

Project Management



Mariusz Maciejczak, Ph.D.

www.maciejczak.pl

Project Management....



TASK 1:

What are your experiences with projects?



Project Management....



Work Smart



Not Hard !!!

What is Project Management?

Project : A group of milestones or phases, activities or tasks that support an effort to accomplish something

Management : is the process of Planning, Organizing, Controlling and Measuring

The Context of Project Management

- A project is a temporary endeavor undertaken to accomplish a unique purpose.
- Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed project requirements

Who uses Project Management?

- Nearly Everyone to some degree

People plan their Days, their Weeks, their Vacations and their Budgets and keep a simple project management form known as “To Do” list

- Any **Process or Means** used to **track tasks** or efforts towards accomplishing a goal could be considered Project Management

Why is Project Management Important?

- **Enables us to map out a course of action or work plan**
- **Helps us to think systematically and thoroughly**
- **Unique Task**
- **Specific Objective**
- **Variety of Resources**
- **Time bound**

Advantages

- **In built Monitoring/ Sequencing**
- **Easy and Early identification of Bottlenecks**
- **Activity based costing**
- **Identification and Addition of missing and new activities**
- **Preempting unnecessary activity/expenditure**
- **Timely Completion**
- **Assigning tasks**
- **Reporting**

Disadvantages

-
-

TASK 2:

What are disadvantages of Project Management?

The Context of Project Management – Project Attributes

- Time Frame
- Purpose (to provide value!)
- Ownership
- Resources (the triple constraint)
- Roles
 - Project Manager
 - Project Sponsor
 - SME (domain & technical)
- Risk & Assumptions
- Interdependent Tasks
- Planned Organizational Change
- Operate in Environments Larger than the Project Itself



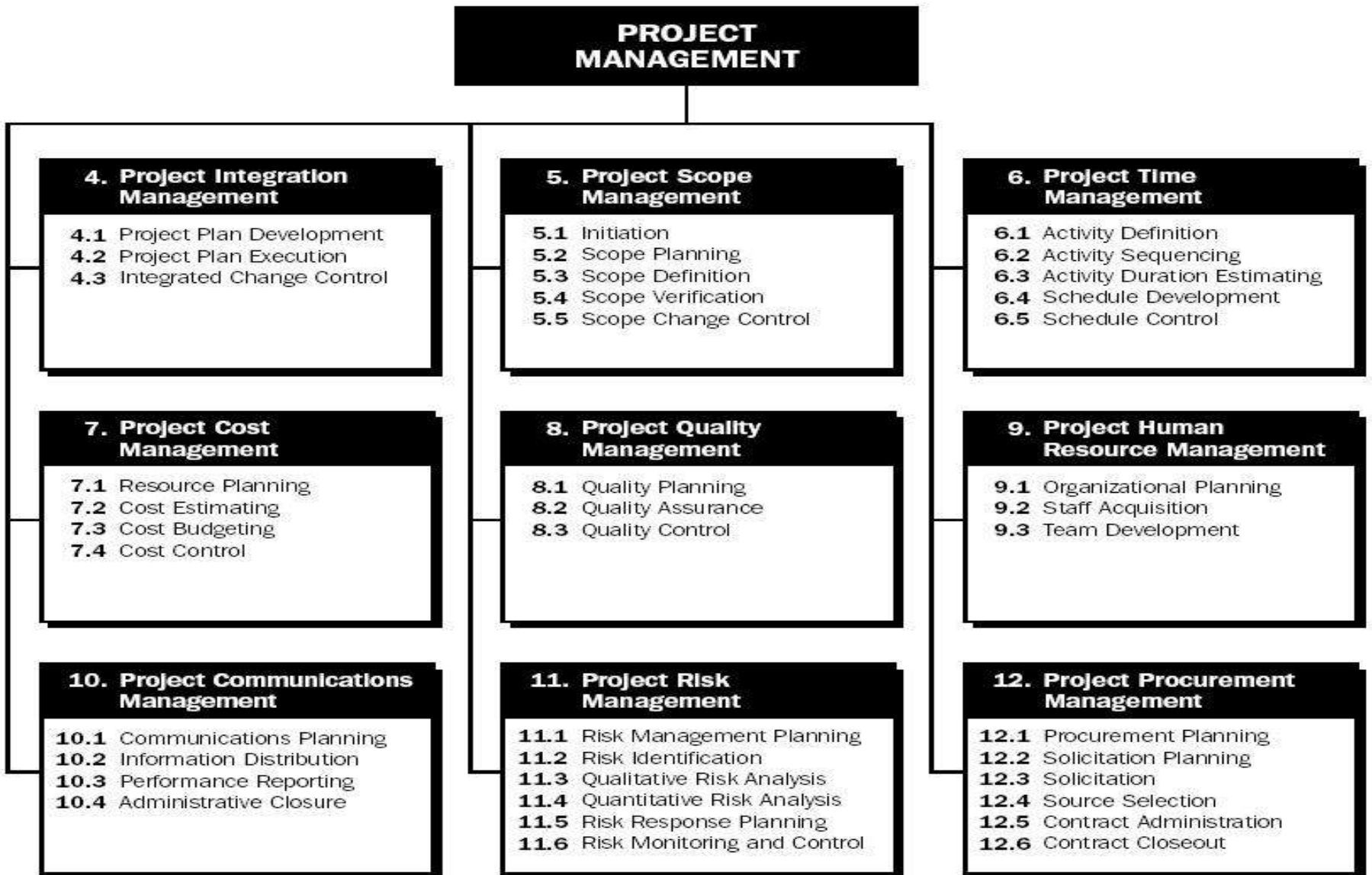
The Project Management Body of Knowledge (PMBOK®)

