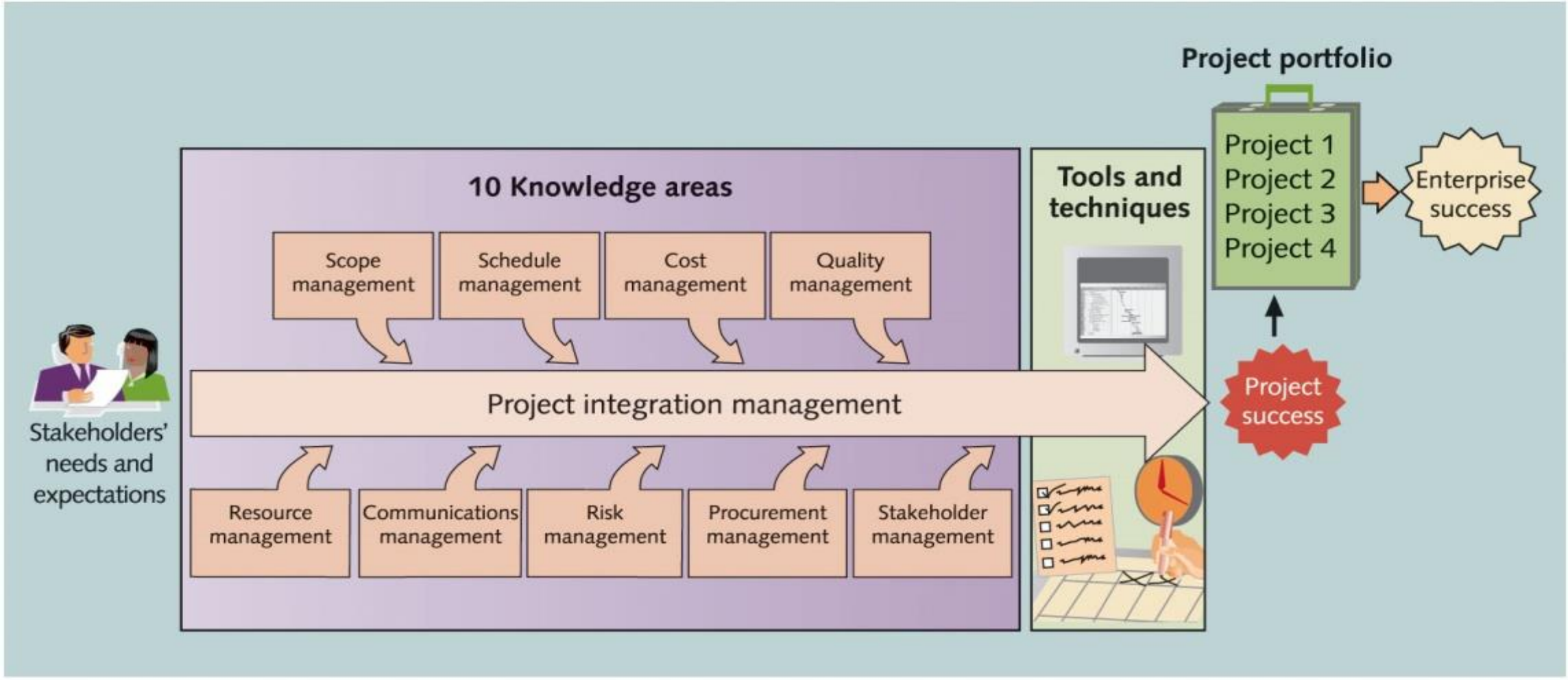
IT Project Management (ITec5111)

Chapter 4

Project Integration Management

Project Management framework

- Recall Project Management framework



What is Project Integration Management?

- Managing a project can be complicated, especially when different teams have to work together and when working on a larger project.
- Without proper alignment of the project parts, the project can slow down, become less productive and possibly grind to a halt.
- To create harmony between the various teams and parts of a project, project integration management is needed.
- **Project integration management** is one of the ten project management knowledge areas which is **mainly concerned with the processes** required to **ensure that the various activities of the project are coordinated properly**.

