

SE 329 – Software Project Management

Project Proposal

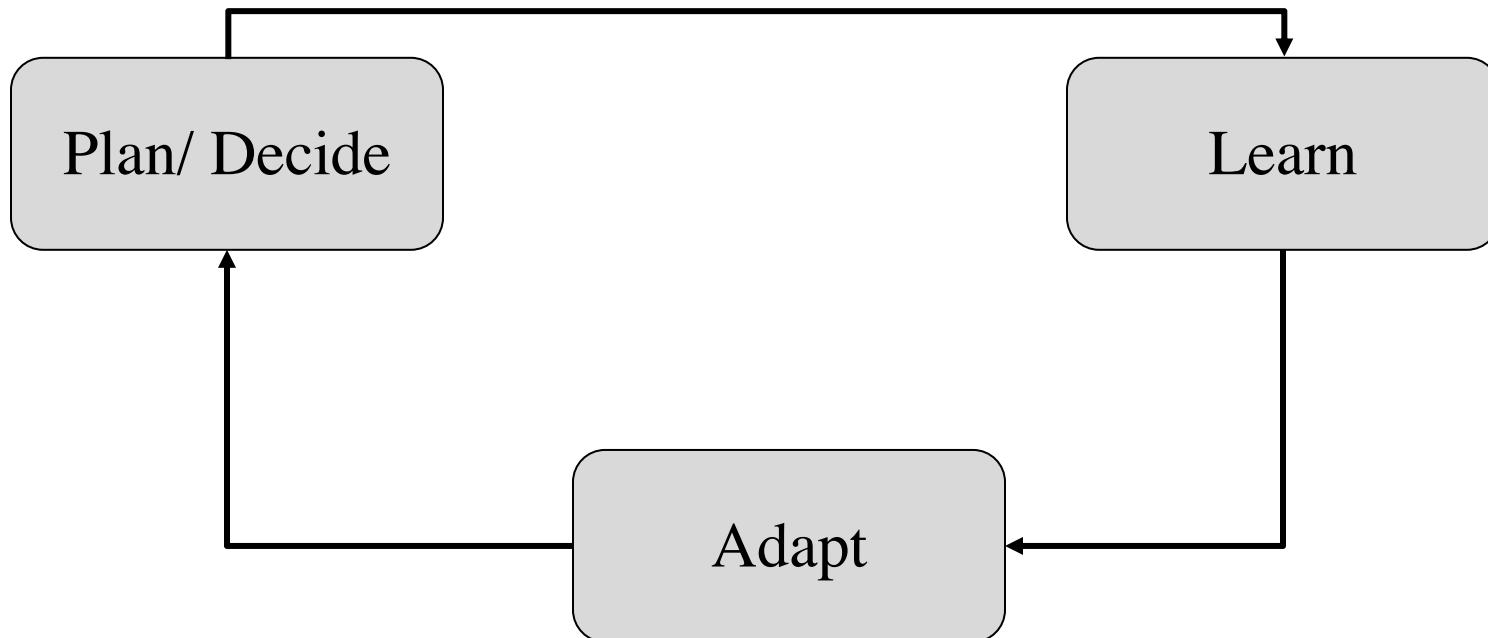
Lotfi ben Othmane

Goal

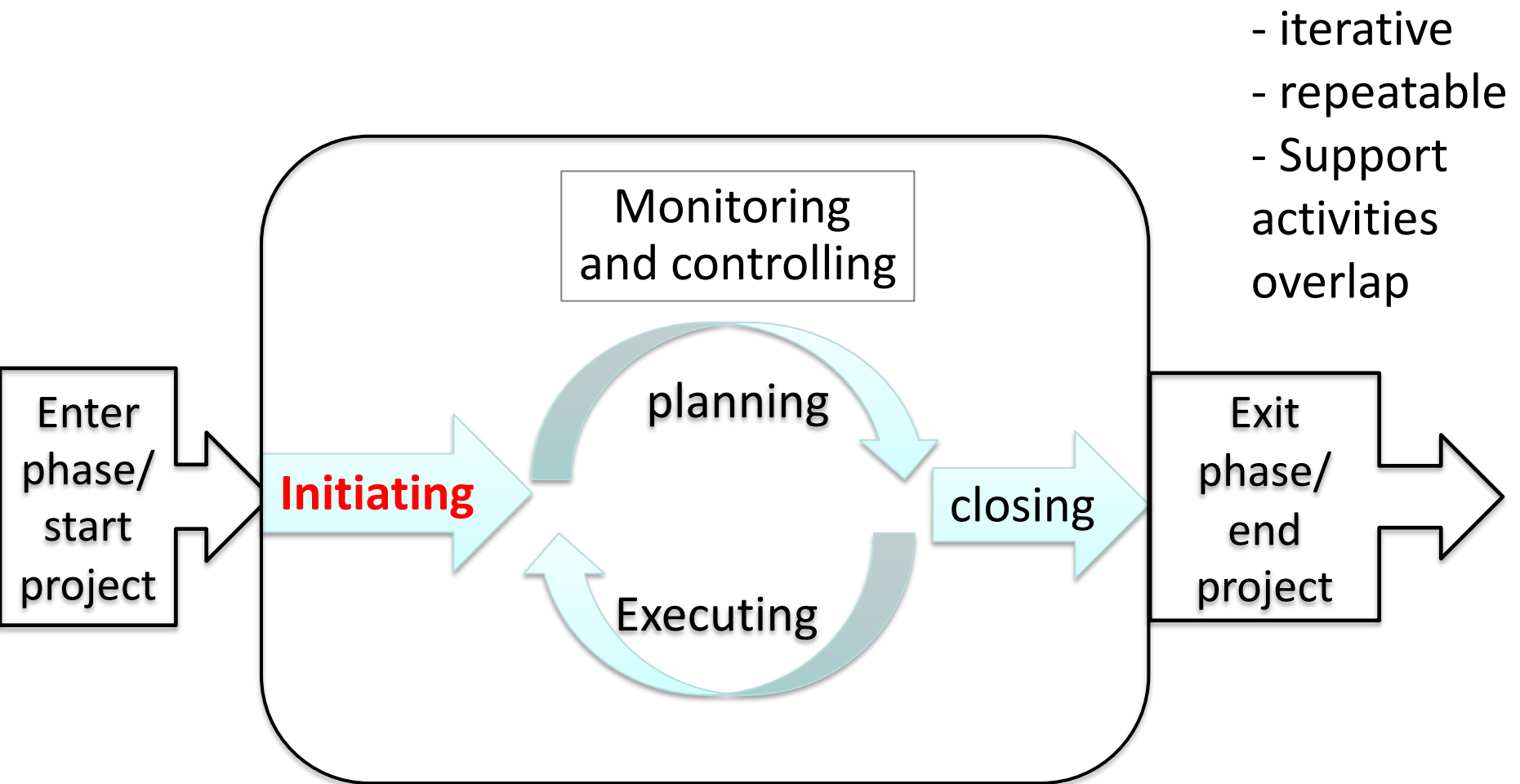
- What is project proposal?
- Why do we need a project proposal?
- What are the main components of a project proposal?

Experience Cycle

- Goal: Do better than self and others



Project Management Processes



Example of Case

You attended a birthday party for your neighbor. He has a mobile app for controlling the AC/heater for each room, the door locks of the house and rooms, and the surveillance cameras. His mom, an old lady, cannot use neither the services nor the mobile app e.g., to adjust the temperature of her room by herself. You suggested to extend the system with voice commands.

How would you start?

Proposal

- A business proposal is a negotiation between someone with a need and someone providing services
- Explains what you'll deliver, when, for how much, what you need from your client, etc.



When Are They Needed

1. Strong business case
2. Following solicitation from client
3. Following interview with client

Business Case – Is the Idea Worth Investigating

- Provides necessary information from business point of view to determine whether a project is worth the required investment
- It contains the business need and cost benefit analysis
- Business case is created as a result of:
 - Market demand – fuel efficient cars
 - Organization need – high cost
 - Customer request
 - Technological advances
 - Legal requirements – European laws for storing private data
 - Ecological impact
 - Social need

Why Are They Needed

- Convince sponsors and stakeholders that the project is worth doing

(and/or)

- Convince sponsors and stakeholders that you can do the project

Who Develops Proposals

- Project manager (within a company)
- Consultant or contractor (bidding on jobs)
- Internal freelancer (within a company, rare)

