University of Mosul

College of Computer Sciences and Mathematics

Department of Computer Science

Software Project Management
Second lecture

Asst. Prof. Ashraf Abdulmunim Althanoon

➢Incremental project management life cycle

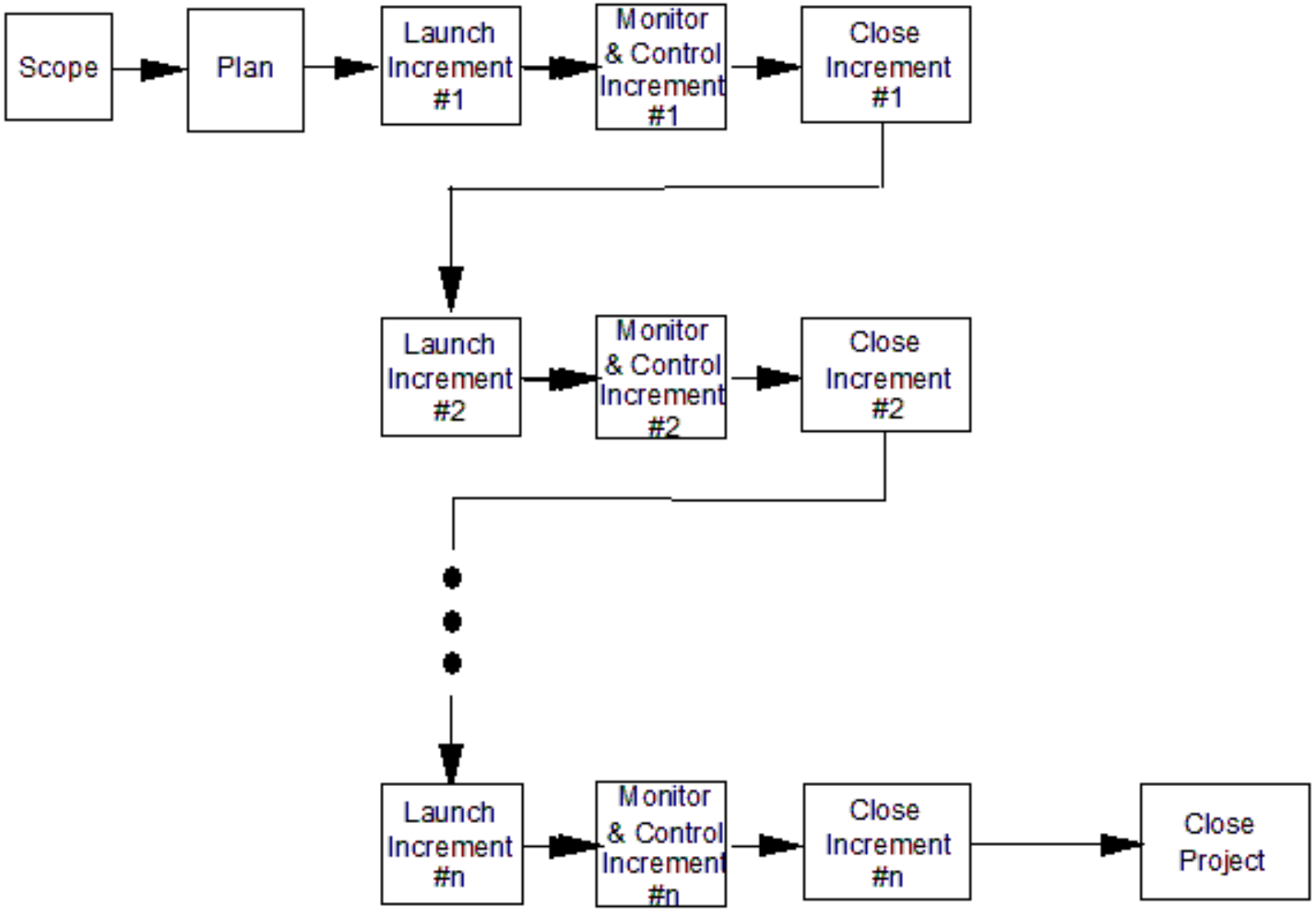
- ➢Incremental project management life cycle
  - ➢Definition
  - ➢Characteristics
  - ➢Strengths/Weaknesses
  - ➢When to use an Incremental Approach
  - ➢Adapting & Integrating the Toolkits for Maximum Effectiveness

Incremental PMLC Model

➢Definition

- An Incremental PMLC model consists of a number of dependent increments that are completed in a fixed sequence. Each increment includes a Launching, Monitoring and Controlling, and Closing Process Group for the functions and features in that increment only. Each increment integrates additional parts of the solution until the final increment, where the remaining parts of the solution are integrated.