- The Guide to the Project Management Body of Knowledge (PMBOK® Guide) documents 9 project management knowledge areas.
- The PMBOK® Guide is published and maintained by the Project Management Institute (PMI). <http://www.pmi.org>
- PMI provides a certification in project management called the Project Management Professional (PMP).

PMBOK® Knowledge Areas

1. Project Integration Management
2. Project Scope Management
3. Project Time Management
4. Project Cost Management
5. Project Quality Management
6. Project Human Resources Management
7. Project Communications Management
8. Project Risk Management
9. Project Procurement Management

Project Management Body of Knowledge Areas



PRINCE 2

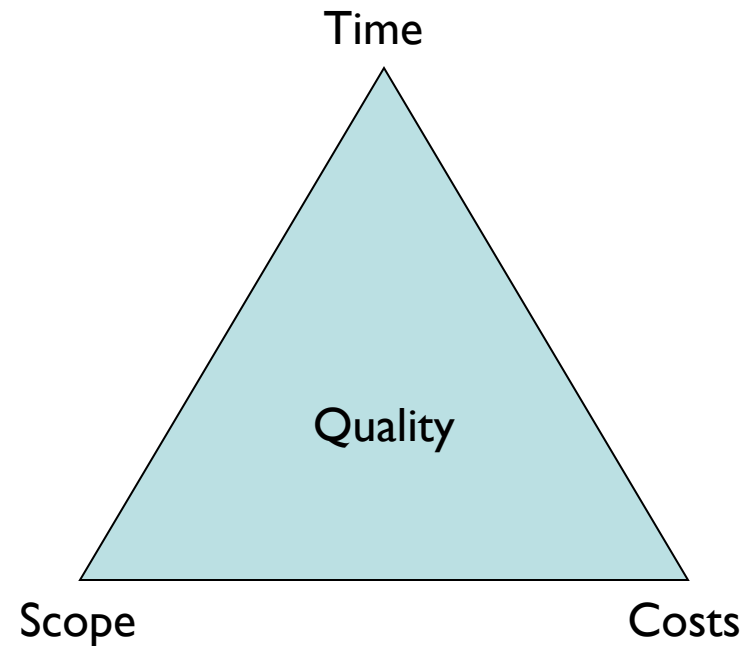


PRojects **IN** **C**ontrolled **E**nvironments

...is the methodology selected for managing projects, and to help to deliver a successful product.

