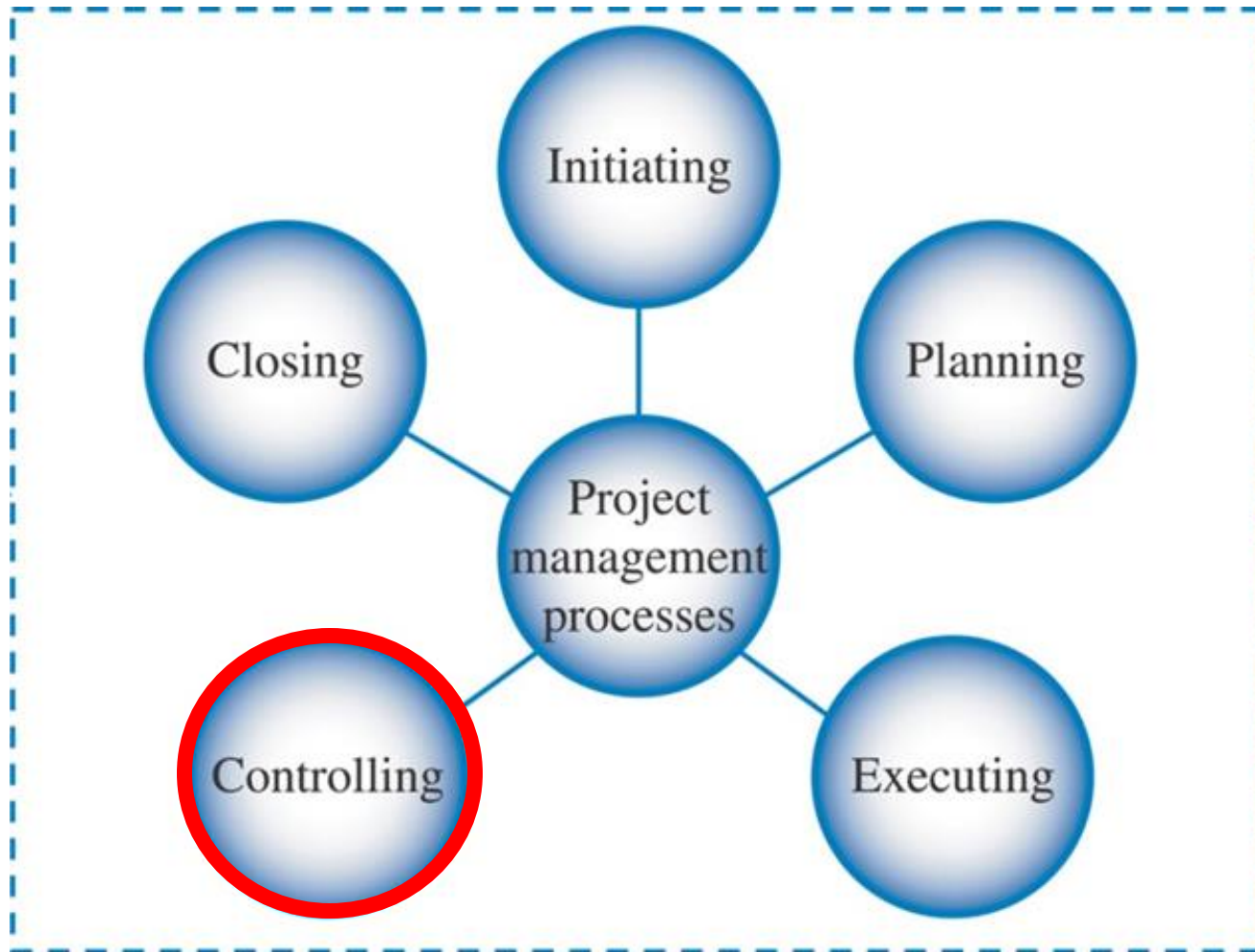


# IT Project Management

CIS 8000

## **Session 8: Stakeholders & EVA**

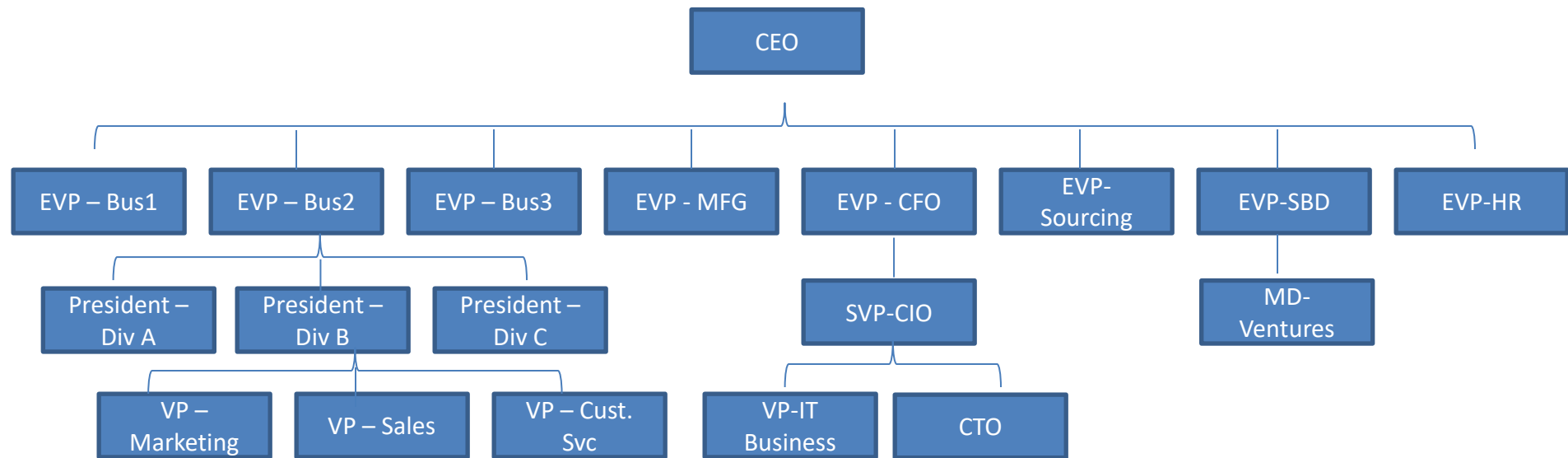
# PMI's PMBOK PROCESS GROUPS



# Learning Objectives

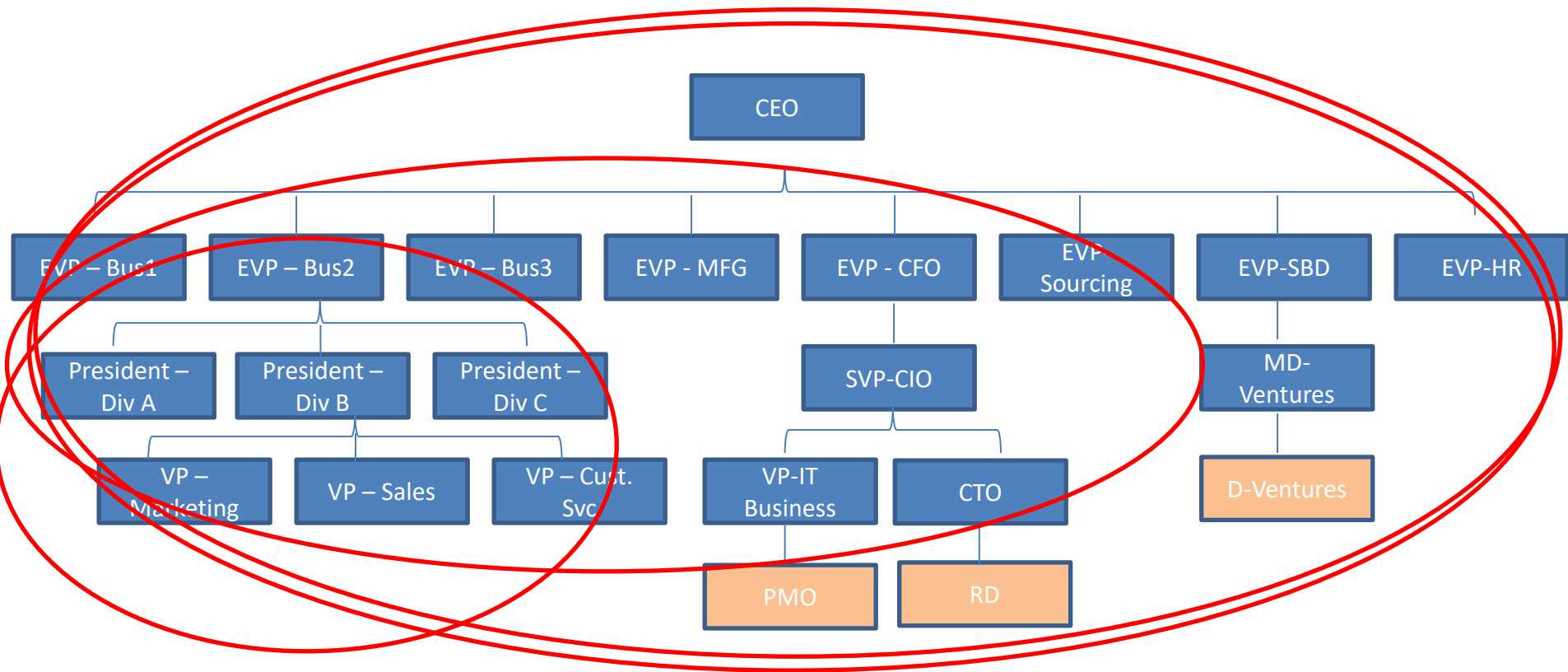
- Describe the **informal organization**.
- Develop a **stakeholder analysis**.
- Develop a **project communications plan** that includes tracking the project's progress to the baseline plan and the distribution of this information to the stakeholders.
- Apply several types of **reporting tools** that support the communication plan.
- Apply the concept of **earned value** and discuss how earned value provides a means of monitoring and forecasting a project's progress.
- Describe how **information may be distributed** to the project stakeholders and the role information technology plays to support project communication.

While the formal organizational structure (see Chapter 4) tells us how individuals or groups within an organization should relate to one another, it does not tell us how they actually relate.



# The Informal Organization

- Bypasses formal lines of communication & authority
- Power is determined by how well one is connected in the informal network – i.e., the “grapevine”
- Can be more complex than the formal organization because relationships are established from positive and negative relationships over time



