



CSSE 372 Software Project Management: Human Side of Software Project Management

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How are Measures/Metrics Used?

Solving problems —

Which choice or improvement should be made?

Benchmarking for performance improvement

Getting attention —

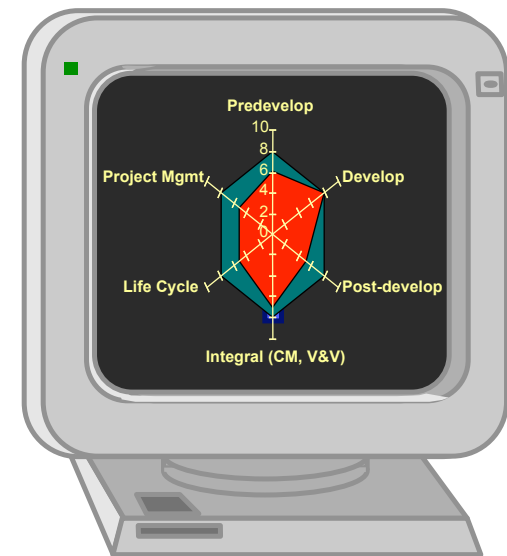
What situations need to be addressed?

Dashboard of indicators

Keeping score —

How well is it doing?

Scorecard on goals





COMMON SENSE

Just because you can, doesn't mean you should.



Measurement Common Sense

- **Collect what contributes to key decisions**
 - And cheap to acquire
 - And does not create undue stress (this means you may have to sell it to those measured)
 - And does not measure people directly

- **Apples to Apples Comparisons**
 - Granny Smith and Macintosh apples

- **When you stop making decisions on the measures, stop collecting them...**
 - “We may need this someday” is not a good reason to keep measuring unless the payoff is high

Learning Outcomes: Teams

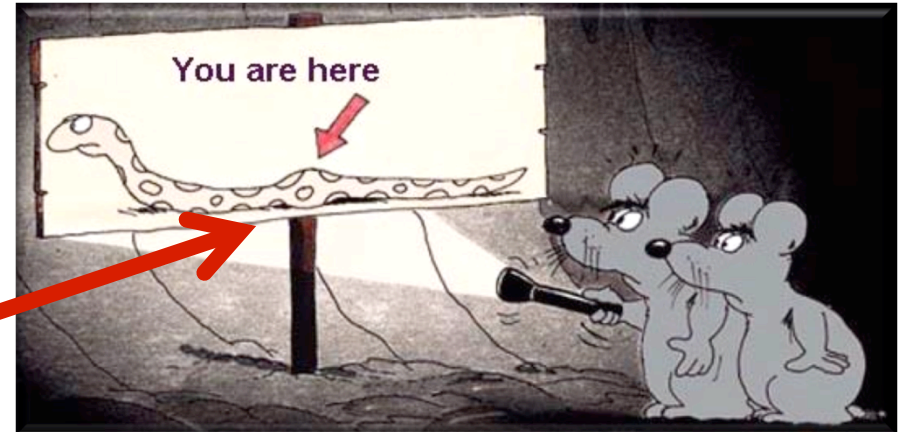


Formulate software project teams in terms of roles & responsibilities

- Characterize good project teams
- Examine maturing of project teams
- Discuss 3 Multi-project team configurations

Software Project Morale Life Cycle

1. Unbridled enthusiasm
2. Guarded optimism
3. Cool objectivity
4. Quiet confusion
5. Partial disengagement
6. Utter disenchantment
7. Search for the guilty
8. Punish the innocent
9. Awards to the non-participants



Software projects are large and require teams to be successful. What do you suppose makes a good team?

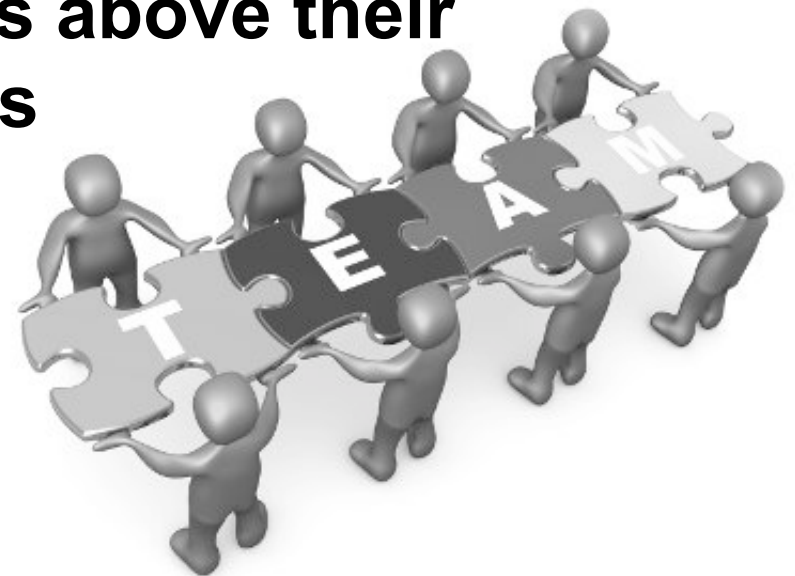
- Think for 15.6 seconds...
- Turn to a neighbor and discuss it for a minute