Project Management by Prince 2

- Juggling time, scope and costs to deliver an agreed product
- Other factors include:
 - priority (business plan)
 - the need for good resource management
- Projects are unique and finite (start and end dates)



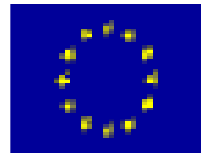
PRINCE2 project has:

- A finite and defined life cycle
- Defined and measurable business products
- A corresponding set of activities to achieve the business or specialist products
- A defined amount of resources
- An organisation structure, with defined responsibilities, to manage the project

PRINCE2: The Basics

- **Products**
 - the specialist product(s) - or deliverables - required by the customer
 - management products, i.e. the documents/reports produced during the project (not necessarily formal)
- **Components**
 - 8 key components, or concepts, e.g. Business Case, Plans, Risk
- **Processes**
 - all part of the project lifecycle, summed up as Controlled Start, Controlled Progress, Controlled Close
- **Roles**
 - the people involved and what is expected of them

PRINCE2 uses **product-based planning** rather than activity-based planning.



Project Cycle Management (PCM),
that includes the Logical Framework Matrix
(LFM), is the Methodology used by the
European Commission (EC) to design ,
execute and evaluate economic , social and
regional Programmes and Projects . It is
similar to the one used by all major
Multilateral Institutions (UN, WB, IMF, etc.)

The EC Project Cycle

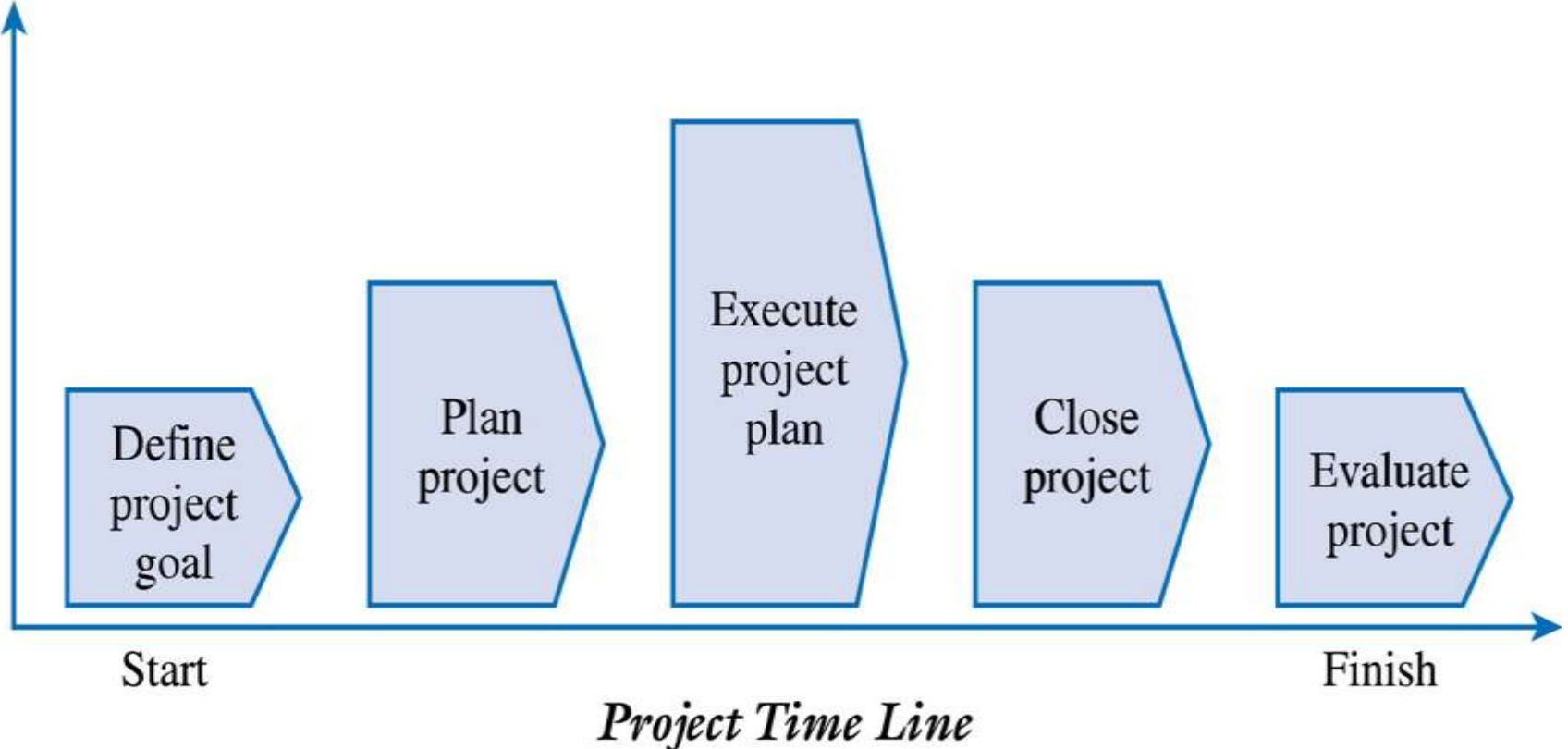
The way in which projects are planned and carried out; it follows a sequence beginning with an agreed strategy, which leads to an idea for a specific action, which then is formulated, implemented, and evaluated with a view to improve the strategy and define further action