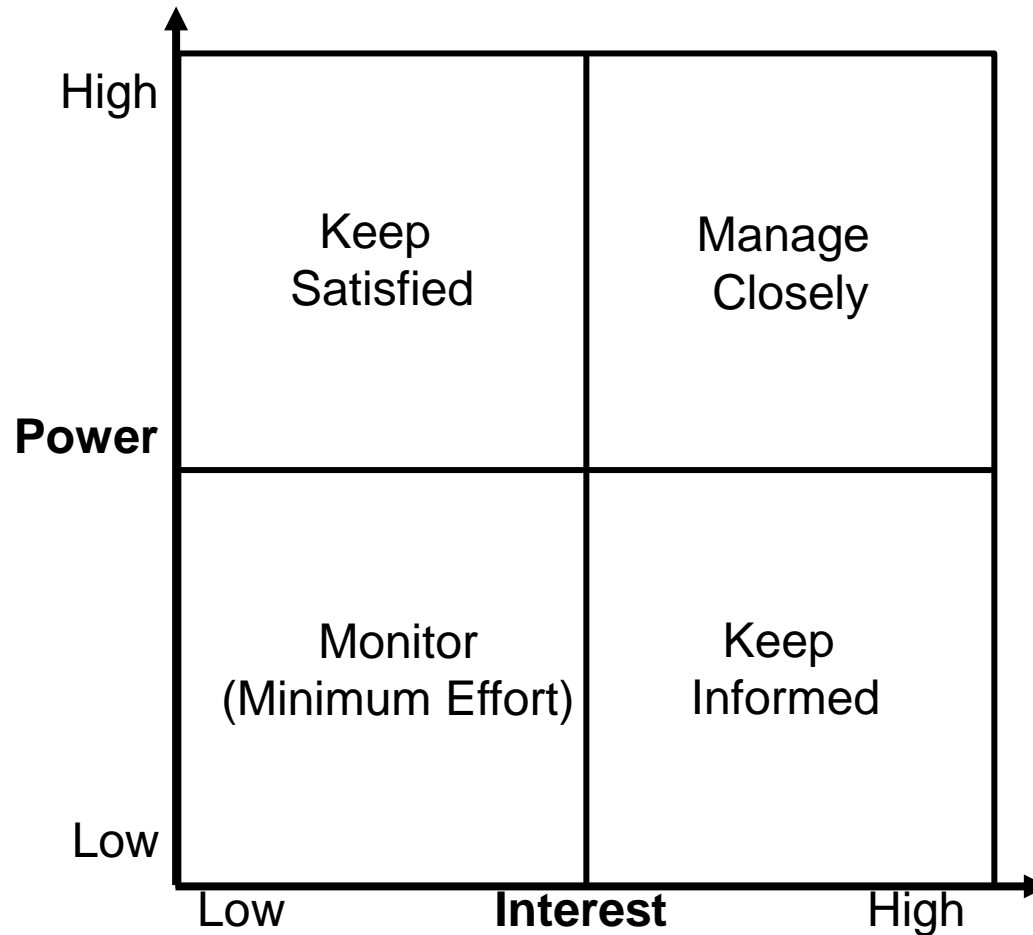
# Stakeholders

Individuals, groups, or even organizations that have a “stake” or claim in the project’s (**successful or unsuccessful**) outcome





# Stakeholder Analysis



# Stakeholder Analysis Process (7 Steps)

1. Develop a list of **stakeholders** who have an interest in the successful or unsuccessful outcome of the project
2. Identify the stakeholder's **interest** in the project
  - ◆ “+1” for positive interest
  - ◆ “0” for neutral
  - ◆ “-1” for negative interest



# Stakeholder Analysis Process (7 Steps)

3. Determine the degree of **influence** each stakeholder has on a scale of 0 (no influence) to 5 (can terminate the project)
4. Assess whether potential **conflicts** exist among the different stakeholders
5. Define a **role** for each stakeholder – e.g., champion, consultant, decision maker, ally, rival, foe, etc.



# Stakeholder Analysis

6. Identify an **objective** for each stakeholder – e.g., provide resources, guidance, expertise, acceptance, approval, etc.
7. Identify a **strategy** for each stakeholder – e.g., build, maintain, improve, re-establish the relationship



Stakeholder	Interest	Influence	Potential Conflicts	Role	Objective	Strategy
Hirem N. Firem	+I	5	Competition for resources with other functional managers	Project Sponsor and Champion	Provide resources, approvals, and public support for the project	To maintain open communication so that political landmines can be avoided
Dee Manitger	+I	3	Competing with other functional managers to get this project prioritized higher over other projects	Functional Manager	Serve as an advocate for the project.	Keep Dee closely involved in the project and incorporate her input as appropriate.
Project Team (SMEs)	+I	2	This project will change a number business processes. Affected users may resist change by withholding information	Steve Turner – Network Administrator Shedelle Bivits – Systems Analyst Corean Jenkins – Programmer/DBA Myra Dickens – Inventory Analyst	Provide expertise to complete the project work	Support project team with adequate resources while minimizing distractions
I.Will Sellit	-I	4	As the marketing manager, Sellit is not pleased that this project was chosen over his proposed project. May withhold promised resources	Foe	Build and maintain best possible relationship to minimize attempts to divert resources	Maintain open communication Use project sponsor's influence as necessary

# The Project Communications Plan – Key Areas

- **Stakeholders** (*Who*) – have a “stake” or a claim in the project’s outcome
- **Information Requirements** (*What*) – Driven by stakeholder needs information requirements will vary by project but typically focus on scope, schedule, budget, quality, and risk.
- **Type of report or metric** (*How Much Detail*) – Dependent upon stakeholder information requirements. Can take the form of formal or informal reviews of deliverables, milestones, newsletters or other forms as needed.
- **Timings/Availabilities** (*When*) – Set expectations for stakeholders. Should let people know when they will know.
- **Medium or format** (*How To Deliver*) – Defines how the information will be provided, for example, paper reports, face-to-face-meetings, emails, etc.

# Project Communication Plan

Stakeholder	Reporting Requirements	Report/Metric	Reason
Sponsor or client	<p>During periodic review meetings</p> <p><i>Time Frame:</i> Considering projects with six months or more of duration, the project sponsor can be provided with this report monthly.</p>	<p>Project summary, budget, earned value</p>	<p>Sponsor or client will be concerned primarily with the strategic indicators including overall cost and value in the project.</p> <ul style="list-style-type: none"> <li>Project summary report presents the overall cost that the project will incur. This report shows the baseline schedule and budget along with the actual schedule and budget and gives the project's overall status report.</li> <li>The budget is also a top-of-view project summary of the cost for all tasks in the project.</li> <li>Earned value report gives a top level summary of the project at a given status date. It also includes key metrics that monitor the health of the project.</li> </ul>
Project manager	<p>At periodic intervals or even online</p> <p><i>Time Frame:</i> This report can be sent to the project manager once in every two weeks for a typical six month or more project.</p>	<p>Earned value, project summary, slipping tasks, critical tasks, milestone, current activities reports, over budget tasks and resources</p>	<p>The project manager will be concerned with making both operational and strategic decisions. Therefore, reports that are primarily involved in tracking the current status of the project and its health are of utmost importance. The project manager would be required to be informed of the work progress compared to the baseline plan.</p>
Project team	<p>At periodic intervals</p> <p><i>Time Frame:</i> Receiving this report weekly would help the team members benefit from it. They also need to get an updated copy in case of any changes in the schedule.</p>	<p>"Who Does What When" and "To Do List" reports</p>	<p>The project team would be concerned with day-to-day execution of the project. Issues like who does what and when, what is assigned to a team member would be key needs. In case of interdependent tasks, the team members can also see who performs preceding or succeeding tasks.</p>

# Project Metrics: Why Measure Projects?

Human nature meets Project Management...

- If it's not documented it did not happen.
- What get's measured gets done.

