Introduction to Project Management

Chapter 1
Introduction

Information Systems Project Management: A Process and Team Approach, 1e
Fuller/Valacich/George

What is a Project?

"A planned undertaking of related activities to reach an objective that has a beginning and an end."*

*Project Management Institute

Project Management Institute (PMI)

- An association designed to bring together project management professionals and systematically capture project management knowledge
- Publishes the Project Management Body of Knowledge (PMBOK)
  - The PMBOK is a collection of processes and knowledge areas generally accepted as best practice within the project management discipline

Project Environment

- One to many individuals involved
- Time to completion can range from days to years

Projects

- Temporary (have a specific beginning and end)
- Organizational projects are prioritized for consideration and selection
- Projects require senior management support
- Projects are lead by a project manager
- Project members often come and go

Stakeholders of a Project

- Project Sponsor
  - Provides executive support
- Project Manager
  - Leads and manages the project
- Project Team Members
  - Provide technical and support expertise
- Organization Employees
  - Those that are directly or indirectly affected by the proposed project
- Community
  - Competitors and business partners impacted by the project outcome

Project Manager

A person with a diverse set of skills – *management, leadership, technical, conflict management*, and *customer relationship* – who is responsible for initiating, planning, executing, controlling, monitoring, and closing down a project.

Why Undertake a Project?

- To take advantage of a business opportunity
- To solve a business problem

Feasibility Study

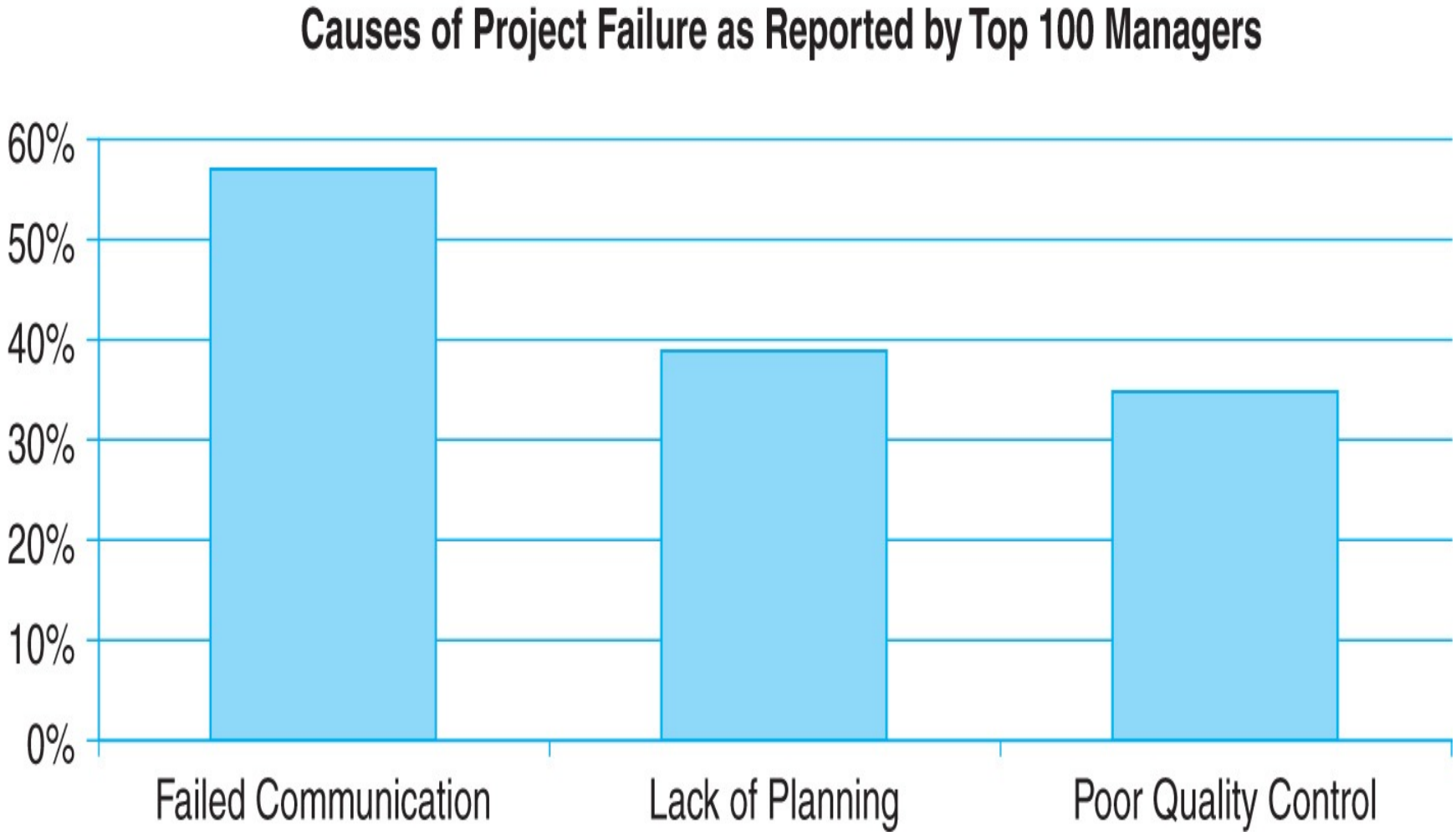
- Do you have the:
  - Time?
  - Financial resources?
  - Technical resources?

The Outsourcing/Offshore Options

- India is the largest supplier
- By 2008 U.S. companies are projected to spend $31 billion dollars on the outsourcing of software and services

Project Failure

(French Study)



Top Five Causes of Project Failure

(OASIG Study)

1. Lack of attention to human and organizational factors
2. Poor project management
3. Poor articulation of user requirements
4. Inadequate attention to business needs and goals
5. Failure to involve users appropriately

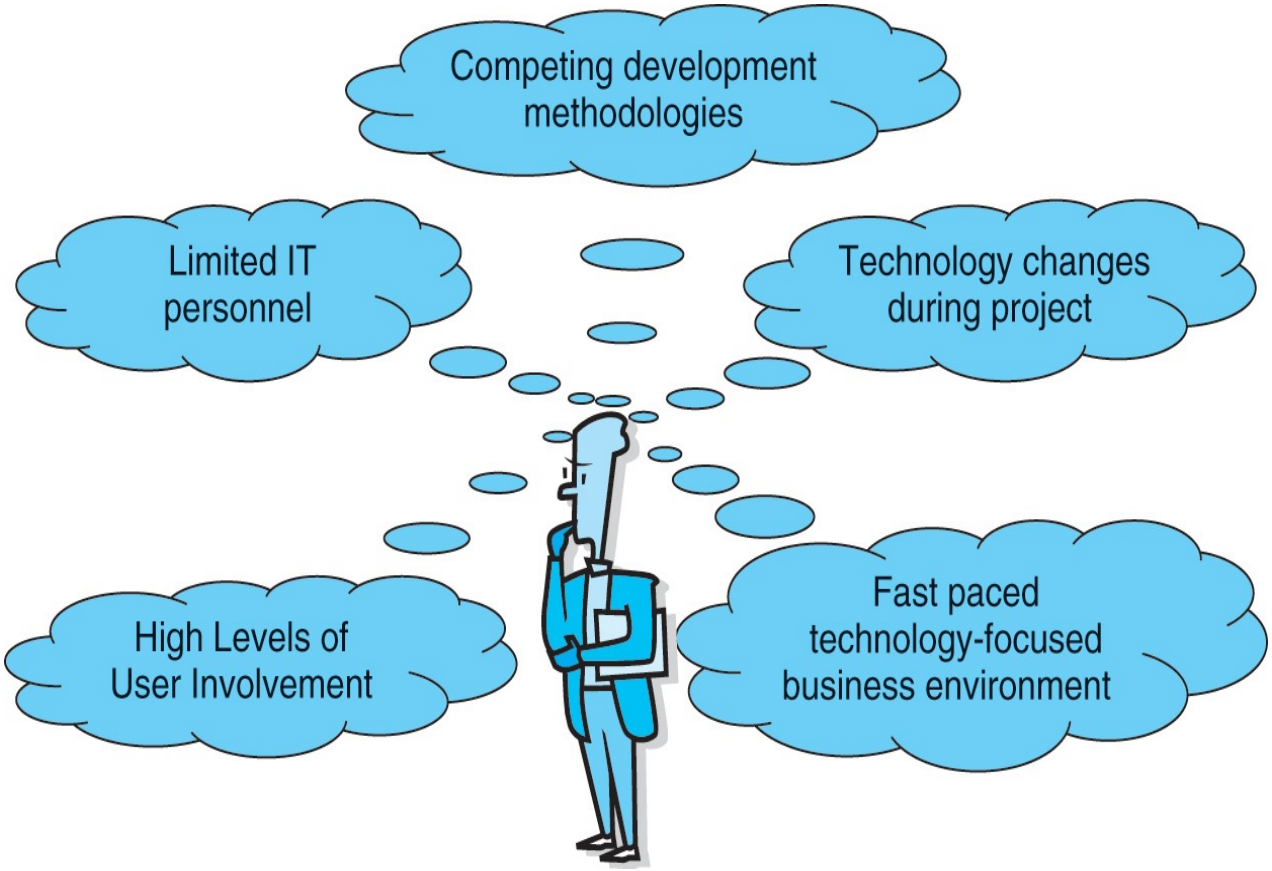
2004 Study by Wallace & Keil

1. Lack of executive support
2. Lack of user involvement
3. Inexperienced project manager
4. Inexperienced team members
5. Unclear business objectives
6. Unreliable estimates
7. Lack of effective project management methodology
8. New software infrastructure
9. Unstable organizational environment
10. Unreliable outside suppliers

What is Unique About IT Projects?

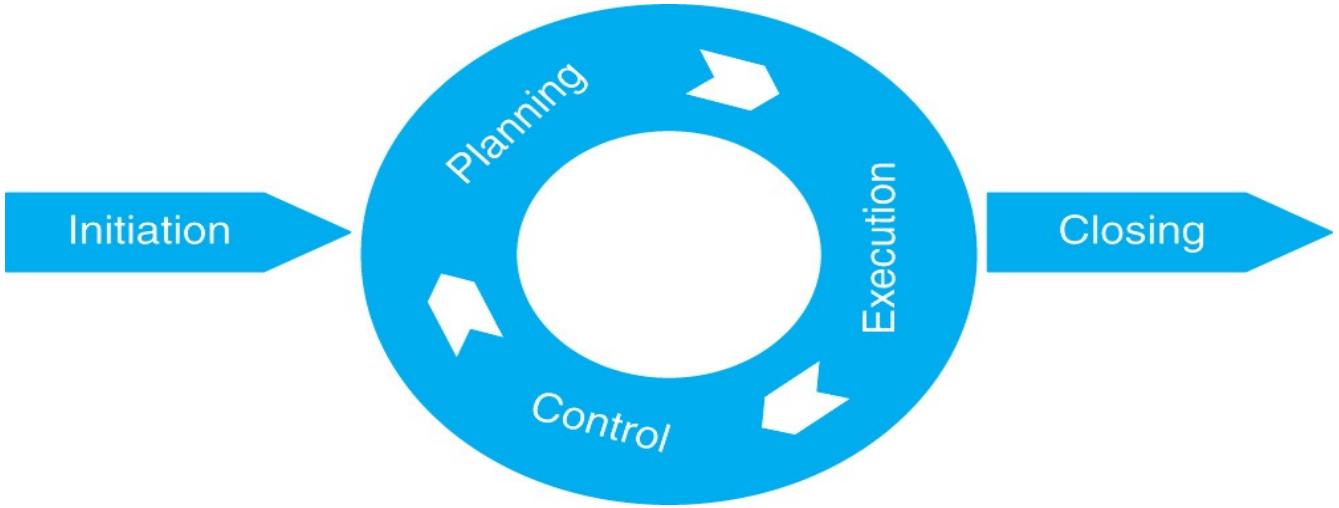
- Constant change in applied technologies within the organization
- Difficulty in finding and keep experienced IT project employees
- Extensive amount of user participation required
- Selecting the appropriate systems development methodology
- Most IT solutions are “one-of-a-kind”
- Specifics of the project likely to change during the life of the project
- Technology changes may change the project itself

IS Project Complexities



What is Project Management?

- The application of *knowledge*, *skills*, *tools*, and *techniques* to project activities in order to meet project requirements.
- Involves five process groups:



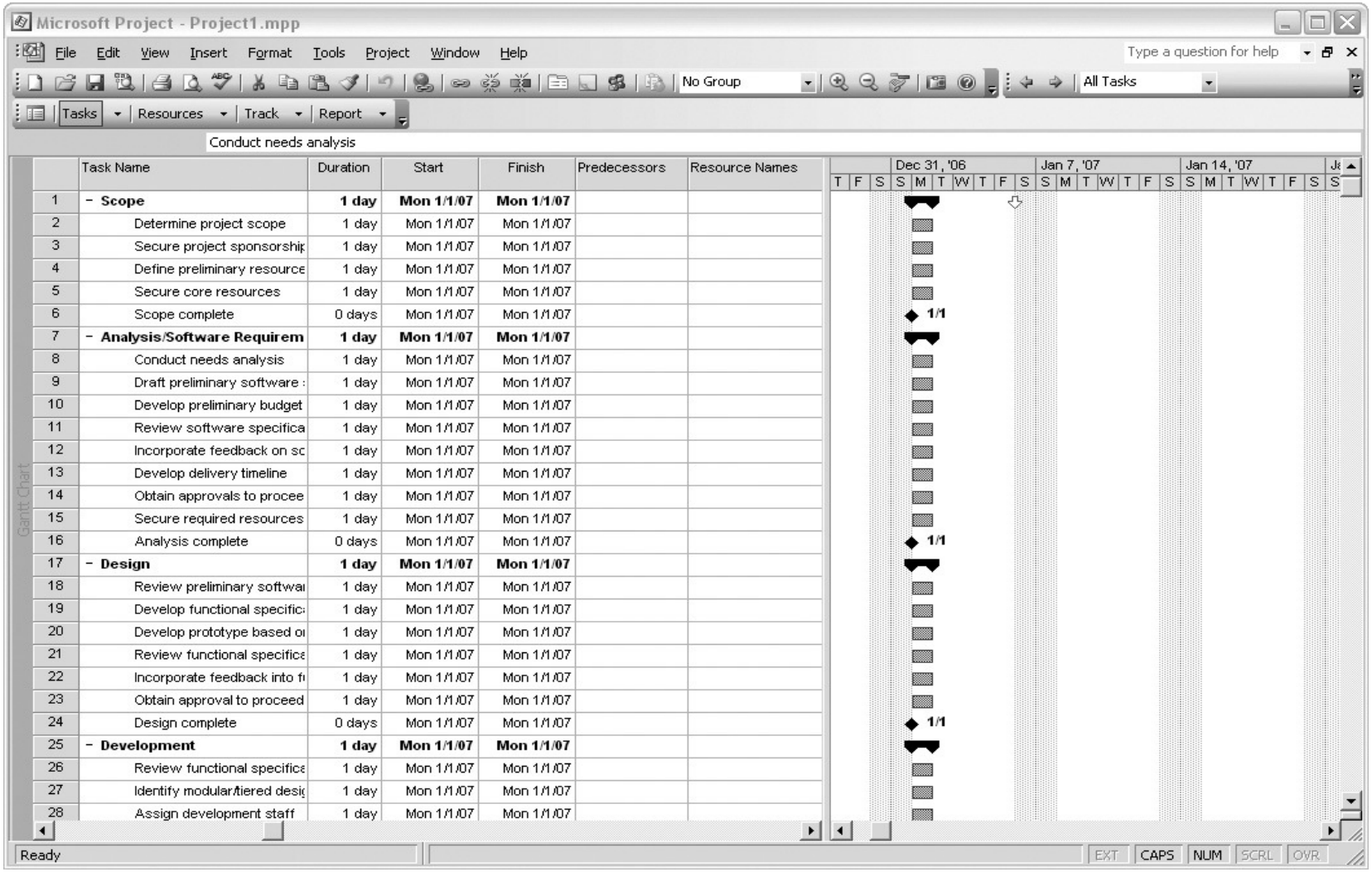
Project Management Life Cycle

- Initiate – potential projects are identified and evaluated in terms of importance to the organization
- Plan – scope, time, cost and risk management planning takes place
- Execute – project plan is followed
- Control – project performance is measured against the project plan
- Close – final paper work completed and sign off by all stakeholders

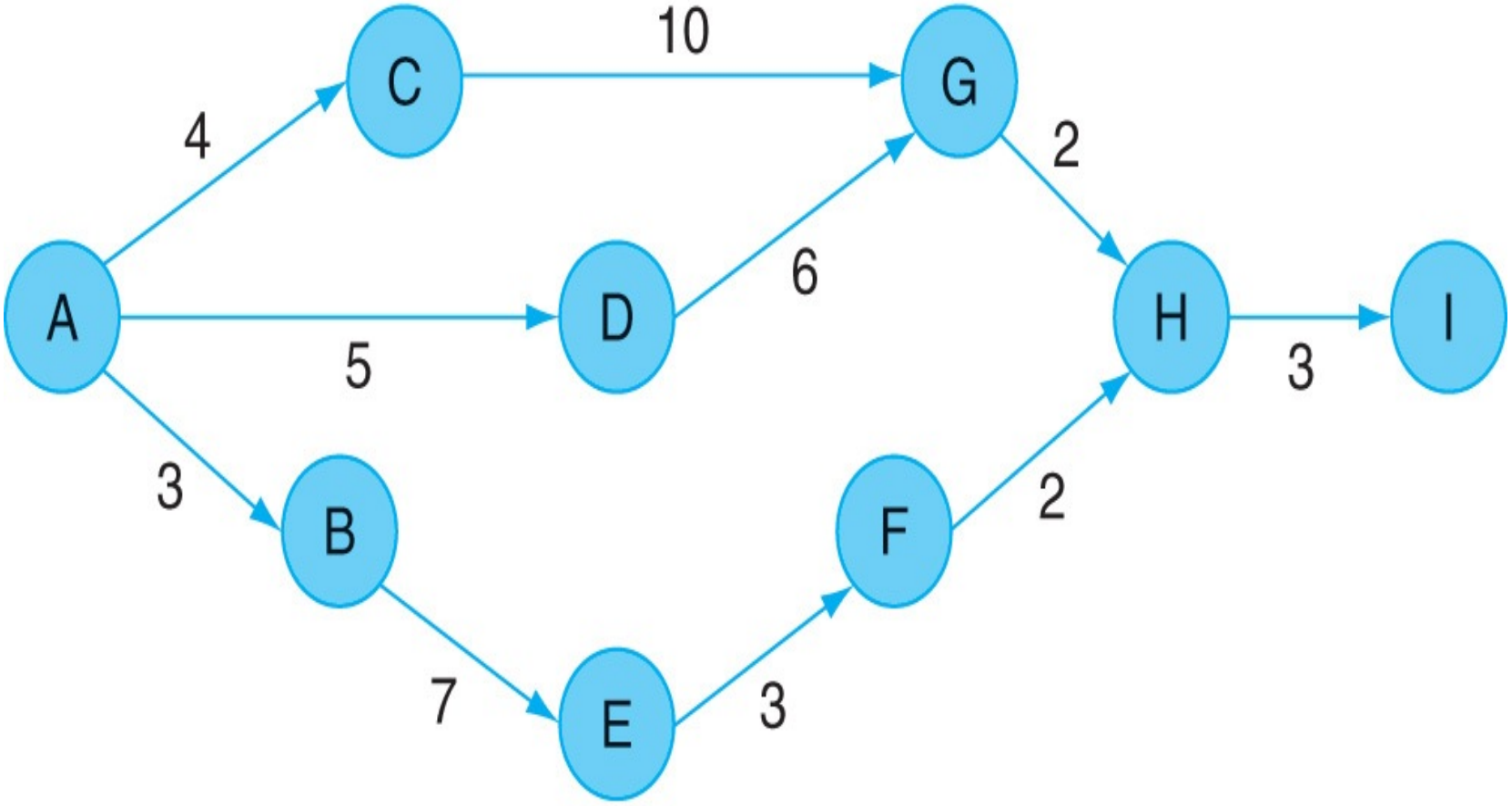
Various Project Management Tools/Techniques

- Gantt Chart
  - Tool that can be used to plan and track project activities
- Critical Path Method (CPM)
  - A method used for determining the sequence of task activities that directly affect the completion of a project
- Program Evaluation and Review Technique (PERT)
  - A technique that uses optimistic, pessimistic, and realistic time to calculate the expected time for a particular task
- Microsoft Project
  - Most widely used project management software
  - http://office.microsoft.com/en-us/project/default.aspx
- Application Service Provider (ASP) software
  - Web hosted project management software
- Industry-Specific software
  - Software which addresses a specific industry or environment

Gantt Chart

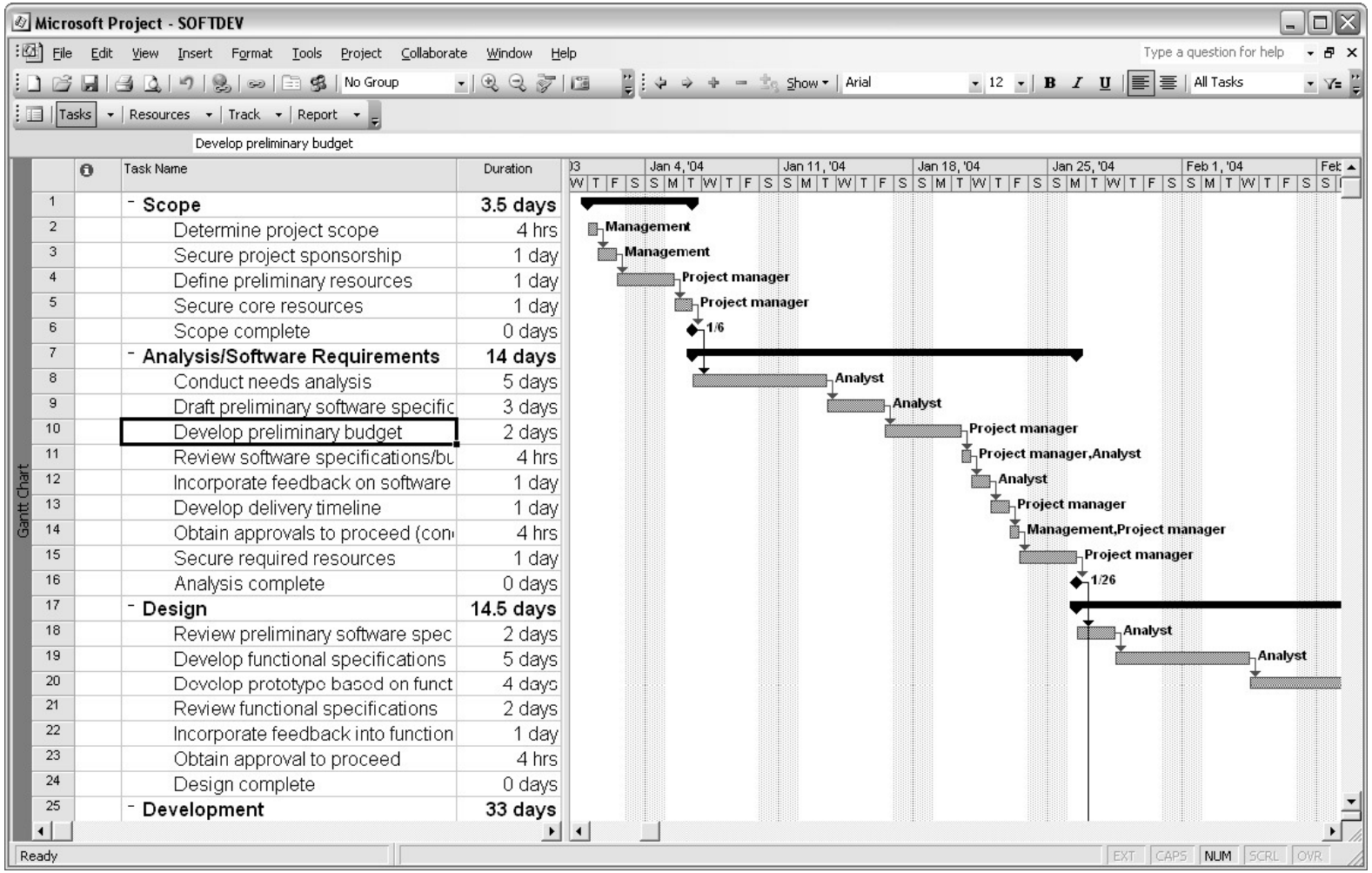


CPM & PERT



Critical Path = ACGHI (19 days)

Microsoft Project



Industry Specific Software

Industry	Software Package
General Purpose	Microsoft Project
Detailers and Fabricators	AbacusPM
Audio/Visual/Multimedia Production	AlterMedia
Construction	Hard Hat Manager
Small Business	4aBetterBusiness
Software Development	DOVICO Track-IT
Manufacturing and Mining	Crest Soft

Project Management Institute (PMI)

- Professional organization for project managers
- Over 214,000 members from 159 countries (2006)
- Provides professional literature on project management
- Develops and maintains the PMBOK
- Sponsors the PMP Certification
- www.pmi.org

PMBOK

- Project Management Body of Knowledge
- A repository of the key project management knowledge areas

PMBOK Knowledge Areas

Project Integration Management	Project Scope Management	Project Time Management
• Project plan development • Project plan execution • Integrated change control	• Initiation • Scope planning • Scope definition • Scope Verification • Scope Change Control	• Activity definition • Activity sequencing • Activity duration estimating • Schedule development • Schedule control
Project Cost Management	**Project Quality Management**	**Project Human Resource Management**
• Resource planning • Cost estimating • Cost budgeting • Cost control	• Quality planning • Quality assurance • Quality control	• Organizational planning • Staff acquisition • Team development
Project Communications Management	**Project Risk Management**	**Project Procurement Management**
• Communications planning • Information distribution • Performance reporting • Administrative closure	• Risk management planning • Risk identification • Qualitative risk analysis • Quantitative risk analysis • Risk response planning • Risk monitoring and control	• Procurement planning • Solicitation planning • Solicitation • Source selection • Contract administration • Contract closeout

Major Project Management Achievements

- Great pyramids of Egypt
- Pacific Railroad
- Hoover Dam
- Manhattan Project
- Space program

The Approach to Learning Project Management

- Process Focus
- Team Focus
- Technology Focus
- PM Software
- Group Support Technologies
- Knowledge Management and Organizational Memory Systems
- Global Focus
- PM Professional Focus

Questions?

Introduction to Project Management

Chapter 2
The Project Management Life Cycle

Information Systems Project Management: A Process and Team Approach, 2e
Fuller/Valacich/George

What is the Project Management Life Cycle?

- A project life cycle simply includes the necessary steps, from beginning to end, needed to complete a project. The end of each phase is referred to as a stage gate, phase exit, or kill point, and usually marks the completion of deliverables.
- A phase defines work to be done and personnel required
- Life cycles vary by industry and organization

Common Life Cycle Characteristics

- Cost and staffing resemble a bell curve
- Risk and uncertainly are highest at the beginning
- Stakeholder influence is highest at the beginning; lowest at the end

Systems Development Life Cycle (SDLC)

- A common methodology for systems development that marks the phases or steps of information systems development
- SDLC Phases
  1. Plan
  2. Analyze
  3. Design
  4. Implement
  5. Maintain

SDLC Phase Activities

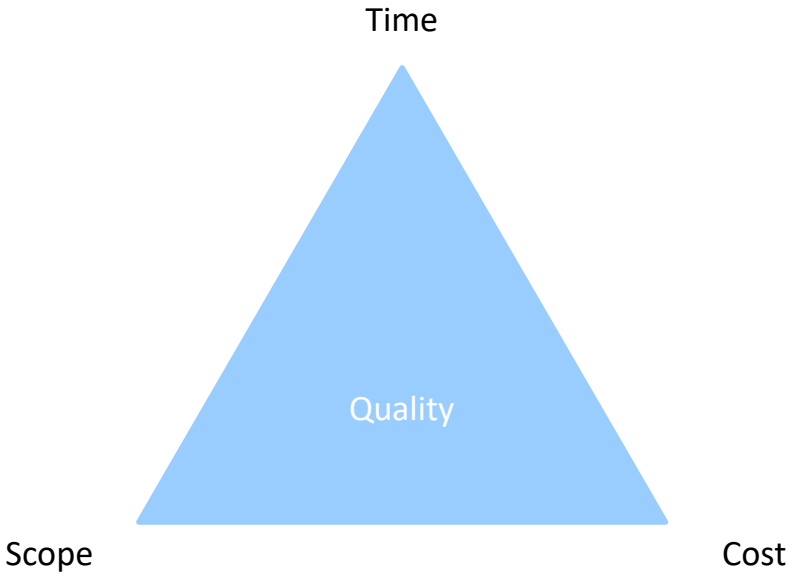
1. Systems Planning
   - The need for a new or enhanced system is identified and the proposed system's scope is determined
2. Systems Analysis
   - Systems requirements are determined and an alternative is chosen among a set of alternatives to best meet these requirements within the cost, labor, and technical levels to which the organization is willing to commit
3. Systems Design
   - Descriptions of the recommended alternative are converted into logical and then physical system specifications

SDLC Phase Activities
(cont.)

