

Project Management Fundamentals



Agenda

Day One
Introductions
Project Leadership Basics
Best Practices at Intel
Initiating: Getting the Project Started
Managing Project Stakeholders
Lunch
Planning: Keeping the Project Going
Risk Management
Executing & Controlling: Project Monitoring and Control
Closing: Getting the Project Finished
Implementing Project Management: Back at the Office
End

Project Leadership Basics



What is a Project?

- **Project Definition**

A temporary endeavor, creating a new process to deliver a unique product or service

- **Project Characteristics**

Newness of the task

Detailed specifications

Divided into small steps

One time process with specific time limits

Activity-based budget

Release of project team members from line functions

Competes with other projects/activities for resources

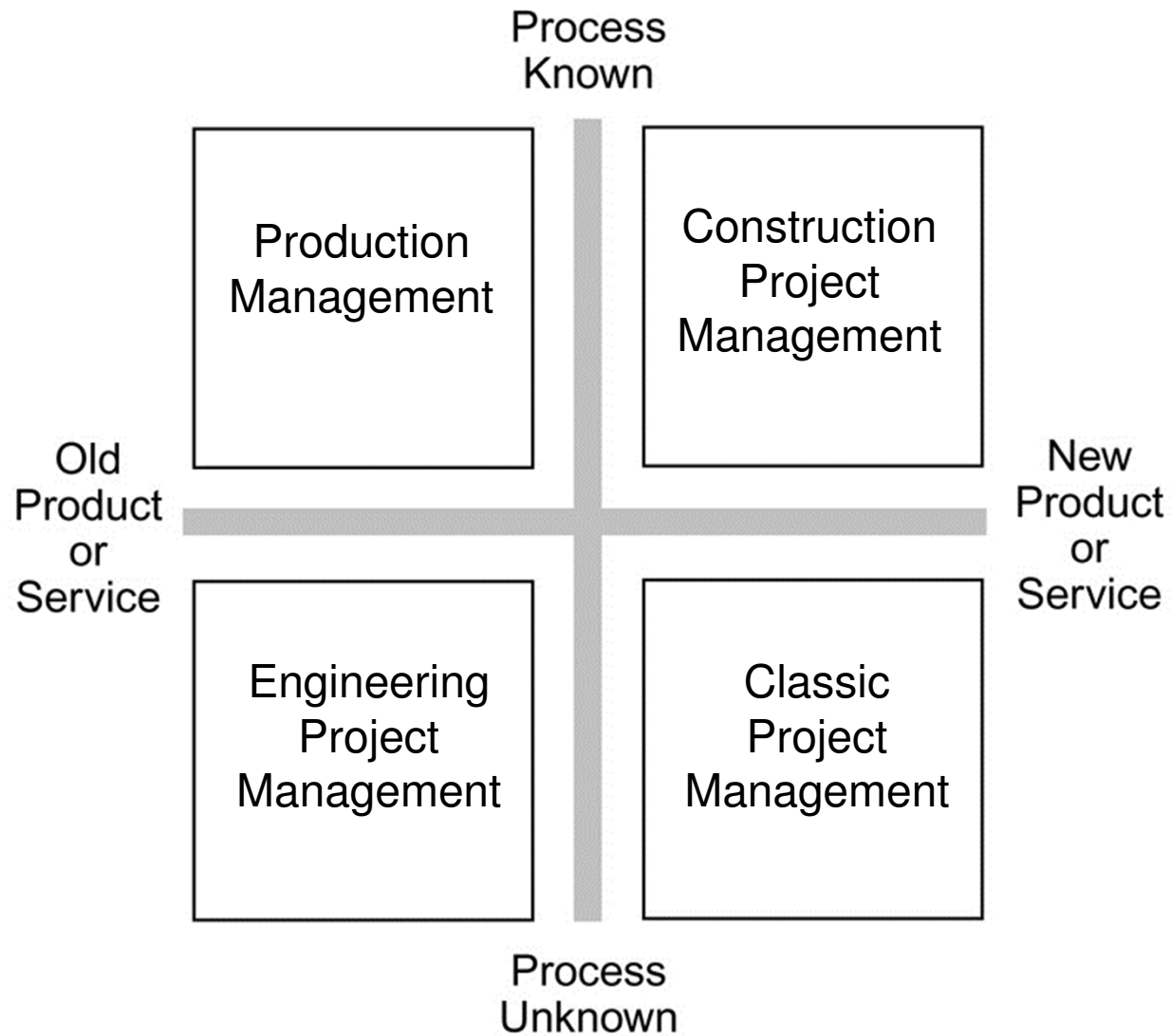
Uncertainty about results, costs, etc.

Best of Times, Worst of Times

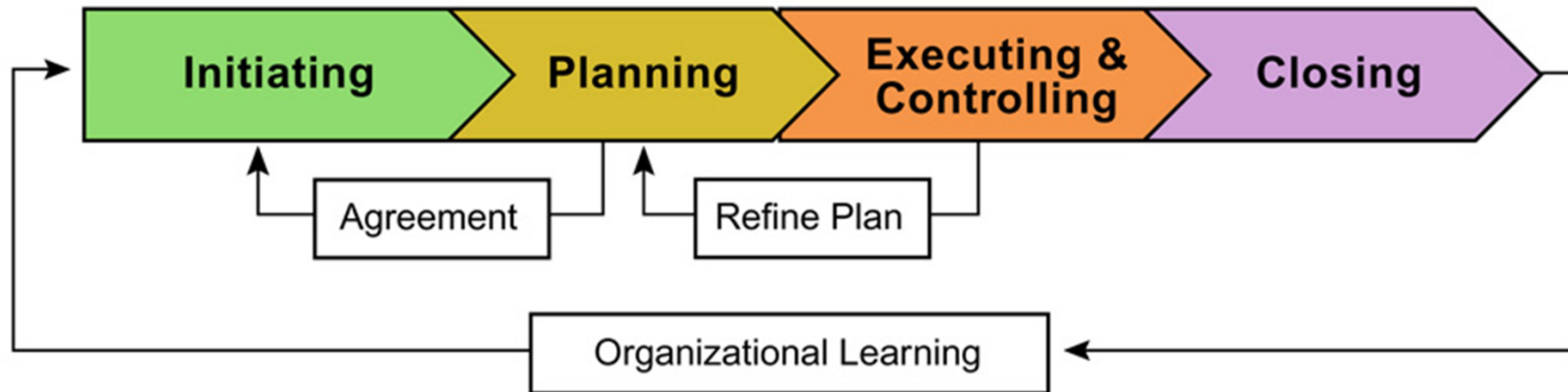
- **For the best project you have worked on at Intel, list:**
 - The factors that contributed to the project's success
 - What the Project Manager did that made it so successful

- **For the worst project you have worked on at Intel, list:**
 - The factors that contributed to the project's failure
 - What the Project Manager did that contributed to its failure

What is Project Management?






























