



ĐẠI HỌC ĐÀ NẴNG
TRƯỜNG ĐẠI HỌC CÔNG NGHỆ THÔNG TIN VÀ TRUYỀN THÔNG VIỆT - HÀN
Vietnam - Korea University of Information and Communication Technology

Software Project Management

The Project Manager



Lecture Objectives

- Software Project Management
- Why Project Managers?
- Software Project Management Phases
- Responsibility
- Accountability
- Authority
- Matrix Management
- Relationships and Expectations



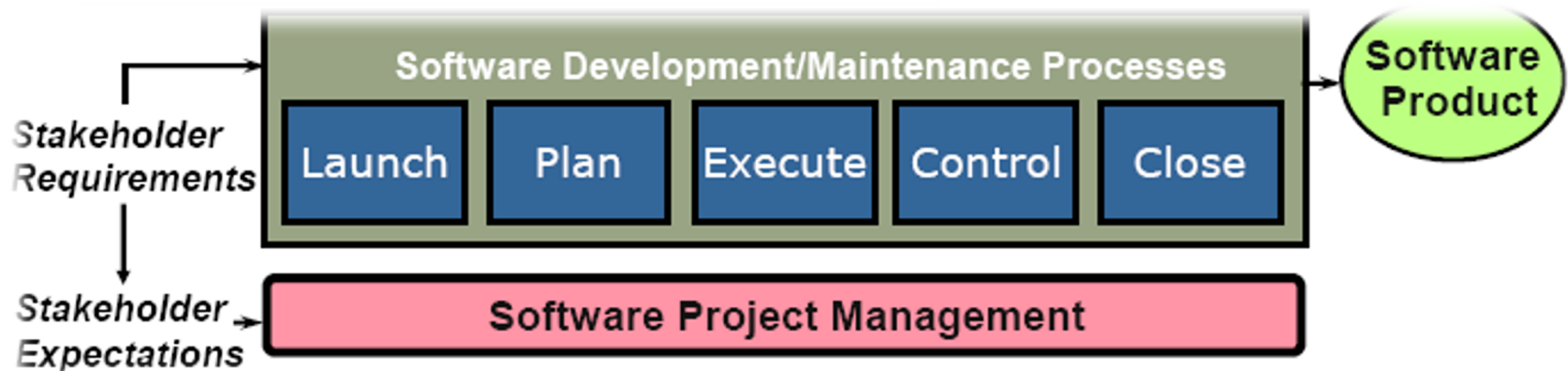
Software Project Management

- **Definition:** The application of knowledge, skills, tools, and techniques to software project activities in order to meet stakeholders' needs and expectations.
- **Meaning:** Complete the software project.
 - On-time
 - Within budget
 - According to requirements
 - According to plans



Software Project Management Process Groups*

- **Software Development & Maintenance Process**
 - The development & maintenance of software products & services that meet the stakeholders' requirements.
- **Software Project Management**
 - The application of knowledge, skills, tools & techniques to manage software development & maintenance to meet the stakeholders' expectations.





Software Project Management Process Group Definitions

- **Initiating (Launch)**

- Understand project stakeholders, goals, scope and risks.
- Form project charter and team.

- **Planning**

- Define project scope.
- Define actions to achieve project goals.
- Estimate project size, schedule, budget, resources, etc.
- Define how you will control project execution.



Software Project Management Process Group Definitions

- **Executing**

- Manage the product delivery process.
- Mitigate project risks.
- Measure product and project performance.
- Manage product and project integration.