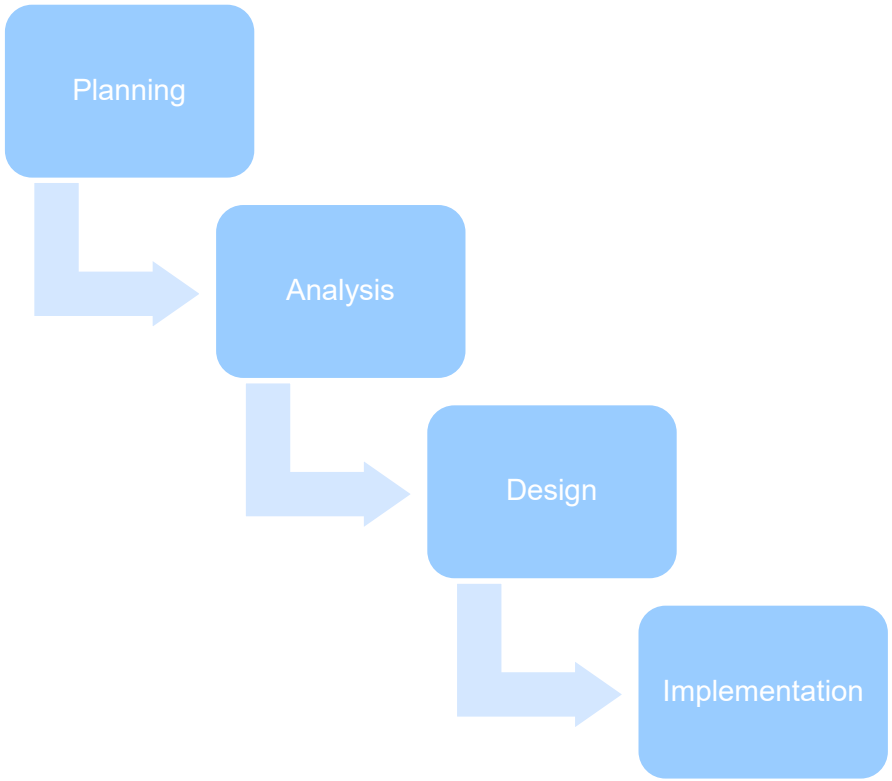
4. Systems Implementation
   - The system specifications are turned into a working system that is tested and then put into use
5. Systems Maintenance
   - Programmers make the changes that users request and modify the system to reflect changing business conditions

Time, cost, and scope triangle

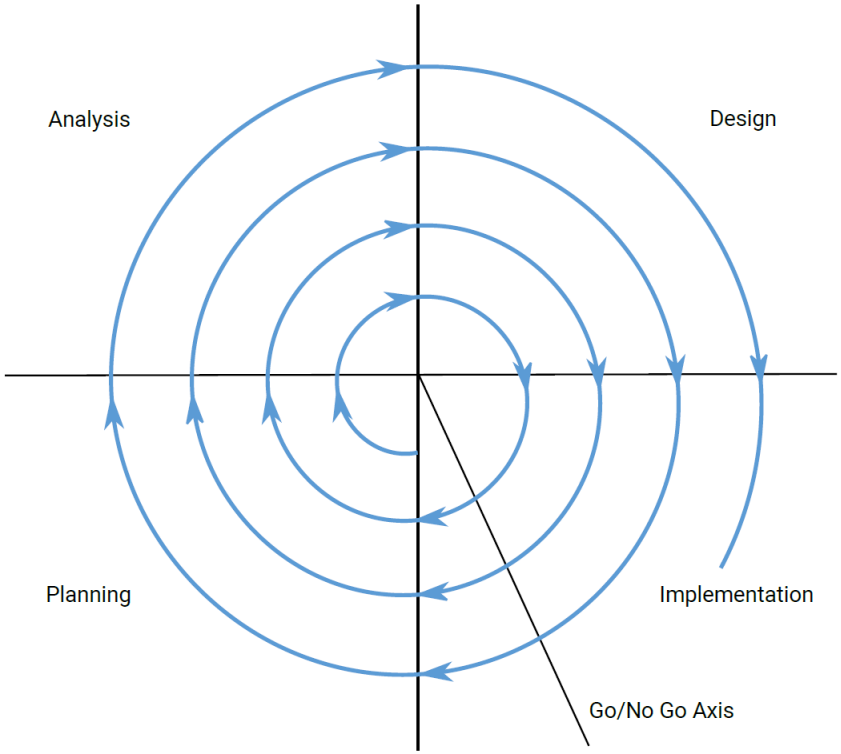
- The Time-Cost-Scope triangle is a fundamental concept in project management that refers to the interdependent nature of time, cost, and scope, with quality being the central goal that the project manager must balance against these constraints.
- Project managers must balance the constraints of time, cost, and scope against the goal of achieving high-quality project deliverables.
- By doing so, they can effectively manage projects and ensure that stakeholders are satisfied with the outcomes.



Predictive Information Systems Development Life Cycle (ISDLC)



Agile (spiral) information systems development life cycle



Predictive ISDLC vs. Agile

- The predictive ISDLC is a structured and sequential approach that is useful in situations where the project requirements are well-defined, while Agile is a flexible and adaptive approach that is useful in situations where the requirements are dynamic or evolving.
- The main differences between the predictive ISDLC and Agile include:
  - **Flexibility**: The predictive ISDLC is less flexible than Agile because it requires the project requirements to be well-defined upfront. Agile, on the other hand, allows for changes to be made throughout the development process, and it encourages flexibility and adaptability.
  - **Customer involvement:** The predictive ISDLC involves less customer involvement than Agile because the requirements are defined upfront, and the project follows a sequential process. Agile, on the other hand, emphasizes collaboration and continuous feedback with the customer to ensure that the software meets their needs.
  - **Risk management:** The predictive ISDLC focuses on risk management by identifying risks upfront and developing mitigation strategies. Agile, on the other hand, focuses on risk management through frequent testing and continuous improvement.
  - **Documentation**: The predictive ISDLC requires extensive documentation, including detailed specifications and design documents. Agile, on the other hand, emphasizes working software over documentation, although it does require documentation for the project backlog and other project artifacts.

Software Project Behind Schedule?

- *Mythical Man-Month: Adding personnel to an information system behind schedule will NOT speed up the process*
- "Brook's law": states that adding more people to a late software project only makes the project later.
  - This is because adding more people to a project increases the communication overhead and the need for coordination, which can slow down the development process.

Outsourcing / Offshoring

- **Outsourcing** is the practice of contracting a business function to an external provider, to reduce costs, improve quality, or gain access to specialized expertise.
  - The outsourced function can be performed locally or offshore, but the location is not the defining factor.
  - For example, a company may outsource its accounting function to a local accounting firm, or it may outsource its IT help desk to a provider in a different state.
- **Offshoring**, on the other hand, is the practice of relocating a business function to a foreign country to take advantage of lower labor costs or other benefits.
  - Offshoring typically involves moving jobs from a high-cost country to a low-cost country, such as moving call center jobs from the United States to India.
- For software:
  - 60% of work performed in-house
  - 30% sent offshore
  - 10% outsourced

Stakeholders

- Individuals which will benefit, participate, or be impacted by proposed system
  - Project sponsor
  - Project manager
  - Project team members
  - Customers
  - Influencers
  - Project Management Office (PMO)

Information Systems Influences

- Stakeholders
- Organizational structure
- Organizational culture
- Social environment
- Economic conditions
- Others?

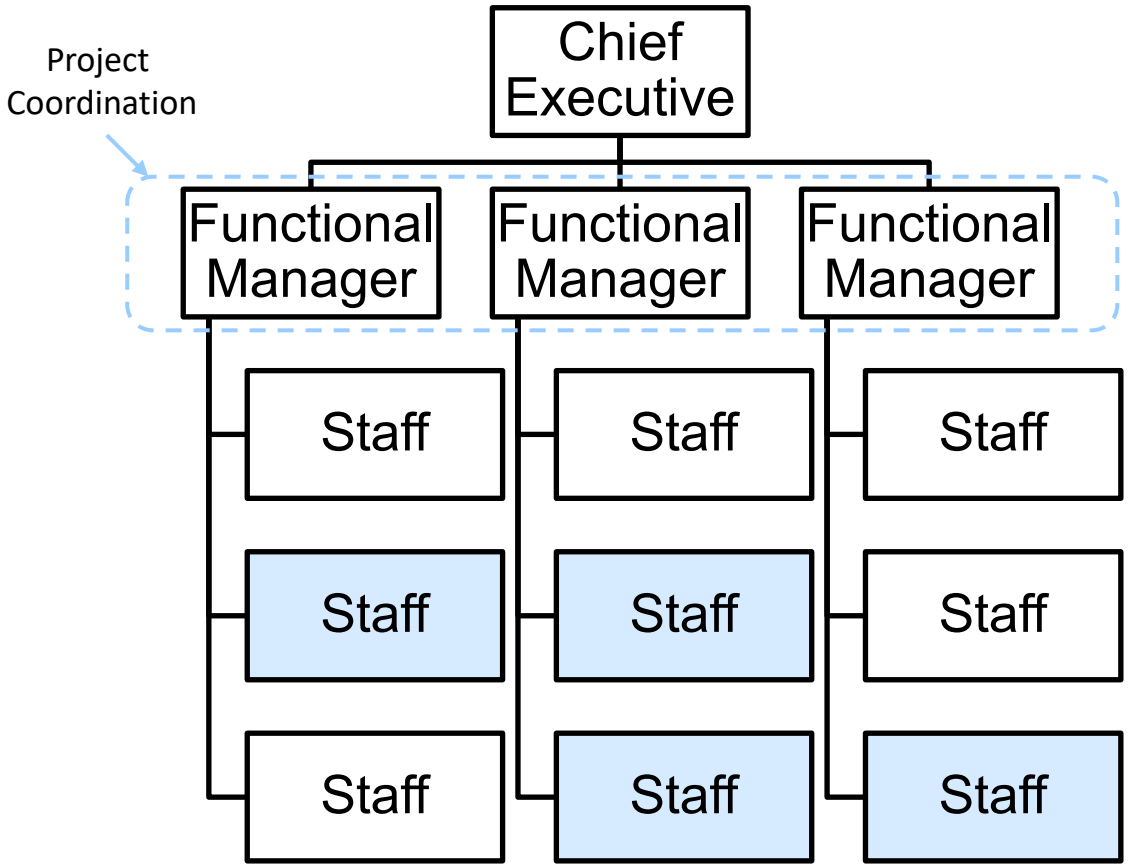
Organizational culture

- Organizational culture refers to the shared values, beliefs, attitudes, customs, behaviors, and practices that characterize an organization.
  - It is the set of unwritten rules and assumptions that guide how employees think, act, and interact with each other, stakeholders, and the environment.
- Organizational culture is important because it influences how employees perceive their work and their relationship with the organization.
  - A strong, positive culture can foster employee engagement, collaboration, innovation, and productivity, while a negative culture can lead to low morale, conflicts, and turnover.
- Organizational culture is not something that can be created or changed overnight.
  - Organizational culture is shaped by various factors, including the organization's history, mission, leadership, work environment, and social norms.
  - It is a complex and dynamic phenomenon that evolves over time and requires sustained effort and commitment from the organization's leaders and employees.

Organization Structure Types

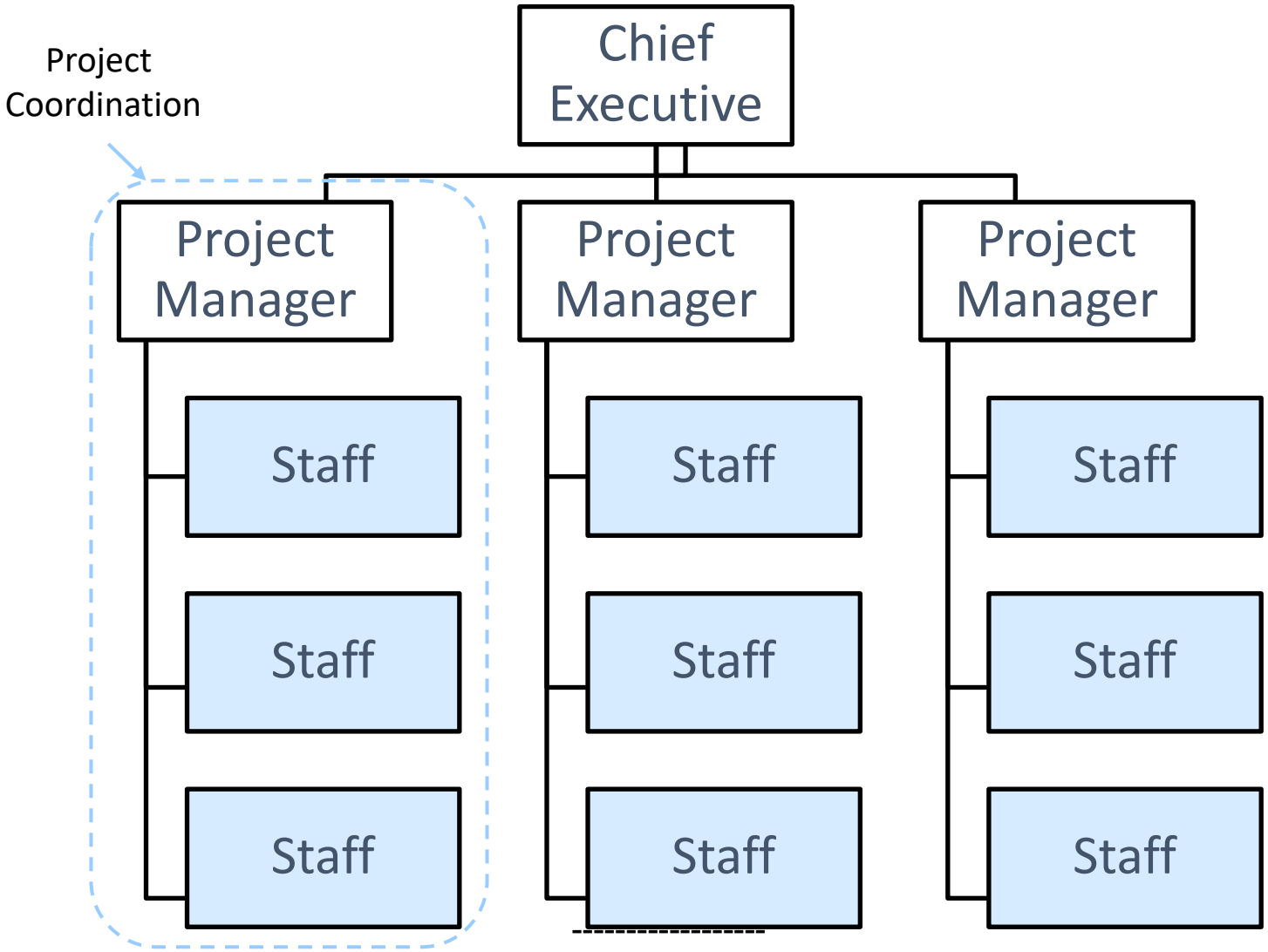
- An organizational structure refers to the formal system of authority, communication, and roles that defines how an organization functions and operates.
  - It determines how people are grouped together and how resources are allocated to achieve the organization's goals and objectives.
  - An organization's structure can influence its culture, decision-making, and overall effectiveness.
- There are three main types:
  - **Functional**: A traditional hierarchical organization, sometimes thought of as resembling a pyramid, with top management at the fulcrum, direct workers at the bottom, and middle managers in between
  - **Projectized**: A type of organization structure where people from different functional backgrounds work with each other throughout the lifetime of the project
  - **Matrix**: A type of organization structure that typically crosses functional design (on one axis) with some other design characteristic (on the other axis)

A functional organization structure



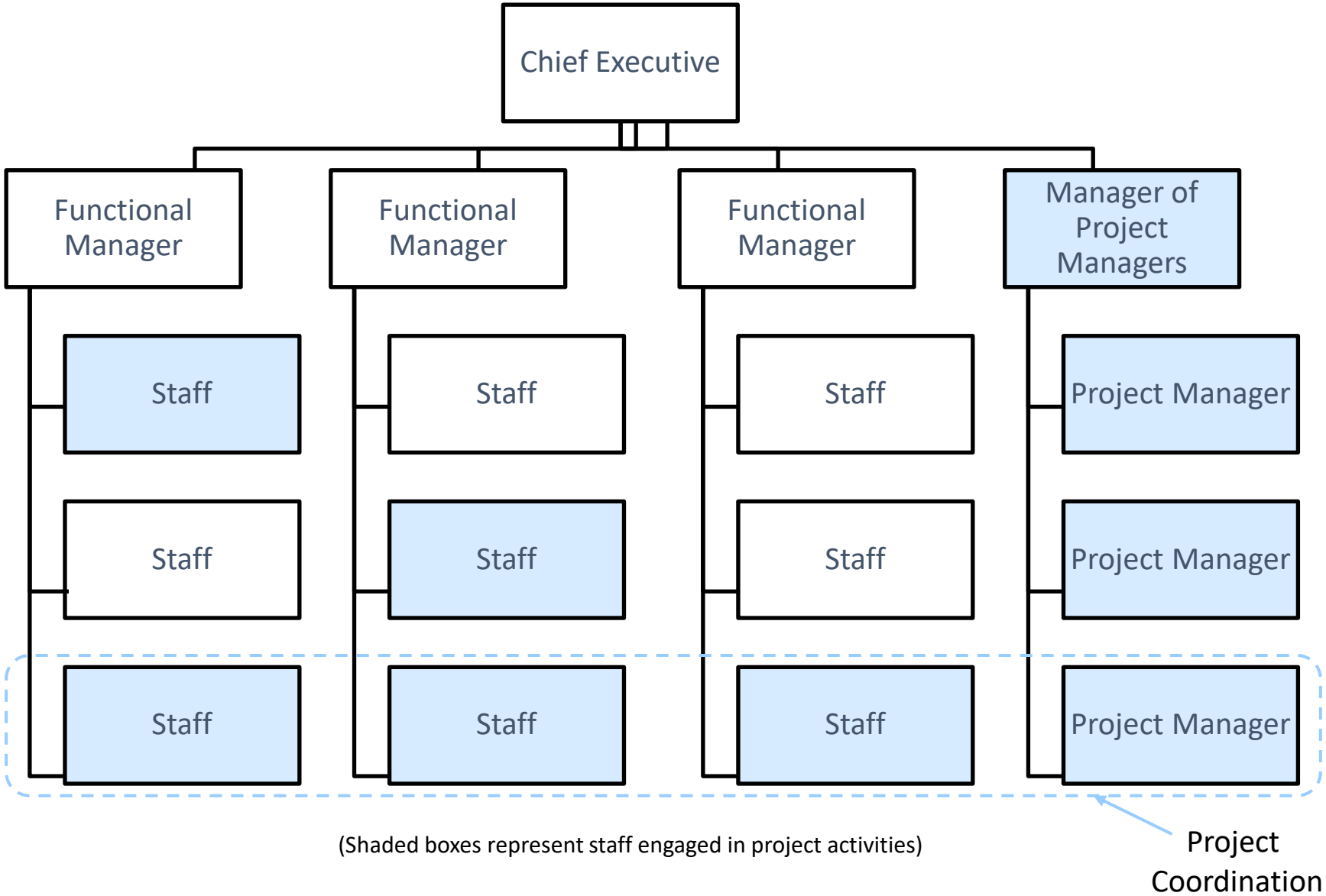
(Shaded boxes represent staff engaged in project activities)

Project-oriented organization structure



(Shaded boxes represent staff engaged in project activities)

Strong matrix organization structure



Organization Structure Comparison

Organization Structure / Project Characteristics	*Functional*	*Matrix*			*Projectized*
		Weak Matrix	**Balanced Matrix**	**Strong Matrix**	
Project Manager's Authority	Little or None	Limited	Low to Moderate	Moderate to High	High to Almost Total
Resource Availability	Little or None	Limited	Low to Moderate	Moderate to High	High to Almost Total
Who Controls the Project Budget	Functional Manager	Functional Manager	Mixed	Project Manager	Project Manager
Project Manager's Role	Part-time	Part-time	Full-time	Full-time	Full-time
Project Management Administrative Staff	Part-time	Part-time	Part-time	Full-time	Full-time

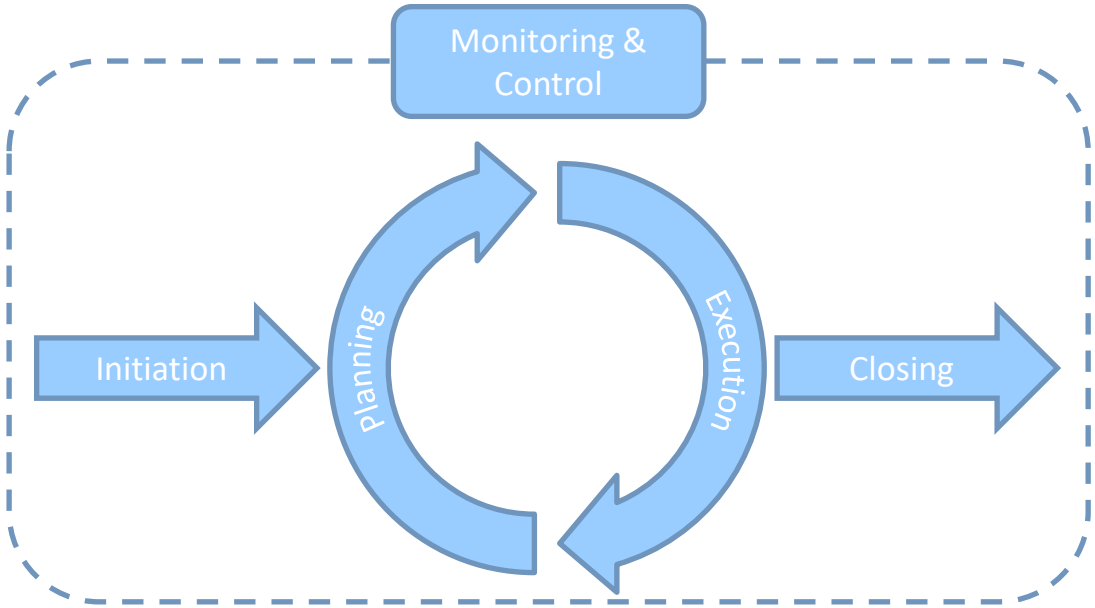
Project Management Processes

- Process – "*a series of continuous actions that bring about a particular result, end or condition*"
- PMBOK Process Groups
  - Initiate
  - Plan
  - Execute
  - Monitor and Control
  - Close

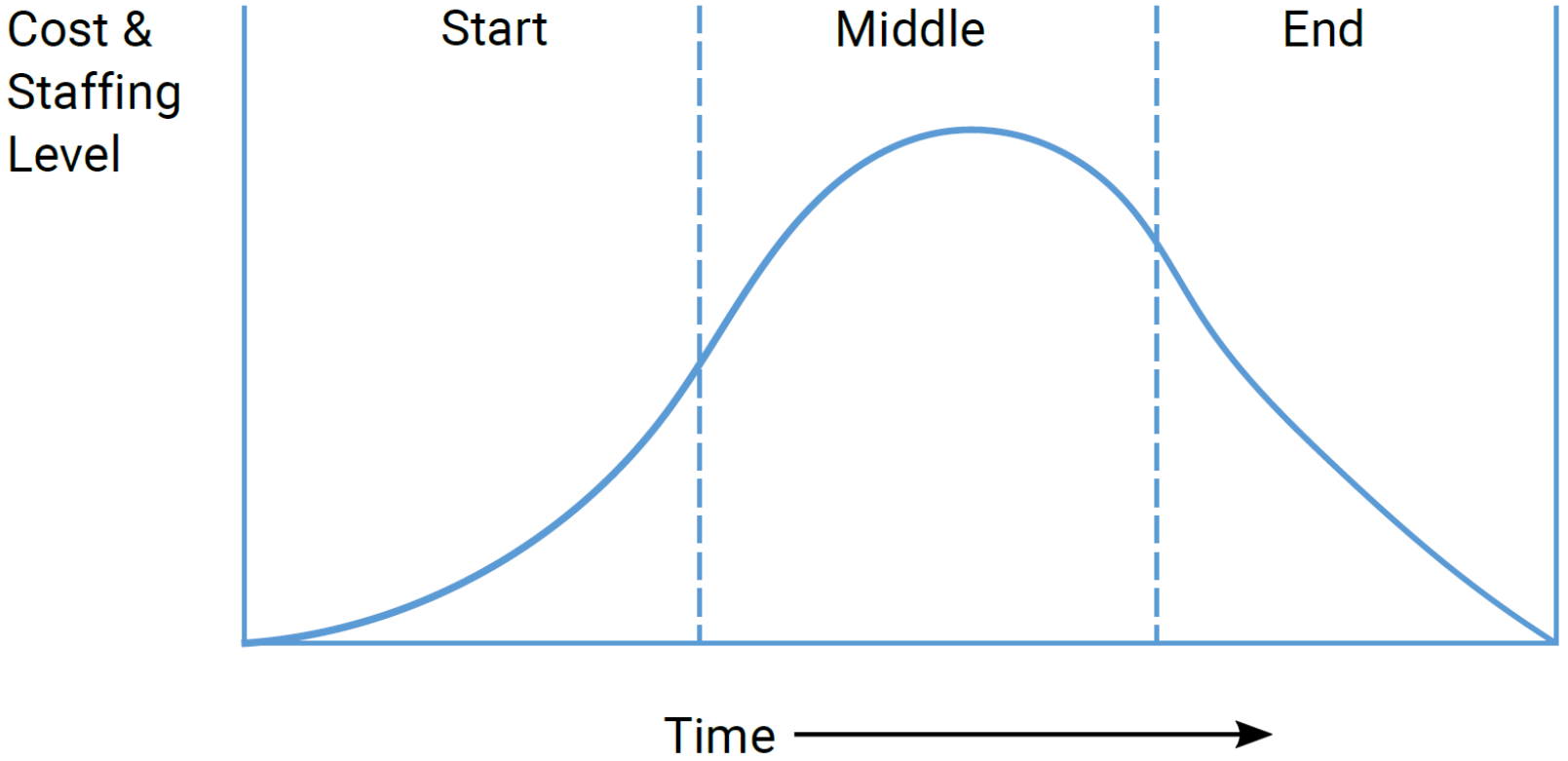
Project Management Processes

- **Initiating:** This process involves defining the project objectives, scope, and stakeholders. It also involves identifying the resources needed to complete the project and creating a high-level project plan.
- **Planning:** This process involves creating a detailed project plan that includes the scope, schedule, budget, quality requirements, and risk management plan. It also involves identifying the resources needed to complete the project and developing a communication plan.
- **Executing:** This process involves implementing the project plan and completing the work required to deliver the project. It involves managing the project team, communicating with stakeholders, and monitoring progress.
- **Monitoring and Controlling:** This process involves tracking the project's progress against the project plan, identifying any deviations from the plan, and implementing corrective actions. It also involves managing changes to the project scope, schedule, and budget.
- **Closing:** This process involves formally closing the project and ensuring that all deliverables have been completed, stakeholders have been satisfied, and all project documentation has been archived.