Extreme Project Management (XPM)

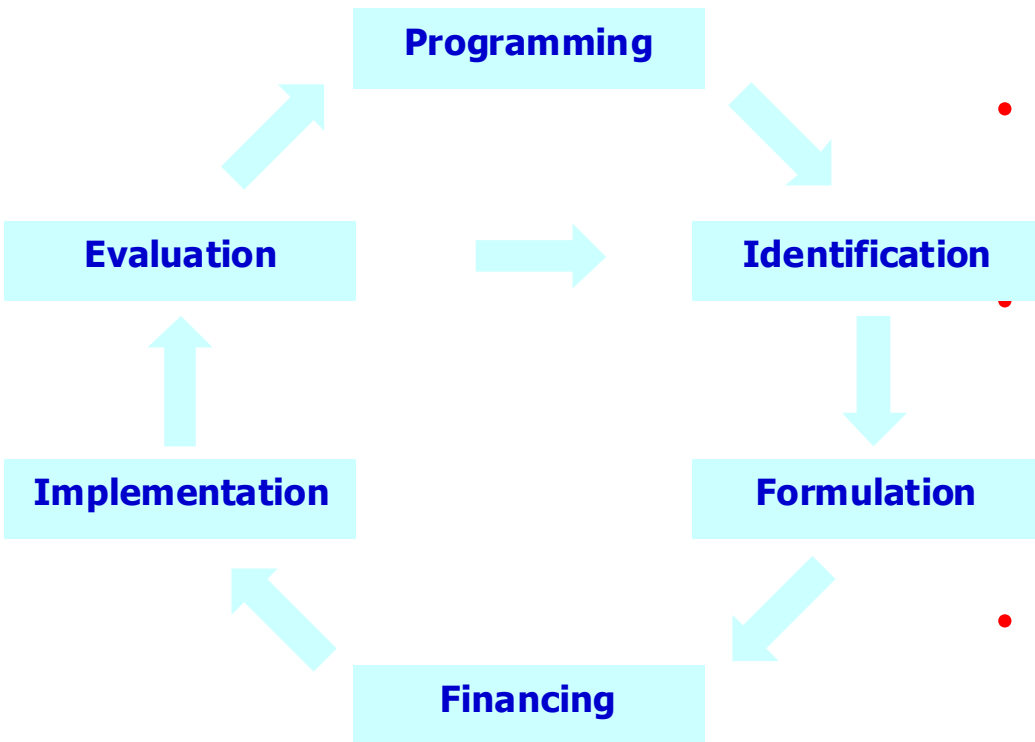
- A new approach and philosophy to project management that is becoming increasingly popular.
- Characterizes many of today's projects that exemplify speed, uncertainty, changing requirements and high risks.
- Traditional project management often takes an orderly approach while XPM embraces the fact that projects are often chaotic and unpredictable.
- XPM focuses on flexibility, adaptability and innovation
- Traditional and new approaches together can provide us with a better understanding of how to improve the likelihood of project success.