Unexpected events and situations will arise!

- PMs need an early warning system.
- Metrics are a big component of your warning system.



# Monitoring and Controlling the Project

- Regardless of how well a project is planned, unexpected situations will require adjustments to the project schedule and budget.
- A project manager will not lose credibility because an unexpected event or situation arises. He or she will, however, **lose (or gain) credibility in terms of how they handle these events.**

# Burndown Chart

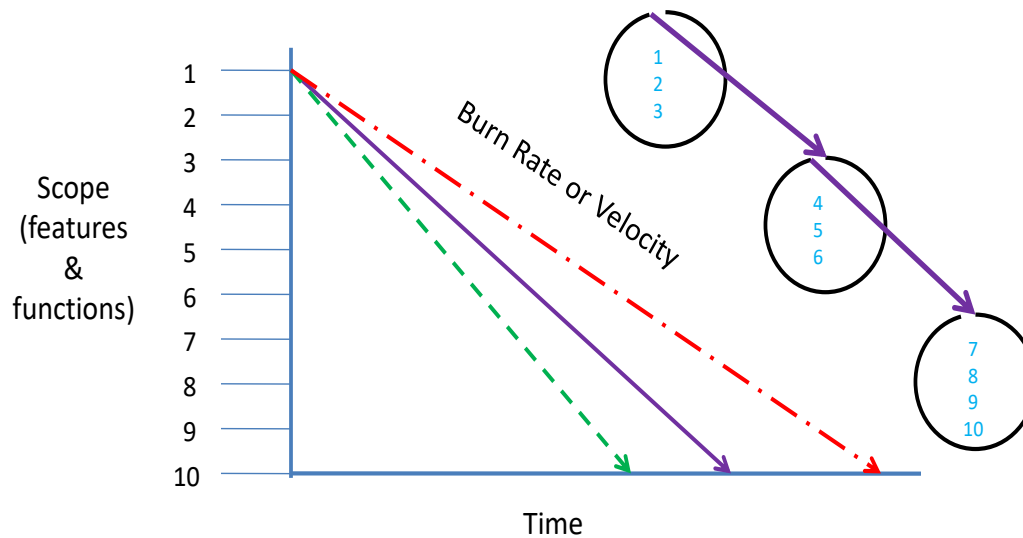


Figure 9.8

# Earned Value

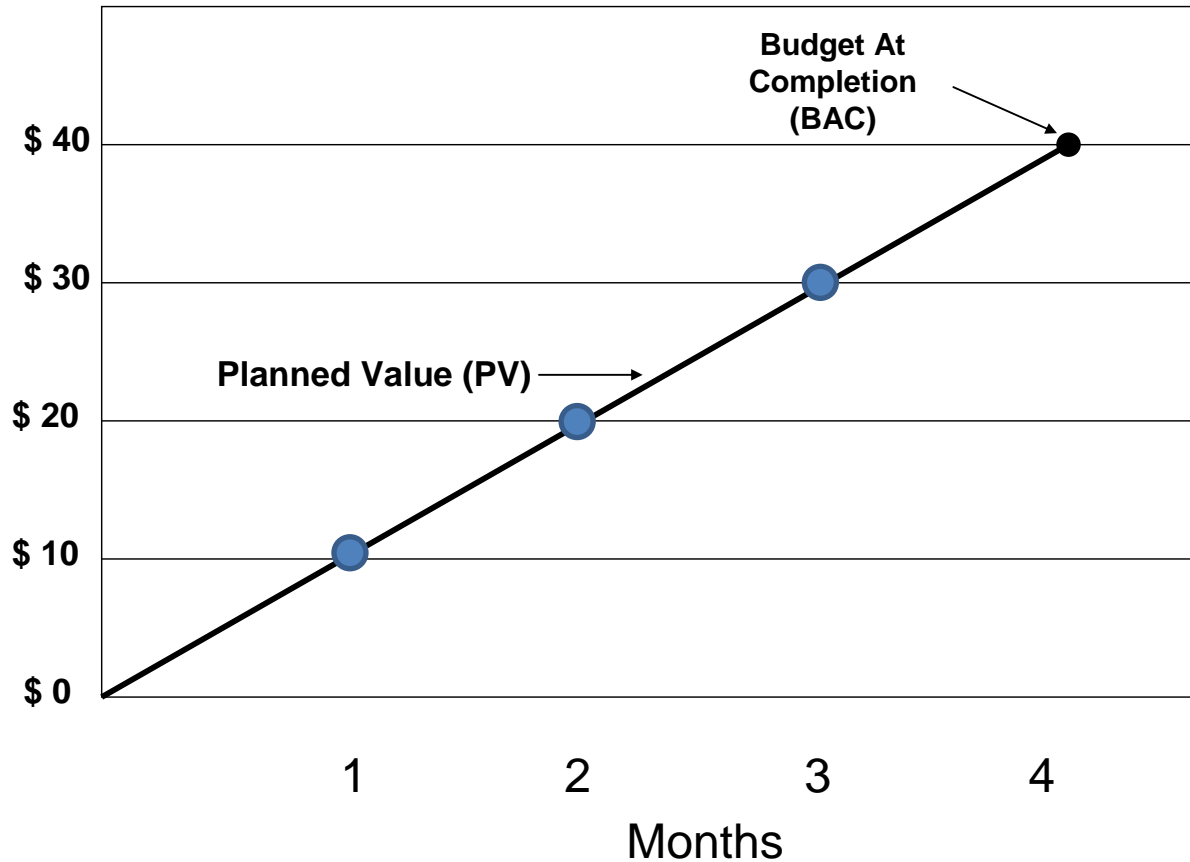
- Suppose you just signed a contract with a consulting firm called Dewey, Cheatem, and Howe to implement an ERP system.
- Project Budget, Schedule, Tasks
  - ◆ \$40,000
  - ◆ 4 months
  - ◆ 20 Tasks (evenly divided over 4 months)
    - 5 tasks per month
    - \$2,000 per task ( $\$40,000 / 20$  tasks)

## The Planned Project Schedule And Budget

Task	Month 1	Month 2	Month 3	Month 4	Total
1	\$2,000				
2	\$2,000				
3	\$2,000				
4	\$2,000				
5	\$2,000				
6		\$2,000			
7		\$2,000			
8		\$2,000			
9		\$2,000			
10		\$2,000			
11			\$2,000		
12			\$2,000		
13			\$2,000		
14			\$2,000		
15			\$2,000		
16				\$2,000	
17				\$2,000	
18				\$2,000	
19				\$2,000	
20				\$2,000	
<b>Total</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$40,000</b>

# Planned Budget

in 000's



At the end of Month 1, we received the following invoice...