Project Integration Management Processes

- Six main processes are involved in project integration management:

1. **Develop the project charter**: working with stakeholders to create the document that formally authorizes a project
2. **Develop the project management plan**: coordinating all planning efforts to create a consistent, coherent document
3. **Directing and managing project work**: carrying out the project management plan by performing the activities included in it
4. **Monitor and control the project work**: overseeing project work to meet the performance objectives of the project
5. **Perform integrated change control**: coordinating changes that affect the project's deliverables and organizational process assets
6. **Close the project**: finalizing all project activities to formally close the project

Project Integration Management Processes(cont'd)

- The project managers takes responsibility for
  - Coordinating all the people, plans and work required to complete a project
  - Focusing on the big picture and steering the project team toward successful completion
  - Making the final decisions when there are conflicts among project goals or people involved
  - Communicating key project information to top management

Project Integration Management Processes(cont'd)

- Good project integration management is critical to providing stakeholder satisfaction
- Therefore, the Project Manager **must establish and maintain good communication and relationships** with all stakeholders, including customers, the project team, top management, other project managers and opponents(internal or external resistance) of the project.
- Recall that **project management** is applying knowledge, skills, tools, and techniques to meet project requirements, while also meeting stakeholder needs and expectations

Strategic Planning & Project Selection

a. Strategic planning:

- Involves determining long-term objectives, predicting future trends, and projecting the need for new products and services.
- **Strategic planning:** provides important information for organizations to identify and then select potential projects.
- Organizations often perform a **SWOT analysis-**which is one tool used in strategic planning
  - Analyzing **Strengths**, **Weaknesses**, **Opportunities**, and **T**hreats

Strategic Planning & Project Selection(cont'd)

b. Identifying Potential Projects:

- The first step in project management is **deciding what projects to do in the first place**.
- There are usually more projects than available time and resources to implement them in an organization
- Project selection process start at the top of the hierarchy
  - A steering committee develops an **IT strategic plan** that is tied to the organization's overall strategic plan.
- As part of strategic planning, organizations:
  - Identify potential projects
  - Use realistic methods to select which projects to work on
    - Focusing on broad organizational needs
    - Categorizing information technology projects motivation: **problem, opportunity, directive**
      - A **problem** is an undesirable situation that prevents an organization from achieving its goals – system slow, needs upgrades
      - An **opportunity** is a chance to improve the organization
      - A **directive** is a new requirement imposed by management, government
    - Performing net present value or other financial analyses

Strategic Planning & Project Selection(cont'd)

c. Aligning IT with Business Strategy:

- ***An organization's strategic plan should guide the IT project selection process***
- Many IT systems are "strategic" because they **directly support key business strategies of the organizations**
- Once potential project is selected, the organization should formalize project initiation by issuing a project charter

1. Develop Project Charters

- After top management decides which project to work on, it is important to let the rest of the organization know about the project.
- **Management needs to create and distribute documentation to authorize project initiation.**
- This documentation can take many different forms, but one common form is a **project charter**.
- A **project charter** is a document that formally recognizes the existence of a project and provides direction on the project's objectives and management.
- **The project charter authorizes the project manager to use organizational resources to complete the project**.
- Key project stakeholders should sign a project charter to acknowledge agreement.
- A signed project charter is a key output of the initiation process
- See Table 4-1 from your text book which shows sample project charter

2. Develop Project Management Plan

- A **project management plan:** is a document used to coordinate all project planning documents and help to guide project's execution and control.
  - It **facilitates communication** among stakeholders, provides a **baseline** for progress measurement and project control
  - should be dynamic, flexible and subject to change when the environment or project changes
- To create and assemble a good project management plan, **the project manager must practice the art of project integration management**, because information is required from all of the project management knowledge areas.
- Includes all project planning documents
  - **Plans created in the other knowledge areas are subsidiary parts of the overall project management plan**

Develop Project Management Plan(cont'd)

