Chapter 4: Project Integration Management

Information Technology Project Management, Seventh Edition

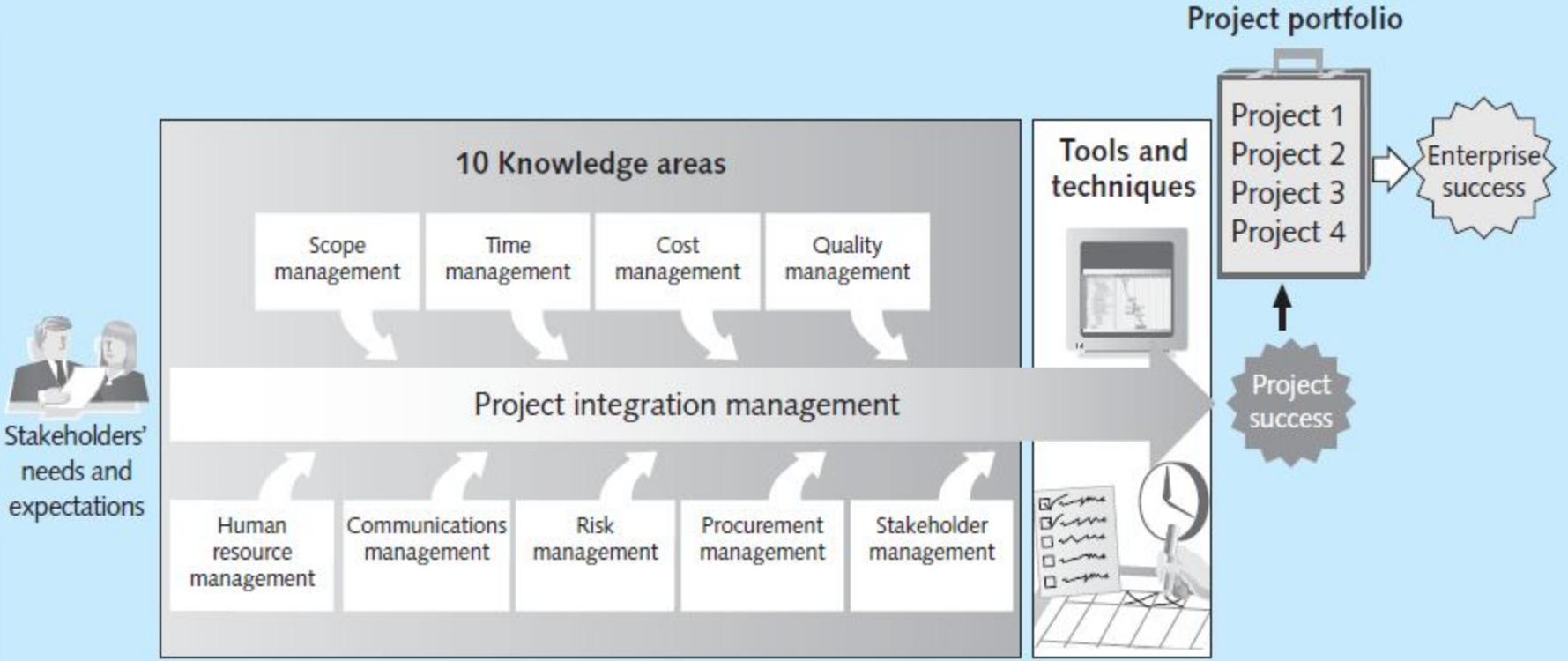
Note: See the text itself for full citations.