*Invoice*

Dewey, Cheatem, and Howe

Amount Due: \$8,000.00

Payment Due: Immediately

Page 1 of 2

# The rest of the invoice... (page 2)

## *Invoice*

Dewey, Cheatem, and Howe

### Work Completed for Month 1

Task 1: \$2,000

Task 2: \$3,000

Task 3: \$3,000

Page 2 of 2

# Planned, Actual, & Earned Values for Month 1

	PV	AC	EV
Task	Planned	Actual	Earned
1	\$2,000	\$2,000	\$2,000
2	\$2,000	\$3,000	\$2,000
3	\$2,000	\$3,000	\$2,000
4	\$2,000		
5	\$2,000		
Cumulative	\$10,000	\$8,000	\$6,000

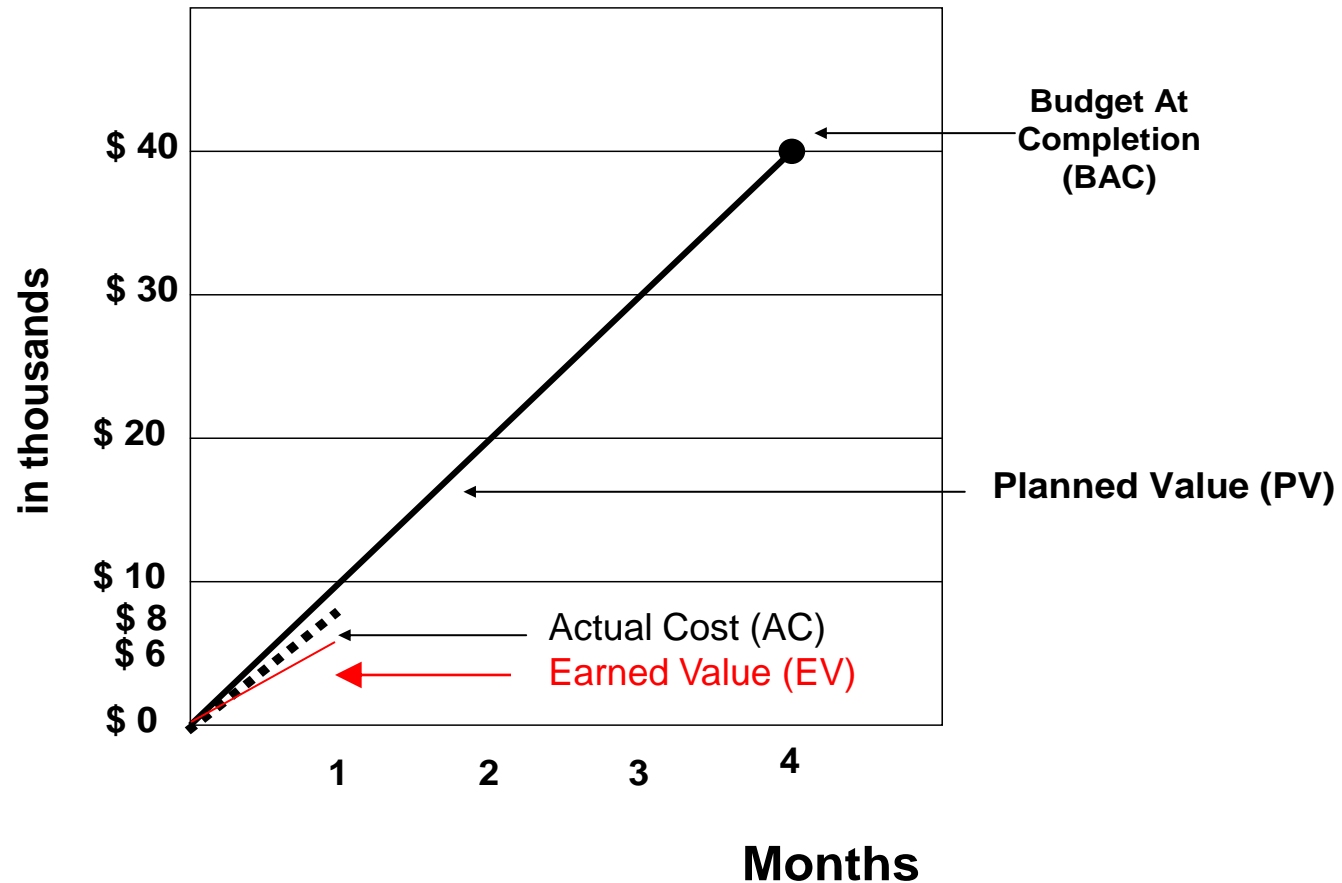
↑  
What we  
planned to pay

↑  
What we  
have to pay

↑  
What we  
should pay



# Planned Value versus Actual Cost



# Calculate Earned Value...

- In terms of completion of the planned value
- Just multiply the planned value (PV) of an activity, task, or WBS component by its percentage of completion

# Earned Value = PV \* Percent Complete

## *Different Example*

Task	Planned Value	Percent Complete	Earned Value
A	\$1,000	100%	\$1,000
B	\$1,500	100%	\$1,500
C	\$2,000	75%	\$1,500
D	\$800	50%	\$400
E	\$1,200	50%	\$600
Cumulative	\$6,500		\$5,000