Pragmatic Definition of Project Team

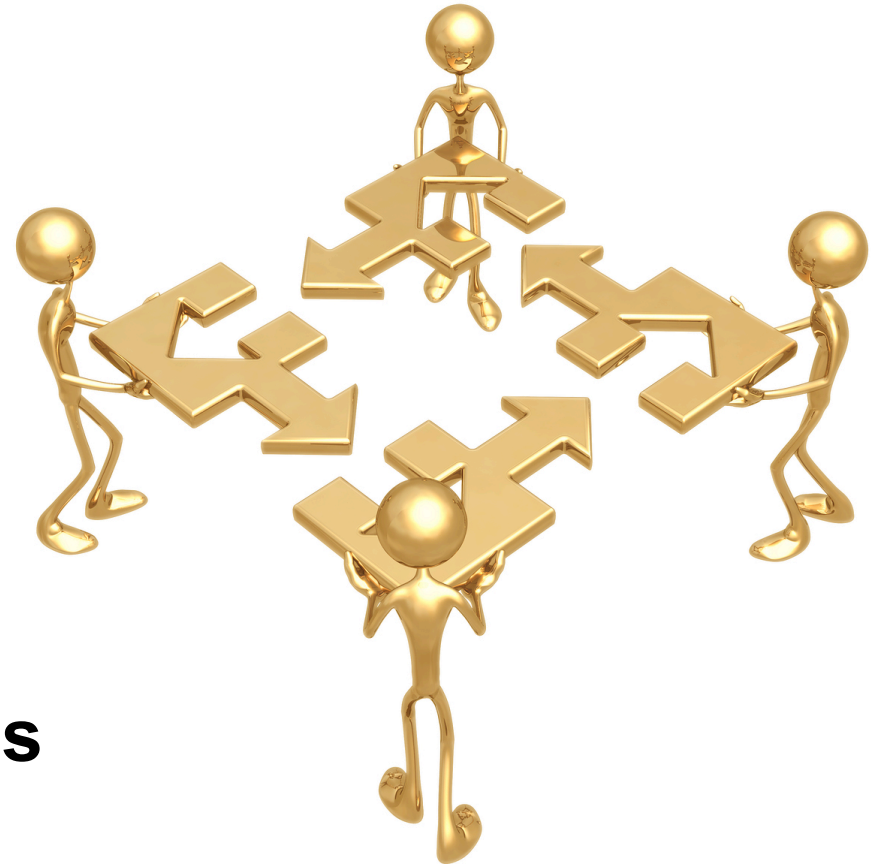
A **project team** is a group of people who have agreed to:

- Work together to achieve a common set of project goals
- Place common/team goals above their functional/individual goals
- Require interdependent activity to achieve these common goals



What makes a Project Team Effective?

- Trust
- Quality
- Flexibility
- Coordination and Cooperation
- Member satisfaction
- Member development
- Possesses needed skills and competencies
- Productivity

