TOPICS

Overview

Metrics

Estimation

Planning

2A - 1

Software Engineering

Overview

To successfully manage software development, the project leader must determine:

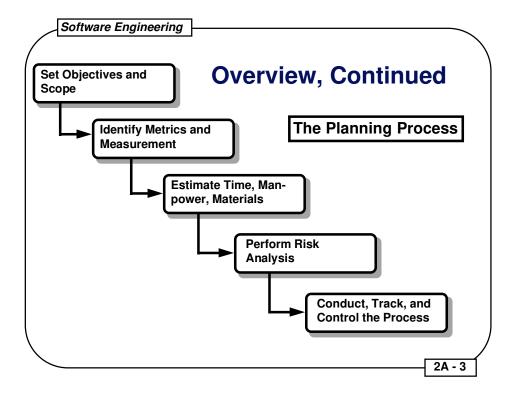
- 1. Scope of work to be done
- 2. Risks to be incurred
- 3. Resources that will be required
- 4. Tasks to be accomplished
- 5. Effort (cost) that will be expended
- 6. Schedule to be followed

Software project management begins before the technical work starts.

Software project management ends when the software is retired.

2A - 2

- Many factors, such as risks, resources, effort (cost), and schedule are difficult to determine in advance without information from previous projects.
- In this vein, there is an emphasis on collecting **software metrics** and then using those metrics to make **estimates** which are reasonably close.
- Industry has traditionally not been good at collecting software metrics on its projects because:
 - Collecting metrics costs money and takes time, both of which have a direct impact on a project, particularly if they were not planned for in advance
 - O Collecting metrics can be tedious work -- something that many software practitioners tend to avoid



- Software in industry is usually developed under the following situations:
 - As part of a product
 - In support of a product
 - O As an activity of research and development
- In the first two cases, budgets are allocated based on the cost estimates. If software is developed for a customer, the award of a contract may be on a firm, fixed-price basis or on a cost-plus or cost-reimbursable basis.