Learning Objectives

- Describe an overall framework for project integration management as it relates to the other project management knowledge areas and the project life cycle
- Discuss the strategic planning process and apply different project selection methods
- Explain the importance of creating a project charter to formally initiate projects
- Describe project management plan development, understand the content of these plans, and review approaches for creating them

Learning Objectives

- Explain project execution, its relationship to project planning, the factors related to successful results, and tools and techniques to assist in directing and managing project work
- Describe the process of monitoring and controlling a project
- Understand the integrated change control process, planning for and managing changes on information technology (IT) projects, and developing and using a change control system
- Explain the importance of developing and following good procedures for closing projects
- Describe how software can assist in project integration management


Project portfolio
Project 1
Project 2
Project 3
Project 4
Enterprise success
10 Knowledge areas
Scope management
Time management
Cost management
Quality management
Tools and techniques
Project integration management
Project success
Stakeholders' needs and expectations
Human resource management
Communications management
Risk management
Procurement management
Stakeholder management

The Key to Overall Project Success: Good Project Integration Management

- Project managers must coordinate all of the other knowledge areas throughout a project's life cycle
- Many new project managers have trouble looking at the "big picture" and want to focus on too many details (See opening case for a real example)
- Project integration management is *not* the same thing as software integration

Strategic Planning and Project Selection

- **Strategic planning** involves determining long-term objectives, predicting future trends, and projecting the need for new products and services
- Organizations often perform a **SWOT analysis**
  - analyzing **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats
- As part of strategic planning, organizations
  - identify potential projects
  - use realistic methods to select which projects to work on
  - formalize project initiation by issuing a project charter