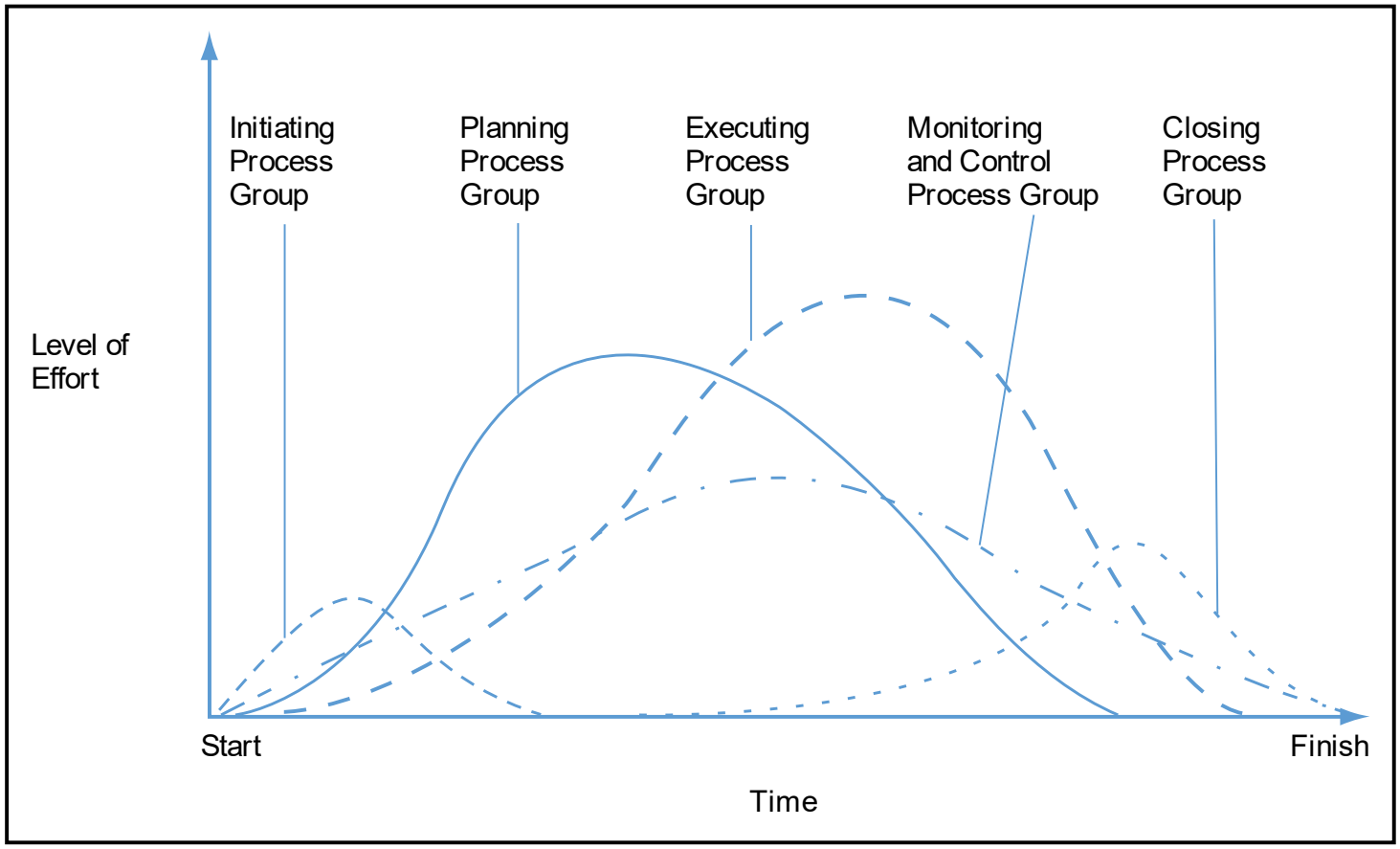
Links among process groups in a project phase



Generic life cycle



Overlap of process groups in a project phase



Project Manager Roles (Desired Traits)

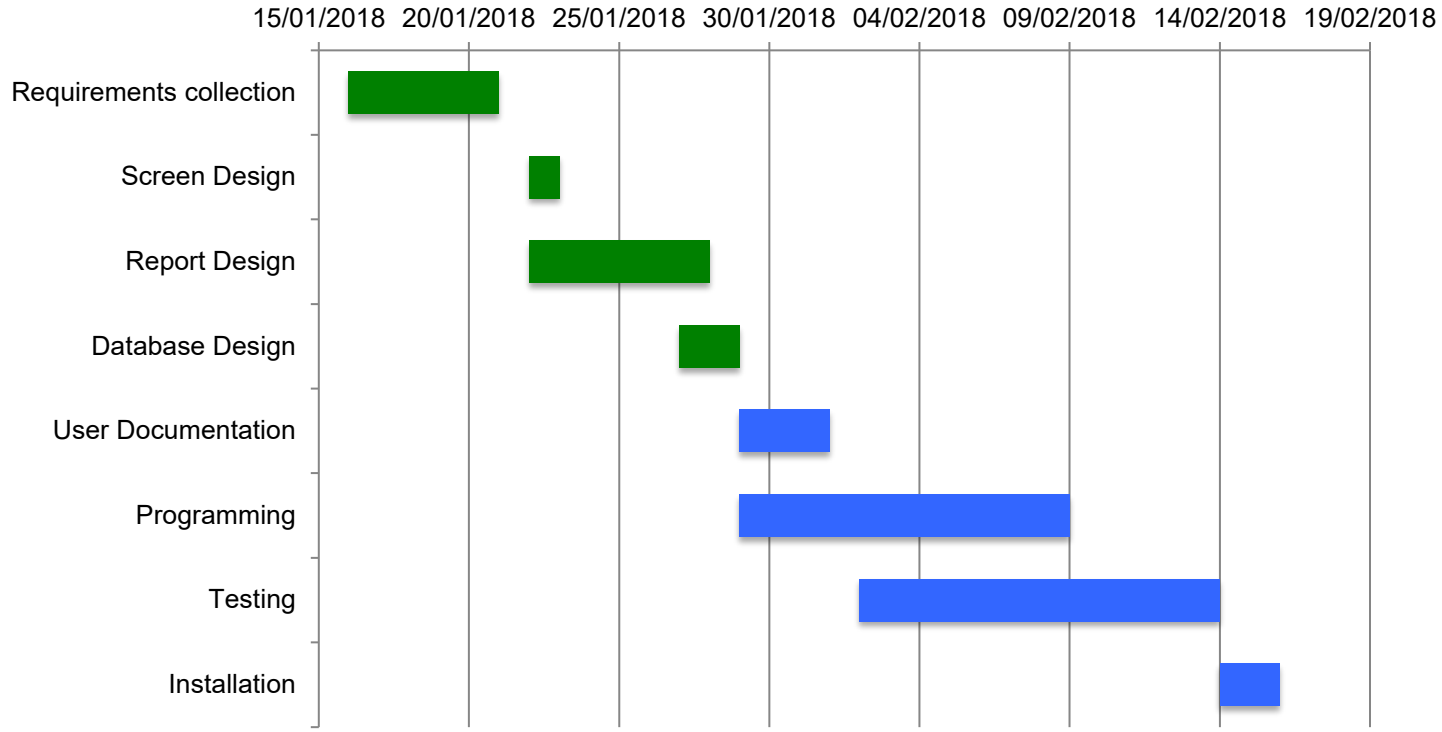
- Leader
- Communicator
- Negotiator
- Problem solver
- Influencer
- Motivator

Project Management Tools & Techniques

- Gantt Charts
  - Duration, beginning and ending of tasks
  - Overlap of tasks
  - Slack time
- Network Diagrams
  - Sequence of activities
  - Task dependencies
  - Slack time

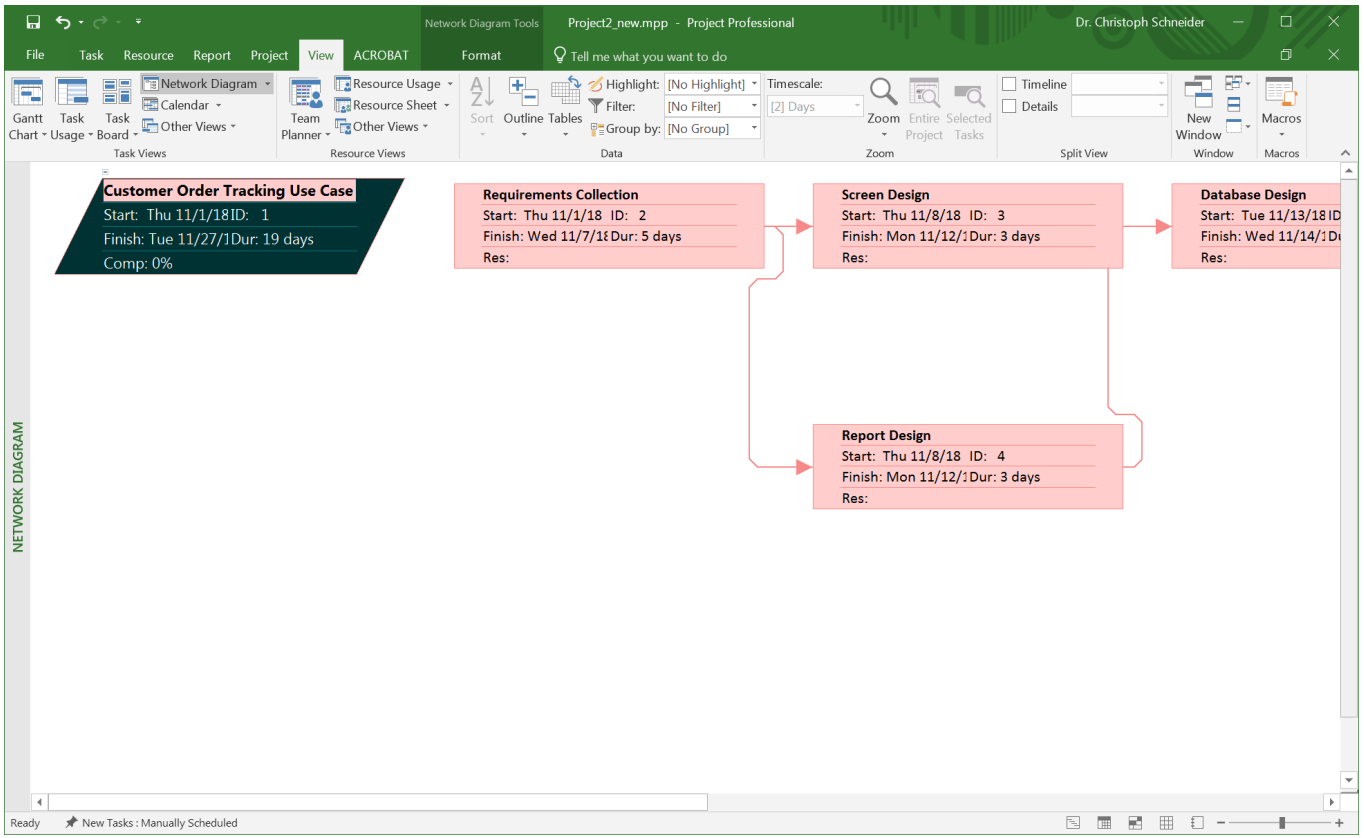
Gantt Chart

- A Gantt chart shows the start and end dates of project tasks, as well as their dependencies, which means that some tasks can only be started after others have been completed.



Network Diagram

- A network diagram is a graphical representation of the project schedule that uses boxes or nodes to represent project tasks and arrows to represent the dependencies between the tasks. The purpose of a network diagram is to help project managers visualize the sequence of tasks and their relationships in a project.



Critical Path Method (CPM)

- The sequence of task activities whose order and durations directly affect the completion date of a project
- The critical path represents the *shortest* time in which a project can be completed
- Forward/backward passes used to determine slack time

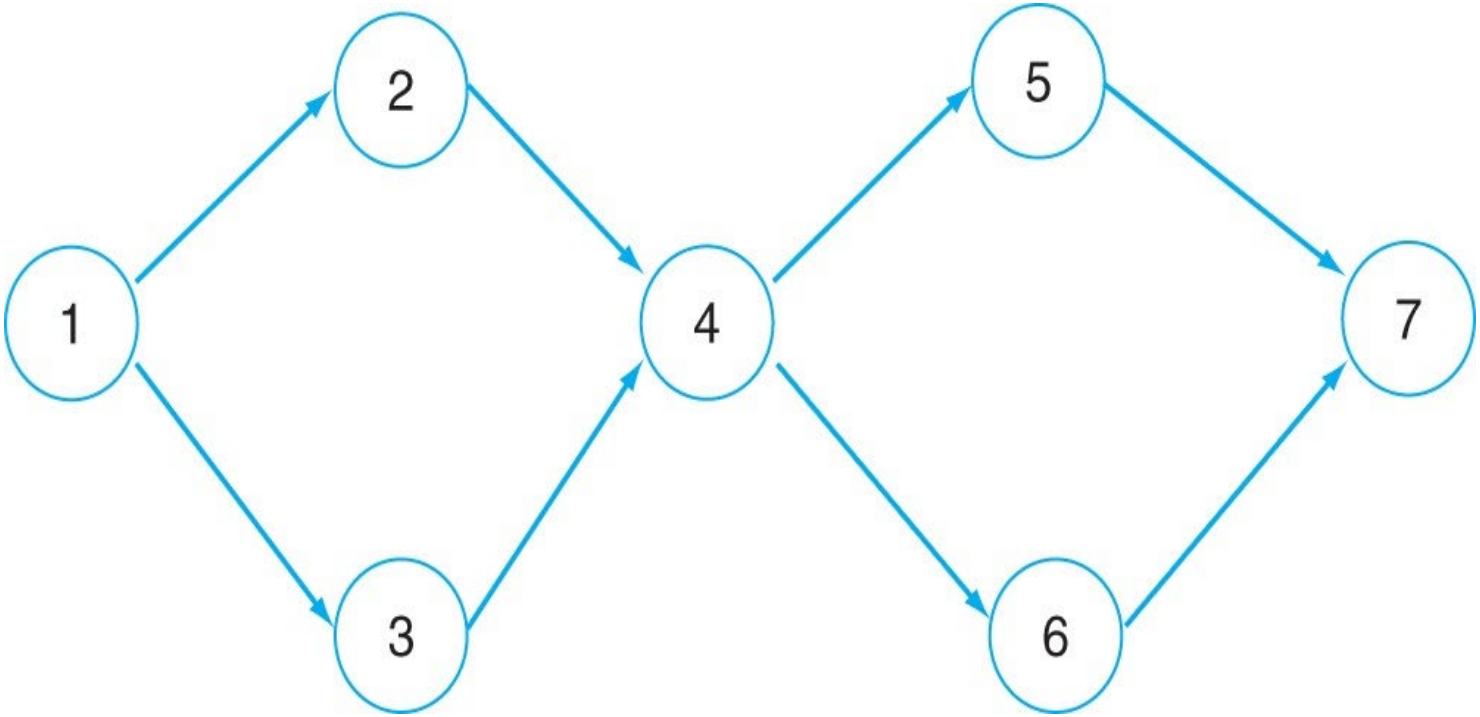
Critical Path Method (CPM) Steps

1. Identify project tasks: Identify all the tasks that are required to complete the project.
2. Determine task dependencies: Determine the relationships between the tasks and identify the predecessors and successors of each task.
3. Determine task duration: Estimate the time required to complete each task.
4. Create the network diagram: Use the task information to create a network diagram that represents the project schedule.
5. Calculate the critical path: Determine the critical path of the project by identifying the longest sequence of tasks that must be completed on time.
6. Determine the project duration: Calculate the project duration based on the critical path and the estimated duration of the tasks.

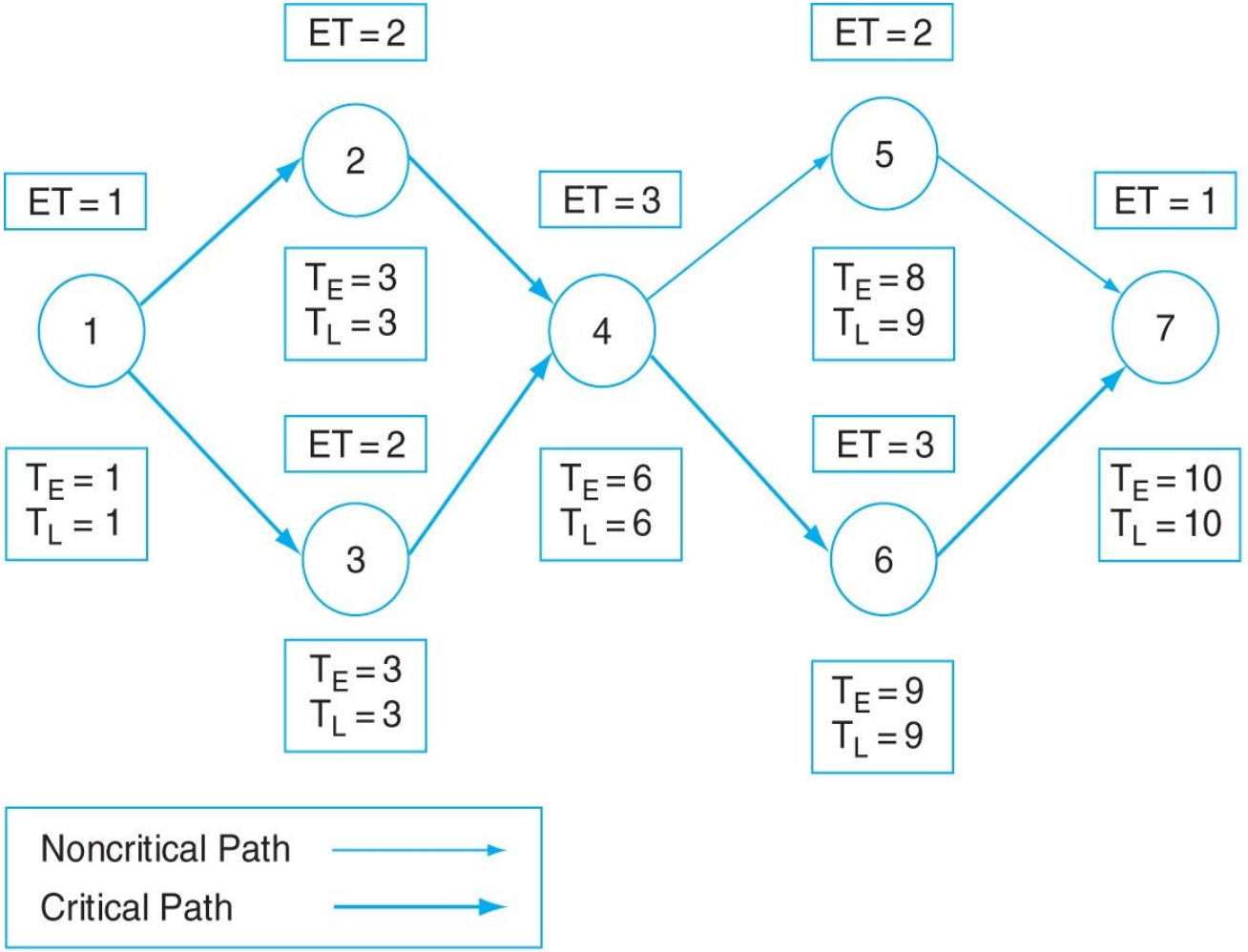
Slack Time

- Free slack – amount of time a task can be delayed without delaying the early start of subsequent task(s)
- Total slack – amount of time a task can be delayed without delaying the completion of the project

Network Diagram



Network Diagram's Critical Path



Program Evaluation Review Technique (PERT)

- Technique that calculates the expected time of a task
- Uses optimistic, pessimistic and realistic time estimates
- ET = (o + 4r + p)/6

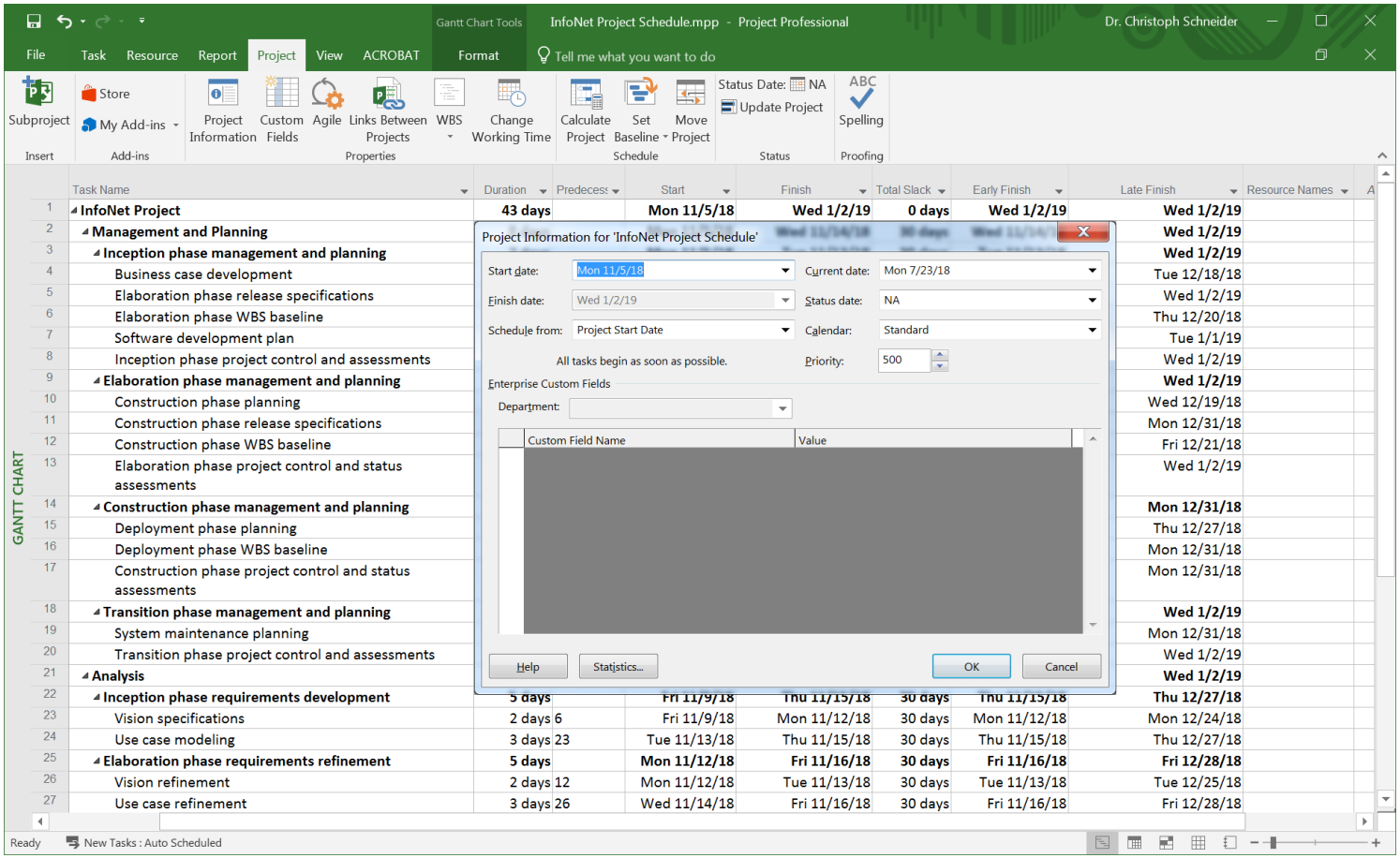
Program Evaluation Review Technique (PERT)

Activity	Predecessor	Time estimates			Expected time
		Optimistic (o)	Real (r)	Pessimistic (p)	
A	—	2	4	6	4.00
B	—	3	5	9	5.33
C	A	4	5	7	5.17
D	A	4	6	10	6.33
E	B, C	4	5	7	5.17
F	D	3	4	8	4.50
G	E	3	5	8	5.17

Microsoft Project

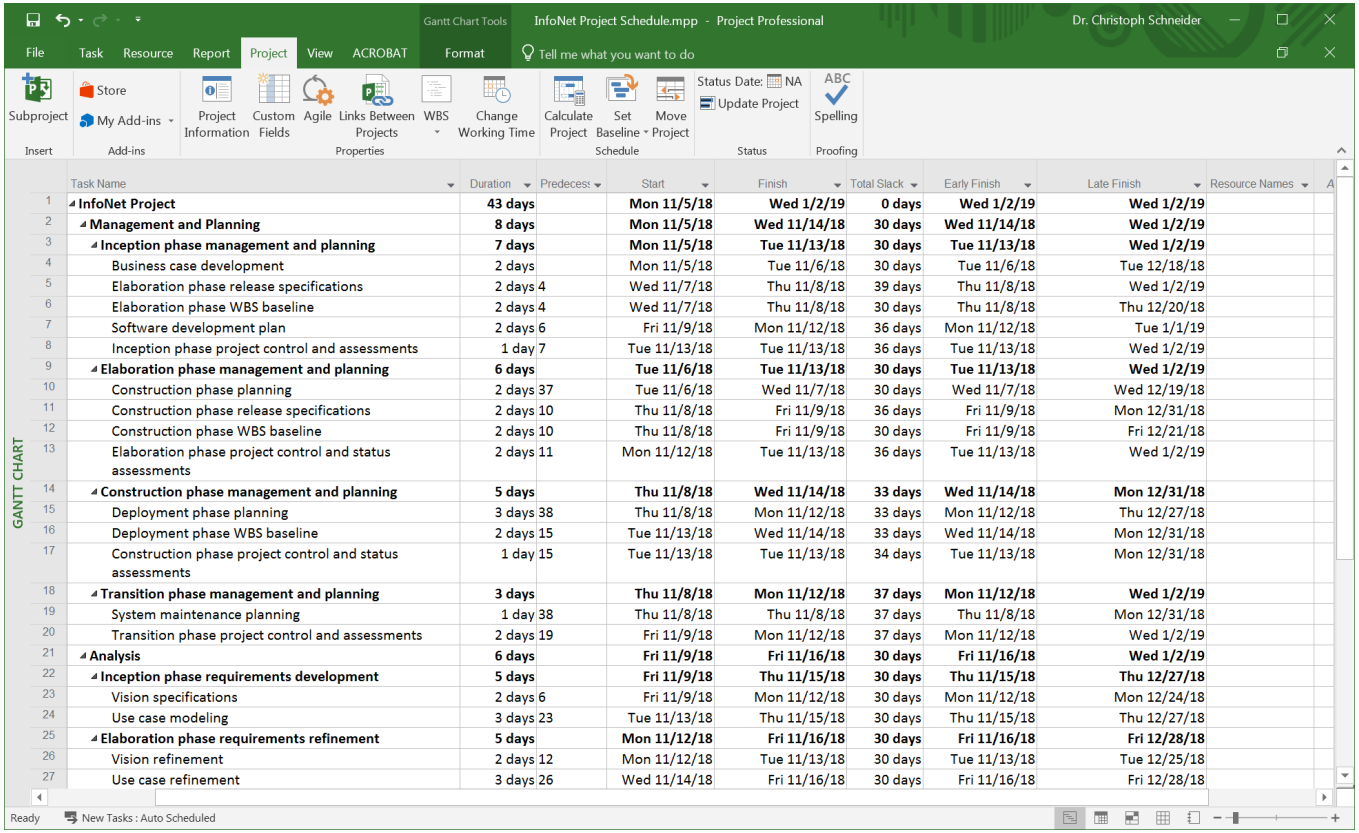
- Most popular of project management tools
- Required
  - Project start and/or end date
  - Project tasks and task relationships
  - Preferred schedule method

Setting the Starting Date in Microsoft Project



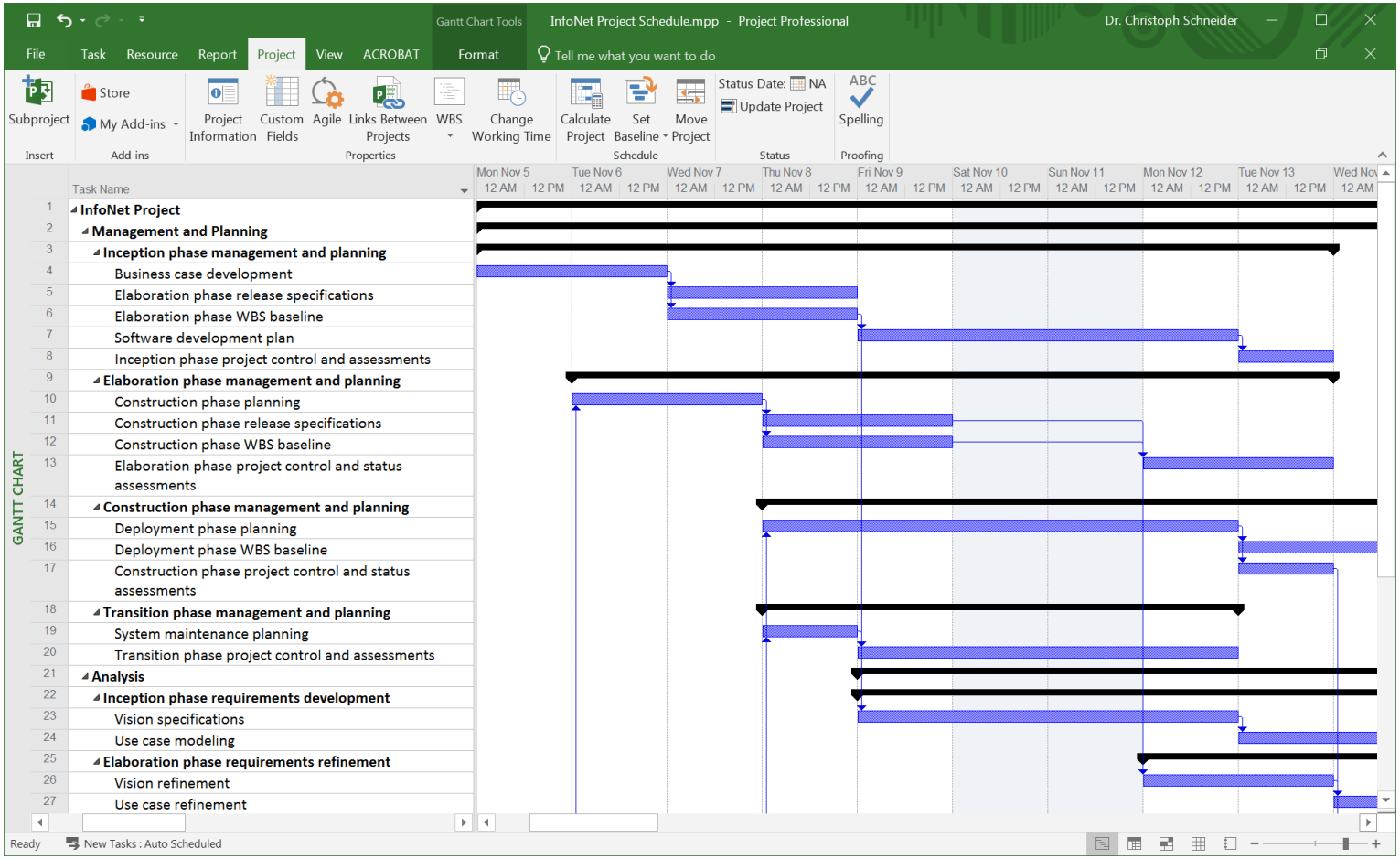
	Task Name	Duration	Predecess	Start	Finish	Total Slack	Early Finish	Late Finish	Resource Names
1	**InfoNet Project**	**43 days**		**Mon 11/5/18**	**Wed 1/2/19**	**0 days**	**Wed 1/2/19**	**Wed 1/2/19**	
2	**Management and Planning**							**Wed 1/2/19**	
3	**Inception phase management and planning**							**Wed 1/2/19**	
4	Business case development							Tue 12/18/18	
5	Elaboration phase release specifications							Wed 1/2/19	
6	Elaboration phase WBS baseline							Thu 12/20/18	
7	Software development plan							Tue 1/1/19	
8	Inception phase project control and assessments							Wed 1/2/19	
9	**Elaboration phase management and planning**							**Wed 1/2/19**	
10	Construction phase planning							Wed 12/19/18	
11	Construction phase release specifications							Mon 12/31/18	
12	Construction phase WBS baseline							Fri 12/21/18	
13	Elaboration phase project control and status assessments							Wed 1/2/19	
14	**Construction phase management and planning**							**Mon 12/31/18**	
15	Deployment phase planning							Thu 12/27/18	
16	Deployment phase WBS baseline							Mon 12/31/18	
17	Construction phase project control and status assessments							Mon 12/31/18	
18	**Transition phase management and planning**							**Wed 1/2/19**	
19	System maintenance planning							Mon 12/31/18	
20	Transition phase project control and assessments							Wed 1/2/19	
21	**Analysis**							**Wed 1/2/19**	
22	**Inception phase requirements development**	**5 days**		**Fri 11/9/18**	**Thu 11/15/18**	**30 days**	**Thu 11/15/18**	**Thu 12/27/18**	
23	Vision specifications	2 days	6	Fri 11/9/18	Mon 11/12/18	30 days	Mon 11/12/18	Mon 12/24/18	
24	Use case modeling	3 days	23	Tue 11/13/18	Thu 11/15/18	30 days	Thu 11/15/18	Thu 12/27/18	
25	**Elaboration phase requirements refinement**	**5 days**		**Mon 11/12/18**	**Fri 11/16/18**	**30 days**	**Fri 11/16/18**	**Fri 12/28/18**	
26	Vision refinement	2 days	12	Mon 11/12/18	Tue 11/13/18	30 days	Tue 11/13/18	Tue 12/25/18	
27	Use case refinement	3 days	26	Wed 11/14/18	Fri 11/16/18	30 days	Fri 11/16/18	Fri 12/28/18	