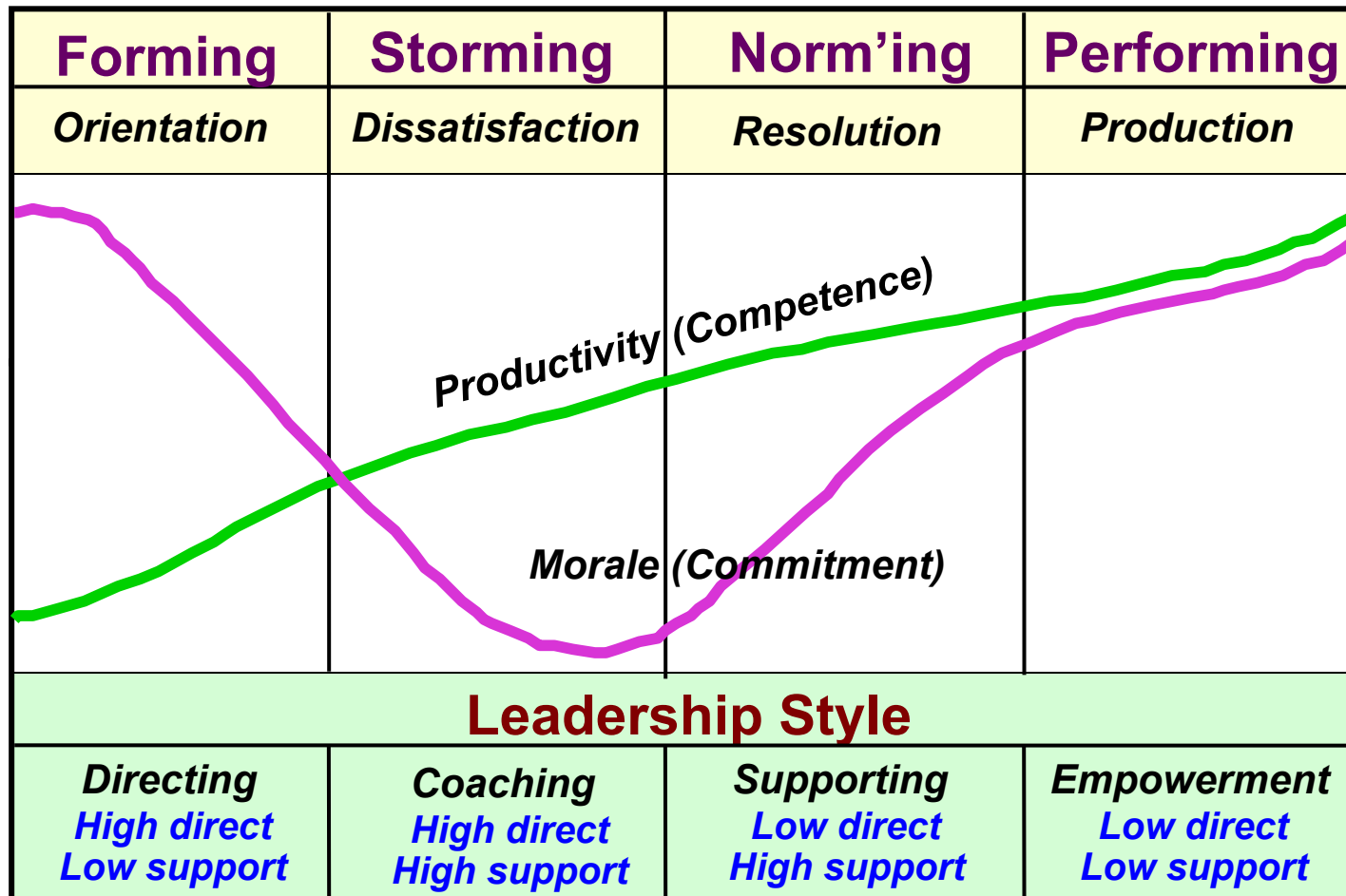


Team Member Etiquette

- ✓ Open communication
- ✓ Good listening skills
- ✓ Shared goals
- ✓ Positive outlook
- ✓ Creativity
- ✓ Respect for others
- ✓ Growth and learning



Tuckerman's Stages of Team Maturity



Forming

- Some excitement and pride about being a member
- Getting acquainted
- Sizing up people and the roles they play
- Group identity low and cliques form
- Early stereotyping
- Attempts to define tasks and how they will be accomplished
- Abstract discussions of concepts and issues
- Some suspicion or fear about the job ahead



Storming

- Resistance to the task
- Fluctuations in attitude about their likelihood of success
- Questioning the wisdom of the team or their project
- Internal competition for influence
- Conflict, voting, and compromise
- Win/lose interactions
- Hidden agendas
- Unrealistic goals
- Perception of lack of progress