- **Controlling**

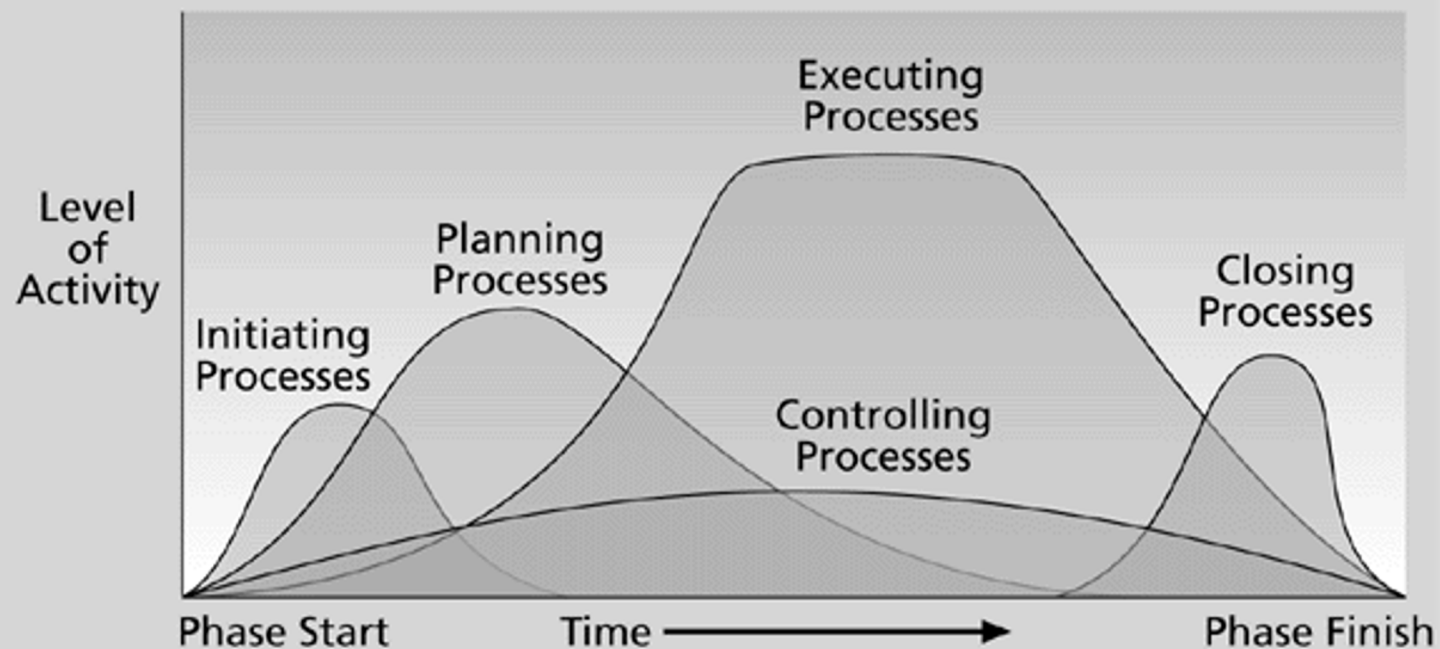
- Track progress against plan.
- Take corrective action as/when necessary.

- **Closing**

- Conclude project's business.



Software Project Management Process Overlap





Why Project Managers?

- To “amplify the work of others on the project.”*
 - They do the actual work, not you.
- To improve the quality of what’s being made.
- To increase the chances that it will be finished on time.
- To help make the product more useful.
- To increase the chance that the product will be successful from a business perspective.
- To protect the project team from politics.



Why Project Managers?

- To make what's built easier to maintain.
- To increase the team's morale.
- To help the team work smarter and faster.
- To help the team learn and apply new skills.
- To eliminate or clarify behavior that is detrimental to the project and/or team.



Software Project Manager Responsibilities

- Create effective channels of communication with stakeholders.
- Provide overall planning and control of the work.
- Build team and establish a unified vision, mission, goals and objectives.
- Identify and mitigate risks to reduce schedule delays and cost overruns.
- Recognize problem areas early and take corrective action.
- Establish structured decision making.



Software Project Manager Responsibilities

- Measure progress against the plan & objectives.
- Develop mechanisms to manage resources, time and cost effectively.
- Coordinate with external groups.
- Help the project team avoid problems.