Entering Tasks in Microsoft Project

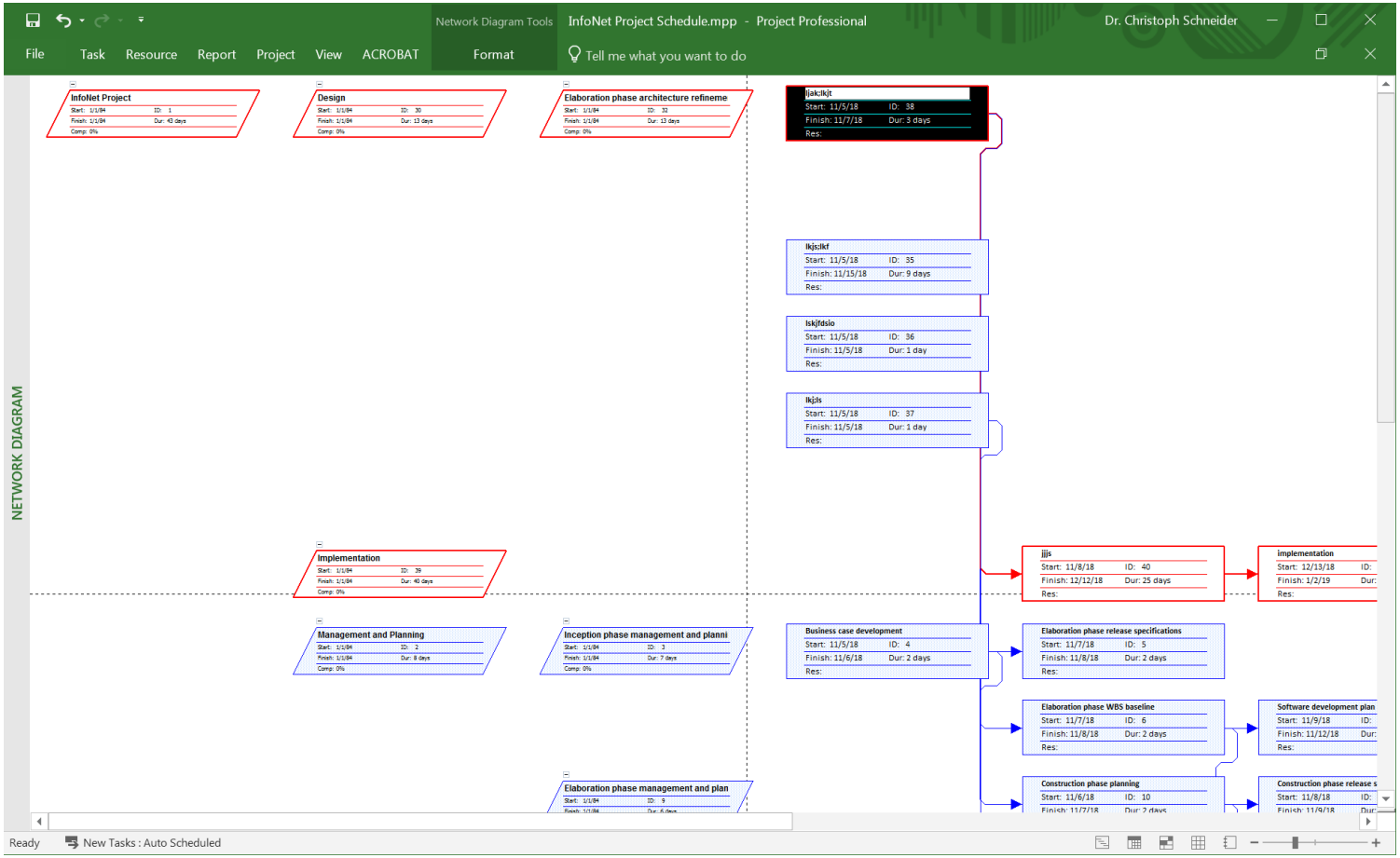


	Task Name	Duration	Predecess	Start	Finish	Total Slack	Early Finish	Late Finish	Resource Names
1	**InfoNet Project**	**43 days**		**Mon 11/5/18**	**Wed 1/2/19**	**0 days**	**Wed 1/2/19**	**Wed 1/2/19**	
2	**Management and Planning**	**8 days**		**Mon 11/5/18**	**Wed 11/14/18**	**30 days**	**Wed 11/14/18**	**Wed 1/2/19**	
3	**Inception phase management and planning**	**7 days**		**Mon 11/5/18**	**Tue 11/13/18**	**30 days**	**Tue 11/13/18**	**Wed 1/2/19**	
4	Business case development	2 days		Mon 11/5/18	Tue 11/6/18	30 days	Tue 11/6/18	Tue 12/18/18	
5	Elaboration phase release specifications	2 days	4	Wed 11/7/18	Thu 11/8/18	39 days	Thu 11/8/18	Wed 1/2/19	
6	Elaboration phase WBS baseline	2 days	4	Wed 11/7/18	Thu 11/8/18	30 days	Thu 11/8/18	Thu 12/20/18	
7	Software development plan	2 days	6	Fri 11/9/18	Mon 11/12/18	36 days	Mon 11/12/18	Tue 1/1/19	
8	Inception phase project control and assessments	1 day	7	Tue 11/13/18	Tue 11/13/18	36 days	Tue 11/13/18	Wed 1/2/19	
9	**Elaboration phase management and planning**	**6 days**		**Tue 11/6/18**	**Tue 11/13/18**	**30 days**	**Tue 11/13/18**	**Wed 1/2/19**	
10	Construction phase planning	2 days	37	Tue 11/6/18	Wed 11/7/18	30 days	Wed 11/7/18	Wed 12/19/18	
11	Construction phase release specifications	2 days	10	Thu 11/8/18	Fri 11/9/18	36 days	Fri 11/9/18	Mon 12/31/18	
12	Construction phase WBS baseline	2 days	10	Thu 11/8/18	Fri 11/9/18	30 days	Fri 11/9/18	Fri 12/21/18	
13	Elaboration phase project control and status assessments	2 days	11	Mon 11/12/18	Tue 11/13/18	36 days	Tue 11/13/18	Wed 1/2/19	
14	**Construction phase management and planning**	**5 days**		**Thu 11/8/18**	**Wed 11/14/18**	**33 days**	**Wed 11/14/18**	**Mon 12/31/18**	
15	Deployment phase planning	3 days	38	Thu 11/8/18	Mon 11/12/18	33 days	Mon 11/12/18	Thu 12/27/18	
16	Deployment phase WBS baseline	2 days	15	Tue 11/13/18	Wed 11/14/18	33 days	Wed 11/14/18	Mon 12/31/18	
17	Construction phase project control and status assessments	1 day	15	Tue 11/13/18	Tue 11/13/18	34 days	Tue 11/13/18	Mon 12/31/18	
18	**Transition phase management and planning**	**3 days**		**Thu 11/8/18**	**Mon 11/12/18**	**37 days**	**Mon 11/12/18**	**Wed 1/2/19**	
19	System maintenance planning	1 day	38	Thu 11/8/18	Thu 11/8/18	37 days	Thu 11/8/18	Mon 12/31/18	
20	Transition phase project control and assessments	2 days	19	Fri 11/9/18	Mon 11/12/18	37 days	Mon 11/12/18	Wed 1/2/19	
21	**Analysis**	**6 days**		**Fri 11/9/18**	**Fri 11/16/18**	**30 days**	**Fri 11/16/18**	**Wed 1/2/19**	
22	**Inception phase requirements development**	**5 days**		**Fri 11/9/18**	**Thu 11/15/18**	**30 days**	**Thu 11/15/18**	**Thu 12/27/18**	
23	Vision specifications	2 days	6	Fri 11/9/18	Mon 11/12/18	30 days	Mon 11/12/18	Mon 12/24/18	
24	Use case modeling	3 days	23	Tue 11/13/18	Thu 11/15/18	30 days	Thu 11/15/18	Thu 12/27/18	
25	**Elaboration phase requirements refinement**	**5 days**		**Mon 11/12/18**	**Fri 11/16/18**	**30 days**	**Fri 11/16/18**	**Fri 12/28/18**	
26	Vision refinement	2 days	12	Mon 11/12/18	Tue 11/13/18	30 days	Tue 11/13/18	Tue 12/25/18	
27	Use case refinement	3 days	26	Wed 11/14/18	Fri 11/16/18	30 days	Fri 11/16/18	Fri 12/28/18	

Gantt Chart in Microsoft Project



Network Diagram in Microsoft Project



Project Management Office (PMO)

- An organizational unit created to centralize and coordinate the projects within an organization
- Function varies among organizations

Project Management Body of Knowledge (PMBOK)

- Standards and Regulations
  - Standard: "document approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or characteristics for products, processes, or services with which compliance is *not mandatory*"*
  - Regulation: "document, which lays down product, process, or service characteristics, including the applicable administrative provisions, with which compliance is *mandatory*"*

    *ISO 1994

PMBOK

- Internationalization
  - Dispersed project team members
  - Time zones
  - Political differences

PMBOK (cont.)

- Cultural Differences
  - Politics
  - Economics
  - Ethnic origins
  - Demographics
  - Religion

PMBOK (cont.)

- Social-Economic-Environmental Sustainability
  - Lasting positive/negative system's impact
  - Accountability by organization

Questions?

Introduction to Project Management

Chapter 3
Managing Project Teams

Information Systems Project Management: A Process and Team Approach, 1e
Fuller/Valacich/George

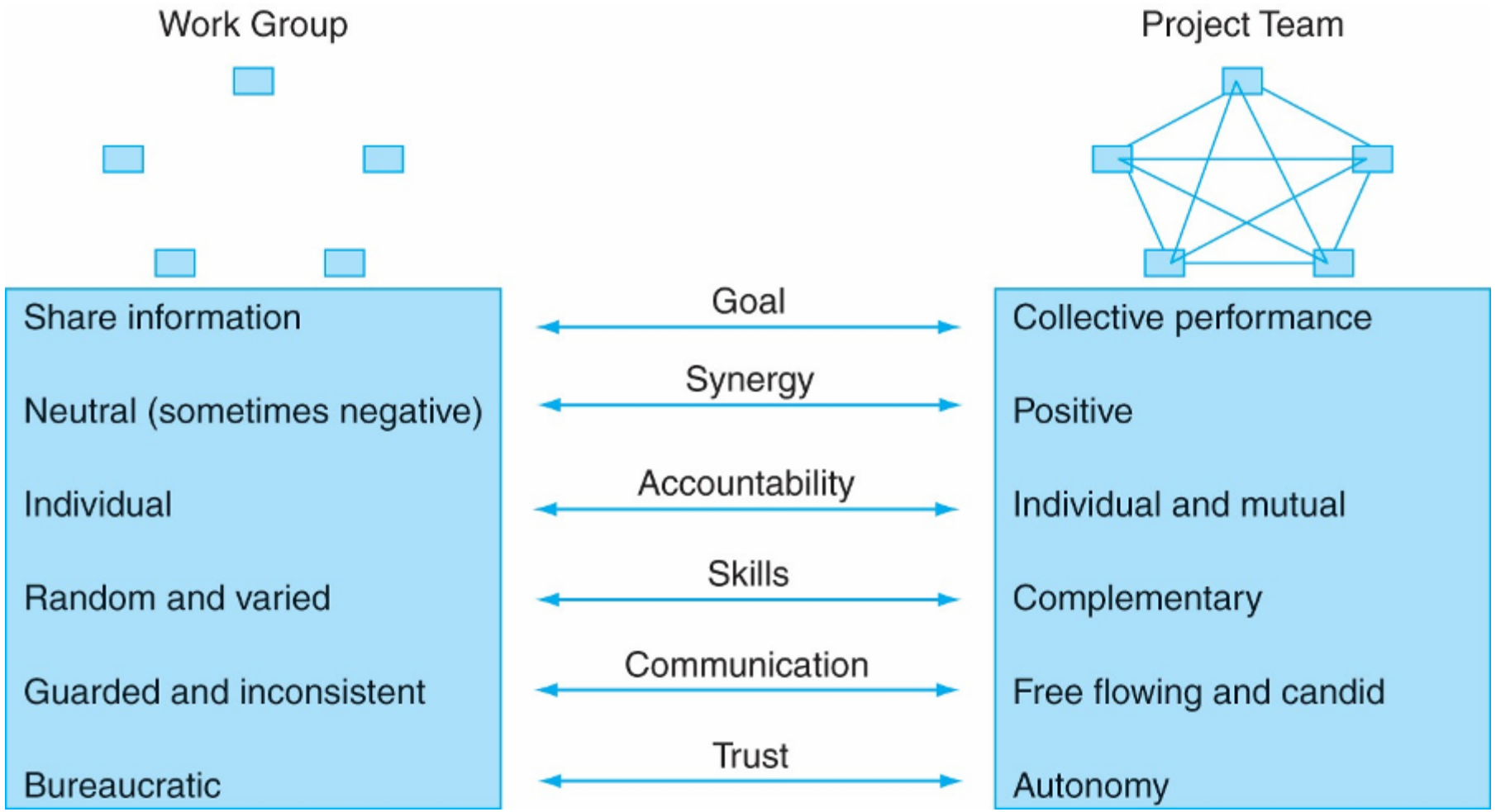
Agenda

- What is project team?
- Motivating team members
- Leadership, Power and Conflict in Project Teams
- Managing Global Project Teams

Facts

- Most important and expensive component of a project are those involved directly or indirectly with the project
- Quality and time estimates depend on the effectiveness of the project team
- Good IT people are in short supply

Work Group Vs Project team



What is a Project Team?

- Two or more people who share the same goals, are interdependent, have complementary skills, and are mutually accountable to the organization and to each member of the team

Project Team Development Stages

- *Form*
- *Storm*
- *Norm*
- *Perform*
- *Adjourn*

Forming

- Become familiar with fellow team member(s)
- Establish team goals
- Provide work assignments

Storming

- Set goals
- Establish power levels
- Identify leadership roles

Norming

- Build interpersonal relationships with team members
- Develop a common purpose for the project
- Develop standard operating procedures

Performing

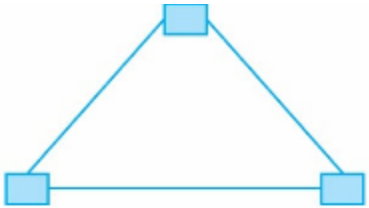
- Start project work
- Stage ends when the project is completed
- For permanent ongoing project teams this is last stage in evolution

Adjourning

- Complete project assignments
- Team members are released from the project and reassigned
- Different emotional reactions exhibited

Team communication and management complexity increase rapidly with group size

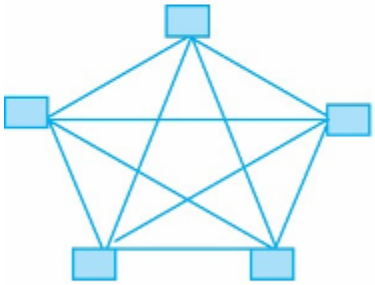
Two member teams have **1** person-to-person interfaces



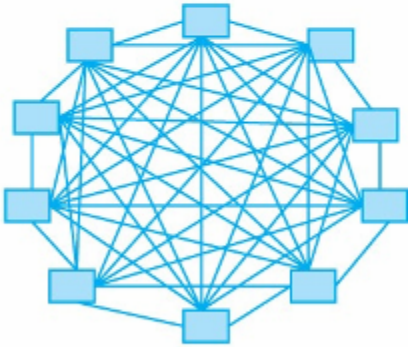
Three member teams have **3** person-to-person interfaces

Communication Interfaces = $\frac{n(n-1)}{2}$

(n = team size)

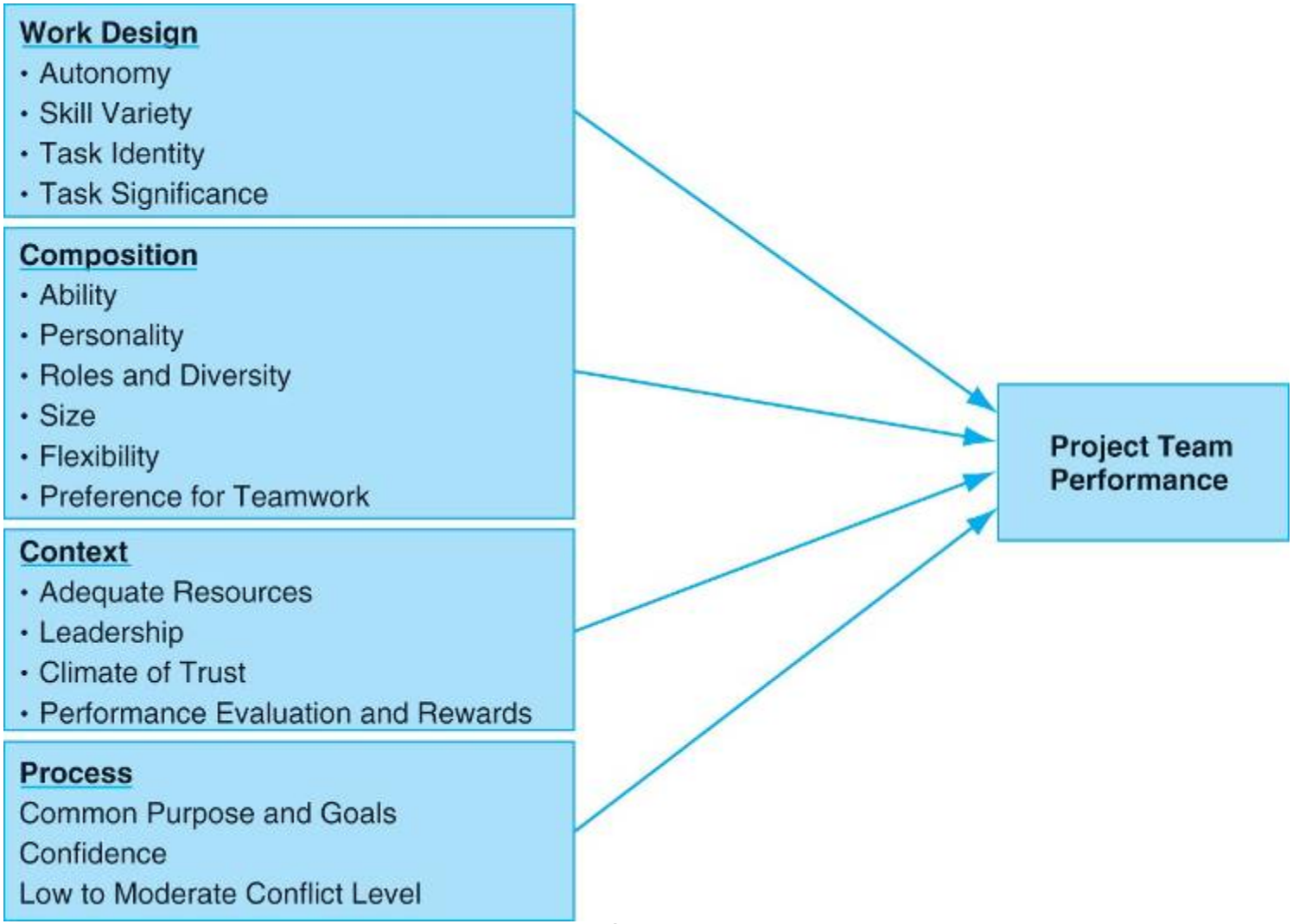


Five member teams have **10** person-to-person interfaces

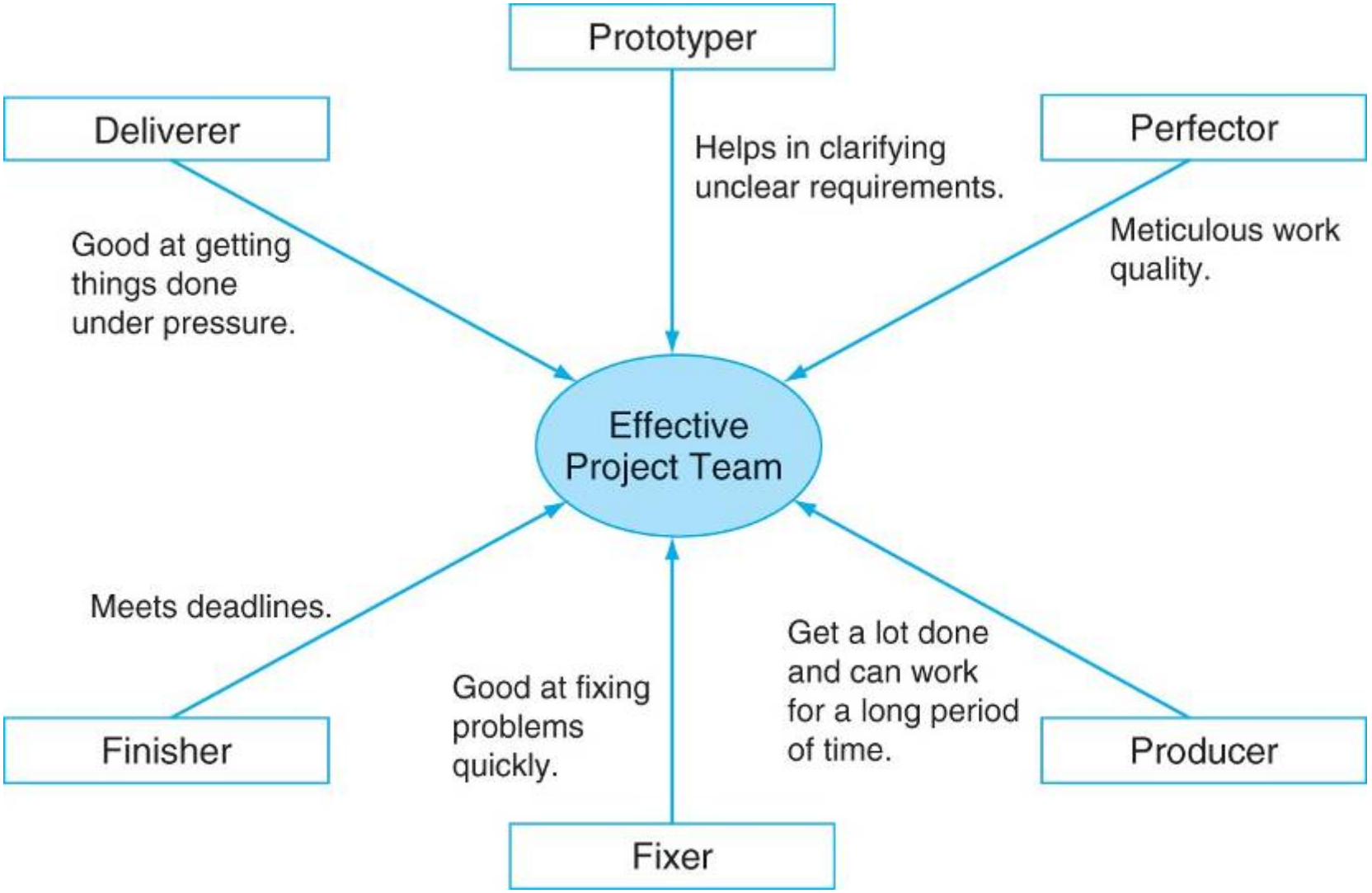


Ten member teams have **45** person-to-person interfaces

Project Team Performance Factors



Different Work Personalities



Project Team Selection

- Keep teams small and manageable
- Get the right personalities
- Embrace diversity
- Reuse successful teams
- Plan ahead to get the right people
- Use your network

Agenda

- What is project team?
- Motivating team members
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Motivation

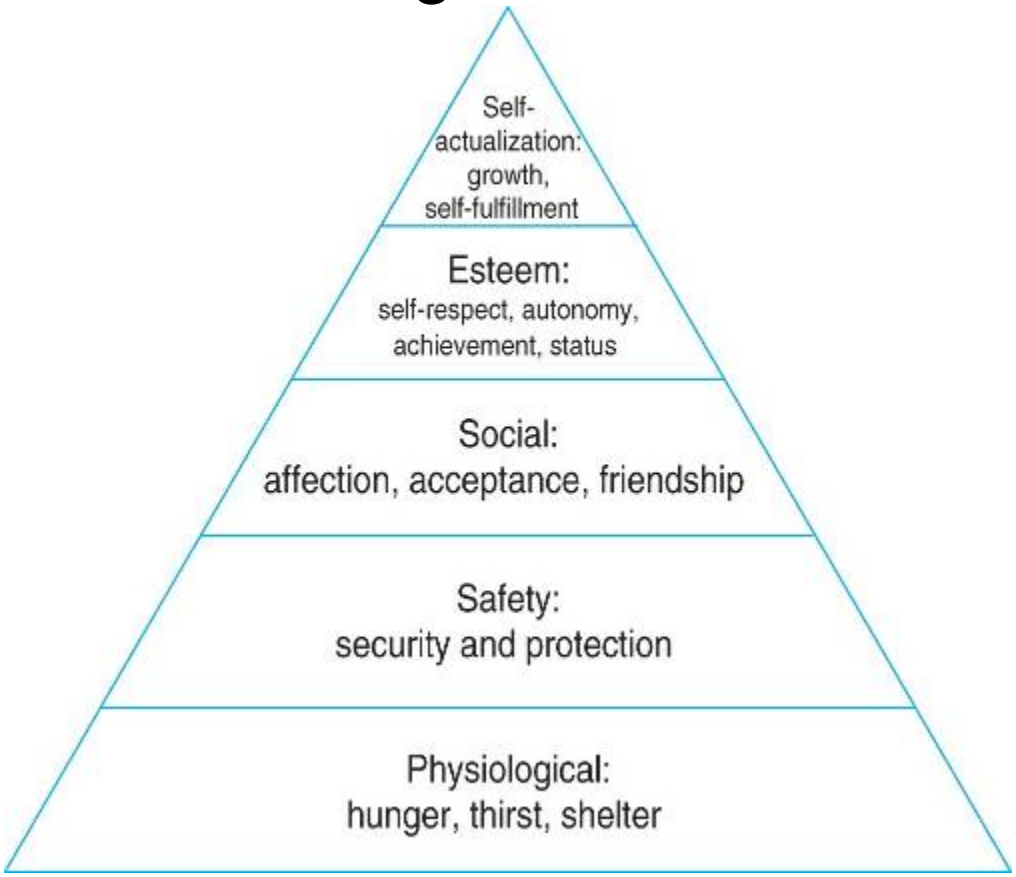
- An individual's intensity, direction, and persistence toward attaining a goal
- Individuals are motivated by different things in different ways
- An individual's level of motivation may be reflected through their:
  - Job satisfaction
  - Absenteeism
  - Turnover

Popular Theories of Motivation

- Hierarchy of Needs (Maslow)
- ERG Theory
- Two-Factor Theory
- Theory of Needs

Maslow's Hierarchy of Needs

- A hierarchy of needs – physiological, safety, social, esteem, and self-actualization – where as each need is met, the next higher-level need becomes the motivating focus



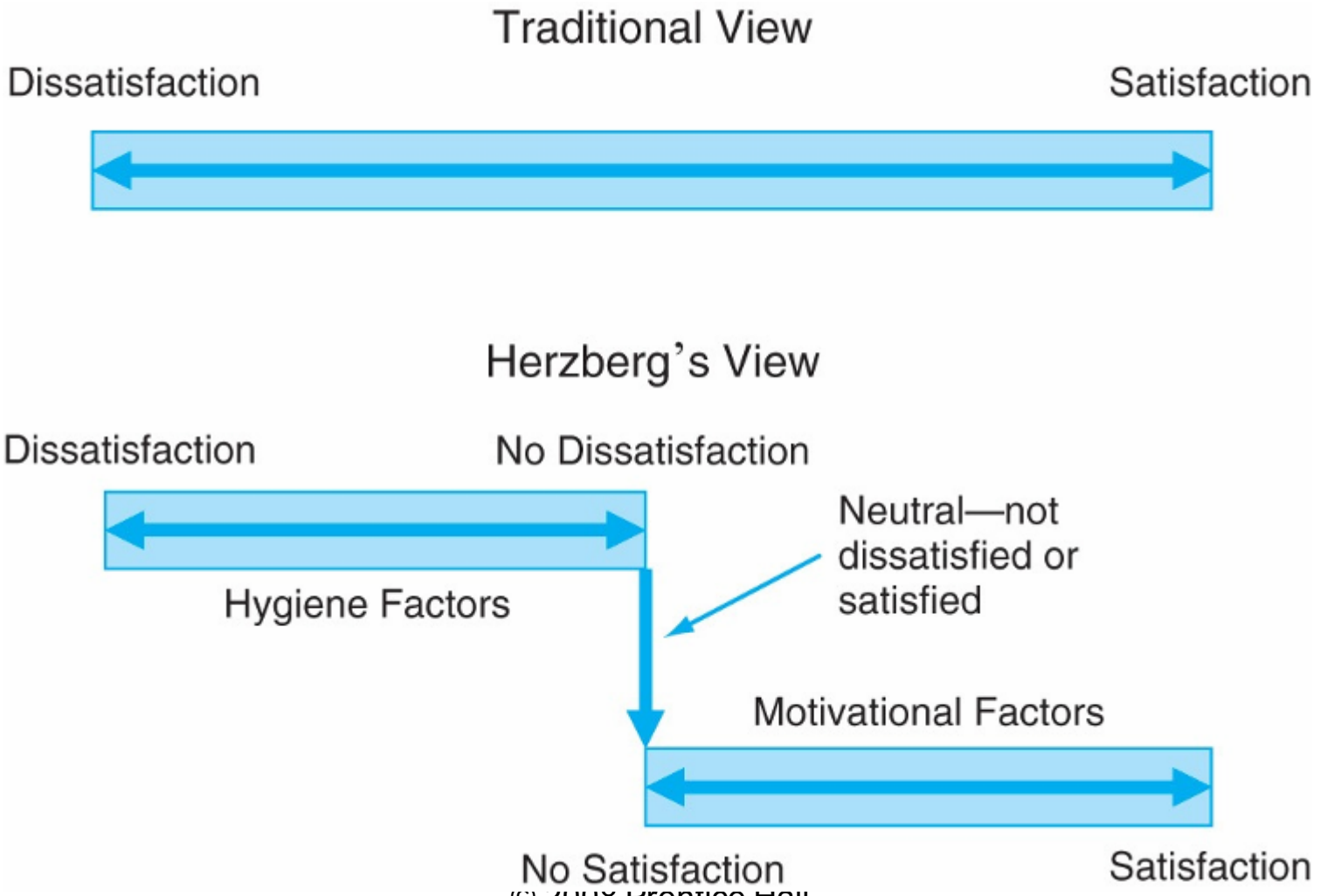
ERG Theory

- Three core needs – Existence, Relatedness, and Growth – in which more than one need may be operative at the same time and that if the fulfillment of a higher-level need is unrealized, the desire to satisfy a lower-level need becomes the motivating focus

