SWE 205 - Introduction to Software Engineering

Lecture 6 - Software Project Management

Lecture Objectives

- To explain the main tasks undertaken by project managers.

- To introduce software project management and to describe its characteristics.

- To discuss project planning and planning process.

Software Project Management

- Concerned with activities involved in ensuring that software is delivered
    - On time;
    - On schedule;
    - In accordance with requirements; and
    - Within budget

Software Management distinctions

- **Software product intangible**
  - Manager of a civil engineering project can see the building being developed.
  - Behind the schedule is visible in the actual project. E.g part of building has not been build.
- **Software Manager relies on**
  - Reports and reviews to monitor progress.

Software Management distinctions

- Typical engineering process have fix standards. E.g.
  - Building bridges, cars etc.

- Software products are uniquely flexible.
- Many software projects are 'one-off' projects.

Software Manager's Roles

How to lead?

How to organize?

How to collaborate?

How to motivate?

How to create good ideas?

Management Activities

- Proposal writing.
- Project planning and scheduling.
- Project costing.
- Project monitoring and reviews.
- Personnel selection and evaluation.
- Report writing and presentations.
  - To both client and stakeholders in the company.

Project Planning

- Probably the most time-consuming project management activity.
  - Iterative process which is only complete when the project itself is complete.
- Project plan is regularly revised;
  - As more project information is available.
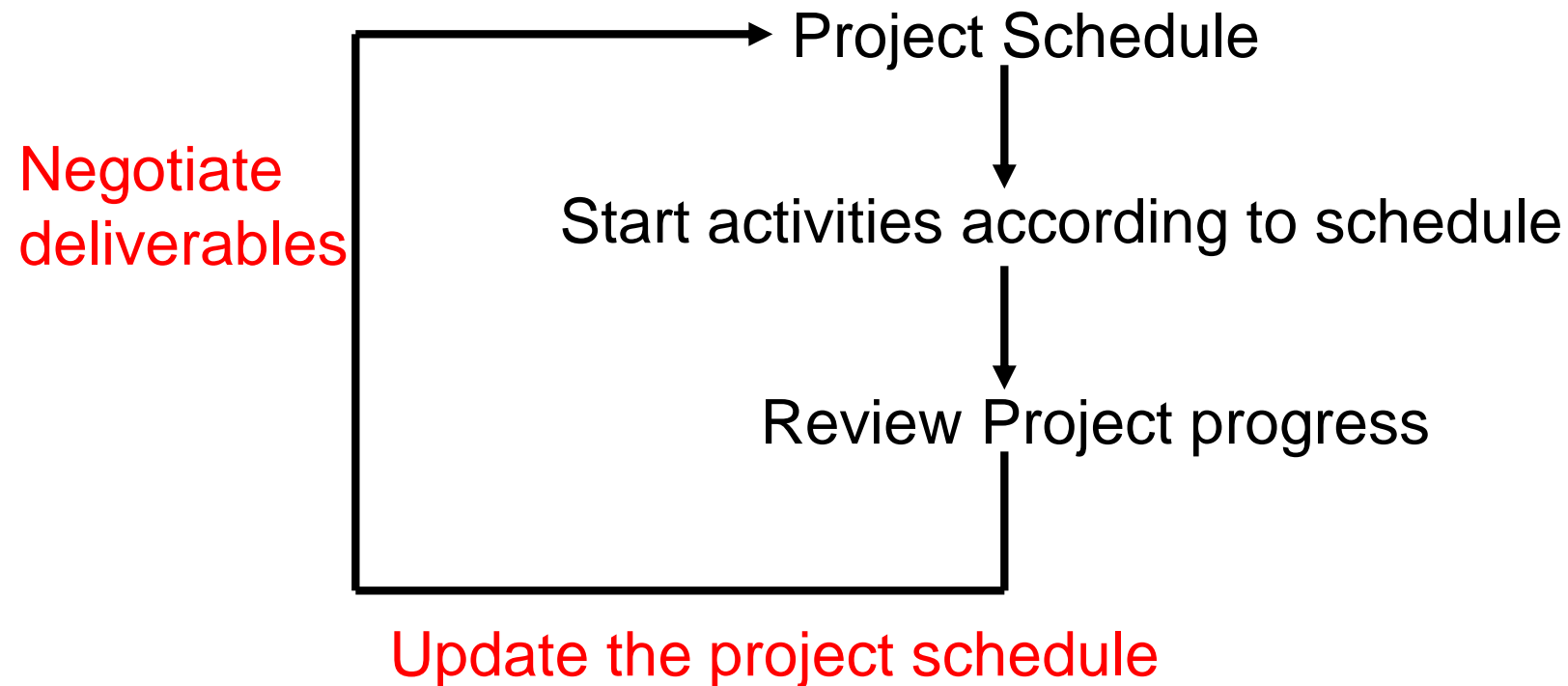
Project planning process

- Assess the project constraints
  - Required delivery date
  - Staff available
  - Overall budget ……..
- Define Process milestone and deliverables

Project planning process

Project Schedule

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Start activities according to schedule

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Review Project progress

Negotiate deliverables

Update the project schedule

Key Points

- Good project management is essential for project success.

- Project Managers have diverse roles; but most significant activities are
  - Planning
  - Scheduling

- Planning and scheduling are iterative process.