Techniques to Develop Proposals

- Experts judgment
- Facilitation techniques
 - Brainstorming meetings
 - Management meetings
 - Conflict resolution meetings
 - Problem solving meetings

Common Components of Proposals

1) Context and goals

- What is the project about?
- What will be delivered and how the company will benefit?
 - They already know the benefit, but remind them, point out additional benefits, etc.
- Goal or a face recognition project
 - Remind a lecturer of student names

Common Components of Proposals

2) Requirements or approach

- Background information on the technologies you are proposing
- Overview of how your solution achieves the goal(s)
- This should help the client to believe that you are the right team with the right idea

Common Components of Proposals

- Example of project requirements
 1. Snap an image and separate faces from the background
 - A video stream is decomposable to a series of pictures, can be used to increase reliability
 2. Compare faces against a database to find most likely match
 3. Present the image to the lecturer, overlaid with metadata (name, last seen, etc.)
 4. Client program should run on portable device (laptop, phone, etc.)
 5. Unidentified individuals are remembered for follow-up introduction

Common Components of Proposals

3) Deliverables

- What will be delivered and when during the project?

- Example

- Deliverable 1: A model for predicting development effort -- The group will analyze the data to extract metrics about the development time to fix security code defects and will use the information to project the cost of fixing security code defects.
- Deliverable 2: An integrated prediction tool -- The results from Deliverable 1 will be used to build an integrated prediction tool as outlined in the proposal.

Common Components of Proposals

4) Required from the client

- What you need for the client in terms of
 1. Resources
 2. Equipment
 3. Data
 4. building access
 5. etc.
- Example: Data collected about fixing security vulnerabilities

Common Components of Proposals

5) High-level Risks

- What are the challenges or “known unknowns” that may hinder success?
- What are the mitigation methods?
 - All risks should have some mitigation strategy
- Examples:
 - The quantity of data is not sufficient to draw conclusion
 - Limited knowledge about the process of fixing vulnerabilities
 - Limited knowledge about the technology

Common Components of Proposals

6) Timeline

- A table of <Phase, Duration, Description>
- Examples:
 - Project starts on 7/1/2021
 - Deliverable 1 by 8/28/2021
 - Deliverable 2 by 12/31/2021

Common Components of Proposals

- 7) Payment terms
 - How much should you charge?
 - How much will it cost?
 - What is the schedule of the payments
- A table of <Phase, Pre-payment, Post-payment>
- Examples: Payments are due 30 days after acceptance of each deliverable. The daily rate is 1000 USD/day.

Common Components of Proposals

8) Intellectual property

- Who owns what, licenses, royalties, NDAs, etc.
(also consider conflict of interests, i.e., does this work prevent other more lucrative work?)

- Example: The client has the intellectual property.

Common Components of Proposals

9) Other thoughts

- Whatever you feel needs to be said that does not fit elsewhere

Summary of Components

1. Convince sponsors and stakeholders that the project is worth doing
2. Convince sponsors and stakeholders that you can do the project
1. Context and goals
2. Requirements or approach/solution
3. Deliverables
4. Items required from the clients
5. High-level risks
6. Timeline
7. Payment terms and cost
8. Intellectual property
9. others

Comments for Writing Proposals

- Use minimal technical jargon, acronyms, etc.
 - Leave that for the technical plan
- Have it short but complete
 - Not a contract, but it'll become part of one (you hope)
- Be professional
 - Your proposal may be the client's first impression of you

What Makes a Good Proposal?

- Before awarding the project
 - The description of the items is clear for the customer
 - Convince the client
 - Includes all major items
 - Includes the main information for developing a project plan
- After awarding the project
 - The delivered project fulfills the goals stated in the proposal
 - The customer is satisfied with the project

Project Charter

- It Establishes partnership between provider and requester
- Case 1 - External project: in the form of contract
- Case 2 - Internal project: agreement to ensure proper delivery

- The sponsor has the resources to support the project
- It provides the PM with authority to plan and execute the project

Project - Part 1

Write a mini-proposal for a project similar to one of the projects that you worked on:

1. Scope
2. Main requirements
3. Deliverables

Summary

- A business case provides necessary information from business point of view to determine whether a project is worth the required investment
- A proposal explains what you'll deliver, when, for how much, what you need from your client, etc.
- A charter establishes partnership between provider and requester

Thank you