Accountability

- “Responsible to somebody else or to others, or responsible for something” - Encarta
- Project Managers are held accountable for:
 - The project being “successful”
 - The output of others
- Accountability consists of:
 - A *clear request*
 - A resulting *promise*
 - Potential for positive or negative consequences
 - Clear status & progress reporting structures



Authority

- “The right or power to enforce rules or give orders” - Encarta
- Requisite Authorities: *
 - Working with stakeholders to set project context
 - Adding people/vendors to your project
 - Removing people/vendors from your project
 - Assigning tasks
 - Establishing & managing the schedule and budget
 - Establishing/influencing rewards and sanctions
 - Coaching



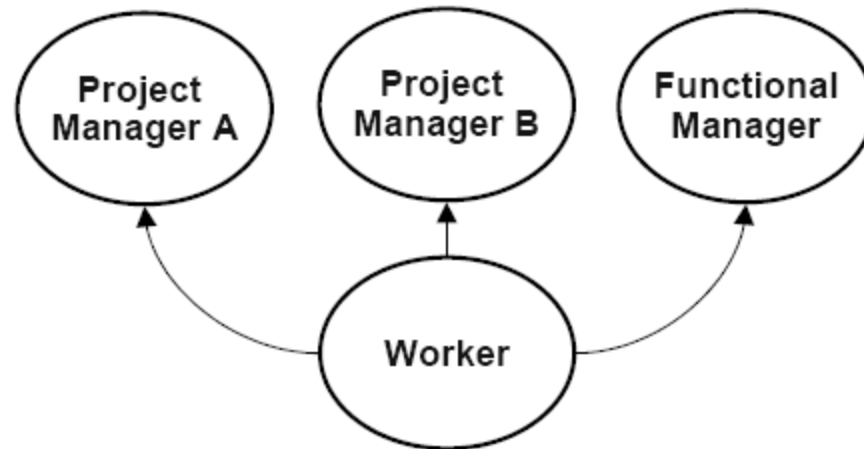
Authority

- PMBOK calls this “strong project management.”*
- If Project Managers are to be held accountable for the output of others then they require the authority to get the work done.
- “Victorious warriors win first and then go to war, while defeated warriors go to war first then seek to win.”**
 - Beginnings are very important!
 - Negotiate your authorities at the beginning of the project!



Matrix Management

- When people are assigned to projects on a “part time” basis.

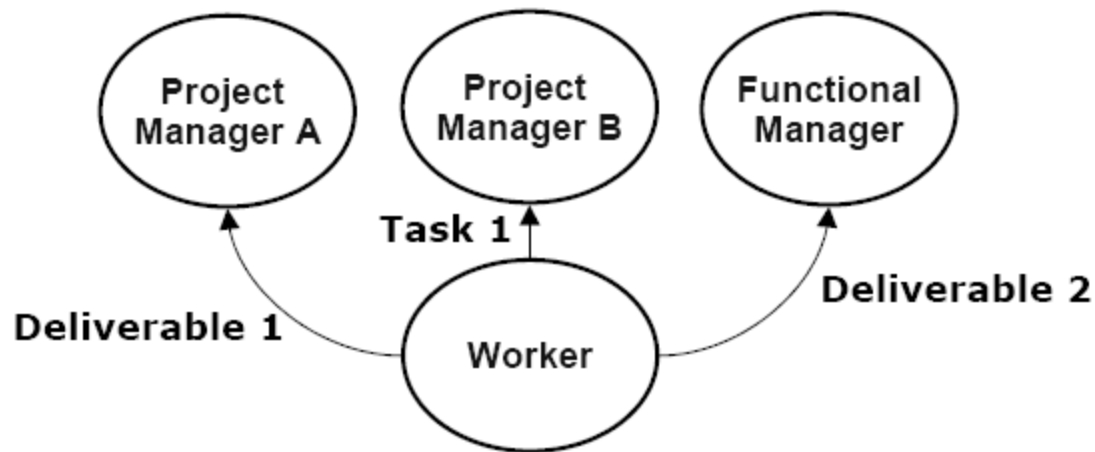


- But, how can employees be accountable to multiple managers at the same time?