Incremental PMLC Model



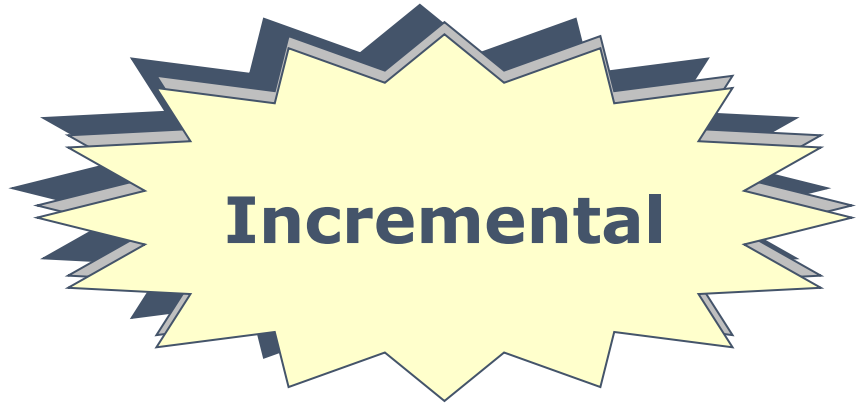
Incremental PMLC Model

This approach is very similar to the Linear approach and is also a TPM approach, however, an Incremental approach releases solutions as they are completed. **There are two differences between the Linear and Incremental approaches based on the following :**

1- The linear approach discourages legitimate scope changes while the incremental approach does encourage scope change requests.

2- The Incremental approach releases solutions to goals in parts and then contains though in a typical linear approach pattern, Certain construction management projects might fit this approach as certain phases of a larger project are released incrementally.

Incremental PMLC Model



Characteristics

- Same as Linear PMLC model
- Need to release deliverables against a more aggressive schedule

Incremental PMLC Model

Strengths

1. Produces business value early in the life cycle
2. Able to better use scarce resources through proper increment definition
3. Can accommodate some change requests between increments
4. Offers a product improvement opportunity
5. More focused on client value than the linear approaches

Incremental PMLC Model

1. Produces Business Value Early in the Project

Organizational velocity needs to be thought about while planning any incremental project increases. That is, the ability of the software company to implement and absorb changes during the construction period of the project.

On the other hand, increases that are too large may negatively affect your success in project development.

Incremental PMLC Model

2. Able to better use scarce resources through proper increment definition

Increments are defined around job dependencies, as this model allows for the utilization of scarce resources. When a scarce resource is only available during certain time periods, the use of a linear PMLC model may lead to resource contention problems in that the scarce resource is required when the scarce resource is not available. If you use the incremental PMLC model instead in your project planning, you can assign functions and features to an increment that will be scheduled during the scarce resource's available time. The rest of the raises can be planned and scheduled around the rarely used raise.

Incremental PMLC Model

3. Can accommodate some change requests between increments

When you release a partial product or service to the end user, it is best to expect that these users will add some changes to the project. Where not to ignore the possibility of making these change requests; Instead, plan for them by adding a reserve management task to each increment.

You must tell the client you have added management reserve and make sure they understand how this can impact the project schedule.

Incremental PMLC Model

4. Offers a product improvement opportunity

Releasing jobs in this model in increments provides the end user or customer with room to feedback the project to add possible improvements throughout the project. A word of caution is required here. The time between increments should be very short. The longer you go between raises, the more likely you are to lose team members on short-term tasks that turn out to be longer than planned. If the time between increments is short, the end user or customer will have little opportunity for testing and feedback.

Incremental PMLC Model

5. More Focused on Client Value Than the Linear PMLC Model

By giving your client the opportunity to work with a partial solution and provide feedback on improvements throughout the project build phases, you are truly more customer facing

Incremental PMLC Model

Weaknesses

- The team may not remain intact between increments
- Requires hand-off documentation between increments
- Must follow a defined set of processes
- An Incremental PMLC model takes longer than the Linear PMLC model
- Requires more client involvement than Linear PMLC models
- Partitioning the functions and features may be problematic
- Must define increments based on function and feature dependencies rather than business value

Incremental PMLC Model

When to use an Incremental PMLC Model

- To get to a partial product or service to market sooner
- To get partial solution to the end user sooner

Incremental PMLC Model

An Incremental PMLC Model Takes Longer Than the Linear PMLC Model

The added time arises from the following:

1. Delays between increments
2. The need for hand off documentation between increments
3. More scope change requests
4. Supporting interim solutions
5. The loss of team members between increments
6. Integration of the latest increment deliverables

Incremental PMLC Model

Adapting & Integrating the Toolkits for Maximum Effectiveness

- An increase in management time to handle between increment issues
- An increase in the total amount of work as compared to the Linear PMLC model
- The likelihood of between increment scope change requests
- An increased likelihood of losing resources between increments
- The possibility of project delays between increments
- Potential for overlooking increment dependencies
- Hand-off documentation of requirements between increments

Thank you