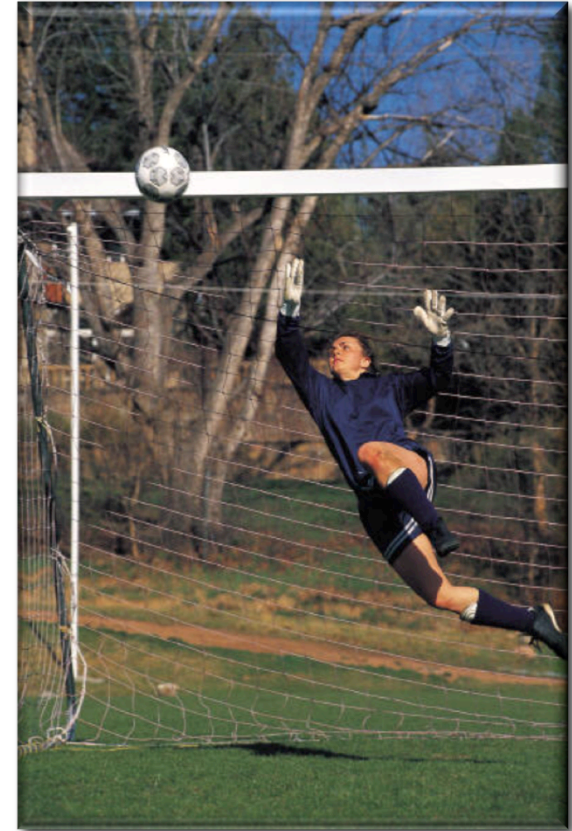
Norm'ing

- Acceptance of membership on the team
- Discussion of the team's dynamics
- Maintaining ground rules
- Active listening
- Group identity high
- Shared leadership
- Open-mindedness
- *Constructive* expressions of conflict
- Relief that things are working out
- More friendliness and sharing of personal problems



