## Team Workflow - Outline

- **Understanding teams**
  - **Aspects of team work**
  - **Team organization**

- **Structuring team environments**
- **Defining teams**
- **Building a team**
- **Supporting team activities**

## Challenges of Software Development

### Challenges

- **Larger teams**
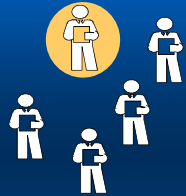- **Specialization**
- **Distribution**
- **Rapid technology change**
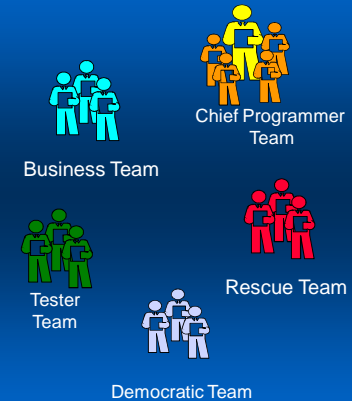
Business Team

Chief Programmer Team

Tester Team

Rescue Team

Democratic Team

## Ways that People can Work Together

**Individual Improvement**          **Group Sharing Tools**

**Jelled Team**

## Team Workflow - Outline

- **Understanding teams**

- **Structuring team environments**
  - **Team management structure**
  - **People structure**
  - **Shared space structure**

- **Defining teams**
- **Building a team**
- **Supporting team activities**

## Optimize the Resources within the Time Available

Resources

How Much Work Can We Do?

Time

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## Layers of Management Structure

?

YES

NO

YES

YES

?

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## Reward and Incentive structures

- ◆ Develop team attitude

- ◆ Be aware of two many stars

- ◆ Provide team model

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## The Concept of Shared Space

Logical

Physical

UML

Meeting

Communications

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## Team  - Outline

- ◆ **Understanding teams**
- ◆ **Structuring team environments**

- ◆ **Defining teams**
  - ▪ **Distinguishing a group from a team**
  - ▪ **Team fundamentals**
  - ▪ **Team organization and behavior**

- ◆ **Building a team**
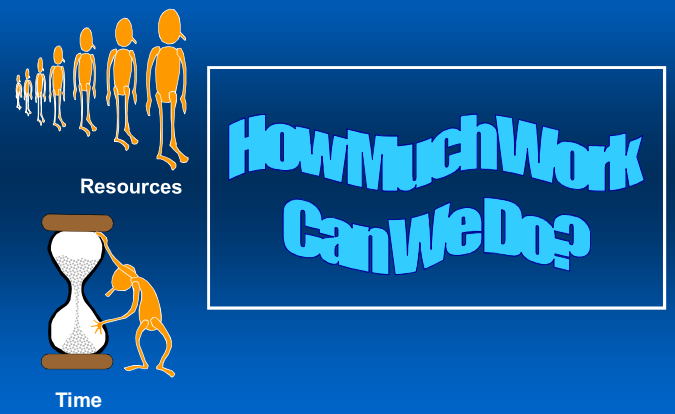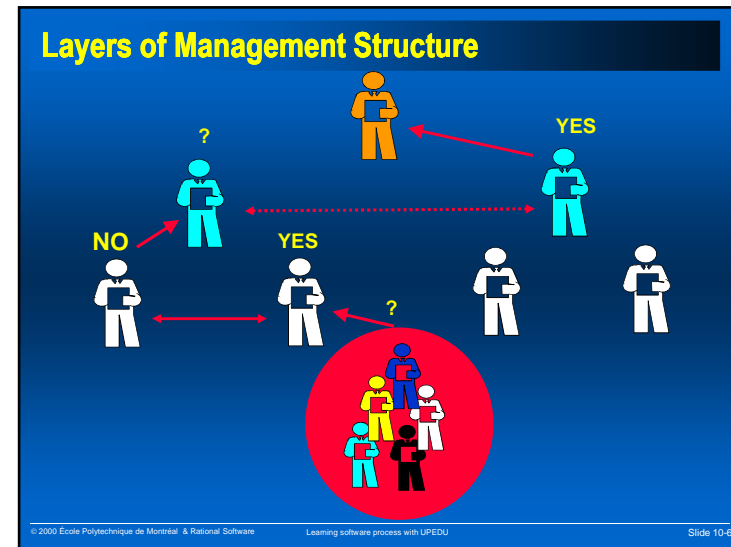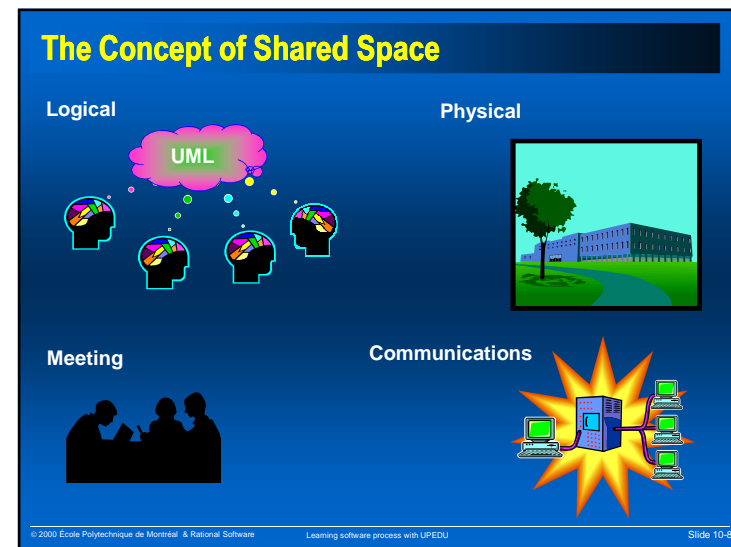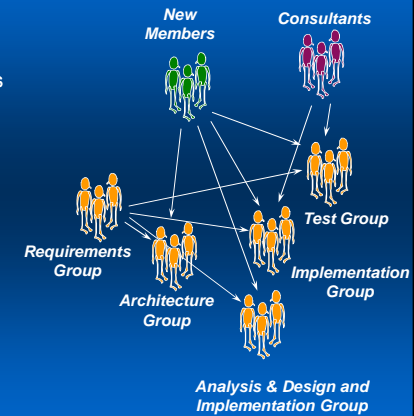- ◆ **Supporting team activities**