Two-Factor Theory

- Intrinsic factors – *motivational factors* – like achievement, recognition, advancement, and responsibility are related to job satisfaction while extrinsic factors – *hygiene factors* – like salary, relationships with colleagues, and work conditions are associated with dissatisfaction

Two-Factor Theory



Two-Factor Theory

Hygiene Factors	Motivational Factors
• Company policies and administration	• Opportunity for achievement
• Relationship with supervisor, peers, and subordinates	• Opportunity for recognition
• Working conditions	• Challenges and variety of the work itself
• Salary and benefits	• Sense of responsibility
• Status	• Opportunity for advancement
• Security	• Opportunity for personal growth

Theory of Needs

- A person's motivation can be explained by their need for achievement, power, and affiliation

Process Theories of Motivation

- Theory X and Theory Y
- Theory Z
- Goal-Setting Theory
- Equity Theory
- Reinforcement Theory
- Expectancy Theory

Theory X and Theory Y

- Theory X: Assumes that people dislike work, are lazy, dislike responsibility, and must be coerced into working hard
- Theory Y: Assumes that people like work, are creative, like autonomy, and seek responsibility

Theory Z

- Reflects the Japanese work philosophy which includes a belief in lifetime employment, strong company loyalty, and group consensus

Goal-Setting Theory

- A specific and difficult goal, with clear feedback related to how well a person is doing in relation to meeting a goal, can be used to enhance a person's work productivity

Equity Theory

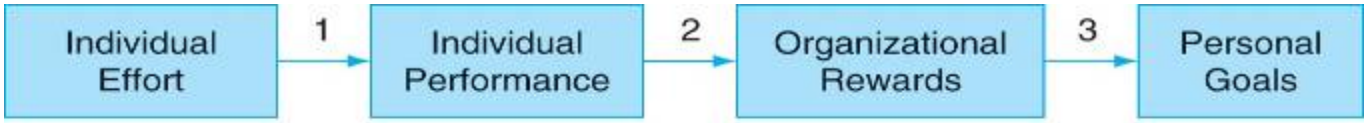
- Individuals compare their work inputs and outcomes with others and then respond to eliminate any inequities between those comparisons

Reinforcement Theory

- States that both positive and negative feedback conditions behavior
  - If desirable behavior is rewarded, it will be repeated
  - Undesirable behavior is discouraged by punishment

Expectancy Theory

- People exert a high level of effort when (1) he or she believes that effort will lead to a good performance appraisal, (2) that a good appraisal will lead to rewards, and (3) that these rewards will satisfy the person's needs



1. Effort-Performance Relationship
2. Performance-Reward Relationship
3. Rewards-Personal Goals Relationship

Motivating Team Members

- Recognize individual differences
- Use specific goals and feedback
- Allow team members to participate in decisions that affect them
- Link rewards to performance
- Check the system for equity

Agenda

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Manager vs. Leader

- *Manager*: A formal position of authority in an organization that is responsible for planning, organizing, directing, monitoring, and controlling the activities of others
- *Leader*: A person, who, by virtue of his or her personal attributes, can exert influence on others

Leadership

- The ability to influence people toward the achievement of goals
- Attributes:
  - Intelligence and competence in task and organizational activities
  - Maturity and a broad range of interests
  - Considerate interpersonal skills and respect for the needs and differences of others
  - Goal-oriented focus and a strong motivation to achieve success

Trait Theories of Leadership

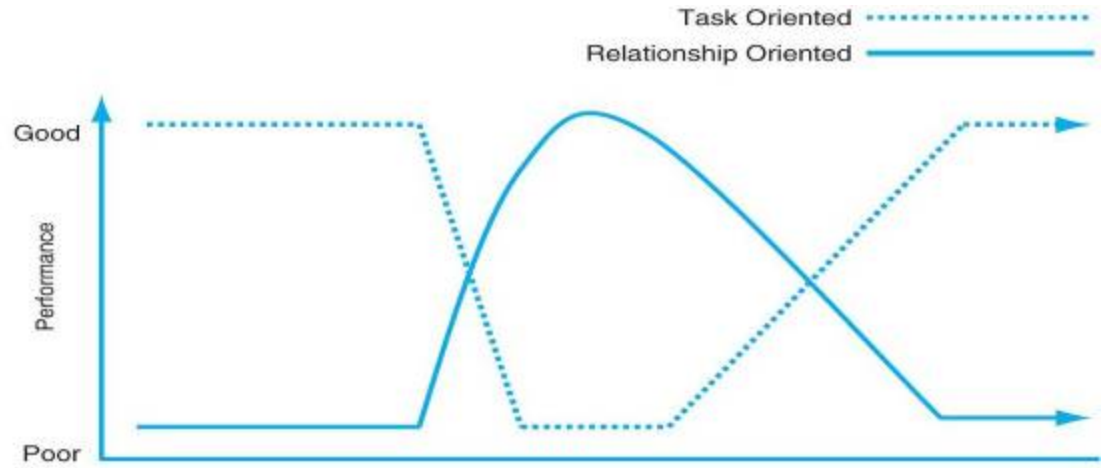
- A set of leadership theories which state that personality, appearance, competence, and other personal characteristics differentiate leaders from non-leaders

Behavioral Theories of Leadership

- Set of leadership theories which state that a person's actions determine his or her potential to be a successful leader
  - Relationship oriented
  - Task oriented

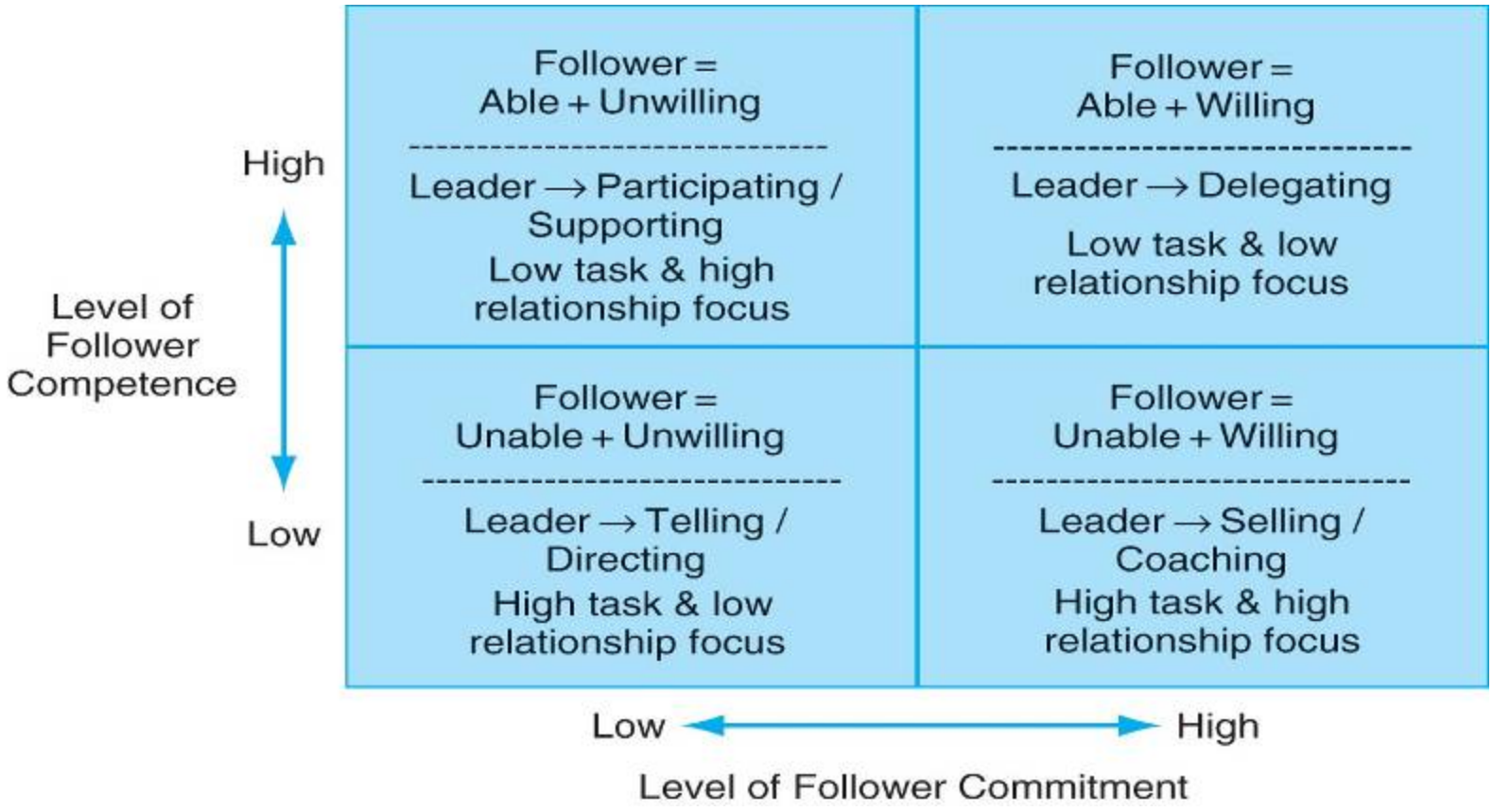
Contingency Theories of Leadership

- Set of leadership theories which state that the situation is most critical for identifying leadership success



Leader-Member Relations	Good	Good	Good	Good	Poor	Poor	Poor	Poor
Task Structure	High	High	Low	Low	High	High	Low	Low
Leader Power	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak

Situational Leadership Model (SLM)



Five Essential Practices To Effective Leadership

1. Challenging the process
2. Inspiring a shared vision
3. Enabling others to act
4. Modeling the way
5. Encouraging the heart

Power

- Absolute capacity of a person to influence the behavior or attitudes of one or more target persons at a given point in time

Positional Power & Types

- Power derived from an individual's position in an organization
  - Legitimate - position
  - Reward – distribute reward
  - Corrective - punish
  - Information – controlling information
  - Ecological – controlling physical resources as equipment and space

Positional Power & Types

- Personal Power Types:
  - *Expert power* – Influencing people based on having expertise, special skills, or knowledge (e.g., financial guru Warren Buffett)
  - *Referent power* – Influencing people based on their strong affection, admiration, or loyalty (e.g., former US Secretary of State Colin Powel)
  - *Charismatic power* – Influencing people based on having a favorable personality and interpersonal style (e.g., entertainment mogul Oprah Winfrey)

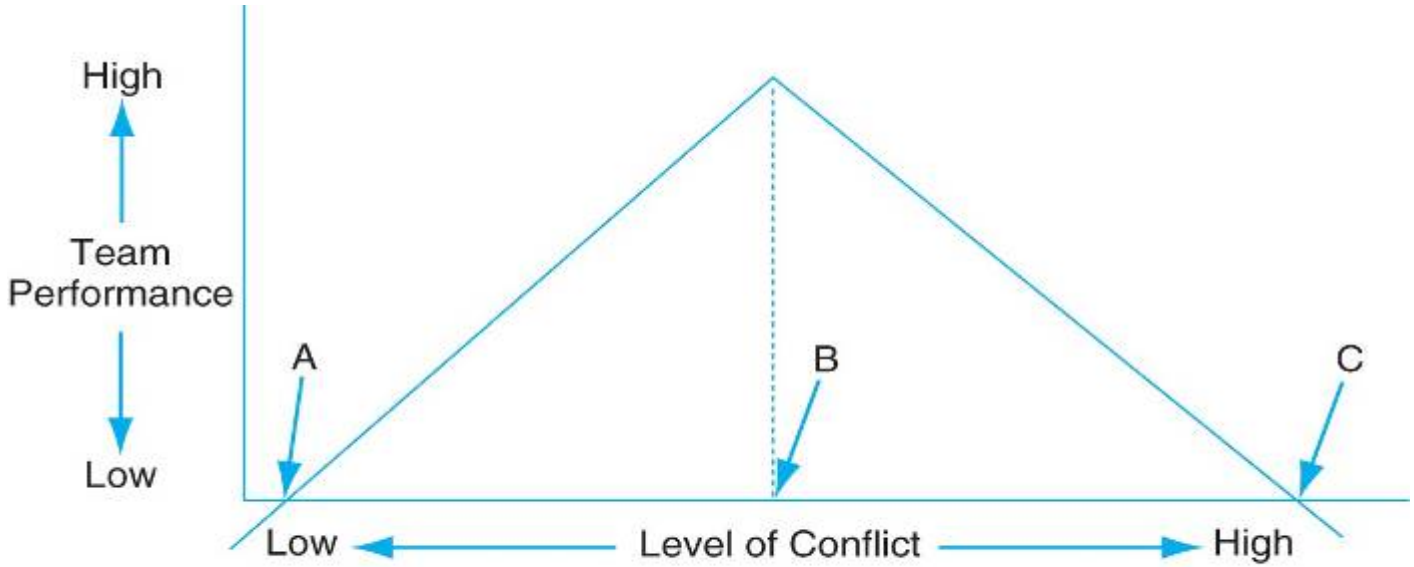
Conflict & Types

- Opposition of people in an organization from incompatible or opposing needs, drives, wishes, external or internal demands
- Types:
  - *Functional*: Conflict that supports the goals of the team and improves its performance
    - Low to moderate levels of Task or Process conflict can increase a team's performance
  - *Dysfunctional*: Conflict that hinders group performance and is destructive to team performance
    - Relationship conflict or high levels of Task or Process conflict will hinder a team's performance

Primary Causes of Conflict

- ***Schedule*** – disagreements on task duration and sequencing
- ***Project priorities*** – disagreements on project vision and scope
- ***Manpower*** – disagreement on the utilization of people, especially those simultaneously involved in multiple projects
- ***Technical*** – disagreements over system design elegance and resource limitations
- ***Administration*** – disagreements due to authority over key resources
- ***Personality*** – disagreements due to dysfunctional interpersonal interactions
- ***Cost*** – disagreements rising from increasing resource constraints as a project evolves

Conflict and Team Performance



Situation	Level of Conflict	Type of Conflict	Team's Internal Characteristics	Level of Team Performance
A	Low to None	Dysfunctional	Apathetic, Stagnant, Nonresponsive to change, Lack of new ideas	Low
B	Optimal	Functional	Viable, Self-critical, Innovative	High
C	High	Dysfunctional	Disruptive, Chaotic, Uncooperative	Low

Project Conflict Conditions

Condition	Description
Ambiguous roles, work boundaries, responsibility, and authority	Project teams often have members with different reporting structures, overlapping or conflicting responsibilities that can lead to conflict.
Inconsistent or incompatible goals	Team members may perceive others to have different or conflicting goals that can lead to conflict.
Communication problems	Task, process, or relationship ambiguity can result in reduced or ineffective communication that can lead to conflict.
Dependence on another party	Team members depend on others to complete tasks or provide resources; delays or work quality issues can lead to conflict.
Specialization or differentiation	Team members from different professional backgrounds often have different viewpoints, languages, and goals that can lead to conflict.
Need for joint decision making and consensus	Teams with a diverse mix of members may feel pressure to conform to the majority opinion, which can lead to conflict.
Behavior regulations	Project teams have norms for working together that may conflict with an individual's preferred work processes.
Unresolved prior conflicts	Past unresolved issues between team members can lead to conflict.

Conflict Intensity Range

Conflict management techniques

Conflict Resolution Techniques	
Problem solving	Face-to-face meetings can be used to identify and resolve conflicts through open and candid discussions.
Shared goals	Create shared goals that can only be achieved through the cooperation of the conflicting parties.
Resource expansion	When conflict is caused by resource scarcity—say, money, opportunities, space, equipment—additional resources can be used to resolve discrepancies.
Avoidance	Withdrawal from, or suppression of, the conflict.
Smoothing	Playing down differences while emphasizing common interests between the conflicting parties.
Compromise	Each party to the conflict gives up something of value.
Authoritative command	A person of power mandates an outcome and communicates it to the conflicting parties.
Altering team member behavior	Use some type of training or intervention to alter the attitudes or behaviors that are causing conflict.
Altering the team structure	Change the formal team structure so that conflicting members limit their interaction; a more extreme solution is to remove members from the team.

Conflict management techniques

Conflict Stimulation Techniques	
Communication	Using ambiguous or threatening messages to increase conflict levels
Bringing in outsiders	Adding new members to the team who have different backgrounds, attitudes, values, or managerial styles
Restructuring the team	Realigning the tasks, work or communication processes to disrupt the status quo
Appointing a devil's advocate	Have an assigned critic to argue against the team's majority position

Important Political Skills

- Understand what your organization values
- Understand how decisions are made in your organization
- Expand and strengthen your network
- Develop a clear and easy to communicate story
- Lead by example

Agenda

- What is project team?
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Global Project Teams

- Increased in popularity due to:
  - Advances in telecommunications
  - Increased globalization
  - Increased outsourcing

Why Outsource?

- Reduce or control costs
- Free up internal resources
- Gain access to world-class capabilities
- Increase revenue potential of the organization
- Reduce time to market
- Increase process efficiencies
- Outsource non-core activities
- Compensate for a lack of specific capabilities or skills

Global Project Team Management Challenges

Culture

- Collective programming of the mind that distinguishes the members of one group or category of people from another

Cultures Vary By:

- *Power distance*: describes how different societies handle human inequality issues
- *Uncertainty avoidance*: level of risk taking common to a culture
- *Individualism/collectivism*: reflects the extent to which a society values the position of an individual versus the position of a group
- *Masculinity/femininity*: degree to which a society is characterized by masculine or feminine qualities
- *Concept of time*: extent to which a culture has a longer- or shorter-term orientation
- *Life focus*: A cultural characteristic that contrasts the extent to which a culture focuses on the quantity versus quality of life

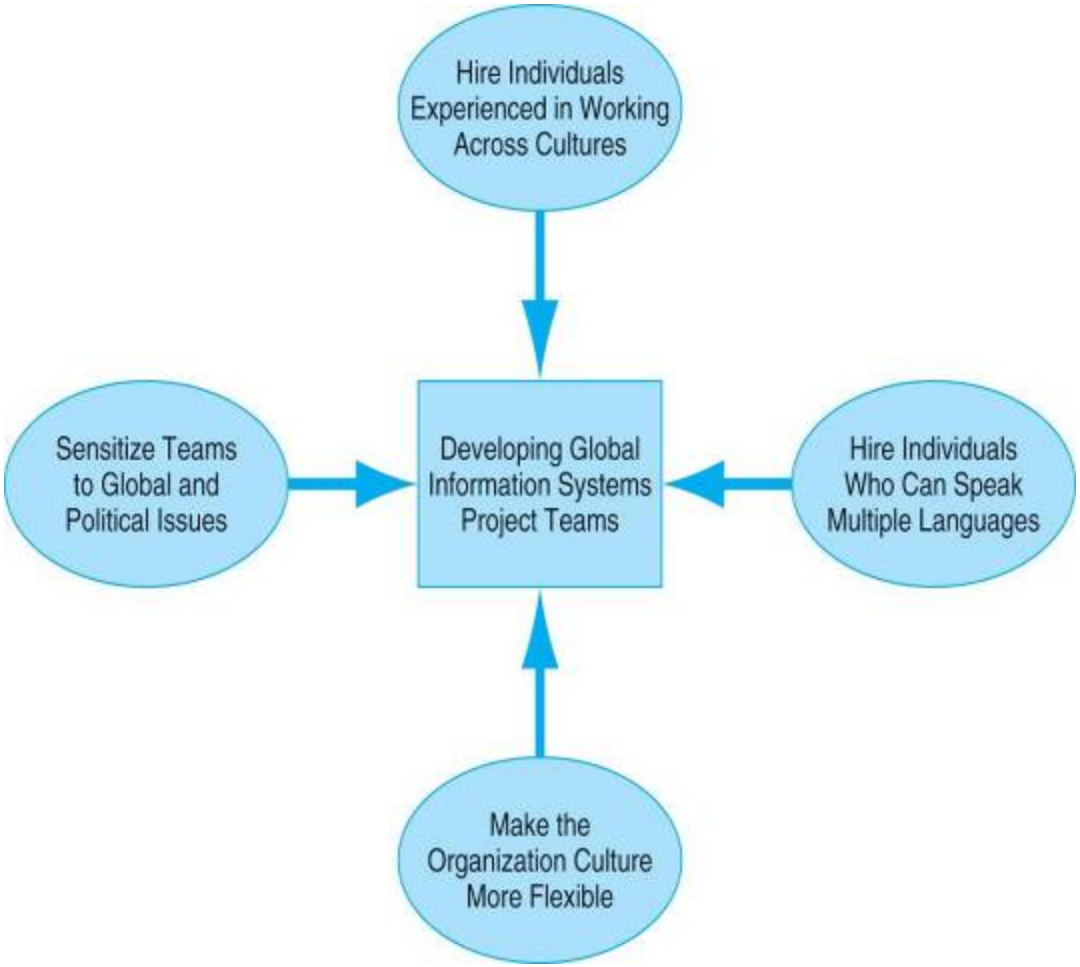
Other Possible Barriers

- *Language* – e.g., communication language and norms
- *Work culture* – e.g., work skills, habits, and attitudes toward work
- *Aesthetics* – e.g., art, music, and culture
- *Education* – e.g., attitudes toward education and literacy
- *Religion, beliefs, and attitudes* – e.g., spiritual institutions and values
- *Social organizations* – e.g., family and social cohesiveness
- *Political life* – e.g., political stability

Environmental & Expertise Related Challenges

- Different skill sets
- Different personnel costs
- Data collection and flow restrictions
- Legal policies
- Currency fluctuations

Global Project Team Development Strategies



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Questions?

Introduction to Project Management

Chapter 4
Managing Project Communication

Information Systems Project Management: A Process and Team Approach, 1e
Fuller/Valacich/George

Agenda

- Introduction
- Managing project communication
  - Communication planning
  - Information distribution
  - Performance reporting
  - Administrative closure
- Enhancing project communications
  - Running effective project meetings
  - Making effective presentations
  - Being a better listener
  - Using communication templates
  - Making a walk-through presentation
- Using collaboration technologies
  - How communication method differ
  - Collaboration technologies
  - Enterprise Project management techniques

What is Communication?

- The process by which information is exchanged between individuals through a common system of symbols, signs, or behavior

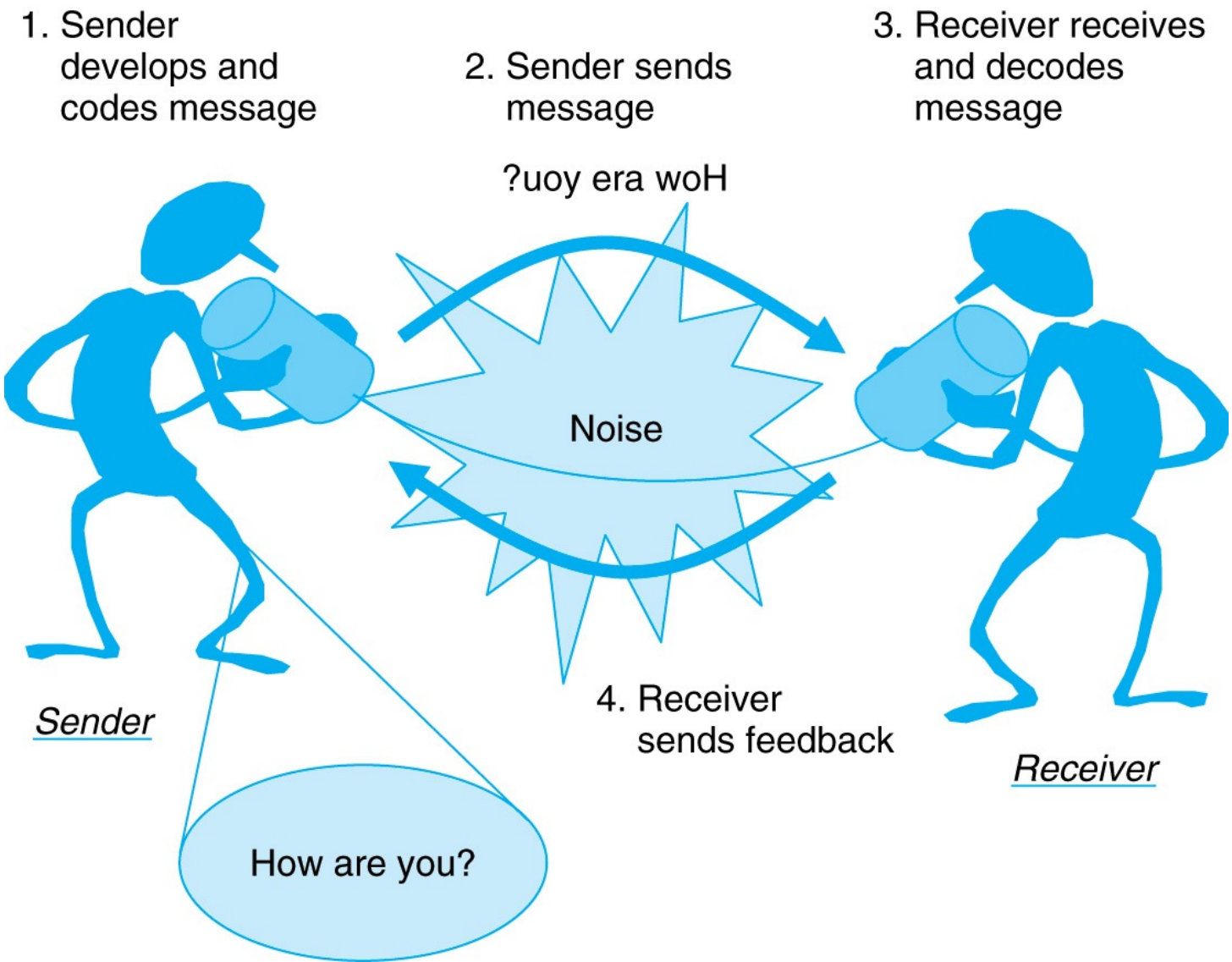
Effective communication in information systems projects

- There is often a broad communication gap between technical development team members and nontechnical individuals, both inside and outside the team.
- This gap is the result of at least two factors.
  - First, some individuals with technical training often do not have adequate communication skills.
  - Second, the nature of information technology is in constant change, with new devices and jargon.
- Together these factors can create formidable communication barriers between technical and nontechnical people

Communication Challenges

- Lack of communication skills
- Constant change in communication technologies

Communication process



Communication Requirements

- Sender who provides the intended message
- Receiver who accepts and understands the message
- Agreement between the sender and receiver on the interpretation of the message
- Feedback by the receiver to the sender that the message was received and understood

Agenda

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Communication Processes
(PMBOK)

1. Communication Planning
2. Information Distribution
3. Performance Reporting
4. Administrative Closure

Communication Planning

- A process for developing a comprehensive communication plan that identifies:
  - stakeholders,
  - the information they need,
  - when they need this information,
  - and in what format it should be delivered

Communication Plan Contents

- When and how written and oral reports will be provided by the team
- How the team members will coordinate their work
- Messages announcing project milestones
- Kinds of information to be shared with external shareholders (vendors and contractors)

Common Communication Plan Questions

- Who are the stakeholders?
- What information does each need?
- When and how often?
- Where will the information come from?
- Who will be responsible for collecting, storing, and verifying the accuracy of the information?
- Who will organize and package the information?
- Who will be the stakeholder's contact person?
- What will be the format of the information?
- What medium will be used to deliver the information?