Matrix Management

- Associate output authority with the accountability. In other words ask:
 - “Who are you accountable to, and for what?”





Focused & Diffused Accountability

- Focused Accountability
 - When individuals have output authority over the outputs of other individuals.
 - No argument over who was going to do what for whom.
- Diffused Accountability
 - Output authority relationships involving groups.
 - If I assign two people to task A and task A doesn't get done, then who do I hold accountable?



Work Assignment Relationships

- There are three ways to complete a task as a manager:
 - Do it yourself.
 - Assign it to someone for whose output you are accountable and you have requisite authority.
 - Request that someone do it for whose output you are not accountable (asking another department to do something, for example).
- But what authorities do you need to get work done by someone who is not accountable to you?



Work Assignment Relationships

- Authorities you need to get work done by someone who is not accountable to you:
 - You can ask the person to do something.
 - You can ask the person to stop.
 - You can ask the person to delay.
 - You can ask to be informed.
 - You can try to persuade the person.
 - You can escalate the person's performance.



Clarifying Work Expectations

- When you are clear about your expectations you empower people to meet those expectations.
- Formula for Clarity:

Clarity = Quality + Quantity + Timeframe

- Quality: How Good
 - Quantity: How Many
 - Timeframe: When
- Note that Quality can describe just the outcome or the outcome and the process to achieve the outcome.



Clarifying Work - Example

- Formula for Clarity:

Clarity = Quality + Quantity + Timeframe

- Quality: How Good
 - Quantity: How Many
 - Timeframe: When
- *“I need you to finish developing the test cases by Thursday. Do you think we can get 80% product coverage by then?”*



Project Sponsor Relationships

- The project sponsor is your guardian angel:
 - Provides high level context
 - Provides political coaching
 - Takes care of issues at a high level
- Sponsors are politically at risk for the project.
 - They will get anxious if/when they don't know what is going on.



Sponsor Relationship Rules

- The larger, riskier and more important the project, the more likely you'll need a sponsor.
- Pick a sponsor appropriate to the size, value and risk associated with the project.
- Involve your sponsor early in the project for strategizing and goal setting.
- Be the first to inform your sponsor of bad news, good news or impending issues.
- Never, never surprise your sponsor.
- If your project is large enough, consider a steering board.



Customer Relationships

- **Customers:**

- Pay money to,
- Receive goods or services, and
- Have a choice regarding whether they have your project team or another do the work.

- **Be careful:**

- Your customer may not be providing funding.
- Some “clients” want work done, but provide no funding.
- Funding sources will get the attention.



Relationships & Communication

- Project managers spend most of their time communicating.
 - *There is no communication without rapport!*
- Communication Model
 - Transmitted
 - Received
 - Understood
 - Agreed
 - Converted to Useful Action