- Many organizations use **guidelines** to create project management plans.
- Microsoft Project 2013 and other project management software packages come with several template files to use as guidelines.
- However, do not confuse a project management plan with a Gantt chart.
- The project management plan is much more than a Gantt chart
- **Project Management Plan Contents**
  - Introduction or overview of the project
  - Description of how the project is organized
  - Management and technical processes used on the project
  - Work to be done, schedule, and budget information

Develop Project Management Plan(cont'd)

- The **introduction or overview** of the project should include the following information at a minimum:
  - **The project name**: Every project should have a unique name, which helps distinguish each project and avoids confusion among related projects.
  - **A brief description of the project and the need it addresses**: This description should clearly outline the goals of the project and strategic reason for it.
  - **The sponsor's name**: Every project needs a sponsor. Include the name, title, and contact information of the sponsor in the introduction.
  - **The names of the project manager and key team members**: The project manager should always be the contact for project information. Depending on the size and nature of the project, names of key team members may also be included.
  - **Deliverables of the project:** This section should briefly list and describe the products that will be created as part of the project. **Software packages, technical reports, and training materials** are examples of deliverables.
  - **A list of important reference materials**: Many projects have a history that precedes them. Listing important documents or meetings related to a project helps project stakeholders understand that history. This section should reference the plans produced for other knowledge areas. Recall that every knowledge area includes some planning processes.
  - **A list of definitions and acronyms, if appropriate**: Many projects, especially IT projects, involve terminology that is unique to a particular industry or technology. Providing a list of definitions and acronyms will help avoid confusion.

Develop Project Management Plan(cont'd)

- The **description of how the project is organized** should include the following information:
  - **Organizational charts**: The description should include a project organizational chart to show the lines of authority, responsibilities, and communication for the project
  - **Project responsibilities**: This section of the project plan should **describe the major project functions and activities and identify the people *responsible* for them.**
  - **Other organizational or process-related information**: Depending on the nature of the project, the team might need to document major processes they follow on the project
    - For example, if the project involves *releasing a major software upgrade*, team members might benefit from having a diagram or timeline of the major steps involved in the process.

Develop Project Management Plan(cont'd)

- The **management and technical processes** section should include the following information:
  - **Management objectives**: It is important to understand top management's view of the project, the priorities for the project, and any major assumptions or constraints.
  - **Project controls**: This section describes how to monitor project progress and handle changes.
  - **Risk management**: This section briefly addresses how the project team will identify, manage, and control risks.
    - This section should refer to the risk management plan.
  - **Project staffing**: This section describes the number and types of people required for the project.
    - It should refer to the human resource plan.
  - **Technical processes**: This section **describes specific methodologies** a project might use and explains how to document information.

Develop Project Management Plan(cont'd)

- The **work that needs to be performed** section summarize the following:
  - **Major work packages**: This section should briefly summarize the main work packages for the project
    - refer to appropriate sections of the **scope management plan**.
  - **Key deliverables**: This section lists and describes the key products created as part of the project. It should also describe the quality expectations for the product deliverables.
  - **Other work-related information**: This section highlights key information related to the work performed on the project.
    - For example, it might list specific hardware or software to use on the project or certain specifications to follow. It should document major assumptions made in defining the project work.

Develop a Project Management Plans(cont'd)

- The **project schedule information** section should include the following
  - **Summary schedule:** Depending on the project's size and complexity, the summary schedule might list only **key deliverables and their planned completion dates**. For smaller projects, it might include all of the work and associated dates for the entire project in a Gantt chart.
  - **Detailed schedule:** This section provides more detailed information about the project schedule.
    - It should reference the **schedule management plan and discuss dependencies among project activities that could affect the project schedule**. A network diagram can show these dependencies.
  - **Other schedule-related information**: Many assumptions are often made when preparing project schedules. This section should document major assumptions and highlight other important information related to the project schedule.

Develop a Project Management Plans(cont'd)

- The **budget** section of the project management plan should include the following:
  - **Summary budget**: The summary budget includes the total estimate of the overall project's budget.
    - It could also include the budget estimate for each month or year by certain budget categories. It is important to provide some explanation of what these numbers mean.
  - **Detailed budget**: This section summarizes the contents of the cost management plan and includes more detailed budget information.
    - For example, what are the fixed and recurring cost estimates for the project each year? What types of people are needed to do the work, and how are the labor costs calculated?
  - **Other budget-related information**: This section documents major assumptions and highlights other important information related to financial aspects of the project.