# Planned, Actual, & Earned Values for Month 1

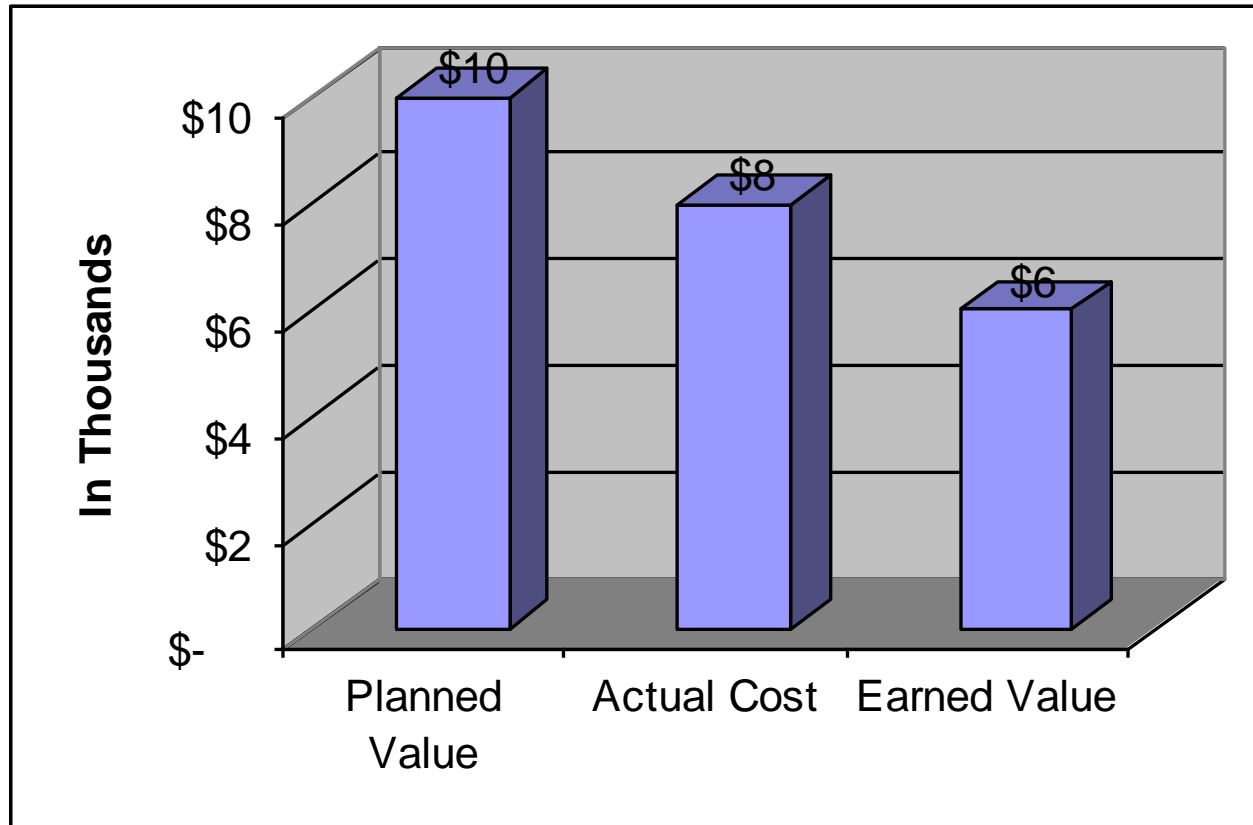
Task	Planned	Actual	Completion	Earned
1	\$2,000	\$2,000	100%	\$2,000
2	\$2,000	\$3,000	100%	\$2,000
3	\$2,000	\$3,000	100%	\$2,000
4	\$2,000		0%	\$0
5	\$2,000		0%	\$0
Cumulative	\$10,000	\$8,000		\$6,000

↑  
What we  
planned to pay

↑  
What we  
have to pay

↑  
What we  
should pay

# Comparison of Planned Value, Actual Cost, and Earned Value



We are spending \$8,000 to achieve \$6,000 worth of work!

# Cost Metrics

$$\begin{aligned}\text{Cost Variance (CV)} &= \text{EV} - \text{AC} \\ &= \$6,000 - \$8,000 \\ &= -\$2,000\end{aligned}$$

Negative = Project is Over Budget  
Positive = Project is Under Budget  
Zero = Project is right on Budget

Negative  
value tells us  
the project is  
**over budget**

# Schedule Metrics

$$\begin{aligned}\text{Schedule Variance (SV)} &= \text{EV} - \text{PV} \\ &= \$6,000 - \$10,000 \\ &= -\$4,000\end{aligned}$$

Negative  
value tells  
the project  
is **behind**  
**schedule**

Negative = Project is behind schedule  
Positive = Project is ahead of schedule  
Zero = Project is on schedule

# Cost Metrics

$$\begin{aligned}\text{Cost Performance Index (CPI)} &= \text{EV} / \text{AC} \\ &= \$6,000 / \$8,000 \\ &= .75\end{aligned}$$

ratio < 1 = the  
project is **over**  
**budget**

For every \$1  
spent, only  
\$0.75 of the  
work we  
budgeted  
was really  
completed.

< 1 = Project will be Over Budget  
> 1 = Project will be Under Budget  
= 1 = Project will be within Budget



# Schedule Metrics

$$\begin{aligned}\text{Schedule Performance Index (SPI)} &= \text{EV/PV} \\ &= \$6,000 / \$10,000 \\ &= .60\end{aligned}$$

ratio < 1 tells  
us the project  
is **behind**  
**schedule**

For every \$1.00 of  
work that was  
expected to be  
completed, only \$0.60  
was accomplished.

< 1 = Project will be behind schedule  
> 1 = Project will be ahead of schedule  
= 1 = Project will be on schedule

# Summary of Project Performance Metrics

Task	Planned Value PV	Actual Cost AC	Earned Value EV	Cost Variance CV	Schedule Variance SV	Cost Performance Index CPI	Schedule Performance Index SPI
1	\$2,000	\$2,000	\$2,000	-0-	-0-	1.00	1.00
2	\$2,000	\$3,000	\$2,000	(\$1,000)	-0-	0.67	1.00
3	\$2,000	\$3,000	\$2,000	(\$1,000)	-0-	0.67	1.00
4	\$2,000				(\$2,000)	-	0.00
5	\$2,000				(\$2,000)	-	0.00
Cumulative	<b>\$10,000</b>	<b>\$8,000</b>	<b>\$6,000</b>	<b>(\$2,000)</b>	<b>(\$4,000)</b>	<b>0.75</b>	<b>0.60</b>

# Estimate At Completion (EAC)

How much will it cost to complete the entire project based on the variances that we saw? - (What is the *new total budget* going to be?)

