Project Integration 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.

- Project integration management is *not* the same thing as software integration

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.

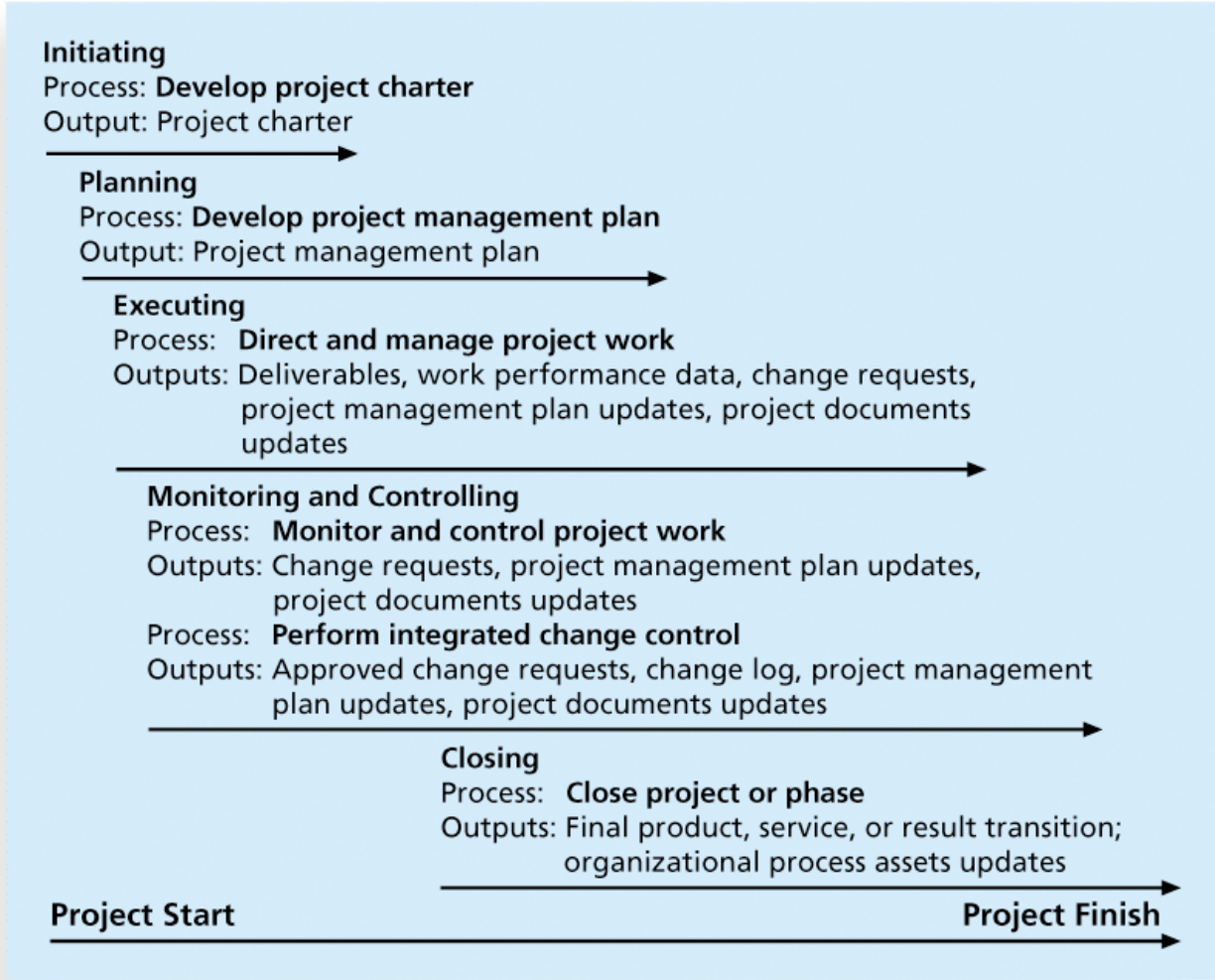
PROJECT INTEGRATION MANAGEMENT PROCESSES

- 4.Monitoring and controlling project work involves overseeing activities to meet the performance objectives of the project

- 5.Performing integrated change control involves identifying, evaluating, and managing changes throughout the project life cycle.

- 6.Closing the project or phase involves finalizing all activities to formally close the project or phase.

PROJECT INTEGRATION MANAGEMENT SUMMARY



1. DEVELOPING A PROJECT CHARTER

Exam Hint !!

- 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

INPUTS FOR DEVELOPING A PROJECT CHARTER

Exam Hint !!

- A project statement of work
- A business case
- Agreements
- Enterprise environmental factors

- **Organizational process assets**, which include formal and informal plans, policies, procedures, guidelines, information systems, financial systems, management systems, lessons learned, and historical information

SAMPLE PROJECT CHARTER

Project Title: DNA-Sequencing Instrument Completion Project
Date of Authorization: February 1
Project Start Date: February 1 **Projected Finish Date:** November 1

Key Schedule Milestones:

- Complete first version of the software by June 1
- Complete production version of the software by November 1

Budget Information: The firm has allocated $1.5 million for this project, and more funds are available if needed. The majority of costs for this project will be internal labor. All hardware will be outsourced.

Project Manager: Nick Carson, (650) 949-0707, ncarson@dnaconsulting.com

Project Objectives: The DNA-sequencing instrument project has been underway for three years. It is a crucial project for our company. This is the first charter for the project, and the objective is to complete the first version of the software for the instrument in four months and a production version in nine months.

Main Project Success Criteria: The software must meet all written specifications, be thoroughly tested, and be completed on time. The CEO will formally approve the project with advice from other key stakeholders.