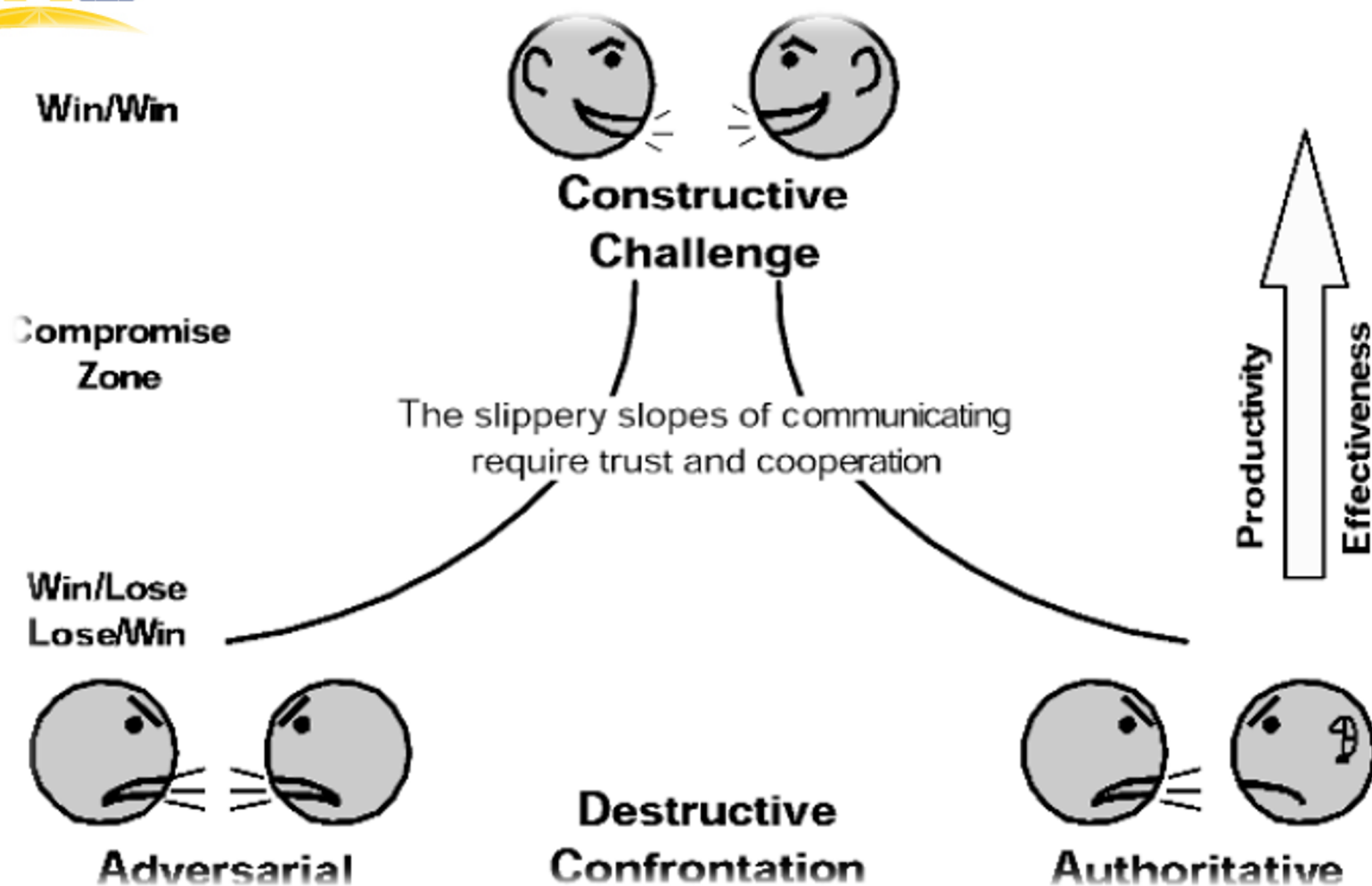


Communication Problems

- Assumptions
- Lack of Clarity
- Not Listening
- Dictation (giving orders)
- Discussion Mismatch
- Personal Attacks
- Derision, Ridicule and Blame



Communicating with Attitude





Projects & Relationships

- Approaches for how to get people's best work:
 - Follow their advice
 - Challenge them
 - Make demands
 - Inspire them
 - Remove roadblocks
 - Remind them of processes and roles
 - Remind them of project goals
 - Institute learning via teaching & mentoring
 - Ask them what you can do to help them



Projects & Relationships

- Approaches for how to avoid annoying people:
 - Don't assume that they are an idiot
 - Trust them
 - Don't waste their time
 - Don't treat them with a lack of respect
 - Don't force them to listen to or read stupid things
 - Implement good processes



Projects & Relationships

- What are good processes:
 - They accelerate progress
 - They prevent problems
 - They make important actions visible and measurable
 - They can be changed or eliminated
 - People impacted by them are in favor of them



Summary

- Software Project Management
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Questions & Answers

The Project Manager