- EAC

$$\begin{aligned} &= \text{Cumulative AC} + ((\text{BAC} - \text{Cumulative EV}) / \text{Cumulative CPI}) \\ &= \$8,000 + (\$40,000 - \$6,000) / .75 \\ &= \$53,333.33 \end{aligned}$$

$$\text{EAC} = \text{AC} + (\text{BAC} - \text{EV}) / \text{CPI}$$

If we believe the variances (e.g., problems) encountered so far WILL continue for the remainder of our project, then the total budget to complete this project is estimated to be \$53,333.33

# Expected Time to Complete (ETC)

If the problem or opportunity continues for the remainder of the project, **how much more** will be needed to complete the project?

- ETC

$$= (\text{BAC} - \text{Cumulative EV to date}) / \text{Cumulative CPI}$$

$$= (\$40,000 - \$6,000) / .75$$

$$= \$45,333.33$$

OR

$$\text{ETC} = \text{EAC} - \text{AC}$$

If we believe the variances (e.g., problems) encountered so far WILL continue for the remainder of our project, then the funds needed to complete the rest of our project is estimated to be \$45,333.33.

# Variance At Completion (VAC)

If the problem or opportunity continues for the remainder of the project, what is the **difference** between the original estimate (BAC) and revised estimate (EAC)?

- VAC

$$\text{VAC} = \text{EAC} - \text{BAC}$$

$$= (\$53,333 - \$40,000)$$

$$= \$13,333$$

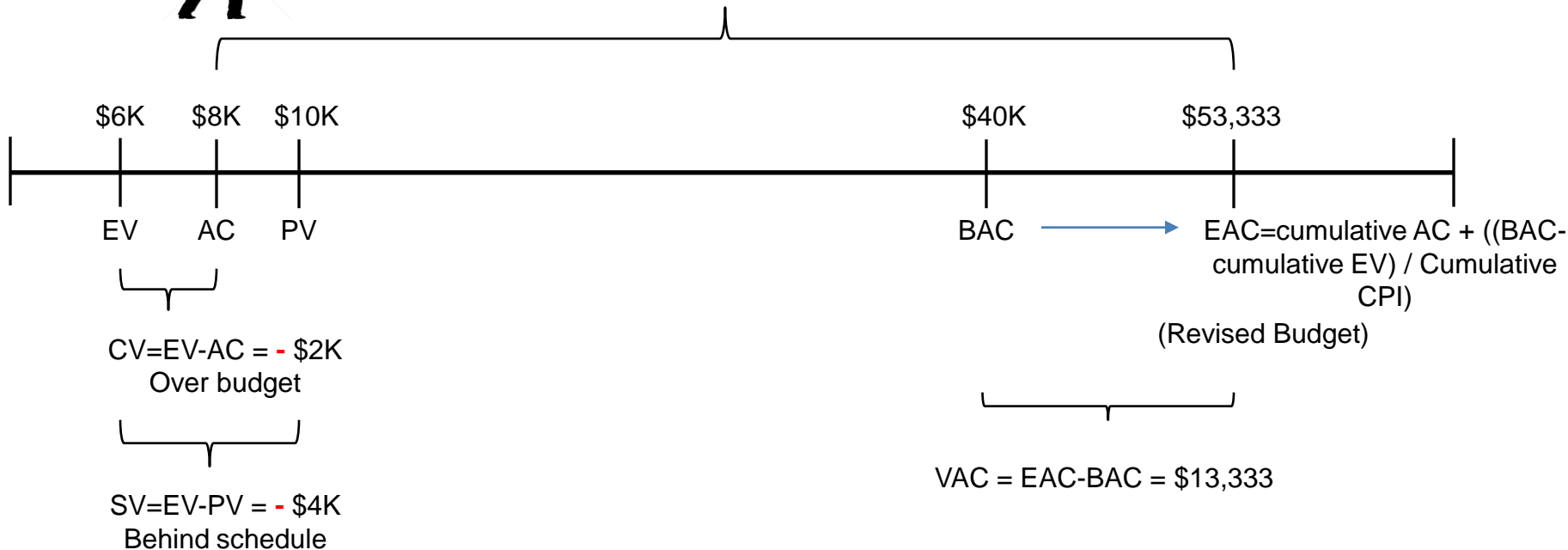
If we believe the variances (e.g., problems) encountered so far WILL continue for the remainder of our project, then we will need an additional \$13,333 from the original total estimated budget for the project

# Let's See What We've Calculated...



How much will be needed to finished the project at this point?

$$ETC = EAC - AC = \$45,333$$



## Forecasting The Future...

$$CPI = EV / AC = 0.75 \text{ (Over Budget)}$$

$$SPI = EV / PV = 0.60 \text{ (Behind Schedule)}$$

# In-Class Individual Assignment 3 – EVA (10 Minutes)

- Edit the INFO on your spreadsheet so that your name appears as an Author.
- Save your spreadsheet with the name In-Class Assignment 3 – (your name)
- Submit your spreadsheet to the “In-Class Assignment 3” dropbox
- Due Before Midnight Today (Individual submission)

