or documentation such as in traditional project management).**
- **By reducing waste in human inputs, project plans are created by combining the knowledge and experience of staff, creating a sense of ownership and accountability.**

# Lean Project Management

## Advantages

- The focus on client's perspective around 'value' enables more objective decision making by project team
- Focus on efficiency means quality work can still be delivered while lowering costs.
- Delays and stoppages in work can be managed or mitigated through early identification of potential bottlenecks.
- Hand offs are well marked out, allowing busy times to be well resourced and dead time to be re-provisioned.

## Disadvantages

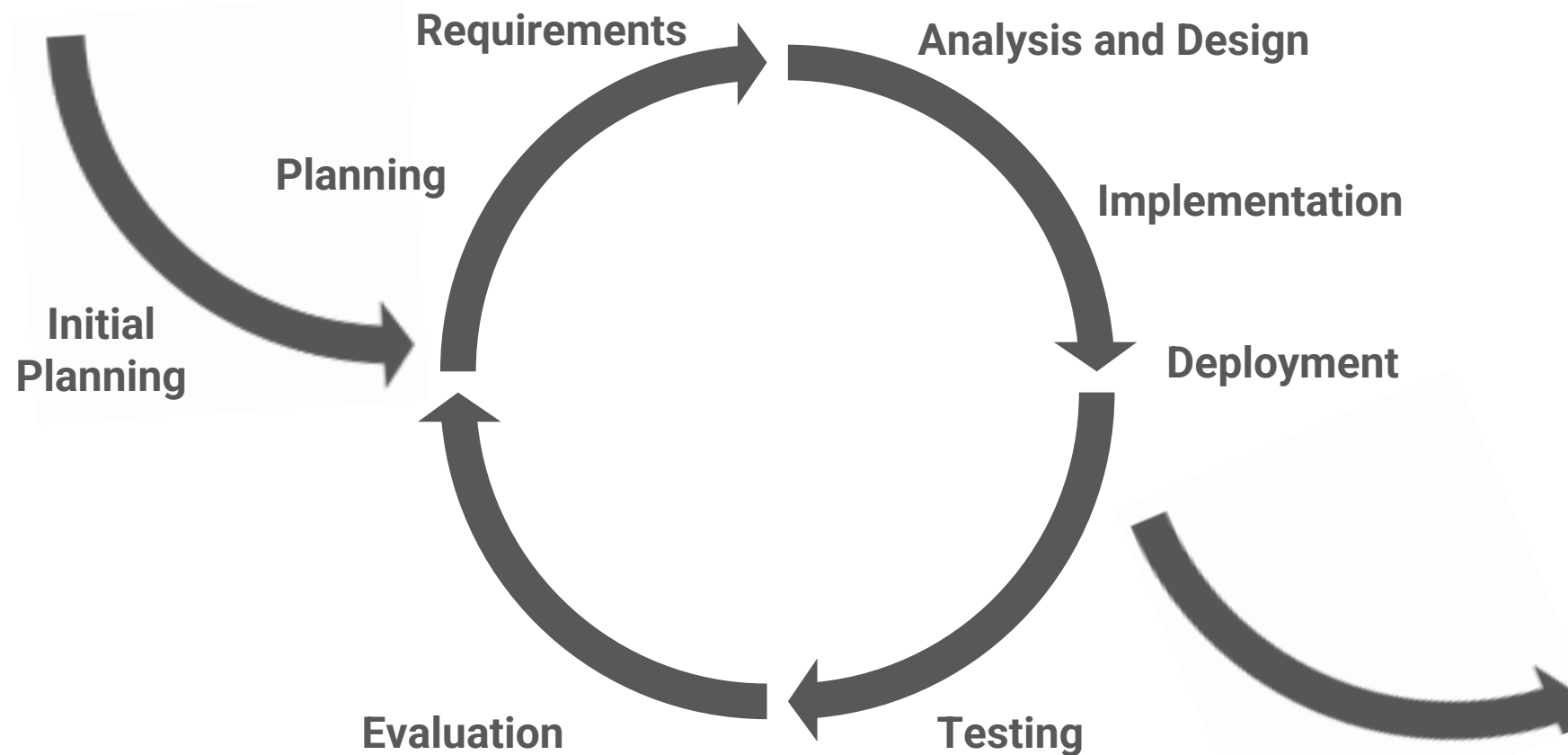
- Project managers need be comfortable with playing the role of facilitator, including sharing power and control.
- The framework typically involves major modifications to existing processes. Stakeholders need to be prepared for the time and effort required to get these in line before realising the lean PM benefits.
- Decisions need to be swift and precise to avoid slowing down the process.

# Iterative and Incremental Project Management

- **Project progresses around design-build-test of components through iterations (repeated cycles), and incrementally (in small time periods);**
- **Process supports building on lessons learnt in the early stages;**
- **Requires extensive planning and risk management processes;**
- **Feedback from the client/stakeholders/testing team is built into the next cycle;**
- **This makes it easier to catch and correct errors early before things have gone too far and become too costly.**



# Iterative and Incremental Project Management



Source: <https://www.testingexcellence.com/incremental-model/>

# Iterative and Incremental Project Management

## Advantages

- Risk is more easily managed: the short cycles allow the team to learn as they go and self correct or build in feedback.
- Easier to measure progress.
- The ability to demo products and functionalities in each iteration usually results in end products that are more in sync with client needs.
- Repeatable processes can be developed, with utilisation and automation incorporated.

## Disadvantages

- It is usually an intensive approach and will most likely require thorough project management and more resources.
- It is harder to implement effectively. The project teams need to be technically competent with strong collaboration skills.
- Usually it requires multiskilled project teams with members that can perform more than one type of task e.g skilled in both front end and back end work.



# Work through this week's activity in groups of 4-5

# Assignment 1

## (Individual)

Project Management report based on a hypothetical project

25% of overall grade

Word limit 1,700

Referencing required if using other sources

Based on a case study – released on LMS