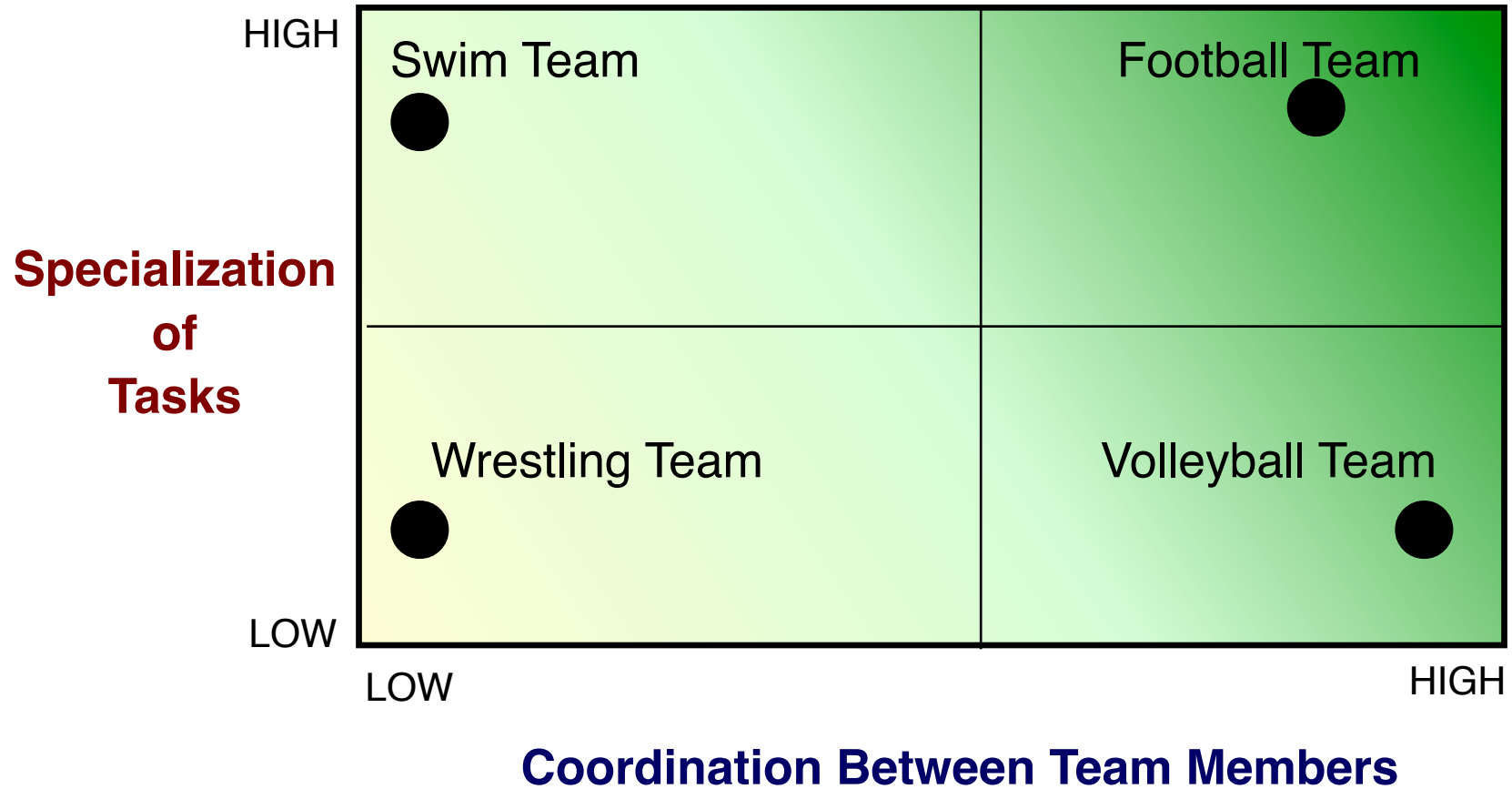
Performing

- Constructive handling of conflict
- Decision making by consensus
- Understanding and ability to use multiple problem solving methods
- Insight into group and individual dynamics
- High performance levels
- High creativity
- High spirits/morale
- Self responsibility
- Cohesion and synergy





Types of Teams



High Performance Team Characteristics

- Shared mission and goals
- Autonomy and authority
- Interdependence and shared leadership
- Broadly-defined jobs
- Meaningful participation in decisions



Dilbert's take on Teamwork





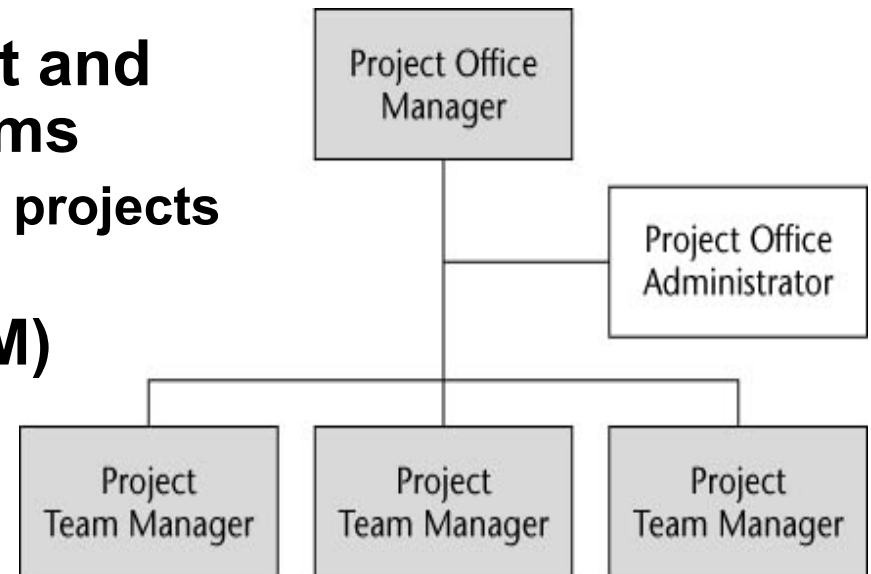
Multiple-Team Projects

- **What happens when the project is so large that one project team cannot handle it?**
 - Break the project into parts
 - Recruit and assign more senior people
 - Beg out of project and look for one your size...

- **Organize around different team approaches**
 - Project Office
 - Core team
 - Super team