# Reporting Performance and Progress

## Reporting Categories

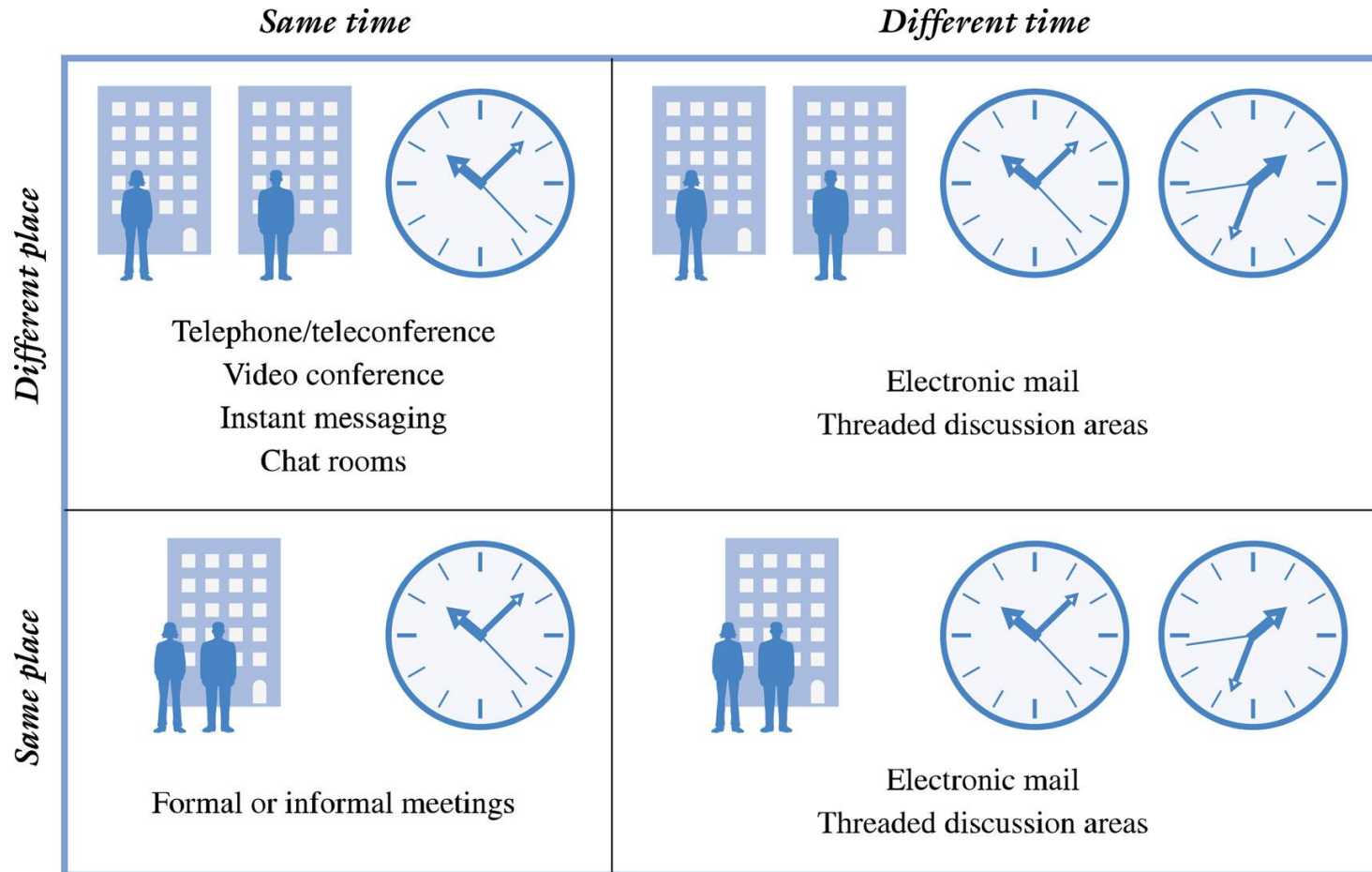
- Reviews
  - ◆ May be formal or informal and include various project stakeholders. Purpose is to not only show evidence that the project work has been completed, but also that the work has been completed according to certain standards or agreed-upon requirements.
- Status Reporting
  - ◆ Describes the present state of the project. In general, a status report compares the project's actual progress to the baseline plan.
- Progress Reporting
  - ◆ Tells us what the project team has accomplished
- Forecast Reporting
  - ◆ Focuses on predicting the future status or progress of the project



# Information Distribution

- Face-to-Face Meetings (F2F)
- Telephone, electronic mail, other wireless devices
- Collaboration technology
  - ◆ Project blog, wiki, or instant messaging

# Communication and Collaboration Matrix



# Prepare for Next Class

- Review Chapter 8 (Bring your questions to class next week.)
- **Exam 2 (Rescheduled to Saturday, June 4th) – Chapters 5, 6, 7**
  - ◆ Starts at 1:15pm (We will meet virtually as a class @ 1:15pm first)
  - ◆ Exam Not Provided After 1:30pm
- **Reminder:**
  - ◆ Team Assignment 4 (In-Class): AON **Due Tonight before 11:59pm**
  - ◆ Team Assignment 5 (In-Class): Risk Analysis **Due Tonight before 11:59pm**
  - ◆ At-Home Assignment: MS Project Tutorial #2 – **Due Tonight**
  - ◆ **In-Class Individual Assignment 3 – EVA – Due Tonight before 11:59pm**
  - ◆ Team Assignment 6 (DSC, UCD, WBS) – Due June 4<sup>th</sup>
  - ◆ Team Self-Select Project Presentation (**5 min./team**) – Due June 10<sup>th</sup>
  - ◆ Team Text-Book Case Study Presentation (**5 min./team**) & Project Book – Due June 10<sup>th</sup>

# Team Self-Select Project Presentation

## (Due Friday, June 10<sup>th</sup>)

- Primary Audience: Project Sponsor
- Objective – Share real-world case study with class in IT PM context
- Content –
  - ◆ Project Charter
  - ◆ Business Case (e.g., alternatives, costs/benefits analysis, recommendations, etc...)
  - ◆ Project Plan
  - ◆ Work Breakdown Structure, DSC, UCD
  - ◆ Risk Analysis and Recommendations
- 5 minutes / team max. – Power Point Slides (create your own template)
- Everyone presents – Practice as a team
- Evaluation – Content, Professionalism, Delivery

# Final Presentation & Project Book

## (Due Friday, June 10<sup>th</sup>)

- Primary Audience: Project Sponsor
- Objective – Obtain sponsor acceptance of project deliverables
- Content –
  - ◆ Present deliverables for your chosen project (charter, WBS, plan, etc.)
  - ◆ Discuss recommendations
  - ◆ Discuss potential issues moving forward and how to address them
- 5 minutes / team max. – Power Point Slides (template provided)
- Everyone presents
- Evaluation –
  - ◆ Content
  - ◆ Professionalism (Presentation Style and Project Book)
  - ◆ Delivery (*Practice! Practice! Practice!*)