Project Management Process



Adapted from: A Guide to the Project Management Body of Knowledge. Upper Darby: Project Management Institute, 1996.

Project Cycles

Project Phases/Activities	Initiate	Plan	Exec. & Control	Close
1. Developing the project goal				
2. Identifying stakeholders				
3. Communicating with team and stakeholders				
4. Negotiating for resources; assessing risk				
5. Consulting client/end-user				
6. Planning				
7. Recruiting/Training				
8. Implementing				
9. Managing Risks				
10. Checking & Correcting				
11. Documenting Lessons Learned				
12. Closing & Transitioning to Operations				

What is a Successful Project?

- **Classic Definition**

- On time

- Within budget

- Meets specifications

- Meets or exceeds customer expectations

- **Dynamic Definition**

- Major project stakeholders agree that the project is a success well after it is completed

- **Business Definition**

- Project outcome is aligned with business strategy

- Enough cash flow to cover expenses, make a profit, pay back cost of capital

- Creates shareholder value

Drivers and Inhibitors of Project Success

- **Principal Success Drivers**

- Top management support
- Clear goals and objectives
- Customer support
- Financial support
- Realistic plan
- Appropriate resources
- Ownership
- Hard-working, focused staff
- Effective communication

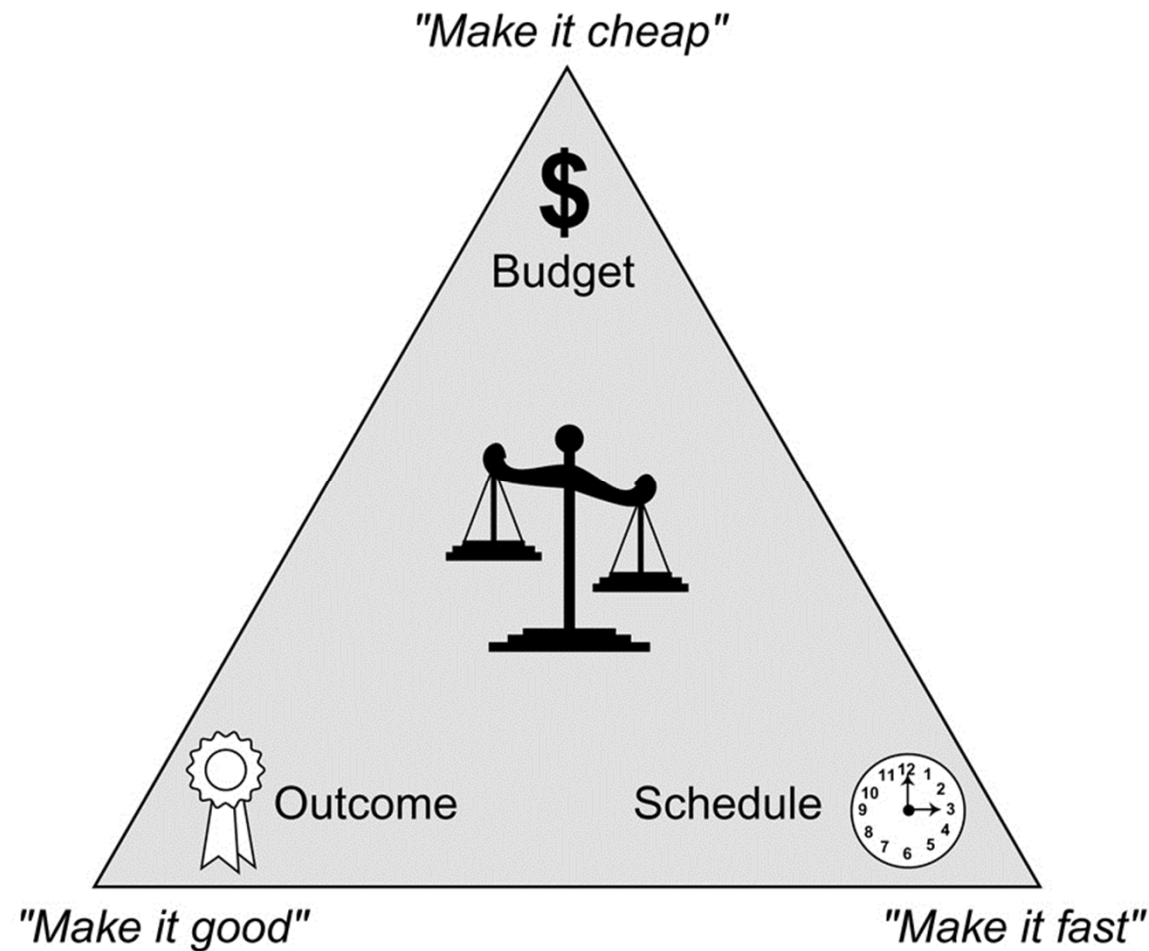
Drivers and Inhibitors of Project Success

- **Principal Inhibitors**

- Poor communication
- Lack of leadership
- Unclear/unrealistic expectations
- Unrealistic deadlines
- Lack of/poor up-front planning
- Changing business strategies
- Poor top management support
- Conflict of objectives
- Inadequate resources
- Financial limitations
- Lack of historical data

What Do Project Managers Do?

...Manage the Triple Constraints



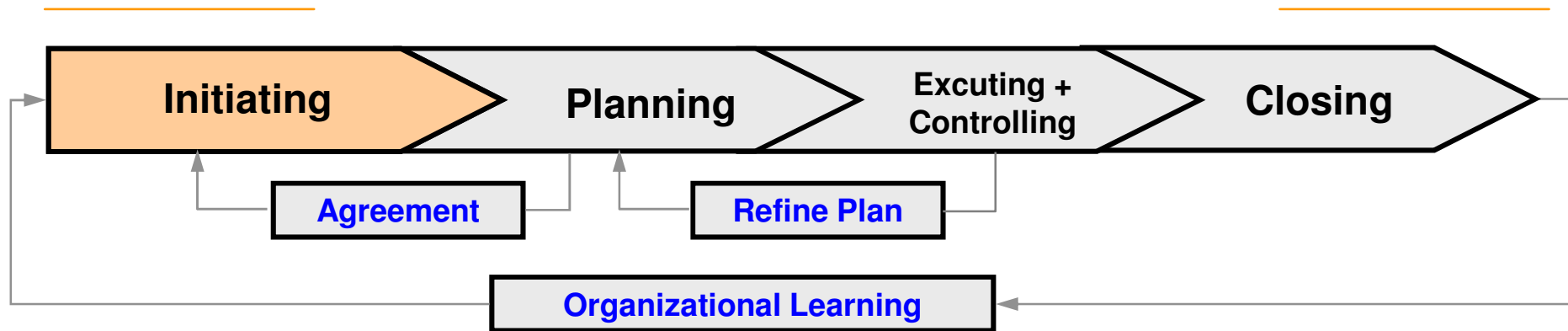
So What is Project Leadership?