Project Communication Matrix

Stakeholder	Document	Format	Team Contact	Date Due
Team Members	Project Status Report	Project Intranet	Juan Kim	First Monday of Month
Management Supervisor	Project Status Report	Hard Copy	Juan Kim	First Monday of Month
User Group	Project Status Report	Hard Copy	James Kim	First Monday of Month
Internal IT Staff	Project Status Report	Email	Jackie James	First Monday of Month
IT Manager	Project Status Report	Hard Copy	Juan Jeremy	First Monday of Month
Contract Programmers	Software Specifications	Email / Project Intranet	Jordan Kim	October 4, 2005
Training Subcontractor	Implementation and Training Plan	Hard Copy	Jordan James	January 10, 2006

Communication in Emergency Situations

- Natural disasters
  - Fires, floods, hurricanes, blizzards, earthquakes
- Man-made disasters
  - Oil & chemical leaks, transportation incidents, threats of violence, hoaxes & pranks, food-borne illness and bioterrorism
- Technology disasters
  - Network downtime, service interruptions, power outages, computer viruses and security breaches

Information Distribution

- The execution of the project communication plan and the response to any ad hoc information requests by stakeholders
  - What?
    - Work results
    - Project plan
  - Where?
    - Vertically
    - Horizontally
  - Format?
    - Written
    - Oral
    - Formal
    - Informal

Communication Formats

- Written
  - Letters
  - Memos
  - Reports
  - E-mails
  - Instant messages
- Oral
  - Presentations (formal)
  - “Water cooler” (informal)
- Non-Verbal
  - Body language
  - Clothing choices

Appropriate Applications

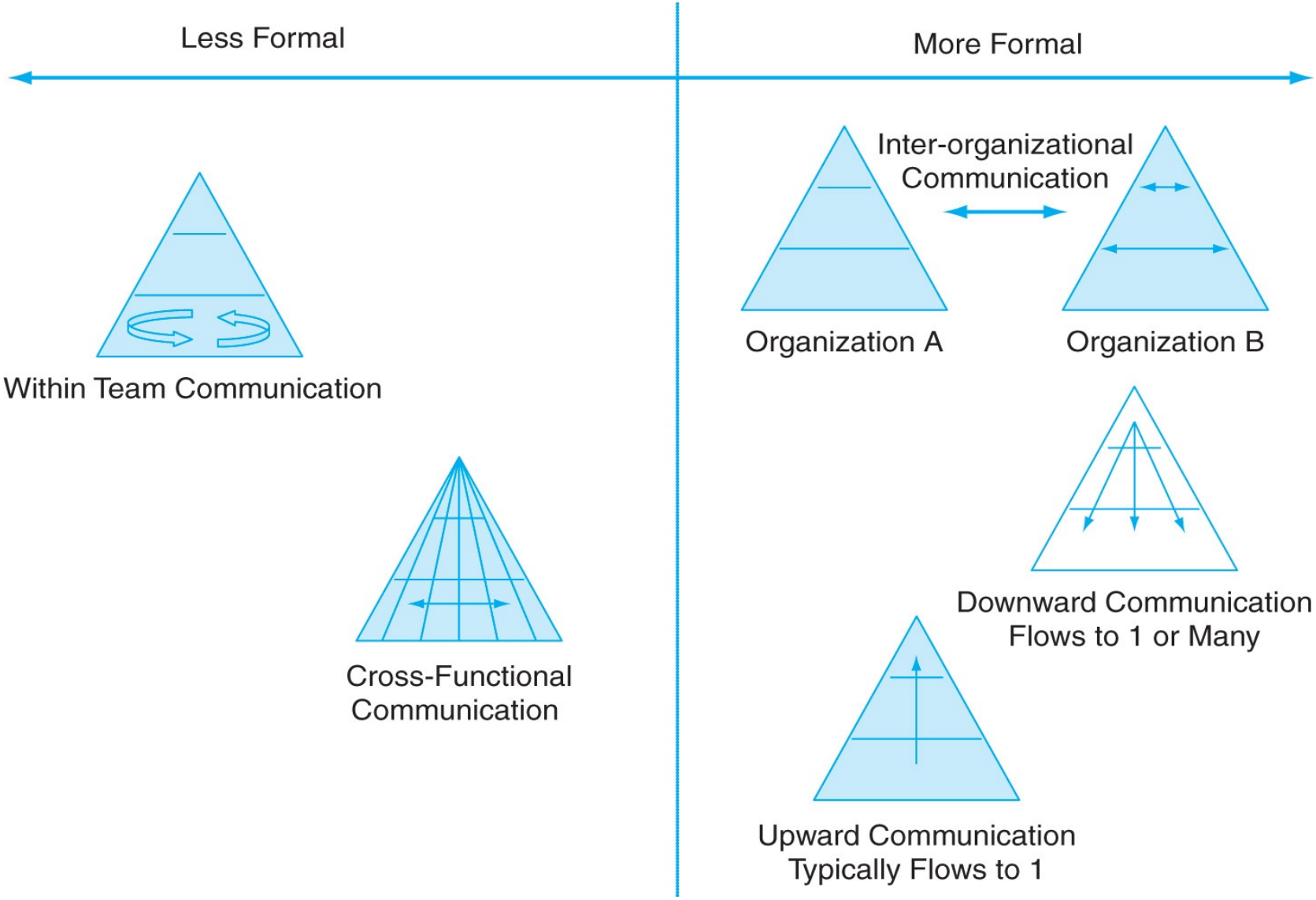
Purpose of Communication	Communication Method (level of effectiveness)		
	Oral	Written	Oral + Written
General Overview	Medium	Medium	High
Immediate Action Required	Medium	Low	High
Future Action Required	Low	High	Medium
Directive, order, or policy change	Low	Medium	High
Progress report to supervisor	Low	Medium	High
Awareness campaign	Low	Low	High
Commendation for quality work	Low	Low	High
Reprimand a team member	High	Low	Medium
Settle a dispute	High	Low	Medium

Informal vs. Formal

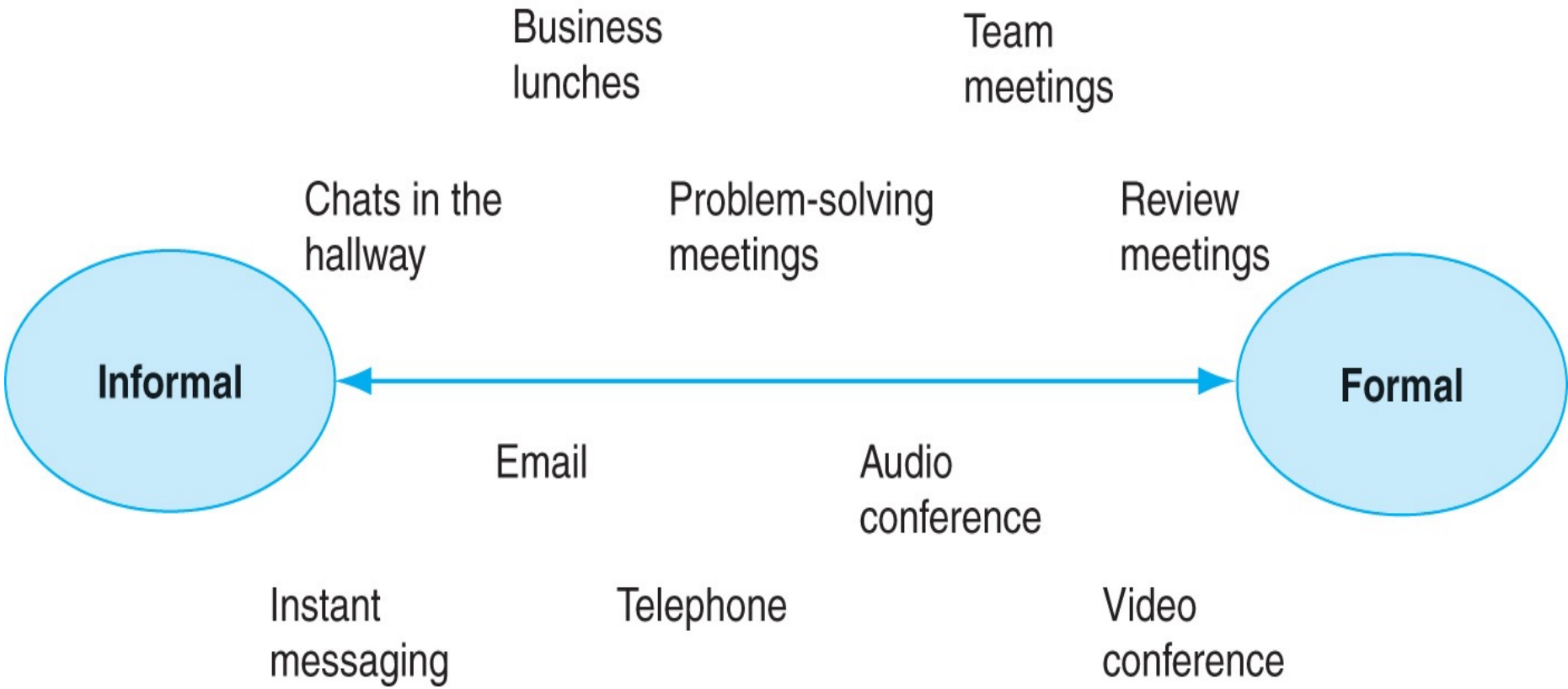
- Governed by convention, custom, and culture
  - Formal:
    - Structured
    - Defined standards for communication
    - Determined by authority, rank, and type of information transmitted
  - Informal:
    - Unstructured
    - Information accuracy varies
    - Often used to supplement formal communication

Vertical vs. Horizontal

- Vertical
  - Higher and lower organization levels
  - Upward to one
  - Downward to many
  - More formal (as is external communication)
- Horizontal
  - Across the department or organization
  - Less formal



Project Team Communication Exchange



Performance Reporting

- Collection and distribution of project performance information to shareholders so that they understand the status of the project at any given time period
- Report types:
  - *Status*: current project information
  - *Progress*: accomplishments of project team to-date
  - *Forecast*: project predictions per status or progress

Administrative Closure

- The careful and detailed documentation of a project or project phase at its termination
  - Natural termination
    - Planned
    - Triggered by successful project or phase completion
  - Unnatural termination
    - Unplanned
    - Multiple causes

Agenda

- Introduction
- Managing project communication
  - Communication planning
  - Information distribution
  - Performance reporting
  - Administrative closure
- Enhancing project communications
  - Running effective project meetings
  - Making effective presentations
  - Being a better listener
  - Using communication templates
  - Making a walk-through presentation
- Using collaboration technologies
  - How communication method differ
  - Collaboration technologies
  - Enterprise Project management techniques

Being an Effective Communicator

1. Running productive project meetings
2. Making effective presentations
3. Becoming a good listener
4. Using communication templates
5. Conducting a walkthrough

Meeting Benefits to Project Teams

- Define the project, team members, and key stakeholders.
- Provide a forum for revising, updating, modifying, and clarifying key aspects of the project.
- Provide an opportunity for team members to better understand how their contribution fits within the scope of the overall project.
- Increase team member commitment to the project and the team through shared decision making and collaboration.
- Increase work productivity and job satisfaction by clarifying task assign¬ments and other project details.
- Provide an opportunity for the project manager to demonstrate leadership and vision.
- Provide an opportunity for project members to demonstrate their creativity, skills, and commitment to the project and team.

Causes for Ineffective Project Meeting

- Lack of adequate notification and preparation
- No agenda
- Wrong people or too many people in attendance
- Lack of control
- Political pressure and hidden agendas
- No conclusions or follow up

Guidelines for Running an Effective Project Meeting

- Before the meeting:
  - Define the meeting purpose.
  - Set the ground rules for discussion.
  - Identify and invite only those people who need to attend.
  - Notify people in advance of the meeting's purpose, location, and time.
  - Distribute agenda in advance.
  - Prepare any presentation, handouts, or other materials

Guidelines for Running an Effective Project Meeting

- During the meeting:
  - Start and end the meeting on time.
  - Begin by specifying the purpose of the meeting.
  - Gather information from all participants using good listening skills.
  - Take good notes or have someone assigned to record the meeting minutes.
  - Keep things moving and stay on topic.
  - Use visual aids to enhance the sharing of information.
  - Periodically summarize the results of the discussion in terms of consensuses achieved or disagreements to be resolved.
  - Assign action items to participants with clear deadlines if possible.

Guidelines for Running an Effective Project Meeting

- After the meeting:
  - Review and professionally prepare the minutes. Minutes should include at least the following information:
    - Time and place of the meeting.
    - List of attendees with their project role.
    - Agenda items discussed.
    - Decisions reached or held for further study.
    - Action items—include who is responsible and timelines for completion.
    - Time and place of the next meeting, if necessary.
  - Review and circulate the minutes among all attendees. Request clarifications and corrections with a deadline.
  - Circulate the finalized minutes to all attendees and relevant nonattending members.

Meeting Ground Rules

1. All team meetings will start and end on time.
2. All team members will arrive on time and be prepared to actively participate.
3. All team meetings will have an agenda, and team members will respect the agenda unless majority of the members choose to deviate.
4. Any team members who have a meeting conflict will notify the meeting leader prior to the meeting if they will be absent, late, or have to leave early.
5. All team members will actively participate, listen carefully, and respect the opinions of others.
6. No one-to-one or side meetings will occur during a team meeting.
7. Team members will work hard to reach consensus on decisions using agreed upon methods for resolving disagreements (e.g., majority vote).
8. All team members are responsible for keeping the team on the agenda.
9. Breaks will be included in all meetings that last longer than one hour or when a member requests a short break.

Making Effective Presentations

- Plan
- Design
- Deliver

Presentation planning

Who is the audience?	To design the most effective presentation, you need to consider the audience (e.g., What do they know about your topic? What is their education level?).
What is the message?	Your presentation should be designed with a particular objective in mind.
What is the presentation environment?	Knowledge of the room size, shape, and lighting is valuable for designing an optimal presentation.

Presentation design

Organize the sequence	Organize your presentation so that like elements or topics are found in one place instead of randomly scattered throughout the material.
Keep it simple	Make sure that you don't pack too much information onto a slide so that it is difficult to read. Also, work to have as few slides as possible; in other words, only include information that you absolutely need.
Be consistent	Make sure that you use consistent types of fonts, font sizes, colors, design approach, and backgrounds.
Use variety	Use both textual and graphical slides to convey information in the most meaningful format.
Don't rely on the spell-checker alone	Make sure you carefully review your presentation for typographical and wording errors.
Use bells and whistles sparingly	Make sure that you use familiar graphical icons to guide and enhance slides; don't lose sight of your message as you add bells and whistles. Also, take great care when making transitions between slides and elements so that special effects don't take away from your message.
Supplemental materials	Take care when using supplemental materials so that they don't distract the audience. For example, don't provide handouts until you want the audience to actually read them.
Have a clear beginning and end	At the beginning, introduce yourself and your teammates (if any), thank your audience for being there, and provide a clear outline of what will be covered during the presentation. At the conclusion, have an ending slide so that the audience clearly sees that the presentation is over.

Presentation Delivery

Practice	Make sure that you thoroughly test your completed work on yourself and others to be certain it covers your points and presents them **in** an effective manner within the time allowed.
Arrive early and cue up your presentation	It is good practice when feasible to have your presentation ready to go before the arrival of the audience.
Lean to use the special software keys	Using special keys to navigate the presentation will allow you to focus on your message and not on the software.
Have a backup plan	Have a backup plan in case technology fails or your presentation is lost when traveling.
Delivery	To make an effective presentation, you must become an effective public speaker through practice.
Personal appearance	Your appearance and demeanor can greatly enhance how the audience

Becoming a Good Listener

- Listening is an *active* activity that consists of hearing, understanding, remembering, and acting
  - *Listen without evaluating*
  - *Do not anticipate*
  - *Take notes*
  - *Listen for themes and facts*
  - *Do not fake attention*
  - *Review*

What Makes A Good Listener?

The Poor Listener…	**The Good Listener…**
Always interrupts	Does not interrupt
Is impatient	Waits until the end, then asks questions
Makes hasty judgments	Ask for clarification
Shows disinterest (poor posture, wandering eyes)	Pays close attention
Doesn't try to understand	Verifies understanding by repeating what was said
Doesn't respond	Gives feedback: smiles, nods, or frowns
Mentally prepares an argument to "win"	Avoids arguing and its negative effects on a relationship
Reacts to person, loses temper	Responds to the ideas, not to the person
Fidgets with pen, paper clips	Gets rid of distractions
Goes off the subject	Concentrates on both the words *and* feelings behind them; stays on track

Using Communication Templates

Assures that all formal documents follow a standard layout and contain all required information

Change Request		
To be completed by the requestor.		
CHANGE REQUEST NUMBER:	DATE SUBMITTED:	PRIORITY (H/M/L):
Requestor Name:		Project/Application Name:
Description of Request:		
Reason for Request		
To be completed by the project manager.		
Assigned To:		Date Assigned:
Skills Needed for Task:		
Estimated Effort Hours, Cost, and Duration:		
Comments:		
Customer Section		
Approval to Begin Work:		DATE:
Approval to Move Work to Production Status:		DATE:
Approval That Work Has Been Successfully Completed:		DATE:

Conducting a Walkthrough

- A peer group review of any product created during the systems development process
- Possible applications:
  - Project scope statement
  - Budget and schedule reviews
  - System specifications
  - Logical and physical designs
  - Code or program segments
  - Test procedures and results
  - Documentation and user training materials

Walkthrough Template

Walk-Through Review Form

Session Coordinator: _____

Project/Segment: _____

Coordinator's Checklist:

1. Confirmation with producer(s) that material is ready and stable: _____
2. Issue invitations, assign responsibilities, distribute materials: [ ] Y [ ] N
3. Set date, time, and location for meeting:

Date:_____ / _____ / _____ Time: _____ A.M. / P.M. (circle one)

Location:_____

Responsibilities	Participants	Can Attend		Received Materials	
Coordinator	_____	[ ] Y	[ ] N	[ ] Y	[ ] N
Presenter	_____	[ ] Y	[ ] N	[ ] Y	[ ] N
User	_____	[ ] Y	[ ] N	[ ] Y	[ ] N
Standards	_____	[ ] Y	[ ] N	[ ] Y	[ ] N
Secretary	_____	[ ] Y	[ ] N	[ ] Y	[ ] N
Maintenance	_____	[ ] Y	[ ] N	[ ] Y	[ ] N

Agenda:

_____ 1. All participants agreed to follow Rules of a walk-through
_____ 2. New material: walk-through of all material
_____ 3. Old material: item by item check of all previous action list
_____ 4. Creation of new action list contribution by each participant
_____ 5. Group decision (see below)
_____ 6. Deliver copy of this form to the project control manager

Group Decision:

_____ Accept product as-is
_____ Revise (no further walk-throughs)
_____ Review and schedule another walk-through

Signatures		
_____	_____	_____

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Communication Methods And Technologies

Communication Method	Structure	Interaction	Richness	# of People
Face-to-face	low-high	synchronous	high	low-high
Video conference	medium-high	synchronous	medium-high	low-medium
Telephone	low-medium	synchronous	medium	low
Instant Messenger	low	synchronous	medium	low
Synchronous groupware	medium-high	synchronous	medium	low-medium
Asynchronous groupware	low-high	asynchronous	low-medium	low-high
Electronic mail	low-medium	asynchronous	low-medium	low-high
Written mail	medium-high	asynchronous	low	low-high

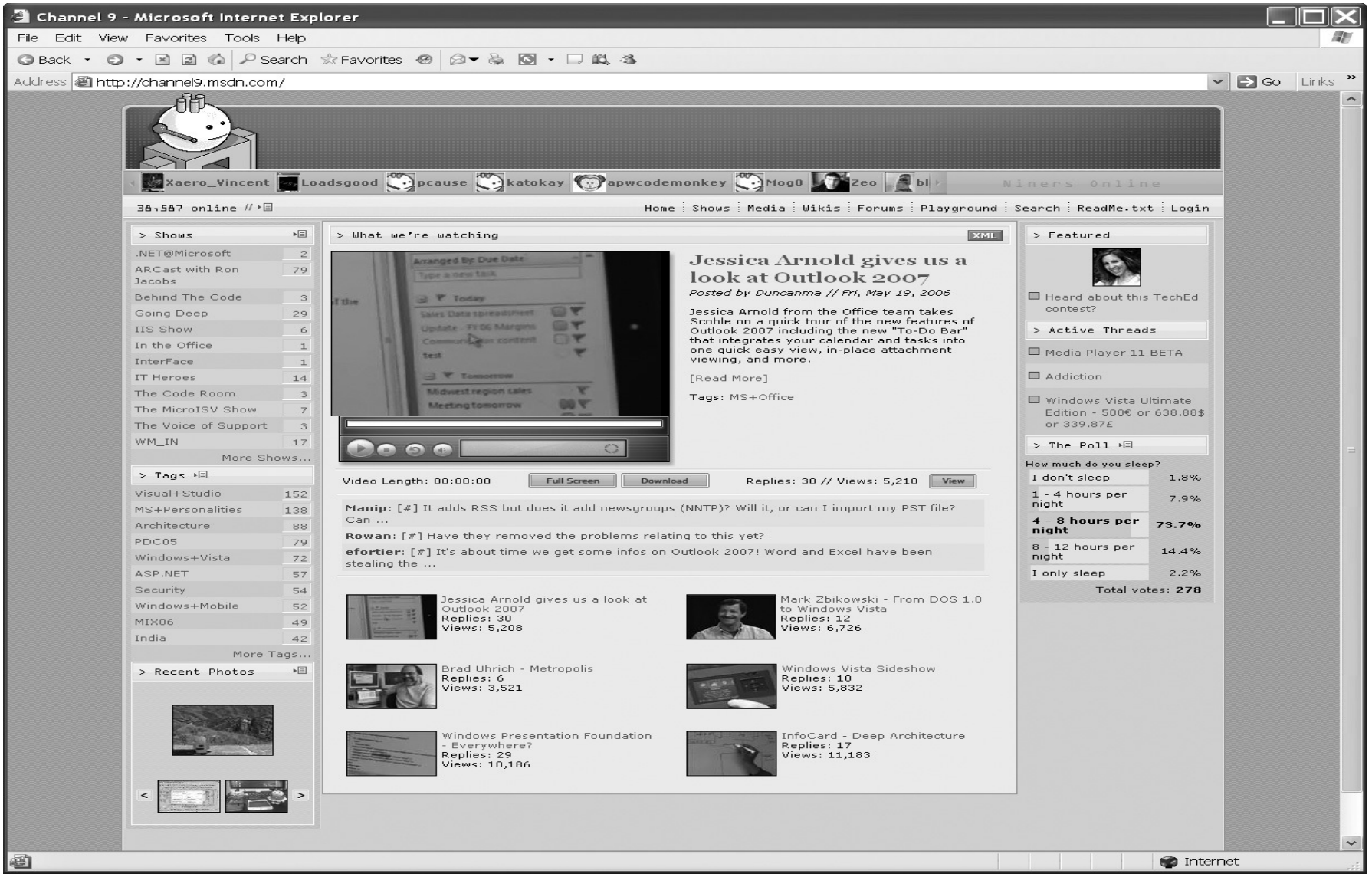
Communication Variations

- When all parties involved are present at the same time, but not necessarily in the same place, *synchronous* communication is required
- When all parties involved need not be available or present at the same time or the same place, *asynchronous* communication is required

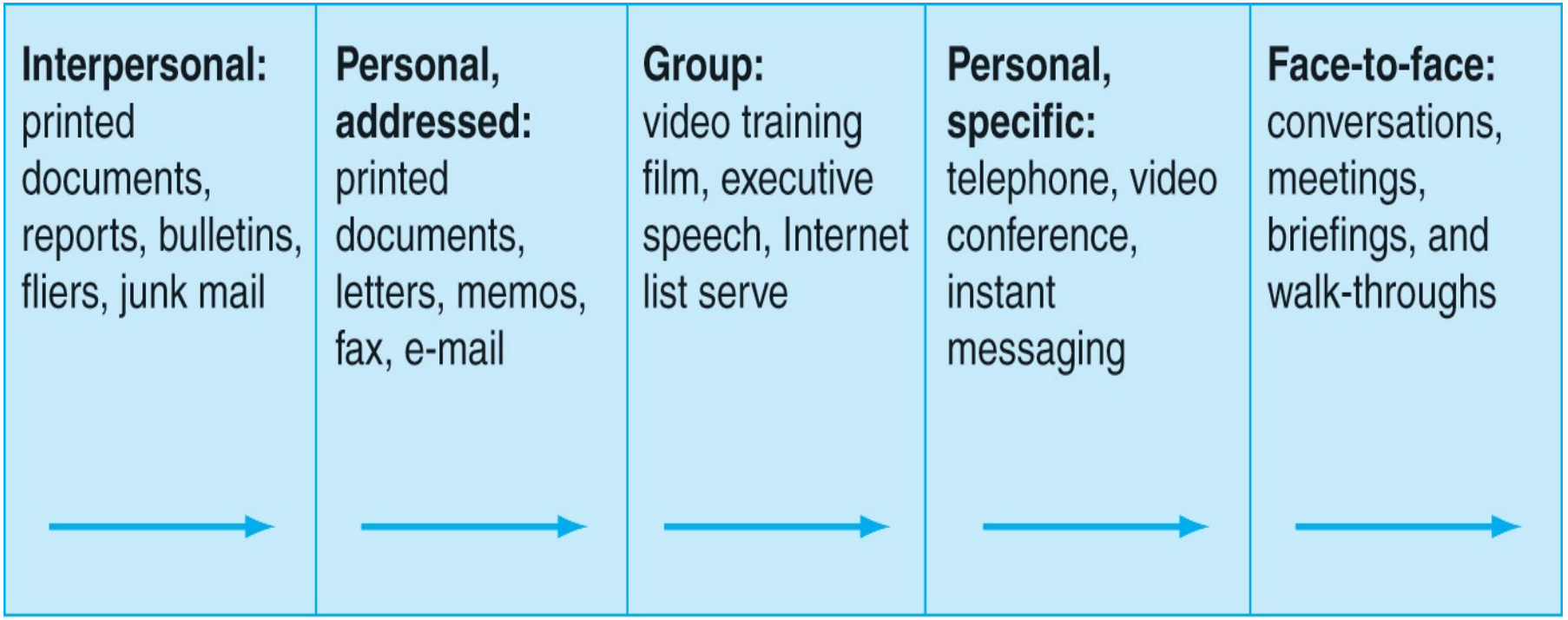
Electronic Meeting System

- A collection of personal computers networked together with sophisticated software tools to help group members solve problems and make decisions through interactive, electronic generation, evaluation, and voting

Electronic Meeting Voting Template



Communication Technologies Information Exchange Capabilities



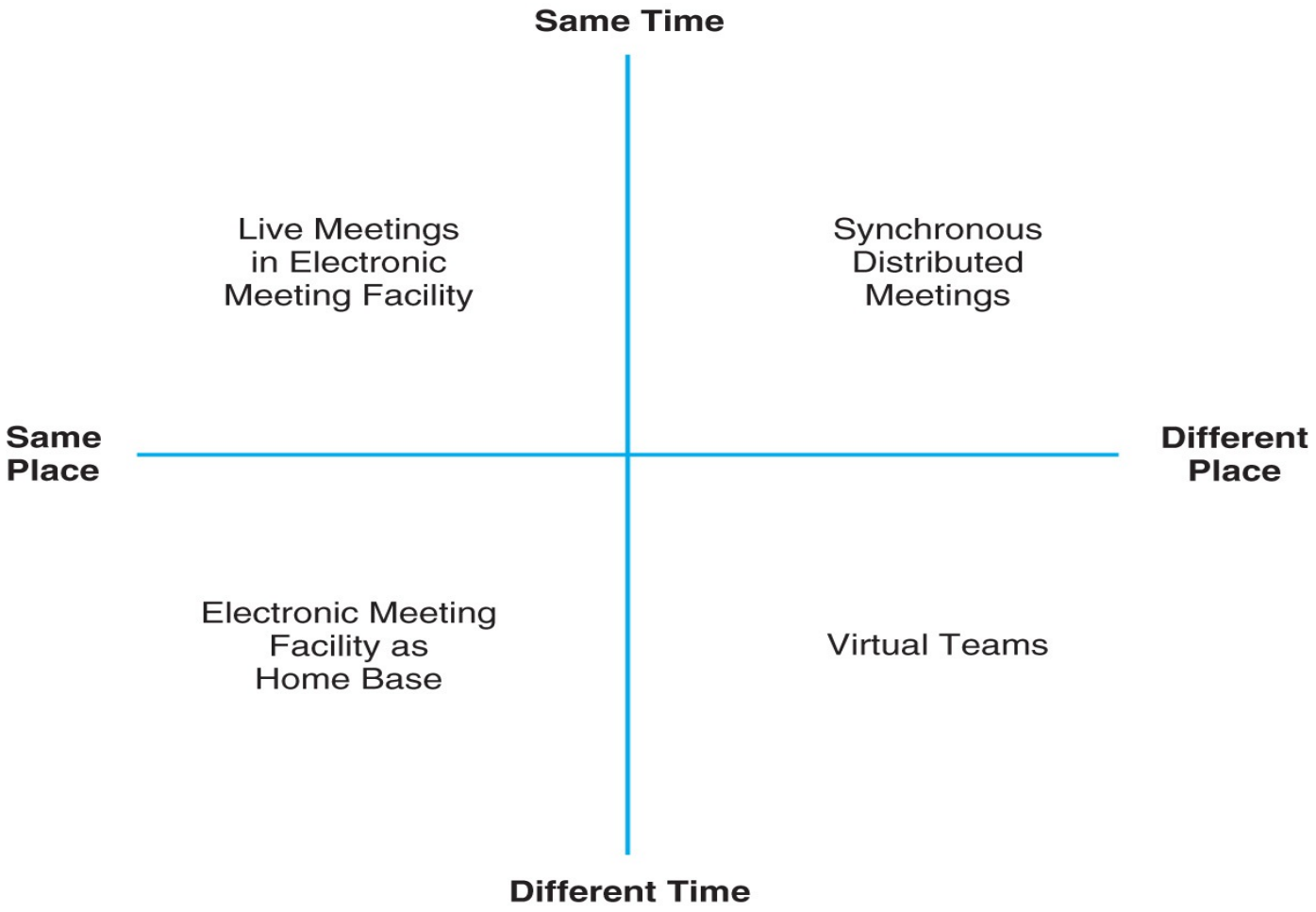
Groupware

- A class of software that enables people to work together more effectively
- Defined by two dimensions:
  - supports groups working together at the same time – synchronous groupware – or at different times – asynchronous groupware
  - supports groups working together face-to-face or at different locations