Figure 4-2. Mind Map of a SWOT Analysis to Help Identify Potential Projects

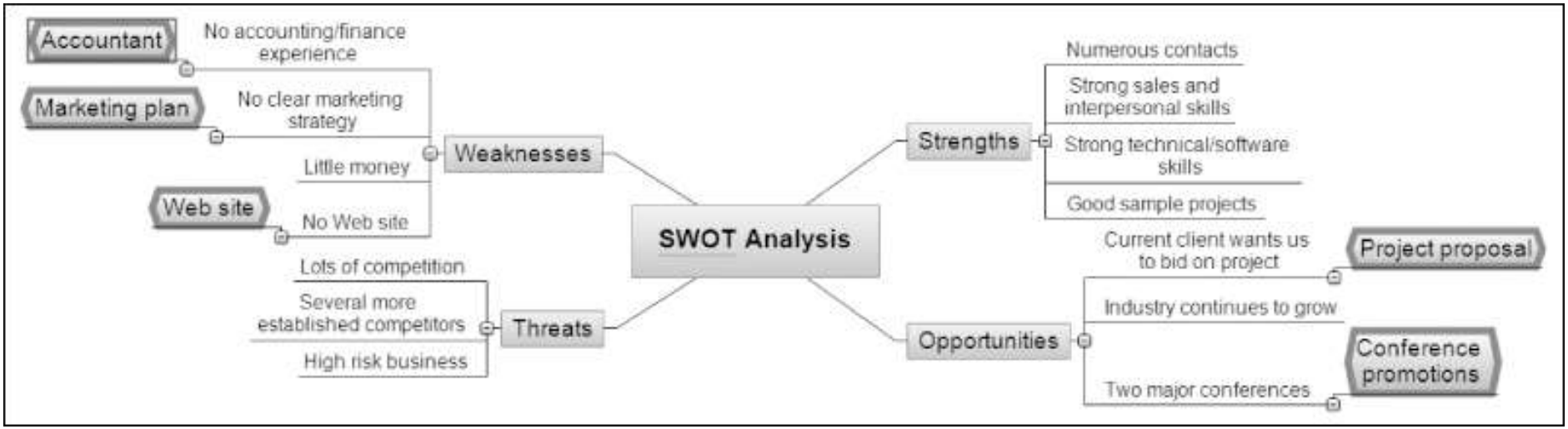
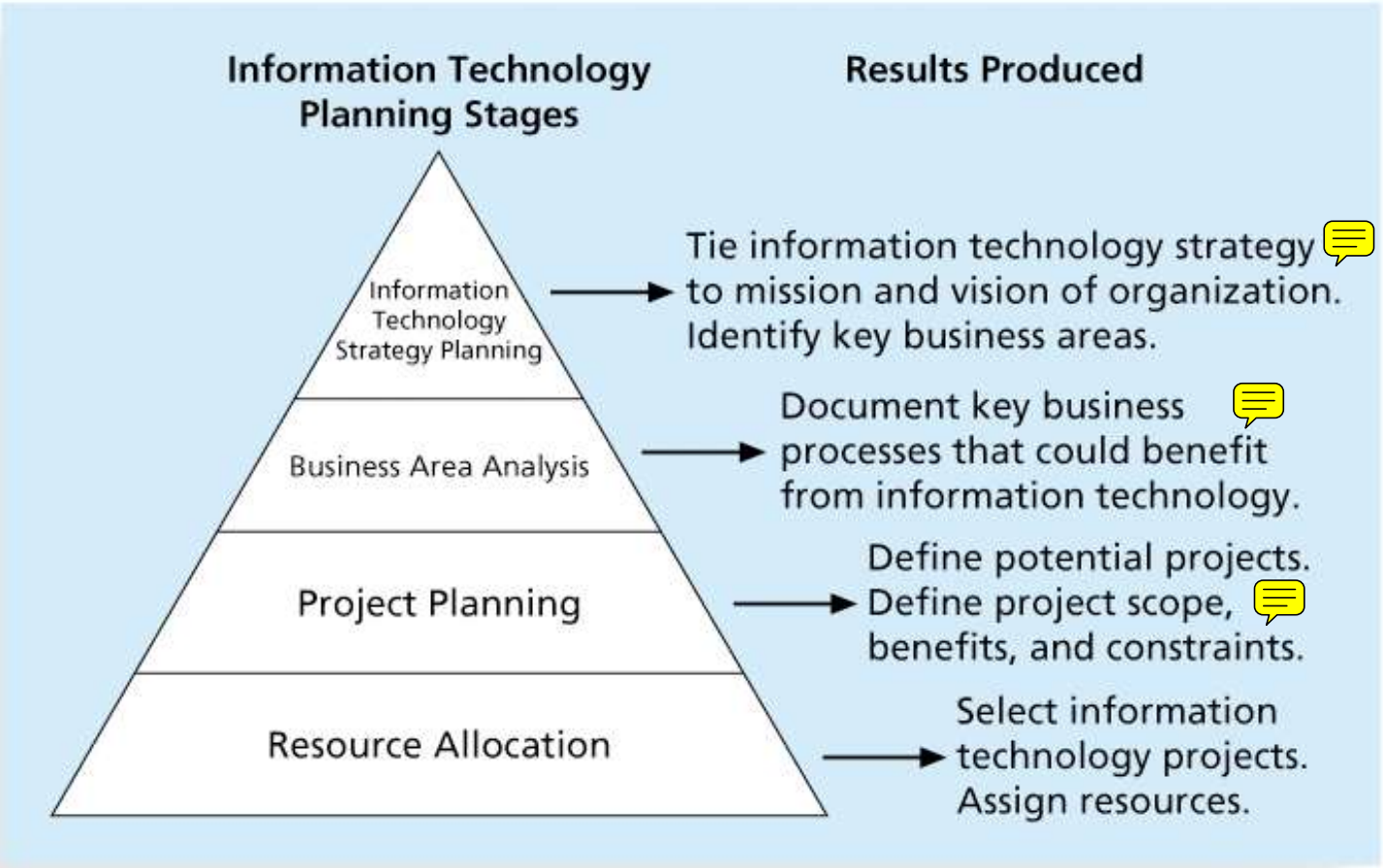


Figure 4-3. Information Technology Planning Process



Methods for Selecting Projects

- There are usually more projects than available time and resources to implement them
- Methods for selecting projects include:
  - focusing on broad organizational needs
  - categorizing information technology projects
  - performing net present value or other financial analyses
  - using a weighted scoring model
  - implementing a balanced scorecard

Focusing on Broad Organizational Needs

- It is often difficult to provide strong justification for many IT projects, but everyone agrees they have a high value
- "It is better to measure gold roughly than to count pennies precisely"
- Three important criteria for projects:
  - There is a ***need*** for the project
  - There are ***funds*** available
  - There's a strong ***will*** to make the project succeed