Initiating Phase

Getting the Project Started





- Write a project requirements document
- Conduct a situation analysis and feasibility study
- Identify the involved departments
- Develop evaluation criteria
- Select the core project team
- Create a project contract
- Hold a project kick-off meeting

Project Requirements Document

The Project Requirements Document should contain:

- A **problem statement** which describes the need, problem or perceived opportunity
- Project **goals/objectives** which describe exactly what the project will accomplish
- A **situation analysis** and **feasibility study**
- The definition of **project scope** which sets the boundaries of the project
- A **description of deliverables** which contains details of the final product or service produced by the project
- Project **evaluation criteria**

SMART Goals

Project Goals should be SMART:

Specific
Measurable
Actionable
Realistic
Timely

SMART Goals

A goal statement should contain the following four building blocks:

- Verb
- Target date
- Desired result
- Budget or resource use

Example: “We will reduce the number of equipment breakdowns in the plant by 90% within three months from now at a cost not to exceed 100 hours of equipment operators’ time.”

Project “Contract”

The Project Contract should contain:

- Project Requirements Document
- Situation Analysis
- Feasibility Study
- Project Selection and Evaluation Criteria
- Signatures

The Role of the Core Team

- Commit to the project from beginning to end
- Redefine the project
- Participate in planning
- Select other team members
- Lead the functional work
- Participate in regular core team meetings
- Function as the repository of collective history
- Lead the project with the project leader

Core Team Selection Criteria




- Technical and functional skills
- Problem solving skills
- Interpersonal skills
- Enthusiasm
- Time
- Motivation
- Lack of conflicts



Managing Project Stakeholders



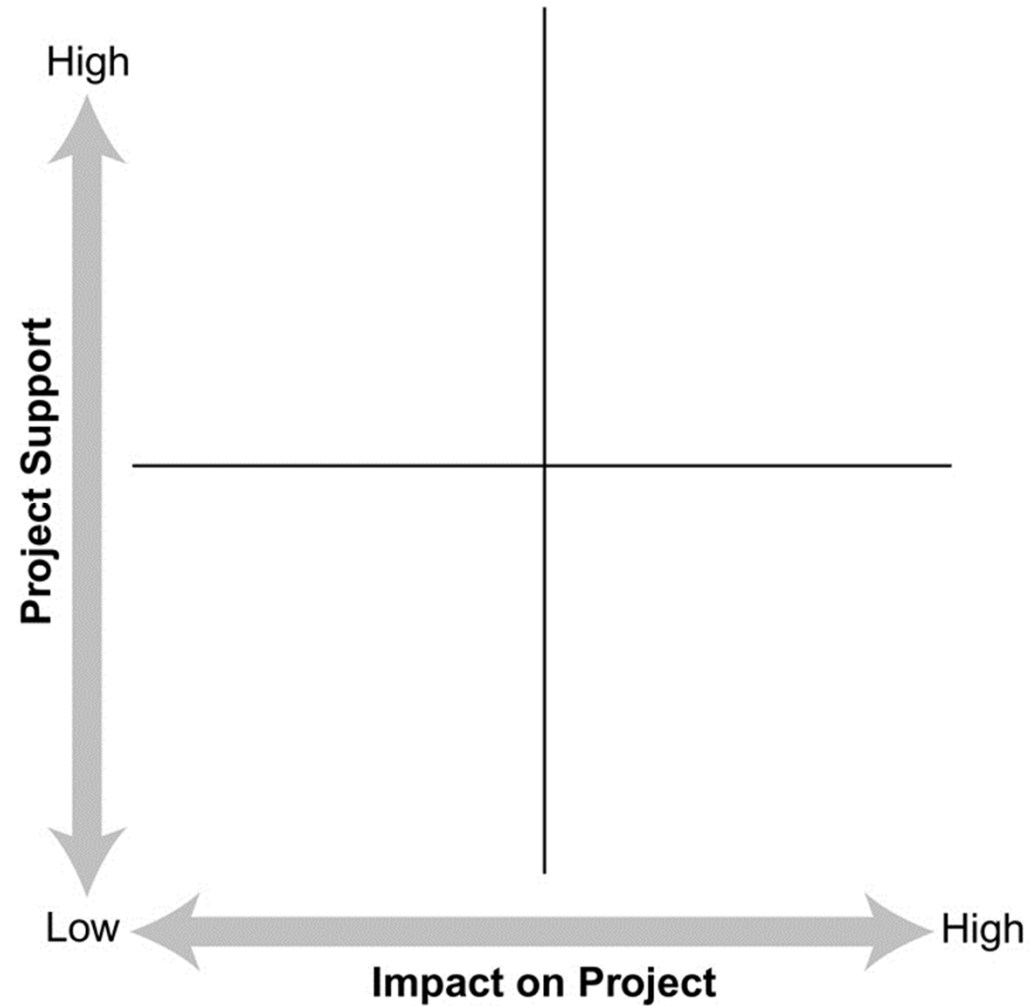
Conflict Among Key Stakeholders

	 Time	 Money	 Changes
Top Management	↓	↓	↑
Customer	↓	↓	↑
Accountant	—	↓	—
Team	↑	↑	↓

Identifying Project Stakeholders



Analyzing Project Stakeholders



Analyzing Project Stakeholders (cont'd)

- **High Support, Low Impact**

- Keep informed

- Keep their support

- **Low Support, Low Impact**

- Keep informed

- Ensure they do not influence other, more impactful, stakeholders

- **Low Support, High Impact**

- Watch carefully throughout the project

- Communicate regularly

- Attempt to determine how project can support their interests

- Use change management and persuasion to build support

Analyzing Project Stakeholders (cont'd)

- **High Support, High Impact**

- Nurture throughout project

- Keep informed of everything that is happening with the project

- Leverage their support and impact

- **Neutral**

- Use influence tactics to gain their support

Leveraging Supporters

Do

- Enroll them in change process
- Offer ownership roles
- Solicit their opinions

Don't

- Expect them to lead the effort
- Dismiss or ignore their ideas

Adapted from:

Berger, Lance A. et. al. The Change Management Handbook: A Road Map to Corporate Transformation. Irwin: NY, 1994.

Berger, Lance A. et. al. Deengineering the Corporation: Leading Growth from Within. Haverford Business Press: Haverford, 1998.

Leveraging Resistors

Do

- Reframe the change in terms of benefits
- Acknowledge problems
- Invite them to voice their reluctance

Don't

- Dismiss or ignore
- Assume the resistor for one change will resist all change

Adapted from:

Berger, Lance A. et. al. The Change Management Handbook: A Road Map to Corporate Transformation. Irwin: NY, 1994.