SAMPLE PROJECT CHARTER (Cont.)

Approach:

- Hire a technical replacement for Nick Carson and a part-time assistant as soon as possible.
- Within one month, develop a clear work breakdown structure, scope statement, and Gantt chart detailing the work required to complete the DNA sequencing instrument.
- Purchase all required hardware upgrades within two months.
- Hold weekly progress review meetings with the core project team and the sponsor.
- Conduct thorough software testing per the approved test plans.

ROLES AND RESPONSIBILITIES

Name	Role	Position	Contact Information
Ahmed Abrams	Sponsor	CEO	aabrams@dnaconsulting.com
Nick Carson	Project Manager	Manager	ncarson@dnaconsulting.com
Susan Johnson	Team Member	DNA expert	sjohnson@dnaconsulting.com
Renyong Chi	Team Member	Testing expert	rchi@dnaconsulting.com
Erik Haus	Team Member	Programmer	ehaus@dnaconsulting.com
Bill Strom	Team Member	Programmer	bstrom@dnaconsulting.com
Maggie Elliot	Team Member	Programmer	melliot@dnaconsulting.com

Sign-off: (Signatures of all the above stakeholders)

Ahmed Abrams
Susan Johnson
Erik Haus
Maggie Elliot
Nick Carson
Renyong Chi
Bill Strom

Comments: (Handwritten or typed comments from above stakeholders, if applicable)

"I want to be heavily involved in this project. It is crucial to our company's success, and I expect everyone to help make it succeed." —Ahmed Abrams

"The software test plans are complete and well documented. If anyone has questions, do not hesitate to contact me." —Renyong Chi

2. 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


needs to be
simple
needs to be
powerful

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

ATTRIBUTES OF PROJECT PLANS

Plans should be:

I. Dynamic
II. Flexible
III. Updated as changes occur

- Plans should first and foremost guide project execution by helping the project manager lead the project team and assess project status

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.

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 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

PROVIDING LEADERSHIP AND A SUPPORTIVE CULTURE

- Project managers must lead by example to demonstrate the importance of creating and then following good project plans

- Organizational culture can help project execution by
  I. providing guidelines and templates
  II. tracking performance based on plans

- Project managers may still need to break the rules to meet project goals, and senior managers must support those actions

CAPITALIZING ON PRODUCT, BUSINESS, AND APPLICATION AREA KNOWLEDGE

- It is often helpful for IT project managers to have prior technical experience
- On small projects, the project manager may be required to perform some of the technical work or mentor team members to complete the projects
- On large projects, the project manager must understand the business and application area of the project

PROJECT EXECUTION TOOLS AND TECHNIQUES

Exam Hint !!

- **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

4. 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

5. PERFORMING INTEGRATED CHANGE CONTROL

Three main objectives are:

I. Influencing the factors that create changes to ensure that changes are beneficial
II. Determining that a change has occurred
III. Managing actual changes as they occur

CHANGE CONTROL ON INFORMATION TECHNOLOGY PROJECTS

- Former view: The project team should strive to do exactly what was planned on time and within budget
- Problem: Stakeholders rarely agreed up-front on the project scope, and time and cost estimates were inaccurate
- Modern view: Project management is a process of constant communication and negotiation
- Solution: Changes are often beneficial, and the project team should plan for them

CHANGE CONTROL SYSTEM

- A **change control system** is a formal, documented process that describes when and how official project documents and work may be changed

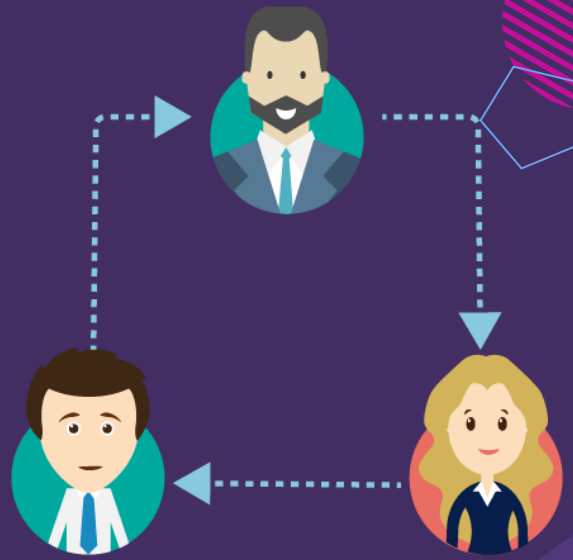
- Describes who is authorized to make changes and how to make them

CHANGE CONTROL BOARD (CCB)

- A **change control board** 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

MAKING TIMELY CHANGES

- Some CCBs only meet occasionally, so it may take too long for changes to occur
- Some organizations have policies in place for time-sensitive changes
  - “48-hour policy” allows project team members to make decisions, then they have 48 hours to reverse the decision pending senior management approval



6. 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
1. Final product, service, or result transition
2. Organizational process asset updates

USING SOFTWARE TO ASSIST IN PROJECT INTEGRATION MANAGEMENT

- Several types of software can be used to assist in project integration management

I. Documents can be created with word processing software
II. Presentations are created with presentation software
III. Tracking can be done with spreadsheets or databases
IV. Communication software can facilitate communications
V. Project management software can pull everything together and show detailed and summarized information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Project B
Project C
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CHAPTER SUMMARY

- Project integration management involves coordinating all of the other knowledge areas throughout a project's life cycle
- Main processes include

I. Develop the project charter
II. Develop the project management plan
III. Direct and manage project execution
IV. Monitor and control project work
V. Perform integrated change control
VI. Close the project or phase

Thanks!