Categorizing IT Projects

- One categorization is whether the project addresses
  - a problem
  - an opportunity, or
  - a directive
- Another categorization is how long it will take to do and when it is needed
- Another is the overall priority of the project

Project Integration Management Processes

- 1. Developing the project charter involves working with stakeholders to create the document that formally authorizes a project—the charter.
- 2. Developing the project management plan involves coordinating all planning efforts to create a consistent, coherent document—the project management plan.
- 3. Directing and managing project work involves carrying out the project management plan by performing the activities included in it.

Project Integration Management Processes (cont'd)

- Monitoring and controlling project work involves overseeing activities to meet the performance objectives of the project
- Performing integrated change control involves identifying, evaluating, and managing changes throughout the project life cycle.
- Closing the project or phase involves finalizing all activities to formally close the project or phase.

Figure 4-1. Project Integration Management Summary

Developing a Project Charter

- After deciding what project to work on, it is important to let the rest of the organization know
- A **project charter** is a document that formally recognizes the existence of a project and provides direction on the project's objectives and management
- Key project stakeholders should sign a project charter to acknowledge agreement on the need and intent of the project; a signed charter is a key output of project integration management

Developing a Project Management Plan

- A **project management plan** is a document used to coordinate all project planning documents and help guide a project's execution and control
- Plans created in the other knowledge areas are subsidiary parts of the overall project management plan

Common Elements of a Project Management Plan

- 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

Table 4-2. Sample Contents for a Software Project Management Plan (SPMP)

MAJOR SECTION HEADINGS	SECTION TOPICS
Overview	Purpose, scope, and objectives; assumptions and constraints; project deliverables; schedule and budget summary; evolution of the plan
Project Organization	External interfaces; internal structure; roles and responsibilities
Managerial Process Plan	Start-up plans (estimation, staffing, resource acquisition, and project staff training plans); work plan (work activities, schedule, resource, and budget allocation); control plan; risk management plan; closeout plan
Technical Process Plans	Process model; methods, tools, and techniques; infrastructure plan; product acceptance plan
Supporting Process Plans	Configuration management plan; verification and validation plan; documentation plan; quality assurance plan; reviews and audits; problem resolution plan; subcontractor management plan; process improvement plan

IEEE Standard 1058-1998.

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 application area of the project directly affects project execution because the products of the project are produced during execution

Coordinating Planning and Execution

- Project planning and execution are intertwined and inseparable activities
- Those who will do the work should help to plan the work
- Project managers must solicit input from the team to develop realistic plans

Project Execution Tools and Techniques

- **Expert judgment**: Experts can help project managers and their teams make many decisions related to project execution
- **Meetings:** Meetings allow people to develop relationships, pick up on important body language or tone of voice, and have a dialogue to help resolve problems.
- **Project management information systems**: There are hundreds of project management software products available on the market today, and many organizations are moving toward powerful enterprise project management systems that are accessible via the Internet
- See the What Went Right? example of Kuala Lumpur's Integrated Transport Information System on p. 169

Monitoring and Controlling Project Work

- Changes are inevitable 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
- A **baseline** is the approved project management plan plus approved changes

Performing Integrated Change Control

- Three main objectives are:
  - Influencing the factors that create changes to ensure that changes are beneficial
  - Determining that a change has occurred
  - Managing actual changes as they occur

Closing Projects or Phases

- To close a project or phase, you must finalize all activities and transfer the completed or cancelled work to the appropriate people
- Main outputs include
  - Final product, service, or result transition
  - Organizational process asset updates

Chapter Summary

- Project integration management involves coordinating all of the other knowledge areas throughout a project's life cycle
- Main processes include
  - Develop the project charter
  - Develop the project management plan
  - Direct and manage project execution
  - Monitor and control project work
  - Perform integrated change control
  - Close the project or phase