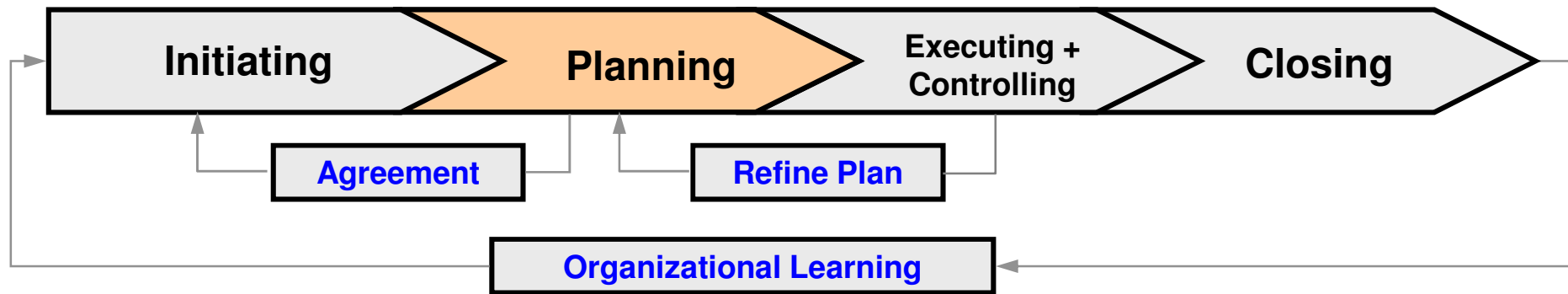
Berger, Lance A. et. al. Deengineering the Corporation: Leading Growth from Within." Haverford Business Press: Haverford, 1998.

Planning Phase

Keeping the Project Going



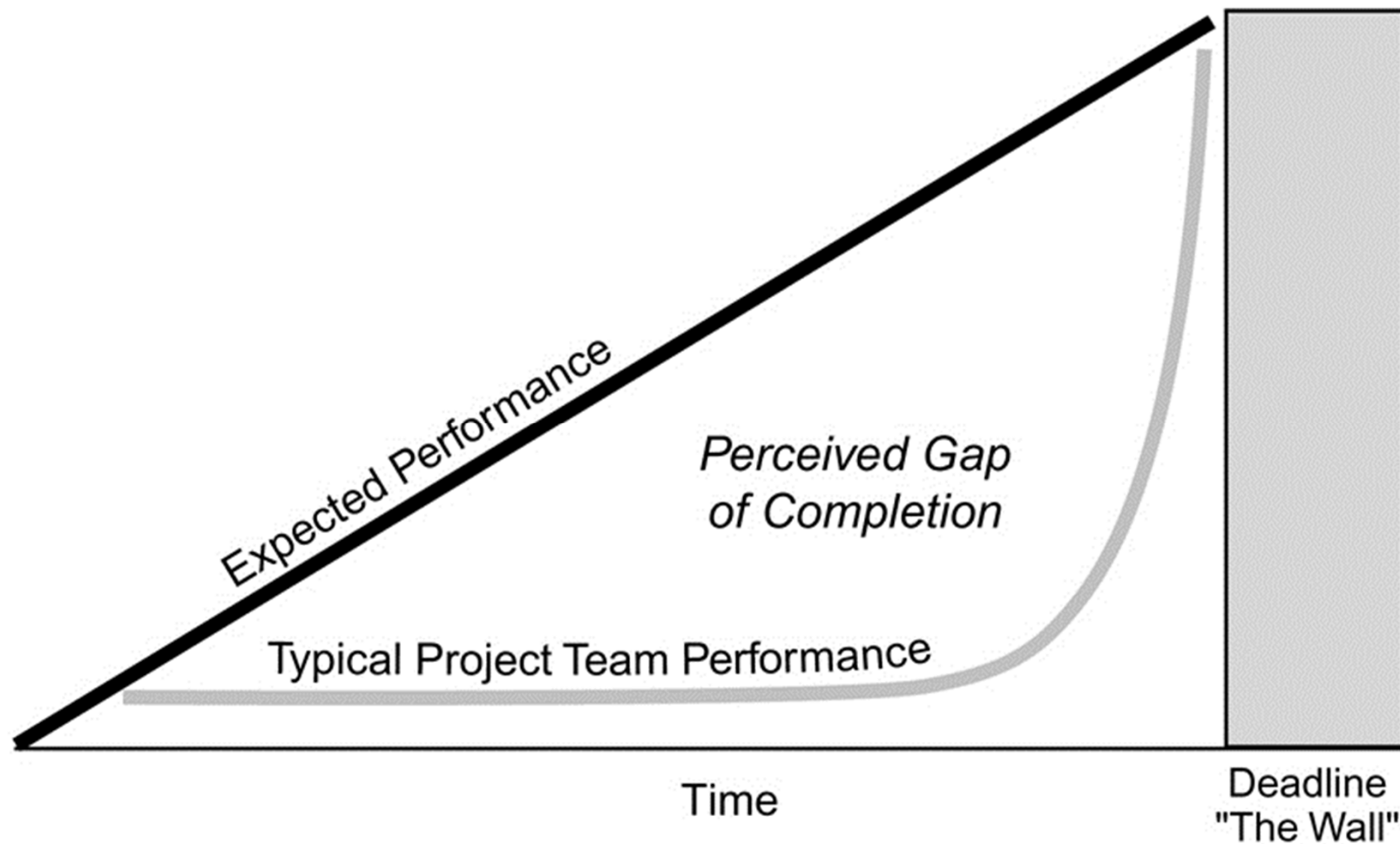
Project Management Process



- **Develop the core project team**
- **Identify project tasks**
- **Complete a work breakdown structure**
- **Develop a responsibility chart**
- **Develop a task network plan**
- **Develop a baseline project schedule**
- **Identify the critical path**
- **Identify critical areas (perform a risk analysis)**