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## A Typical Group is a Collection of Individuals

- ◆ The same people in requirements through implementation
  - ▪ Minimize hand-over

- ◆ Well-balanced teams

- ◆ In general, teams should be composed of no more that 5-7 people

*New Members*  *Consultants*

*Requirements Group*

*Test Group*

*Architecture Group*

*Implementation Group*

*Analysis & Design and Implementation Group*

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## Prerequisites are Needed to Build a Team

- ◆ Agreed team goals
- ◆ A plan for the work
- ◆ Established team members-roles
- ◆ A common teamwork process
- ◆ A mutual team commitment to the goals, roles, and plan
- ◆ A supportive environment in which to work
- ◆ Open an free communication among  team members
- ◆ The mutual respect and support of all the team members

**UPEDU GUIDELINE: USE-CASE Workshop**

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## Team Behavior within Organizational Structures

**Tennis Double**

**Hockey Team**

**Each member adapts to other**

**Baseball team**

**Whole team moves together**

**Every player has a fixed position**

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## Team Workflow - Outline

- ◆ **Understanding teams**
- ◆ **Structuring team environments**
- ◆ **Defining teams**

- ◆ **Building a team**
  - ▪ The four-stage team development model
  - ▪ The five phases for building team spirit
  - ▪ The three steps to creating a jelled team

- ◆ **Supporting team activities**

## Four-Stage Team Development Model

- ◆ **Forming**
  - ▪ Groups seek purposes and relevance. Social relationships are established. Group begins to work with the leader.

- ◆ **Storming**
  - ▪ Conflicts emerge between members due to differences in goals and struggle for control and direction.

- ◆ **Norming**
  - ▪ Commonalties and shared interests are recognized and processes for communications are established.

- ◆ **Performing**
  - ▪ A team identity has formed and members associate strongly with the group.

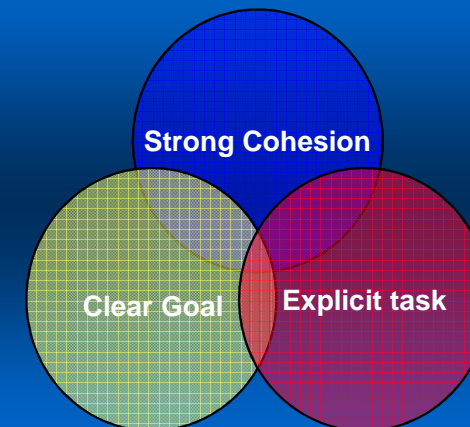## Team spirit Endorses a Five-Phase Spiral Model

- ◆ **Initiating**
  - ▪ Sharing of personal interests
  - ▪ Short informal social activities

- ◆ **Visioning**
  - ▪ Sharing vision or purpose as a group
  - ▪ Peer reviews of team works

- ◆ **Claiming**
  - ▪ Identifying and aligning with roles and goals in the team
  - ▪ Democratic team structure

- ◆ **Celebrating**
  - ▪ Recognition of team and individual accomplishment
  - ▪ Social events outlining project milestones

- ◆ **Letting go**
  - ▪ Constructive feedback among team members
  - ▪ Valuable and trustworthy feeling

## Jelled Team



Strong Cohesion

Clear Goal

Explicit task

## Team Members are not Interchangeable

- **Define roles**

- **Right skills**

- **Appropriate tools**
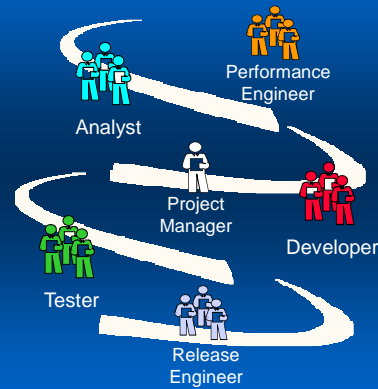
Performance Engineer

Analyst

Project Manager

Developer

Tester

Release Engineer

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## Team Workflow - Outline

- ◆ **Understanding teams**

- ◆ **Structuring team environments**

- ◆ **Defining teams**

- ◆ **Building a team**

- ◆ **Supporting team activities**
  - ▪ **Virtual teaming**
  - ▪ **VTA Tools for collaborative activities**

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## Virtual Teaming Approach

**Electronic Brain Storming Tool**
- Group to diverge from customary thinking

**Categorizer**
- Encourages to converge to key issues

**Team outliner**
- Allows to create on a multilevel tree of topics.

**Alternative analyzer**
- Provides environment for multi-criteria decision making

**Voter**
- Provides methods to reach a consensus or decision.

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