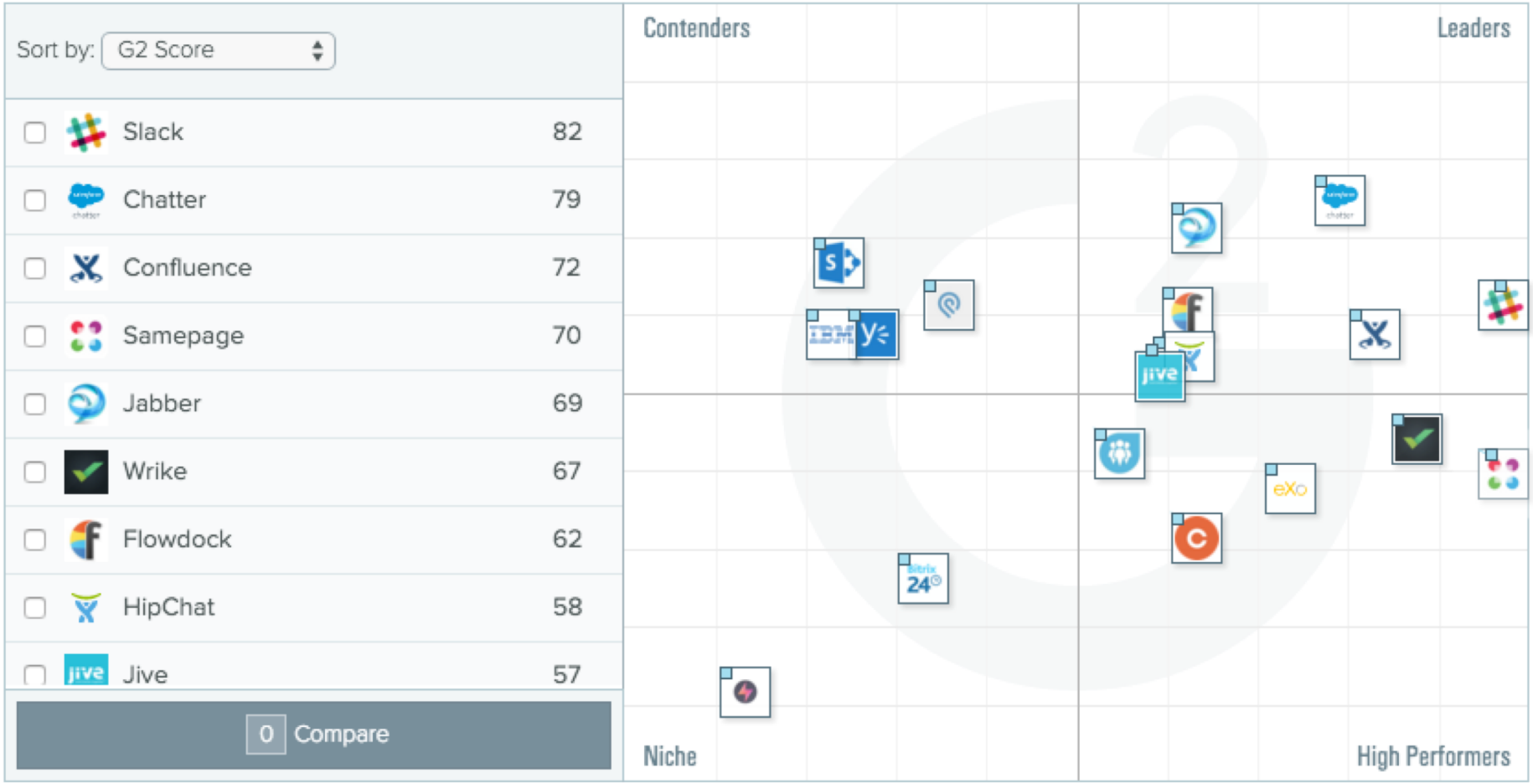
The Benefits of Groupware

Process structuring	Keeps teams on track and helps them avoid costly diversions (e.g., doesn't allow people to get off topic or the agenda)
Parallelism	Enables many people to speak and listen at the same time (e.g., everyone has an equal opportunity to participate)
Group size	Enables members in larger teams to participate (e.g., brings together broader perspectives, expertise, and participation)
Group memory	Automatically records member ideas, comments, votes (e.g., allows members to focus on content of discussions rather than on recording comments)
Access to external information	Can easily incorporate external electronic data and files (e.g., plans and proposal documents can be collected and easily distributed to all members)
Spanning time and space	Enables members to collaborate from different places at different times (e.g., reduces travel costs or allows people from remote locations to participate)
Anonymity	Member ideas, comments, and votes not identified to others (if desired) (e.g., can make it easier to discuss controversial or sensitive topics without fear of identification or retribution)

Groupware Support Groups

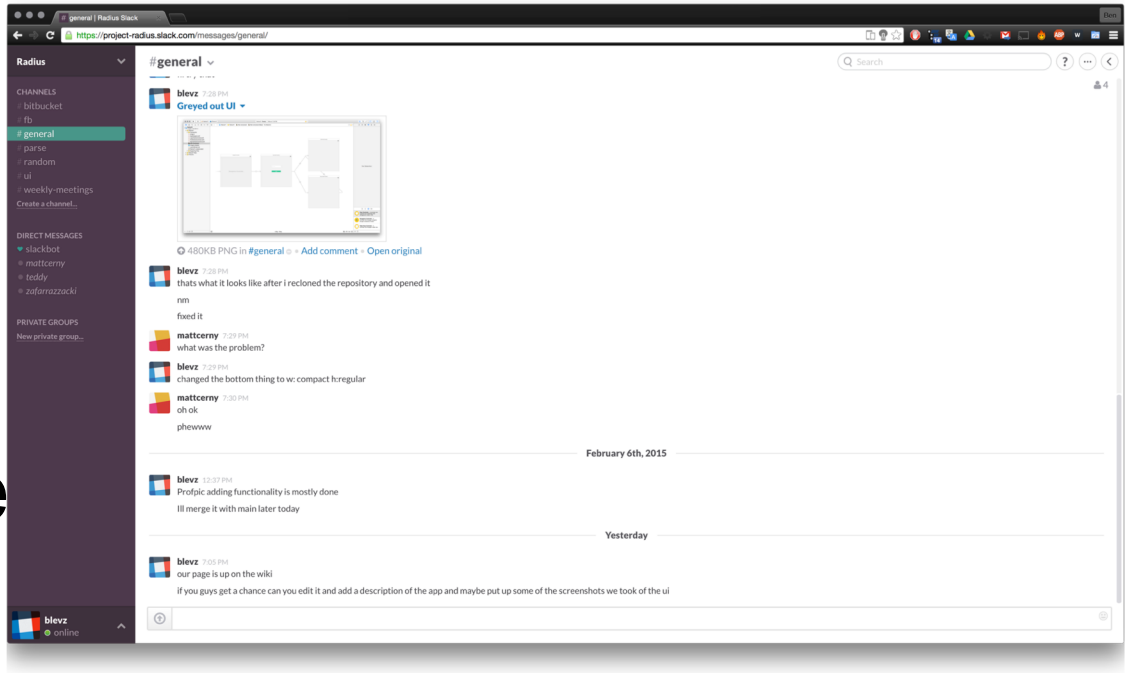


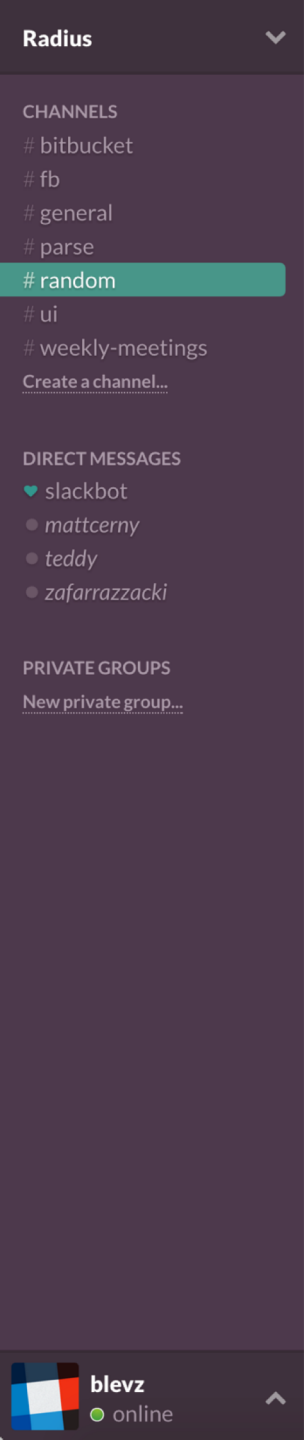
Groupware platforms



What is Slack?

- Glorified web forum
- Features inspired by social media
- Centralized
- “New” way to collaborate



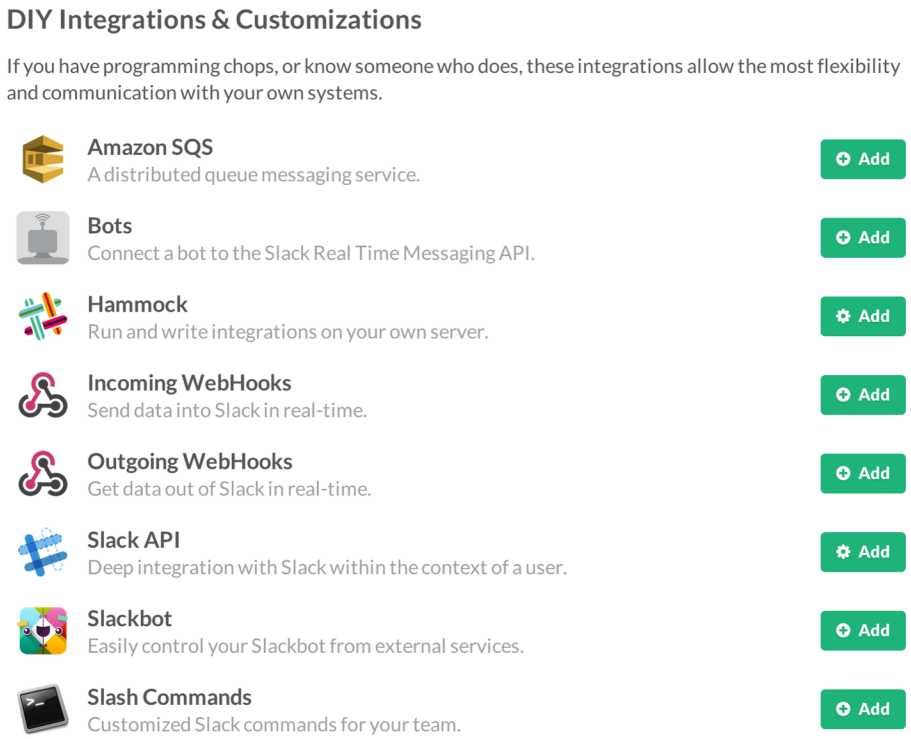


Simple Communications

- Social Network Features for Work:
  - Named Channels
  - @Mentions
  - Direct Messages
  - Activity Feed
- Web and native apps

Lots of Integrations

- Dozes of premade Integrations (Version control, social media, file sharing, analytics, even Yo)
-



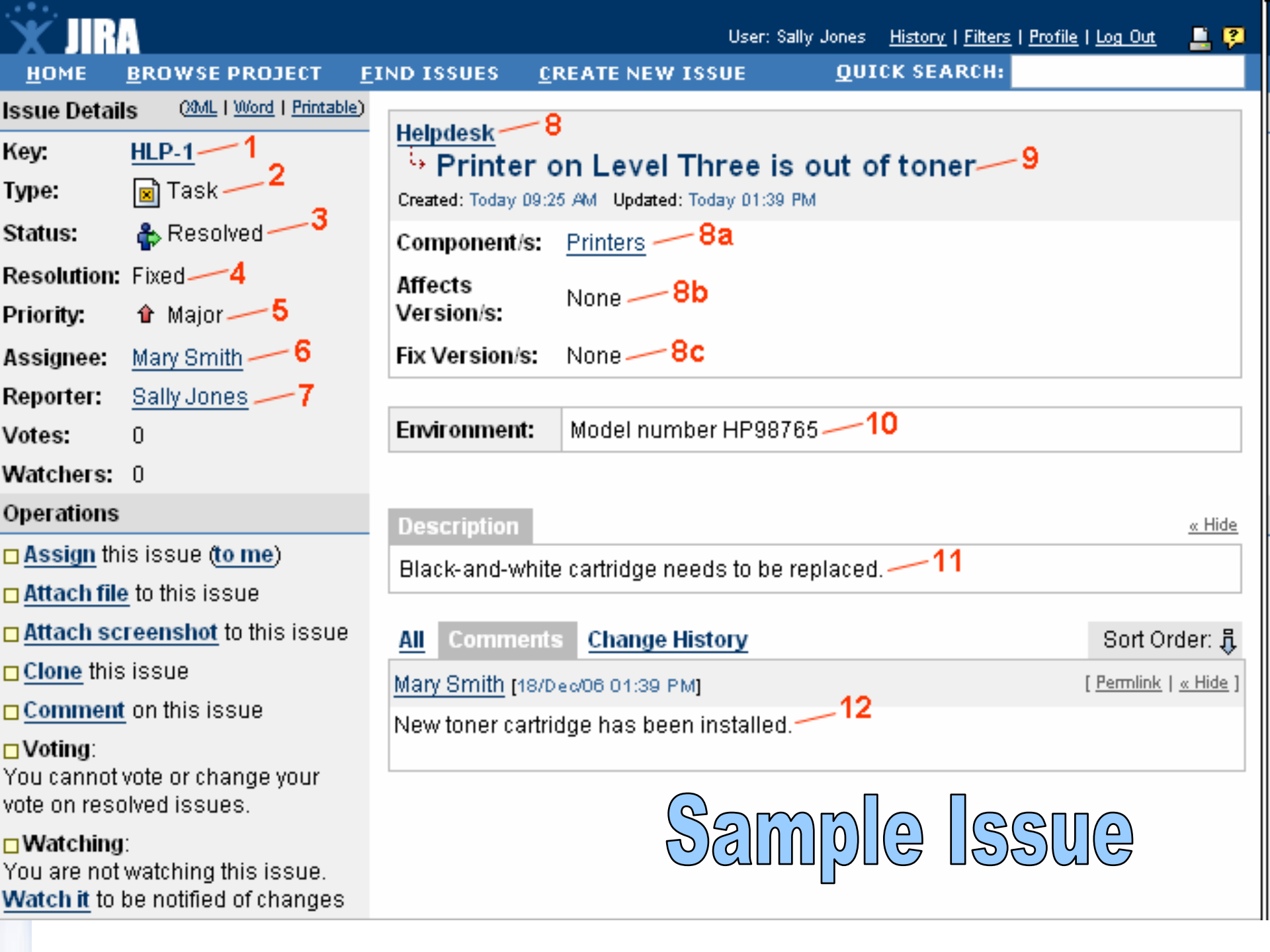
Enterprise Project Management Abilities

- Manage multiple projects as an overall portfolio for better decision making in regard to resource assignment, problem identification, as well as trend and risk analysis
- More closely track resource usage and workload as well as enable better planning for short- and long-term resource assignments
- Manage stakeholders' expectations by effectively reporting project status in regard to time and resources

Enterprise Project Management Abilities (cont.)

- Enforce organizational best practices of project methodologies and processes
- Support improved participation by enabling team members to easily manage, track, and report project updates
- Better manage project-related deliverables through the use of a central document repository with versioning and editing control

Enterprise Project Management Environments


JIRA
User: Sally Jones History | Filters | Profile | Log Out
HOME BROWSE PROJECT FIND ISSUES CREATE NEW ISSUE QUICK SEARCH:
Issue Details (XML | Word | Printable)
Key: HLP-1 1
Type: Task 2
Status: Resolved 3
Resolution: Fixed 4
Priority: Major 5
Assignee: Mary Smith 6
Reporter: Sally Jones 7
Votes: 0
Watchers: 0
Operations
Assign this issue (to me)
Attach file to this issue
Attach screenshot to this issue
Clone this issue
Comment on this issue
Voting:
You cannot vote or change your vote on resolved issues.
Watching:
You are not watching this issue.
Watch it to be notified of changes
Helpdesk 8
Printer on Level Three is out of toner 9
Created: Today 09:25 AM Updated: Today 01:39 PM
Component/s: Printers 8a
Affects Version/s: None 8b
Fix Version/s: None 8c
Environment: Model number HP98765 10
Description
« Hide
Black-and-white cartridge needs to be replaced. 11
All Comments Change History
Sort Order:
Mary Smith [18/Dec/06 01:39 PM]
[Permlink | « Hide]
New toner cartridge has been installed. 12
Sample Issue

Statistics: **JIRA** (Issue Type)

Bug	4539	45%
Improvement	2711	27%
New Feature	1351	13%
Sub-task	183	2%
Support Request	766	8%
Task	485	5%
Third-party issue	31	

Recently Created Issues: **Confluence** more detail >>

194 issues created in last **30** days.
View detailed data table >>

Statistics Table: JIRA's Last 30 Days Resolved Issues

Priority / Assignee	Critical	Major	Minor	Trivial	T:
Anton Mazkovoi	0	2	0	0	2
Chris Mountford	0	4	1	0	5
Daniel Hurst	0	8	8	2	18
Dushan Hanuska	0	3	0	0	3
Dylan Etkin	2	8	0	0	10
Jed Wesley-Smith	0	2	0	0	2
Jeff Turner	0	1	0	0	1
Justin Koke	2	5	0	2	9
Keith Brophy	1	0	0	0	1
Mark Chaimungkalanont	1	0	0	0	1
Total Unique Issues:	**15**	**92**	**28**	**8**	**143**

Sample Reports - II

JIRA

User: Zachary Davis [Atlassian] History | Filters | Profile | Log Out

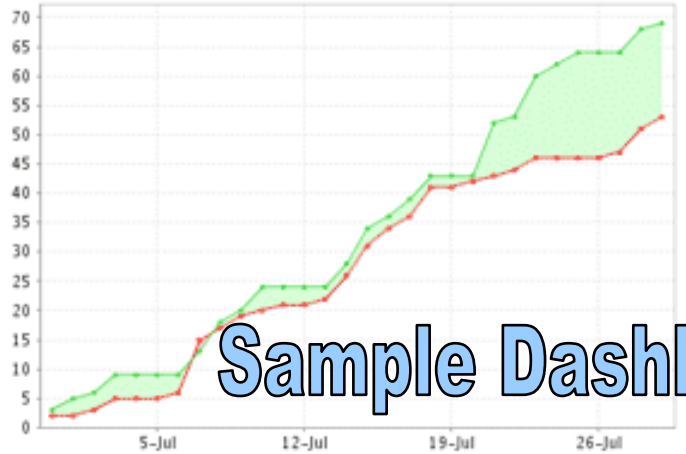
HOME | BROWSE PROJECT | FIND ISSUES | CREATE NEW ISSUE | ADMINISTRATION | PLANNING BOARD | TASK BOARD | QUICK SEARCH:

Atlassian JIRA

Configure: ON | OFF Manage Portal

Created vs Resolved Issues: All Zach's Issues

more detail >>



Issues: 53 created and 69 resolved
Period: last 30 days (grouped daily)
View detailed data table >>

Sample Dashboard

Statistics: Atlassian Website (Status)

Total Issues: 1,197

Open	65	5%
In Progress	5	
Reopened	1	
Resolved	43	4%
Closed	1083	90%

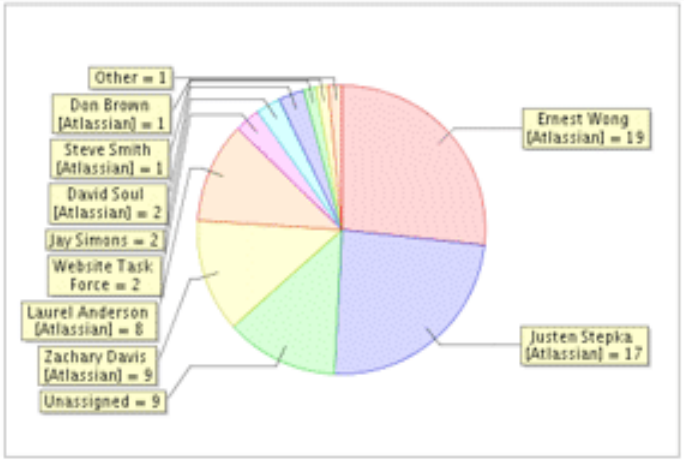
Statistics: All Zach's Issues (Status)

Total Issues: 812

Open	10	1%
In Progress	1	
Resolved	2	
Closed	799	98%

Pie Chart: All outstanding website issues (Assignee)

more detail >>



Issues: 71.
View detailed data table >>

Open Issues: Assigned To Me (Displaying 10 of 11)

BLOGIT-3	Syntax highlighting for code posted to the developer blog	
WEB-969	[JIRA.com] please update status page to include most recent news post from CAC/JIRASTUDIO	
MKT-333	eVar7 for Video pages	
WEB-1210	Grab screenshots for JIRA screenshot tour	
WEB-530	javablogs improvements	
WEB-997	Feedback form	
WEB-1159	Scroll position bug in Firefox	
WEB-1212	Add 2 more quotes to the training testimonial page	
WEB-305	WEB-43 ↳ Add flags to customer pages	
WEB-457	Create alternative Left-hand theme for Confluence	

Statistics: All outstanding website issues (Priority)

Total Issues: 71

Major	31	44%
Minor	35	49%
Trivial	5	7%

Issues: To Be Verified (Displaying 1 of 1)

WEB-1206	WEB-547 ↳ Please add Business Analyst to the Syd and San Fran lists	

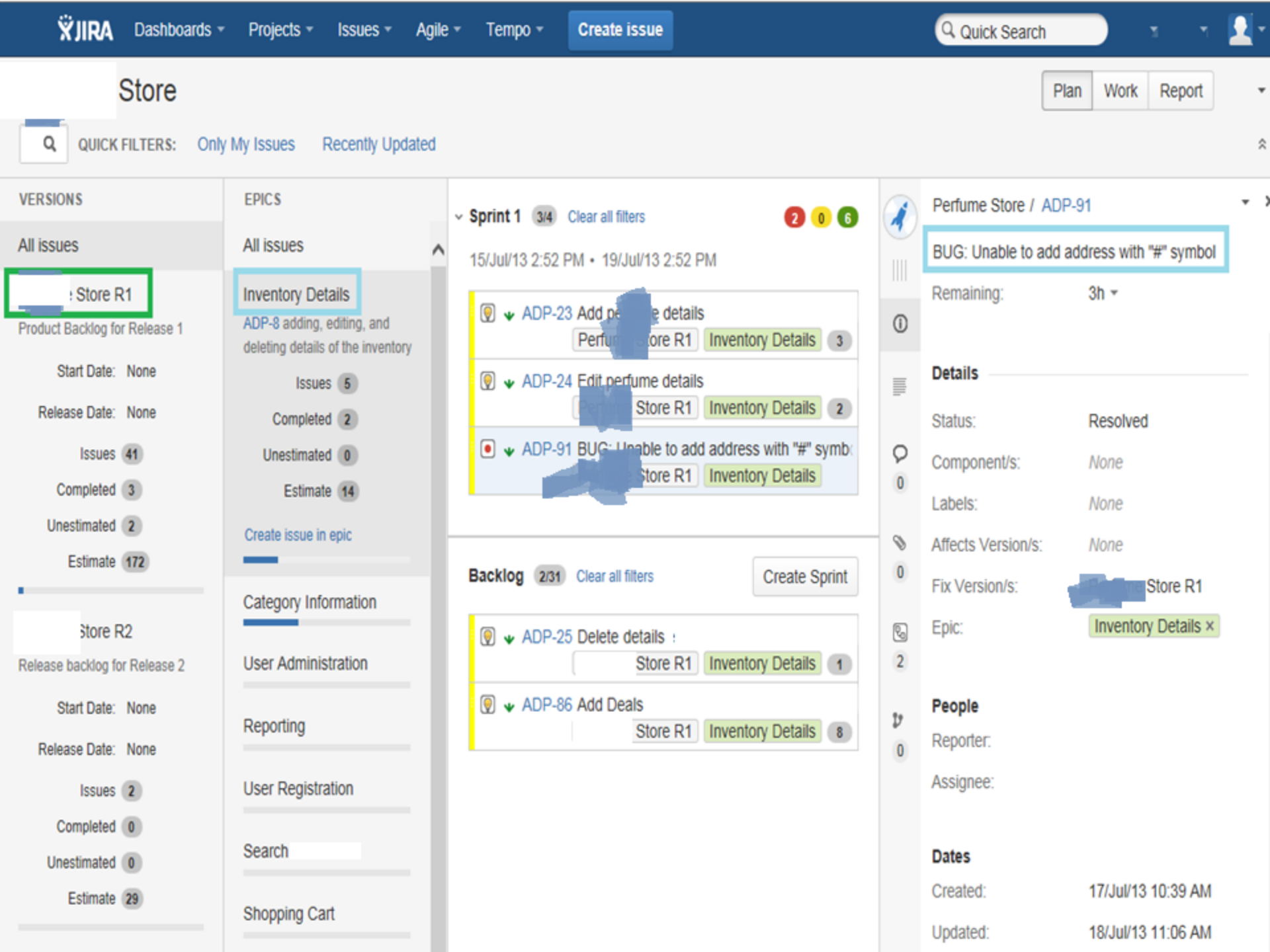
Open Issues: In Progress (Displaying 1 of 1)

WEB-1210	Grab screenshots for JIRA screenshot tour	

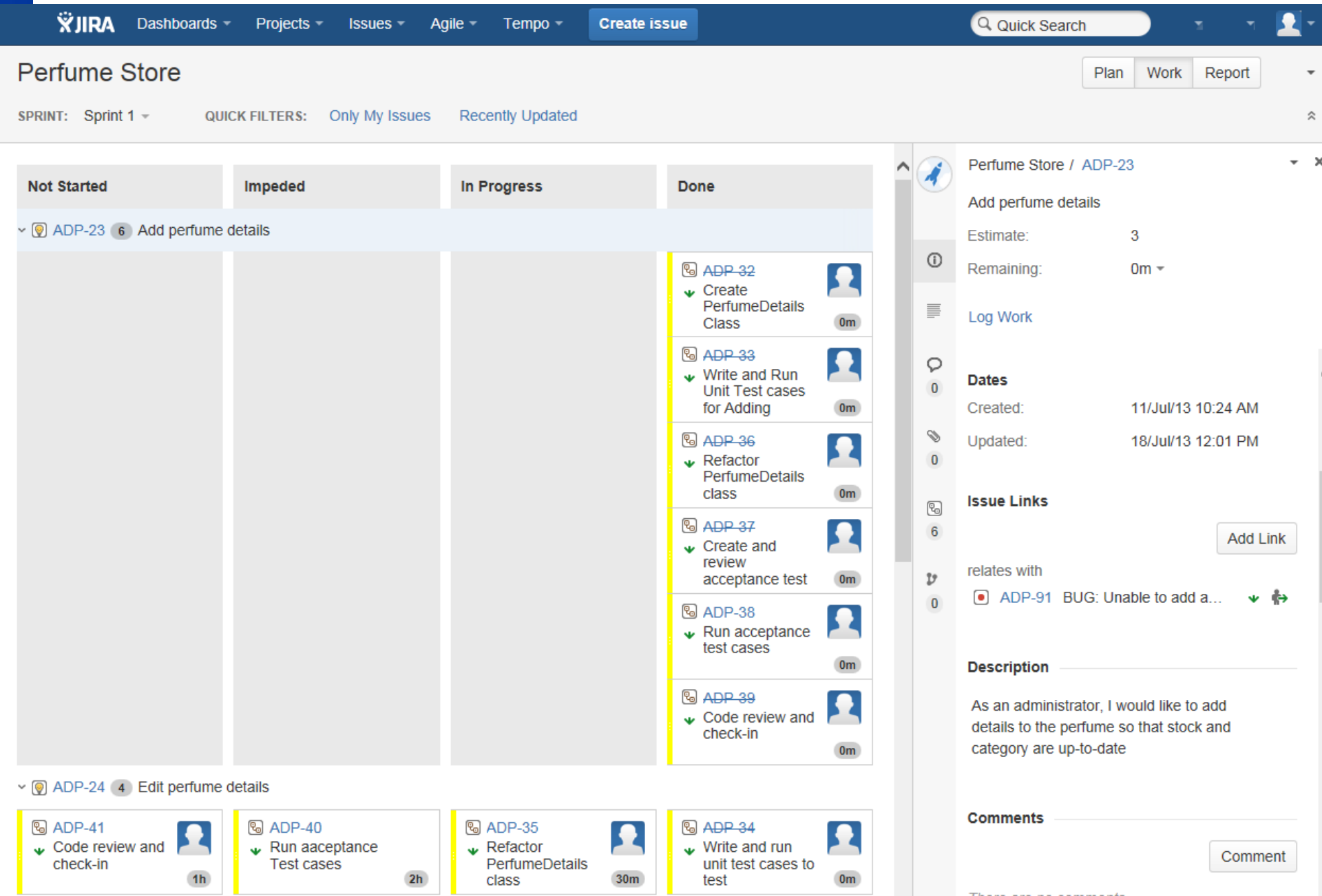
Average Age: All Bugs

more detail >>

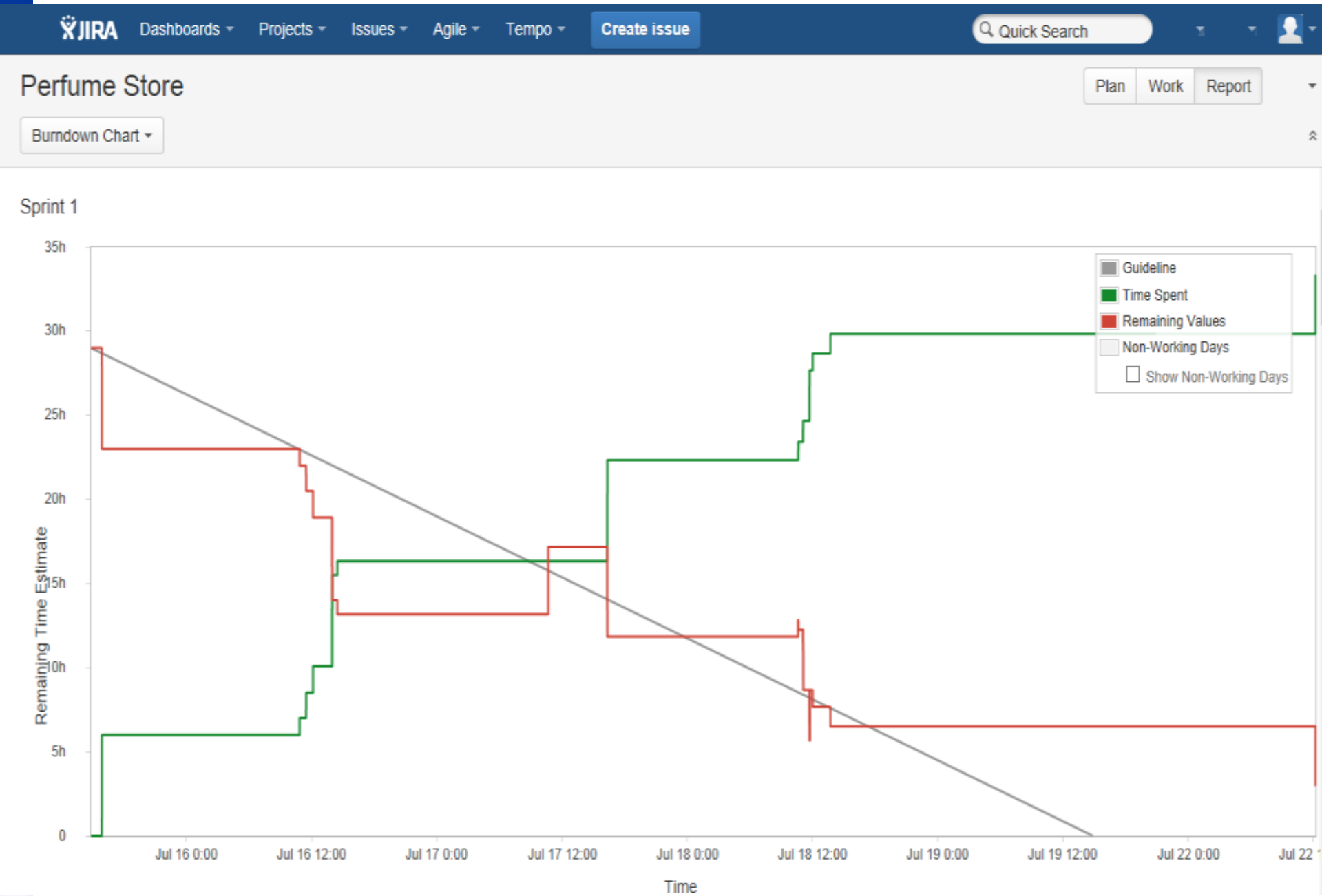
Issues: Bugs (Displaying 0 of 0)