Managing to Be On Time

Functional Delay

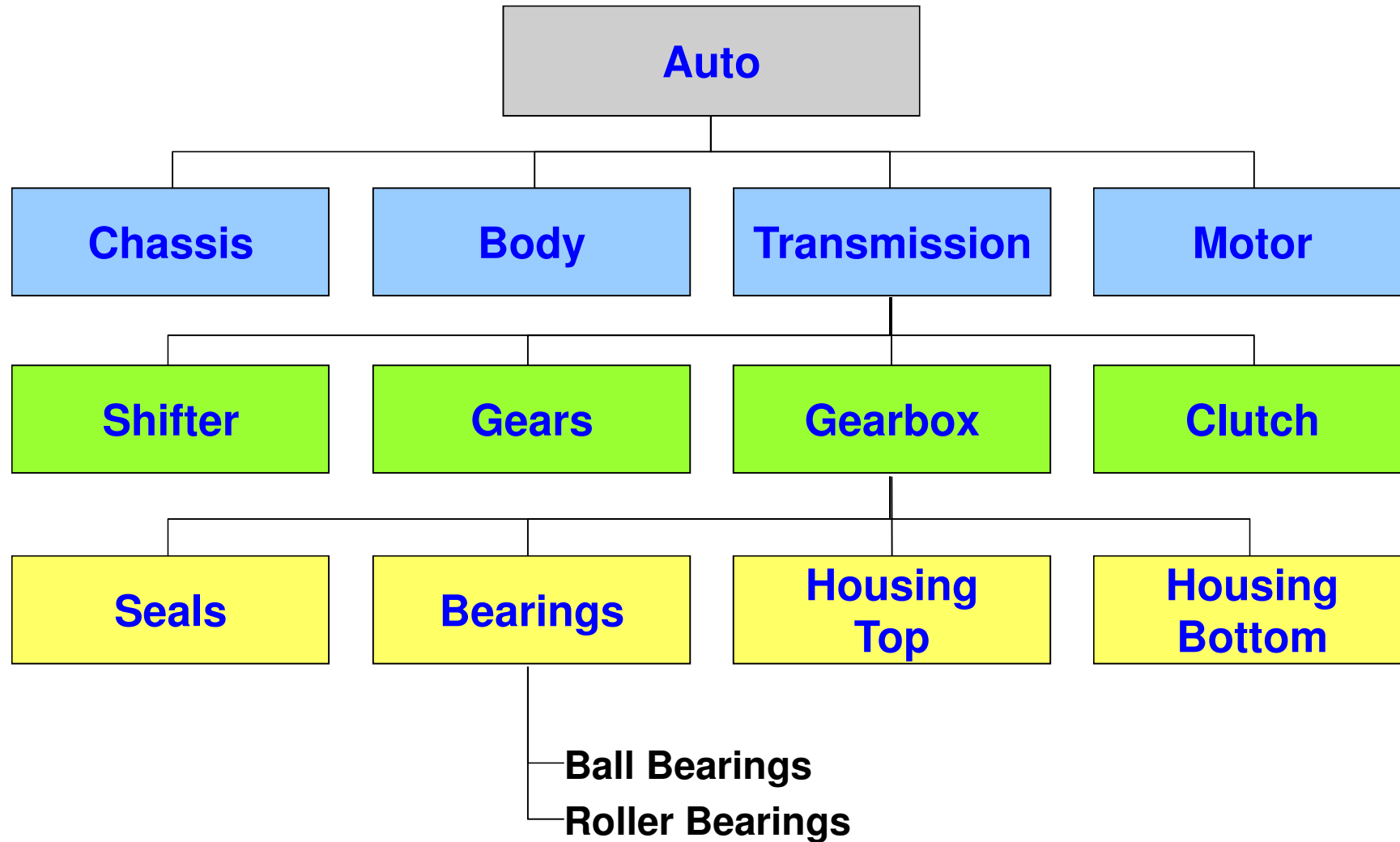


Work Breakdown Structure (WBS)

In order to create a Work Breakdown Structure, you should:

- Note the project goal in a simple form
- List the most important milestones toward reaching this objective
- Determine the necessary tasks for each milestone
- Clearly define tasks (reduce confusion and overlap between tasks)
- Add details later!

Example Work Breakdown Structure



Sample Responsibility Chart

	Tom	Katherine	Joe	Jean-Marc	Jing	Rafi
Create Glossary	A	R	C	C	I	M
Translate Text	A	C	I	I	R	M
Proof Contents	A	M	R	R	C	M
Translate Graphics	A	C, M	M	C	I	X
Integrate Graphics	A	C	R, M	M	C	X
Format Document	A	C	I	C	DK	I
Present to Client	A, R, M	C	C	C	C	I

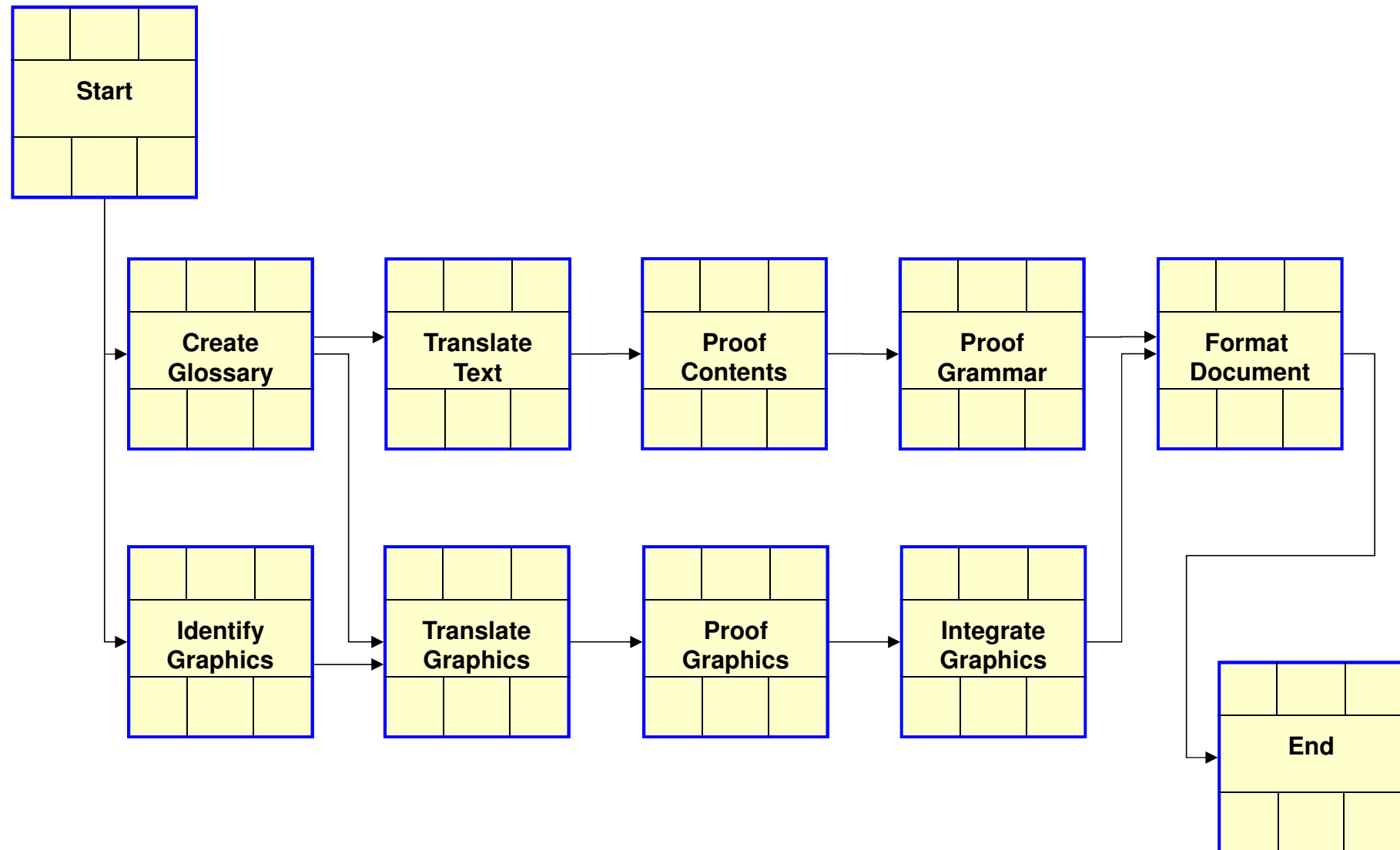
Responsibility Chart Codes

Code	Symbol	Function
Authority	A	Authority to approve or veto
Responsible	R	Responsible for day-to-day management of the task
Consult	C	Should be consulted <i>before</i> a decision is made or a task is completed
Inform	I	Should be informed <i>after</i> the decision is made or the task is completed
Implements	M	Implements the decision, completes the task
No involvement	X	This person has no involvement in the task or decision
Don't know	DK	The person filling out the chart does not know if the stakeholder has any role