3. Directing and managing project work

- Involves managing and performing the work described in the project management plan
- *The majority of time and money is usually spent on execution*
- The **project manager** needs to focus on leading the project team and managing stakeholder relationships to execute the project management plan successfully
- Directing and managing project work needs:

a. **coordinating Planning and Execution**

  - In project integration management, **project planning** and **execution** are intertwined and inseparable activities.
  - The main function of creating a project management plan is to guide project execution.
  - A **good plan should help produce good products** or work results and should document what constitutes good work results

Directing and managing project work(cont'd)

b. **Providing Leadership and a Supportive Culture**

- Strong leadership and a supportive organizational culture are crucial during project execution
- Organizational culture can help project execution by:
  - Providing guidelines and templates
  - Smooth organizational procedures
- Even with a supportive organizational culture, project managers may sometimes find it necessary to break the rules to produce project results in a timely manner.
- When project managers break the rules, politics will play a role in the results.
- Breaking organizational rules—and getting away with it—requires excellent leadership, communication, and political skills.

Directing and managing project work(cont'd)

c. **Important Skills for Project Execution**

- In addition to strong leadership, communication, and political skills, project managers need to possess product, business, and application area knowledge to execute projects successfully.
- **It is often helpful for IT project managers to have prior technical experience or at least a working knowledge of IT products.**
- For example, if the project manager were leading a team to help define user requirements, it would be helpful to understand the language of the business and technical experts on the team.

Directing and managing project work(cont'd)

d. **Project Execution Tools & Techniques**

- Directing and managing project work requires specialized tools and techniques, some of which are unique to project management.
- **Project managers can use specific tools and techniques** to perform activities that are part of execution processes.
- There are different types of project management software products available on the market today.

4. Monitoring & Controlling Project Work

- **Changes are expected on most projects**, so it's important to develop and follow a process to monitor and control changes
- **Monitoring project work:** includes collecting, measuring, and disseminating performance information
- Two important outputs of monitoring and controlling project work include **recommended corrective** and **preventive actions**
  - Corrective: result in improvements in project performance
  - Preventive: reduce the chances of negative consequences associated with project risks
- The project management plan provides the **baseline** for identifying and controlling project changes.

5. Performing Integrated Change Control

- **Integrated change control:** involves identifying, evaluating, and managing changes **throughout the project life cycle**.
- Three main objectives are:
  - Managing the factors that create changes to ensure that changes are beneficial
    - Scope, time , cost and quality
  - Determining that a change has occurred
    - Project manager must **communicate** changes to top management and stakeholders
  - Managing actual changes as they occur
    - **Change is unavoidable** so careful change control is a critical success factor to a project

Performing Integrated Change Control(cont'd)

- **Change Control System**
  - Is a **formal documented process** that describes when and how official project **documents** and **work** may be changed
    - Change is necessary but it needs to be properly managed and controlled
  - Describes who is authorized to make changes and how to make them
- **Change control board (CCB)**
  - **Is a formal group of people responsible for approving or rejecting changes on a project**
  - CCBs provide guidelines for preparing change requests, evaluate change requests, and manage the implementation of approved changes
  - Includes stakeholders from the entire organization

Performing Integrated Change Control(cont'd)

- **Configuration Management**
  - Ensures that the descriptions of the project's products are **correct** and **complete- approve the project**
  - Involves identifying and controlling the functional and physical design characteristics of products and their support documentation
  - Configuration management specialists identify and document configuration requirements, control changes, record and report changes, and **audit the products to verify conformance to the requirements**

6. Closing Projects

- To close a project, you must finalize all activities and transfer the completed or cancelled work to the appropriate people
- Main outputs include:
  - Administrative closure procedures
  - Contract closure procedures
  - Final products, services, or results
  - Organizational process asset updates
    - Project documentation, project closure documents, historical information produced by the project, lessons-learned report