JIRA
Dashboards
Projects
Issues
Agile
Tempo
Create issue
Quick Search
Store
Plan
Work
Report
QUICK FILTERS:
Only My Issues
Recently Updated
VERSIONS
All issues
Store R1
Product Backlog for Release 1
Start Date: None
Release Date: None
Issues 41
Completed 3
Unestimated 2
Estimate 172
Store R2
Release backlog for Release 2
Start Date: None
Release Date: None
Issues 2
Completed 0
Unestimated 0
Estimate 29
EPICS
All issues
Inventory Details
ADP-8 adding, editing, and deleting details of the inventory
Issues 5
Completed 2
Unestimated 0
Estimate 14
Create issue in epic
Category Information
User Administration
Reporting
User Registration
Search
Shopping Cart
Sprint 1 3/4 Clear all filters
2 0 6
15/Jul/13 2:52 PM • 19/Jul/13 2:52 PM
ADP-23 Add details
Store R1 Inventory Details 3
ADP-24 Edit perfume details
Store R1 Inventory Details 2
ADP-91 BUG: Unable to add address with "#" symb
Store R1 Inventory Details
Backlog 2/31 Clear all filters
Create Sprint
ADP-25 Delete details
Store R1 Inventory Details 1
ADP-86 Add Deals
Store R1 Inventory Details 8
Perfume Store / ADP-91
BUG: Unable to add address with "#" symbol
Remaining: 3h
Details
Status: Resolved
Component/s: None
Labels: None
Affects Version/s: None
Fix Version/s: Store R1
Epic: Inventory Details ×
People
Reporter:
Assignee:
Dates
Created: 17/Jul/13 10:39 AM
Updated: 18/Jul/13 11:06 AM

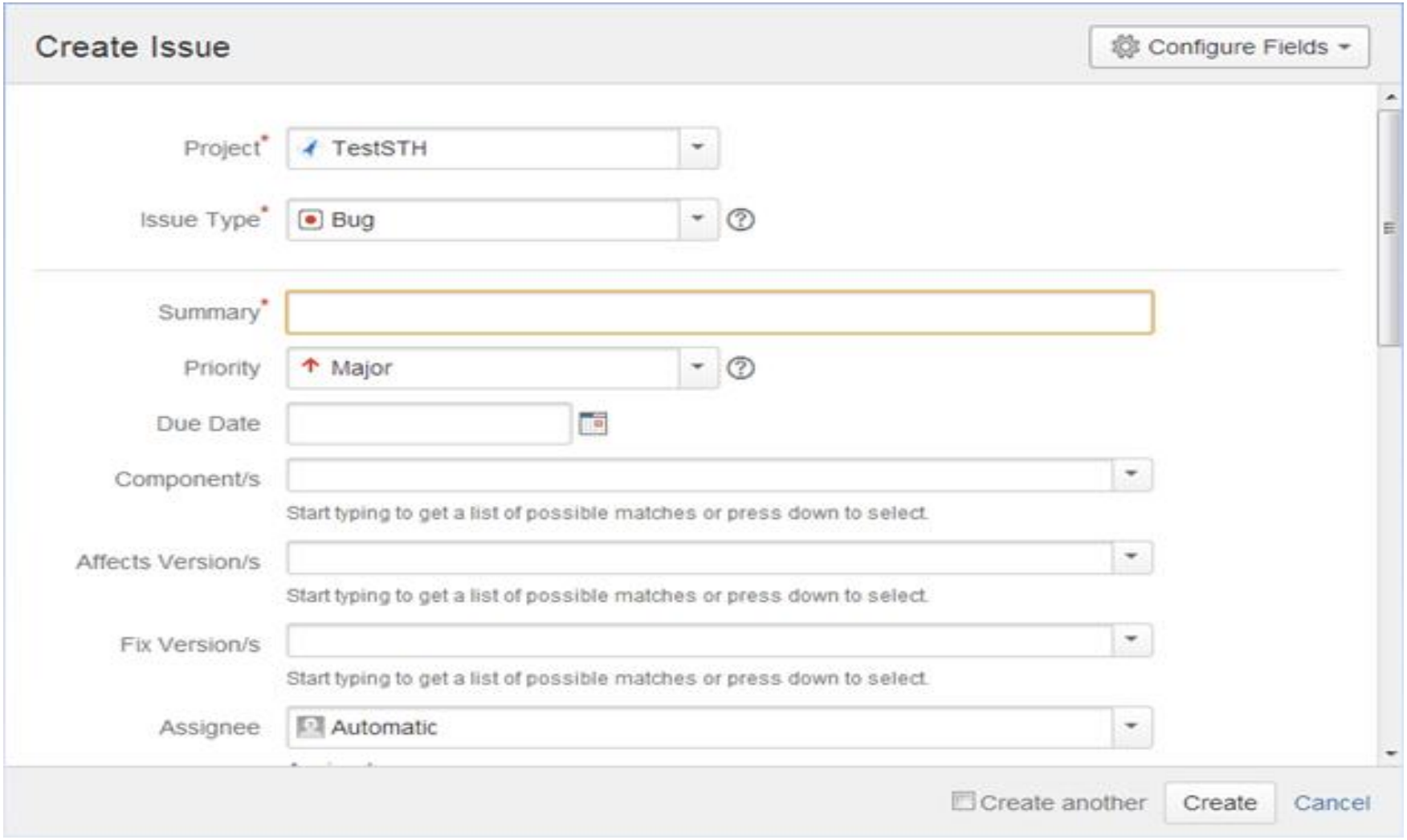
Work Mode - Scrum



Report Mode - Scrum



Creating a JIRA issue



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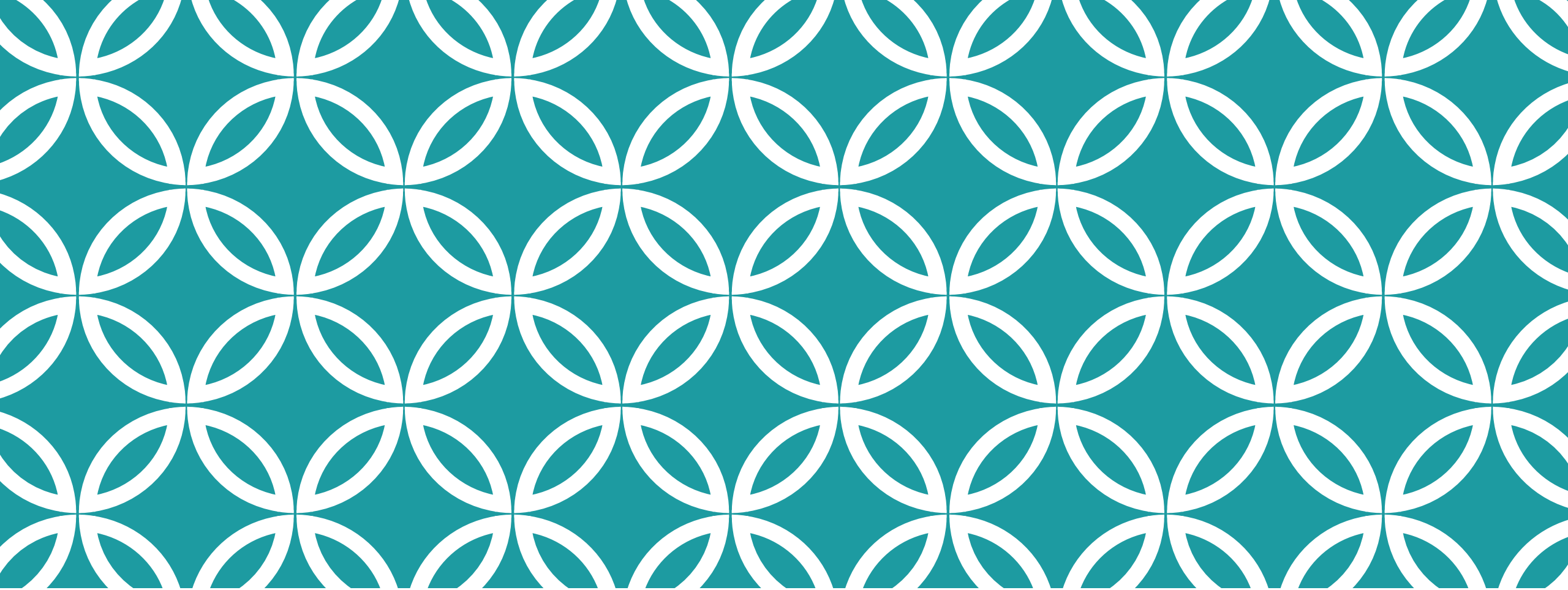
- Enhancing project communications
  - Running effective project meetings
  - Making effective presentations
  - Being a better listener
  - Using communication templates
  - Making a walk-through presentation
- Using collaboration technologies
  - How communication method differ
  - Collaboration technologies
  - Enterprise Project management techniques

Questions



AGILE PROJECT MANAGEMENT FOUNDATIONS

CHAPTER OUTLINE

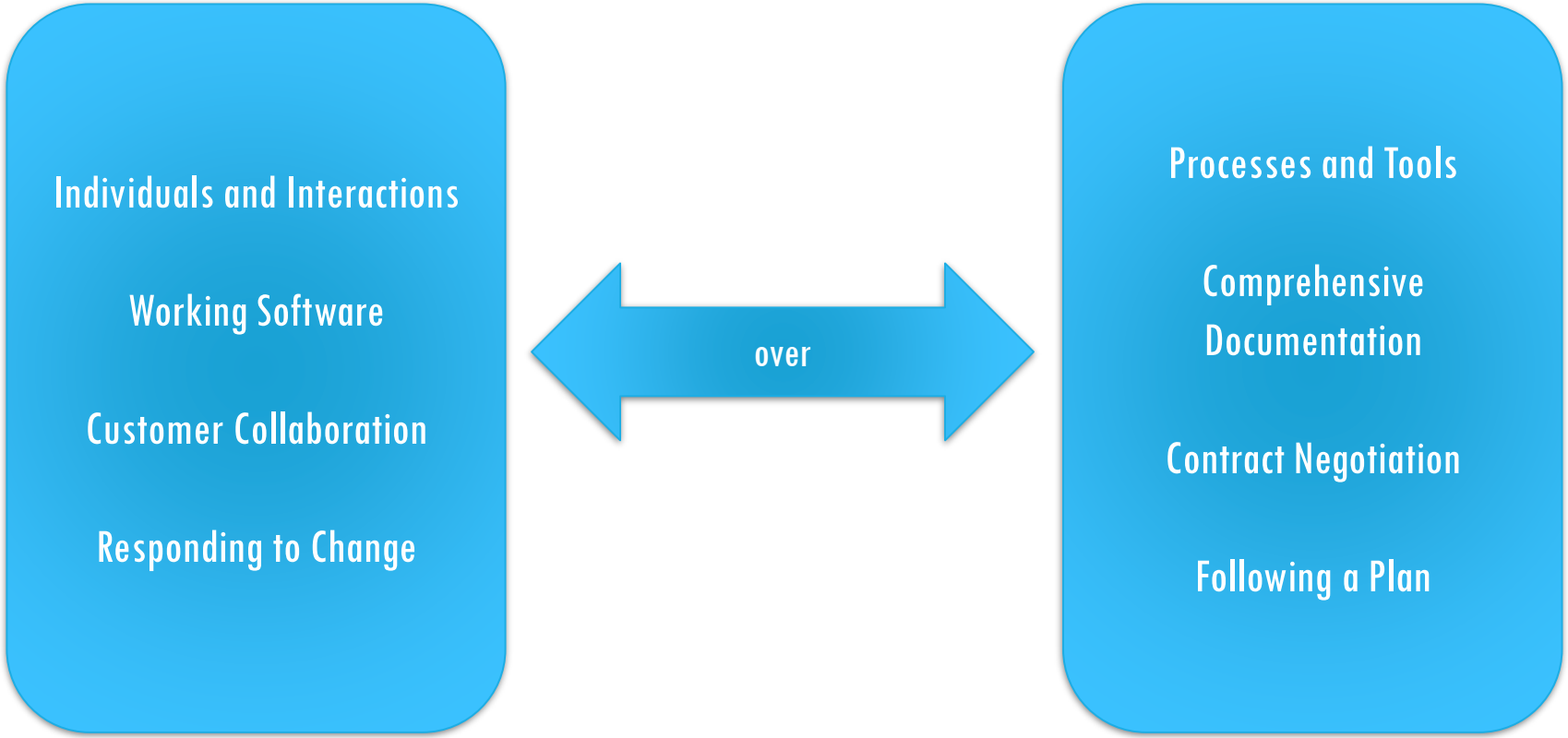
- Agile Project Management Introduction
- The Agile Project Life Cycle
- Managing Agile Project Teams
- Managing Communications in Agile Projects

AGILE PROJECT MANAGEMENT INTRODUCTION

- Competitive environments, the increasing pace of technological change, and increasing uncertainty necessitates organizations to become more adaptive – more agile.
- Oftentimes, traditional project management approaches don't fit the bill because they require most of the work to be determined up front, which makes plans difficult to adjust.
- In contrast, agile approaches are more flexible in allowing frequent iterations and obtaining rapid and frequent feedback from customers.
- Agile is not a methodology per se but rather a philosophy that puts forth a set of principles.
  - Methodologies such as Crystal, Kanban, Scrum, and eXtreme Programming implement these principles set out by the Agile Manifesto.
- Further, organizations are increasingly managing IS projects by using a **DevOps** approach, where, based on agile principles, engineers from both development and operations collaborate throughout the system's life cycle from design to development to operations and support.

THE AGILE MANIFESTO

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:



That is, while there is value in the items on the right, we value the items on the left more.

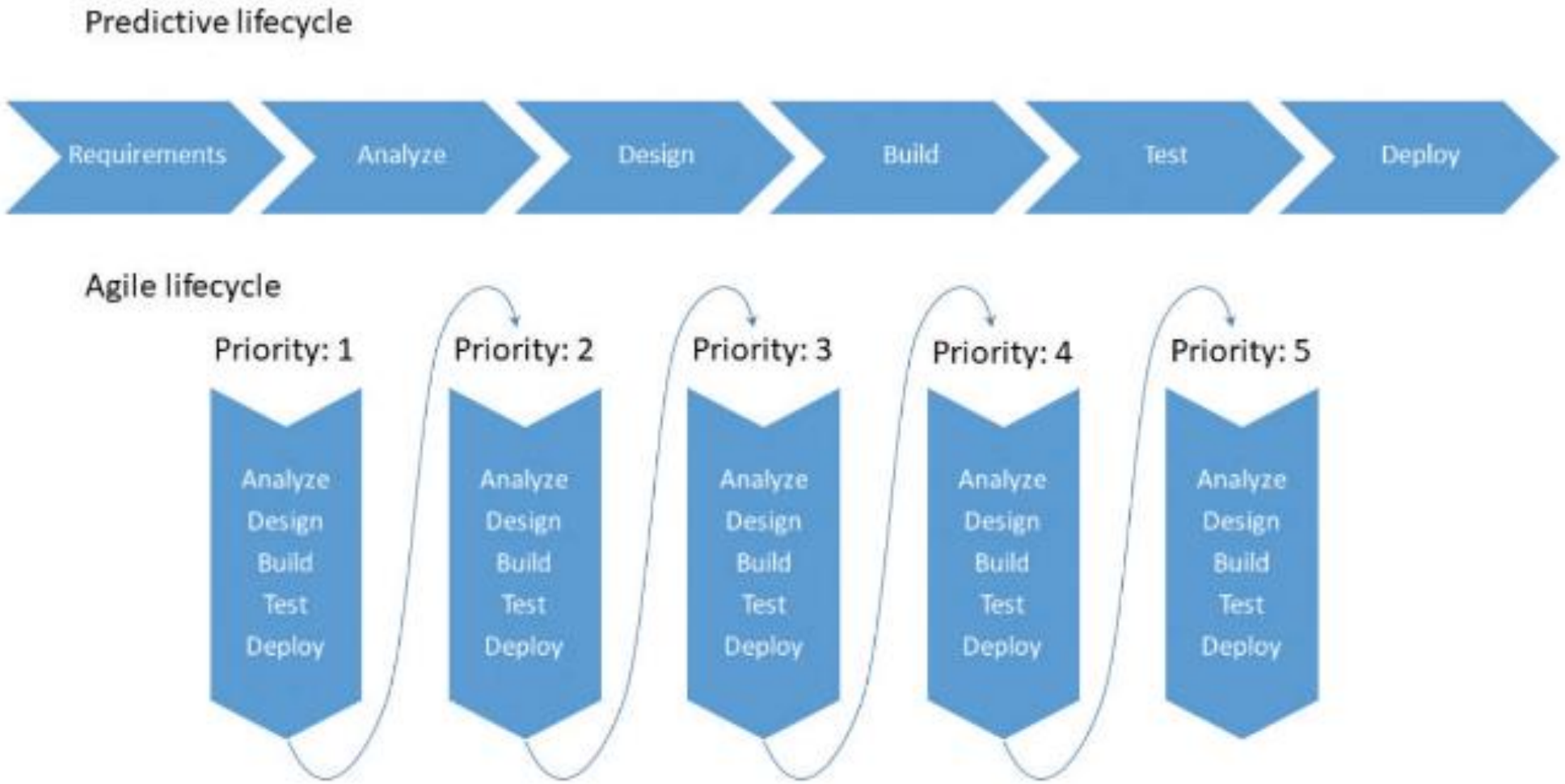
Figure A1.1 The agile manifesto. *Source:* Beck et al. (2001).

The agile manifesto is a declaration specifying the aims of agile approaches, emphasizing a focus on individuals and interactions, working software, customer collaboration, and responding to change, over processes and tools, comprehensive documentation, contract negotiation, and following plans.

THE PREDICTIVE VS AGILE PROJECT MANAGEMENT LIFE CYCLE

- Any project needs to balance time, costs, and scope to deliver a product with a specified performance or quality.
- **Predictive:** In predictive life cycles, project teams go through the stages of analyzing, designing, building, testing and deploying the system based on the requirements.
  - **Scope** is defined early in the project and the requirements drive time and costs, as well as the resulting quality. In an agile approach, requirements are assumed to vary and change.
- **Agile:** In an agile approach, requirements are assumed to vary and change. Typically, the intended features of the finish product are prioritized; the team then starts working on the most important feature, and so on.
  - **Iterations** are key to the agile process. An **iteration** is a development phase (typically timeboxed) in which all work pertaining to a specific deliverable is performed.

PREDICTIVE VS. AGILE



PREDICTIVE VS. AGILE

- In each iteration, the team performs processes related to analyzing, designing, building, testing, and deploying for each feature before moving on to the next priority feature.
- Typically, the iterations take the form of timeboxes of equal duration (such as 7 or 14 days) with the goal of each iteration being the delivery of a working feature.
- Depending on the project, a hybrid approach may be used.
  - That is, some teams may use agile approaches to build the software but then use predictive approaches for later phases.
  - The choice of a life cycle depends on the needs of a particular project, such as the size or scope of the IS project, the timeline or duration of the project, and the number of people involved in the project.
- There are different methodologies under the agile umbrella such as Crystal, Kanban, Scrum, and eXtreme Programming.

SCRUM—KEY TERMS

- **Scrum:** Widely used agile methodology that uses short sprints to deliver software at regular intervals.

- **Sprint:** Iteration that lasts for one to two weeks and consists of a sprint planning meeting, daily stand-ups, a sprint demo, and a sprint retrospective.
- **Sprint planning meeting:** Meeting during which the team jointly decides on which feature to implement during the sprint.
- **Daily stand-ups:** Fifteen-minute stand-up meetings used to discuss issues faced during the previous day and goals for the current day.
- **Sprint review:** Meeting during which the team presents the work completed during the sprint.
- **Sprint retrospective:** Meeting during which the team discusses the sprint, identifies positive and negative aspects of the process, and agrees on changes to the process for the next sprint.

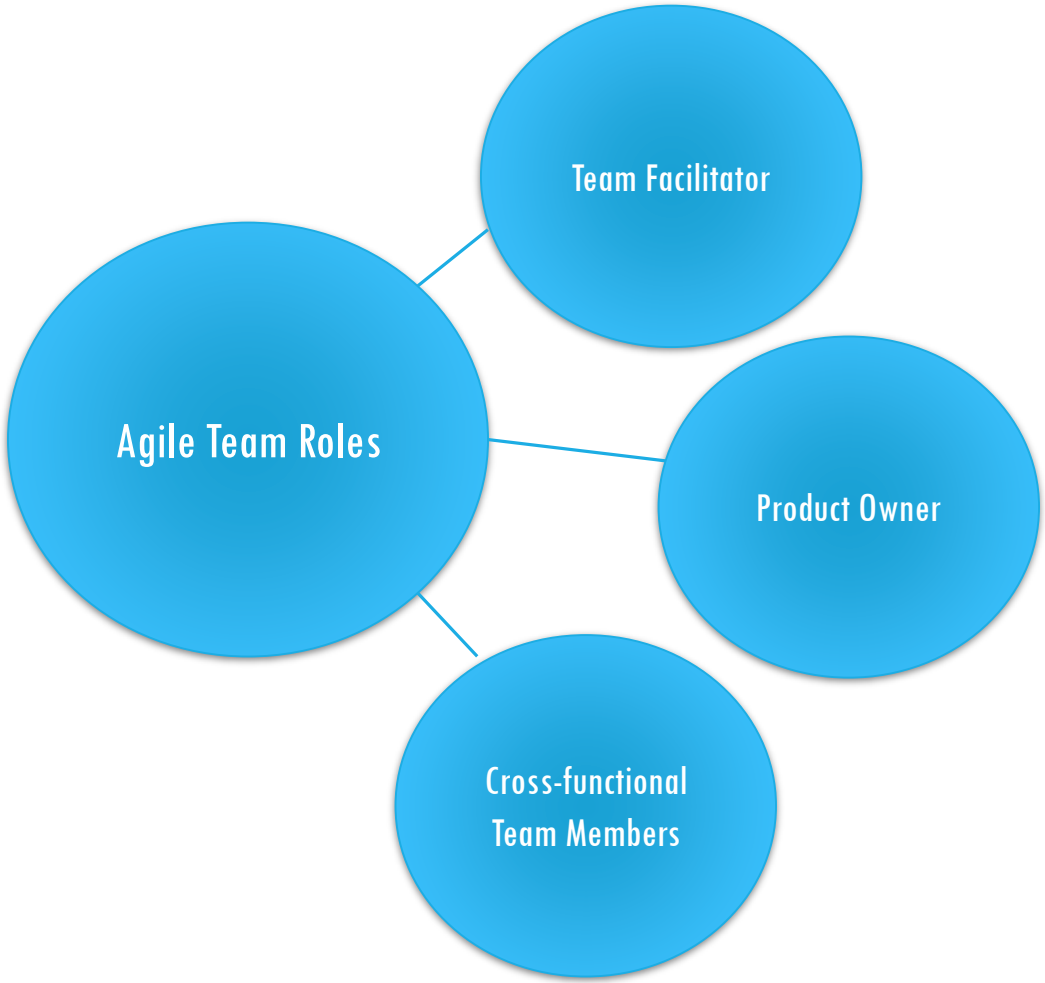
SCRUM—KEY TERMS

- **Product owner:** The key stakeholder of the project who conveys the vision of the end product to the team and guides the team on the priority of features to deliver.
- **Scrum master:** Facilitator aiding the Scrum team in being effective.
- **Scrum team:** Team of five to seven cross-functional members who are jointly responsible for delivering the product on time and at the expected quality at the end of each spring.
- **Servant leader:** Refers to leaders who focus on serving the team and helping the team members succeed by listening, coaching, and facilitating collaboration within the team, between teams, and across the organization

MANAGING AGILE PROJECT TEAMS

- It's not only important to use agile methodologies but it's also important to manage a team that has an agile mindset.
- For example, agile teams should understand the value of early and continuous delivery and how to timebox as a method to minimize distractions and focus on the tasks that have the highest priority.
- Ideally, project team member should be 100 percent dedicated to the team (which is oftentimes not feasible in real-world projects).
- Agile teams are also cross-functional (i.e., designers, developers, testers), which allows teams to have the skillset needed to produce the finished product.
- They rarely need to see outside people.

AGILE TEAM ROLES



Three distinct roles in agile teams

- The agile mindset
- 3-9 collocated members dedicated to the project
- These are self-organizing teams that manage their own process and work together towards successful project completion.
- Cross-functional teams (in Scum called Scrum team)
- Product owner (often with business background)
- Team facilitator (in Scrum called Scrum Master)
- Servant leader

MANAGING COMMUNICATION IN AGILE PROJECTS

- Collocated & Distributed Teams

- Agile teams require close collaboration, daily standups, dedicated space, and minimal interruptions
- Collocation is typically regarded as essential
- However, Agile is practiced among distributed teams
- Distributed teams require communication technology such as always-on videoconferencing (fishbowl window), repositories, etc.
- Problem of time zones still remains

DAILY STANDUPS IS:

A. Fifteen-minute stand-up meetings used to discuss issues faced during the previous day and goals for the current day.

B. Development phase (typically timeboxed) in which all work pertaining to a specific deliverable is performed.

C. Iteration that lasts for one to two weeks and consists of a sprint planning meeting, daily stand-ups, a sprint demo, and a sprint retrospective.

D. Meeting during which the team jointly decides on which feature to implement during the sprint.

E. Meeting during which the team discusses the sprint, identifies positive and negative aspects of the process, and agrees on changes to the process for the next sprint.

SPRINT IS:

A. Fifteen-minute stand-up meetings used to discuss issues faced during the previous day and goals for the current day.

B. Iteration that lasts for one to two weeks and consists of a sprint planning meeting, daily stand-ups, a sprint demo, and a sprint retrospective.

C. Development phase (typically timeboxed) in which all work pertaining to a specific deliverable is performed.

D. Meeting during which the team jointly decides on which feature to implement during the sprint.

E. Meeting during which the team discusses the sprint, identifies positive and negative aspects of the process, and agrees on changes to the process for the next sprint.

SCRUM MASTER IS

A. A leader who focuses on serving the team and helping the team members succeed by listening, coaching, and facilitating collaboration within the team, between teams, and across the organization.

B. Team of five to seven cross-functional members who are jointly responsible for delivering the product on time and at the expected quality at the end of each sprint.

C. Facilitator aiding the Scrum team in being effective.

D. The key stakeholder of the project who conveys the vision of the end product to the team and guides the team on the priority of features to deliver.

SCRUM IS

A. Declaration specifying the aims of agile approaches, emphasizing a focus on individuals and interactions, working software, customer collaboration, and responding to change, over processes and tools, comprehensive documentation, contract negotiation, and following plans.

B. Approach to managing IS projects, where, based on agile principles, engineers from both development and operations collaborate throughout the system's life cycle.

C. A leader who focuses on serving the team and helping the team members succeed by listening, coaching, and facilitating collaboration within the team, between teams, and across the organization

D. Widely used agile methodology that uses short sprints to deliver software at regular intervals.

LET'S REVIEW

- Scrum is a widely used agile methodology that uses short sprints to deliver software at regular intervals. Other types of agile methodologies include: Crystal, Kanban, Scrum, and eXtreme Programming.
- In agile teams there are typically three roles, the product owner, cross-functional team, and the team facilitator. In Scrum, specifically, the three roles are called product owner, Scrum master, and Scrum team.
- While agile teams are typically collocated, there are distributed agile teams. Always-on videoconferencing (fishbowl window), document repositories, etc. are used for communication and collaboration. However, there's still the problem with differences in time zones.
- Increasing uncertainty necessitates organizations to become more adaptive – more agile
- Agile is not a methodology per se but rather a philosophy that puts forth a set of principles.
- Proposed in the early 2000's, *The Manifesto for Agile Software Development* (the agile manifesto)specifies the aims of agile approaches.
- In each iteration in an agile life cycle, the team performs processes related to analyzing, designing, building, testing, and deploying for each feature before moving on to the next priority feature.