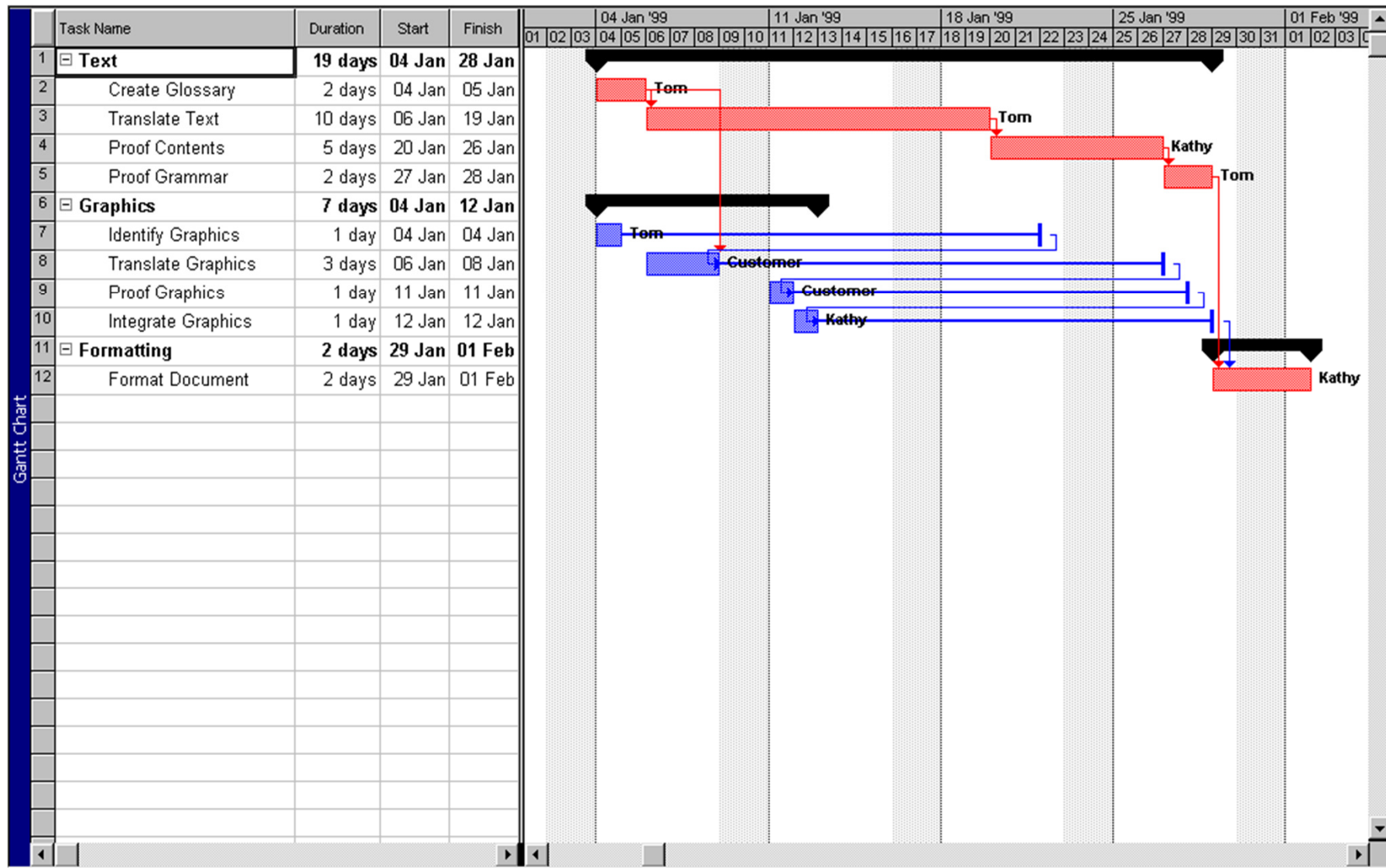
Estimating Task Duration

$$\text{Expected Duration} = \frac{\text{Optimistic Duration} + (4 \times \text{Most Likely Duration}) + \text{Pessimistic Duration}}{6}$$

Creating a PERT Chart



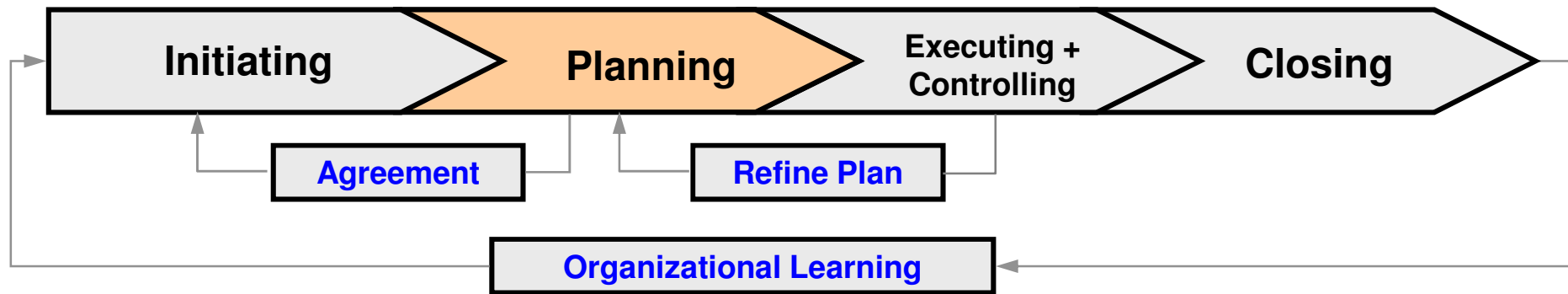
Example Gantt-Chart



Risk Management



Project Management Process



- **Develop the core project team**
- **Identify project tasks**
- **Complete a work breakdown structure**
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- **Develop a task network plan**
- **Develop a baseline project schedule**
- **Identify the critical path**
- **Identify critical areas (perform a risk analysis)**

Types of Project Risk

- **Technical**
- **Behavioral**
- **Organizational**
- **Business**

Risk Categories

- **Risks that**

- can be avoided
- can be contractually eliminated or transferred to a third party
- can be insured against
- must be managed
- you must or should live with
- are extremely unlikely or have minimal impact