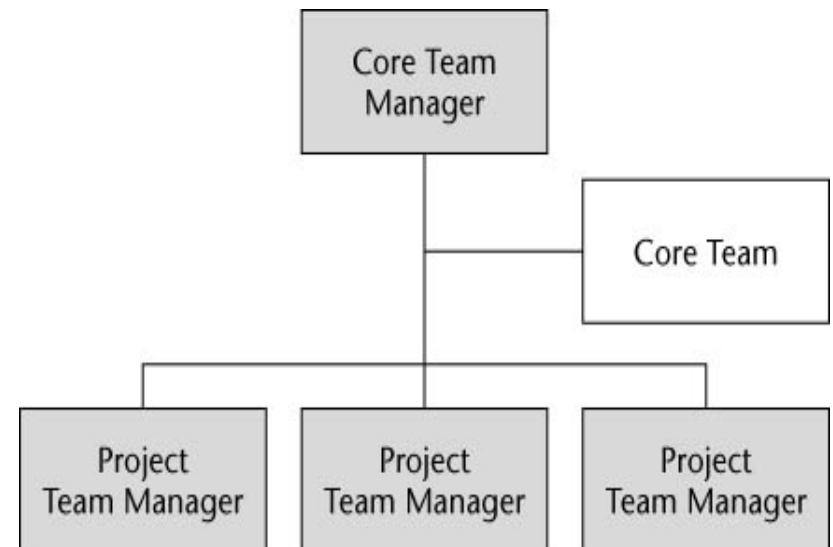
Project Office

- **Layer of management support and coordination between the teams**
 - Temporary structure for of a big projects
- **Program Office Manager (POM) is a coordinating role**
 - Each team operates independently reporting to POM
 - Consolidates reporting to upper management
 - Scales really well to large projects and teams
- **Challenges**
 - Lots of pressure on the project office
 - Must remain mindful of overall vision of the project
 - Must avoid letting individual interests impede overall success
 - It doesn't handle risk all that well



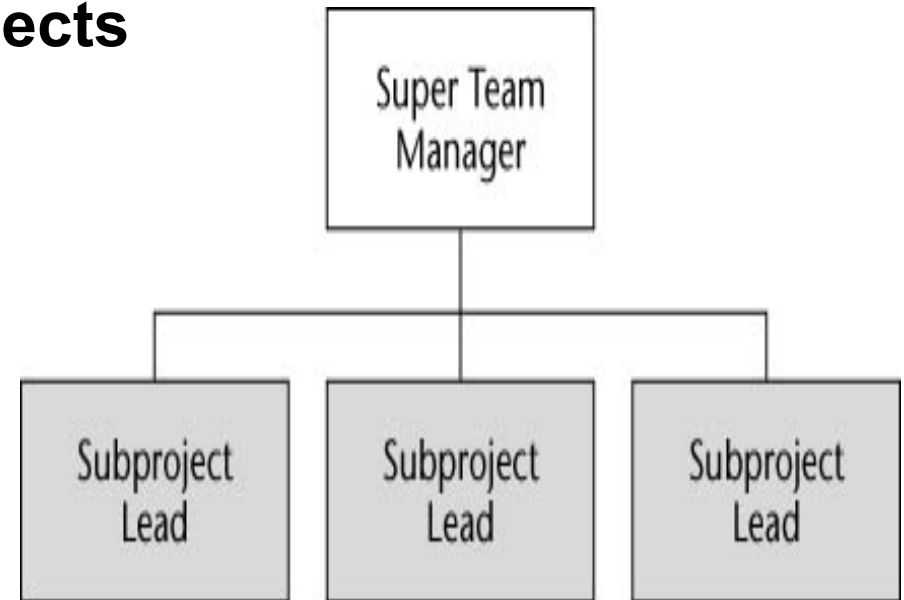
Core Team

- **Similar to the PO, but it has an advisory committee**
- **Subject matter experts work with teams as advisors**
 - Temporary Structure
 - Core team produces overall plan
 - Good for resolving conflicts, handling risks, and coordinating work of several teams
 - Teams retain their individuality
- **Problem: May not scale well to large projects**
 - Must manage competing priorities just like in project office
 - Not very good for professional development
 - Difficult to train next generation of core team members



Super Teams

- Super teams like most projects just bigger
 - Integrate various teams into a huge super team
 - Divide them into groups that focus on a particular aspect
- Single PM responsible
 - Unified process
 - Unified way of handling risks
 - Common plan and a standard set of practices
- Can handle risks and conflicts the best of the lot, but cannot handle huge projects
- Standardizing everything might be tough to do. Individuality may be lost.





Selecting the PM Structure

VARIABLES	PROJECT OFFICE	CORE TEAM	SUPER TEAM
Complexity/Risk	L	M	H
# of customer areas	H	L	M
# of teams involved	H	L	M
Total project team size	H	L	M
Type of project (new/enhanced)	M/M	L/L	H/H
Resource contention	L	M	H
Criticality of deliverables	L	H	M
Need for integrated plan	L	M	H
Need for integrated schedule	L	M	H



Homework and Reading Reminders

- **Read Human Side: Teamwork Paper**

- **Complete Homework 6 – Earned Value Analysis**
 - Due by 11:55pm, Tuesday, October 16th, 2012

- **Final Project – SW Proj. Mgt. Plan (SPMP)**
 - Completed by team...
 - Due by 11:55pm, Friday, November 2nd, 2012.
 - No late days –review swap with another team