Methods of Risk Management

- **Experience**
- **Analysis**
- **Scenario generation**

Steps in Risk Management

- I: Risk analysis**
- II: Prioritizing risk**
- III: Measures to control risk**
- IV: Monitoring risks throughout the project**
- V: Risk review after project ends**

Identifying Project Risks: Risk Table

Risk Element	Probability of Occurrence	Impact Value (0-10)	Weighting
Part not available	50%	1	0.5
Earthquake	0.01%	10	0.001
Snowfall	30%	3	0.9
Heavy Rain	60%	2	1.2

Risk Analysis and Alternative Planning

Impact of Occurrence	Catastrophic						
	Critical						
	Severe						
	Minor						
	Negligible						
		0	10	20	30	40	50+
		Likelihood of Occurrence (%)					

RED: Assign owner and develop alternative plan

YELLOW: Assign owner and monitor situation

GREEN: Monitor and address if classification changes

Risk Management Measures

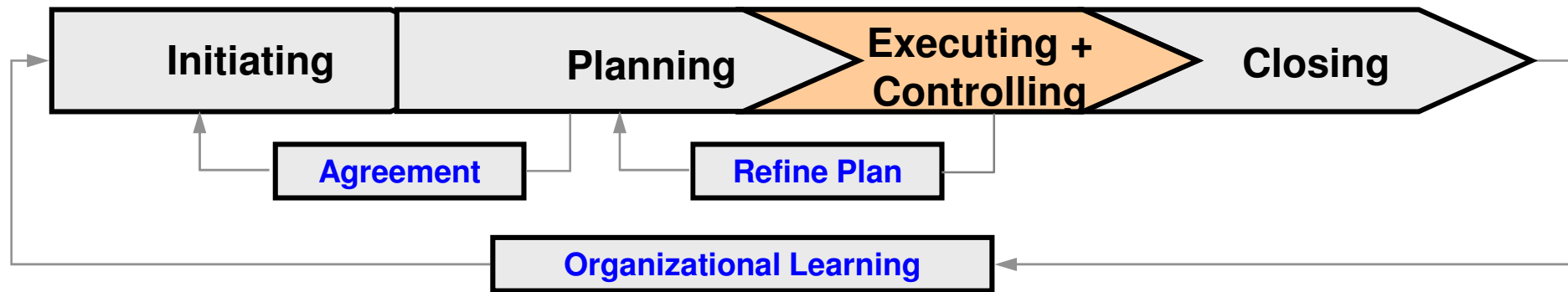
- **Realistic and careful planning of project objectives, costs and deadlines**
- **Develop alternative solutions**
- **Plan a specific risk fund**
- **Secure additional resources**
- **Work closely with suppliers and customers**

Executing & Controlling Phase

Project Monitoring and Control

Pro**ject**
management

Project Management Process



- Monitor project progress
- Identify possible changes to project plan as early as possible
- Report project progress to stakeholders
- Hold milestone meetings

Tasks During Project Execution

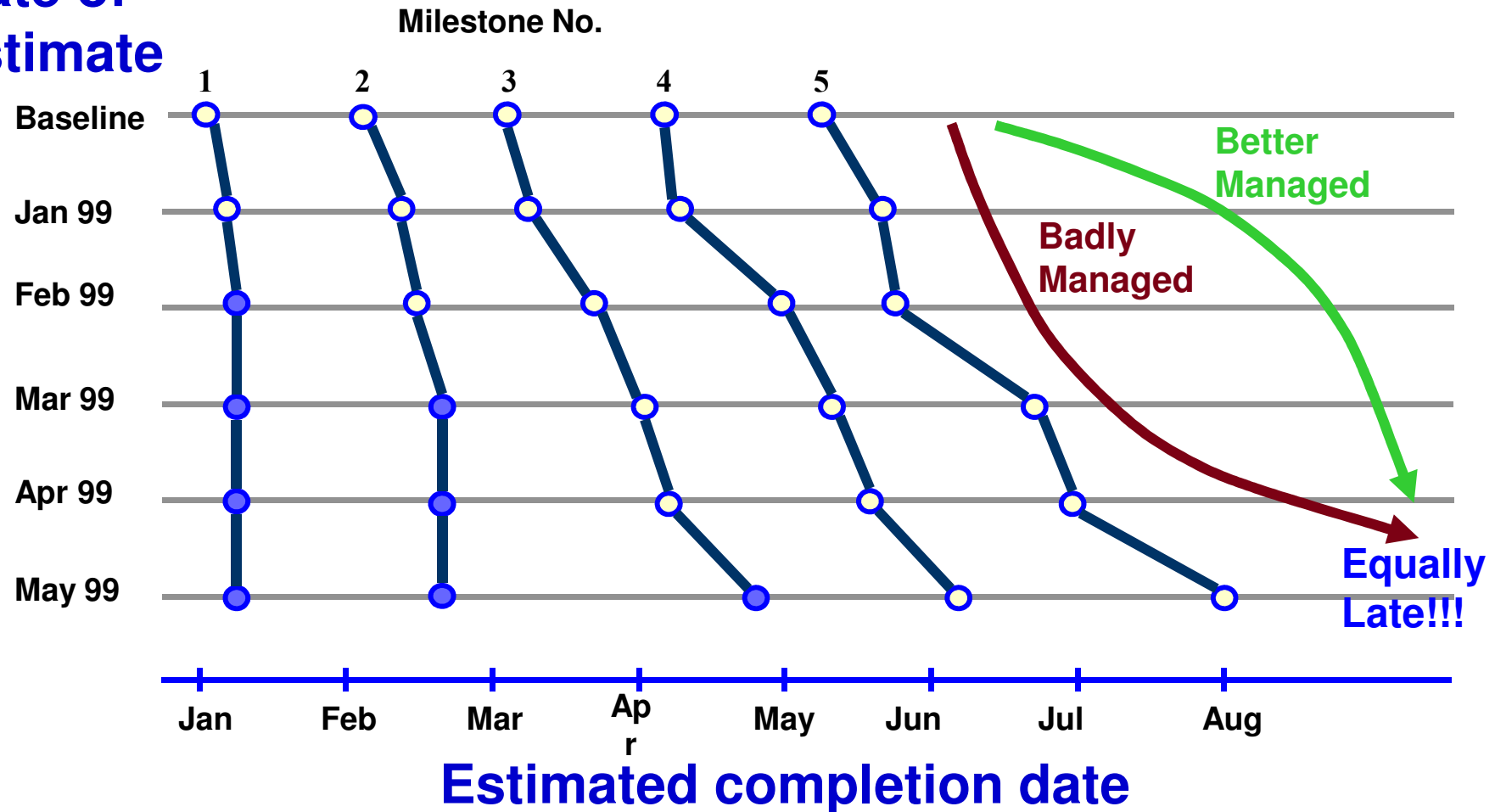
- **Monitoring progress to date**
- **Early identification of possible changes to plan**
- **Reporting**
- **Documentation**
- **Project monitoring**

Control Instruments

- **Time sheets**
- **Start and end times for work packages**
- **Capturing direct project costs**
- **Milestone or time trend analysis**
- **Cost to completion calculations**
- **Analysis of resource constraints**

Waterfall Diagram: Time/Trend Analysis

Date of
estimate



Milestone Meetings

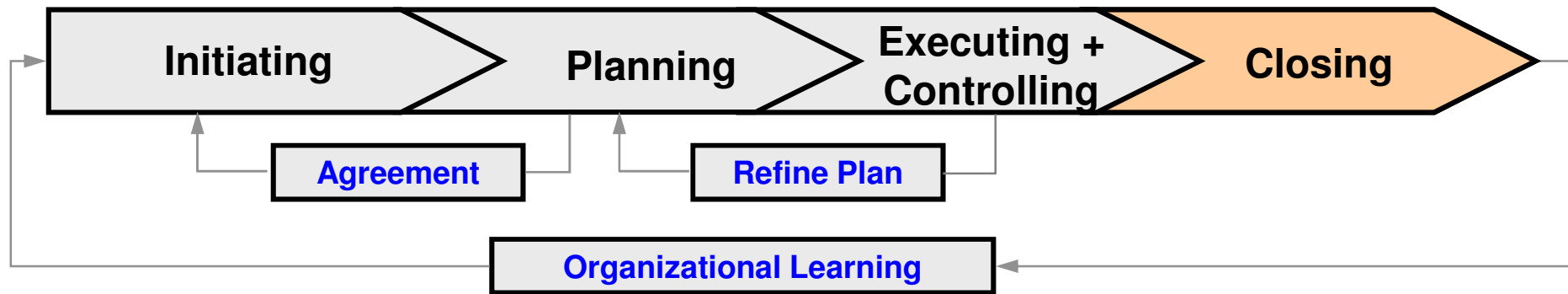
- **Prepare for the meeting**
 - Decide on who should participate
 - Schedule the meeting
- **Establish meeting goals**
- **Begin with systematic planning**
- **Set the agenda**
- **Debrief the meeting**

Closing Phase

Getting the Project Finished



Project Management Process



- Complete project documentation
- Conduct project review
- Record and share project experiences

Closing Phase: Getting the Project Finished

What problems typically occur at the end of the project?

Tie up loose ends

Share project learning and knowledge

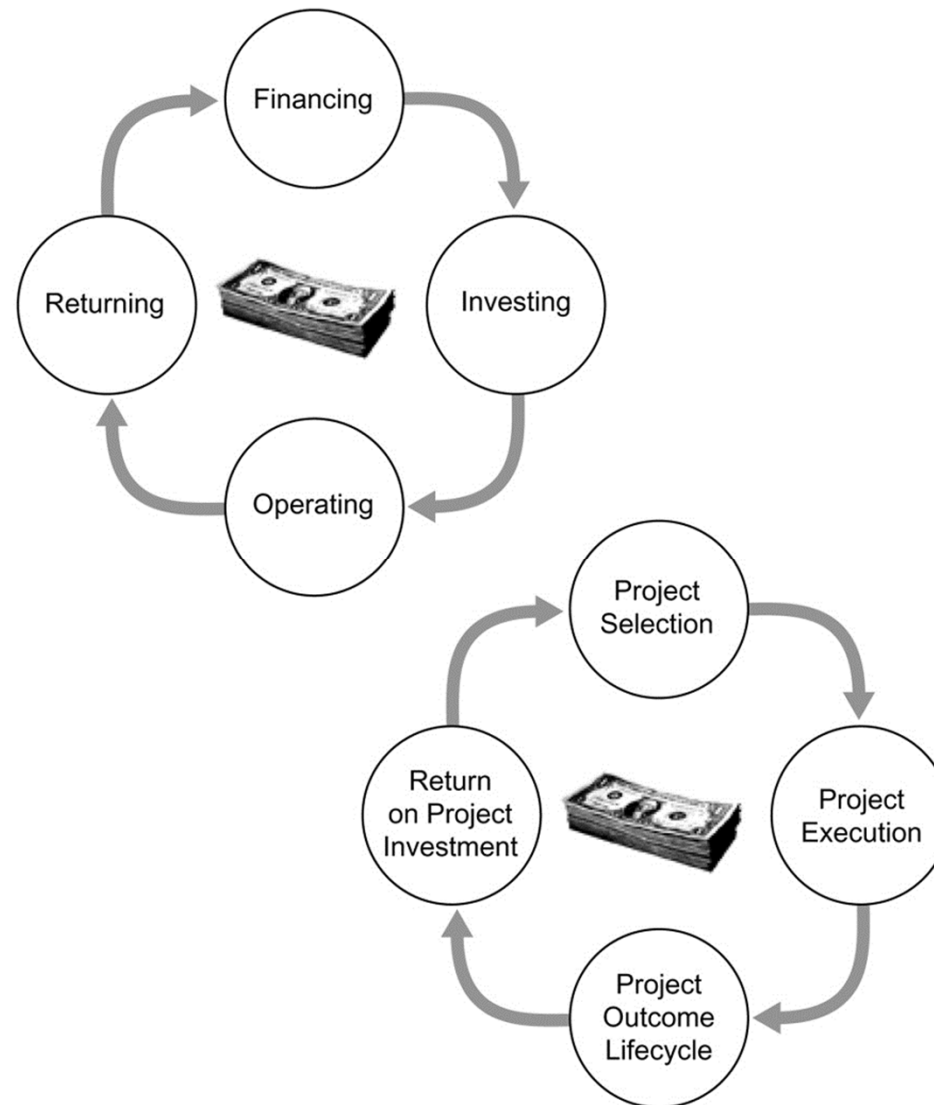
Implementing Project Management Back at the Office



Appendix C: Project Return on Investment (ROI)



The Cash Cycle



The Time Value of Money

- B. Cash Flows In**
- C. Net Present Value (NPV)**
- E. Net Cash Flows**
- F. Hurdle Rate**
- A. Weighted Average Cost of Capital (WACC)**
- D. Cash Flows Out**

The Time Value of Money

Year	Cash Flow	Discounted Cash Flow	Running Total
0	(15,000)	(15,000)	(15,000)
1	7,000	6,363	(8,637)
2	6,000	4,959	(3,678)
3	3,000	2,254	(1,424)
4	2,000	1,366	(58)
5	1,000	621	563

Project Example

Year	Net Cash Flow	Discounted Cash Flow	Running Total
0	(981,750)	(981,750)	(981,750)
1	258,583	230,878	(750,872)
2	368,060	368,060	(382,812)
3	621,646	442,475	59,663
4	837,579	532,297	591,960
5	1,129,089	640,676	1,232,636