Generic Project Life Cycle

*Effort &
Resources
Required*

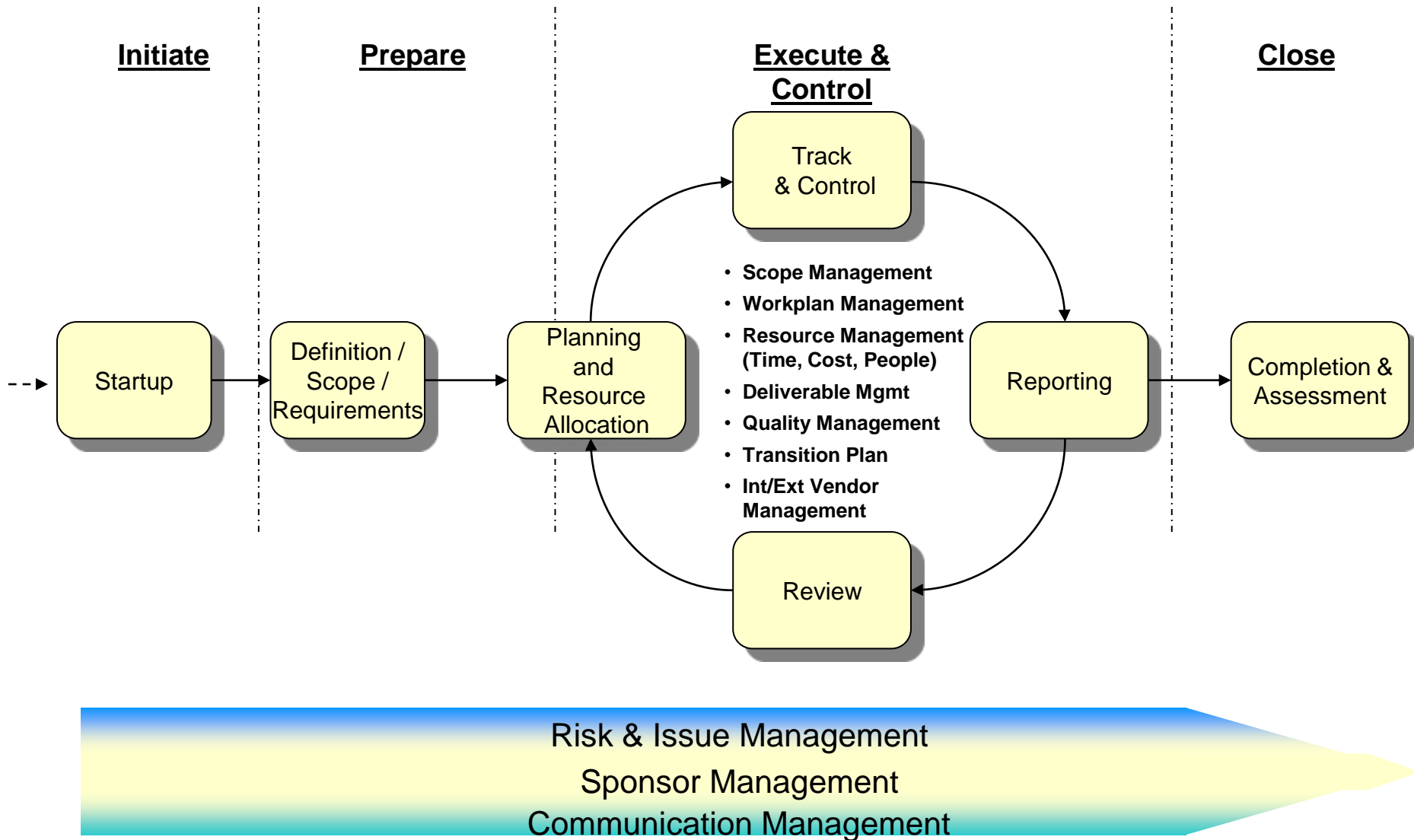


The Project Cycle



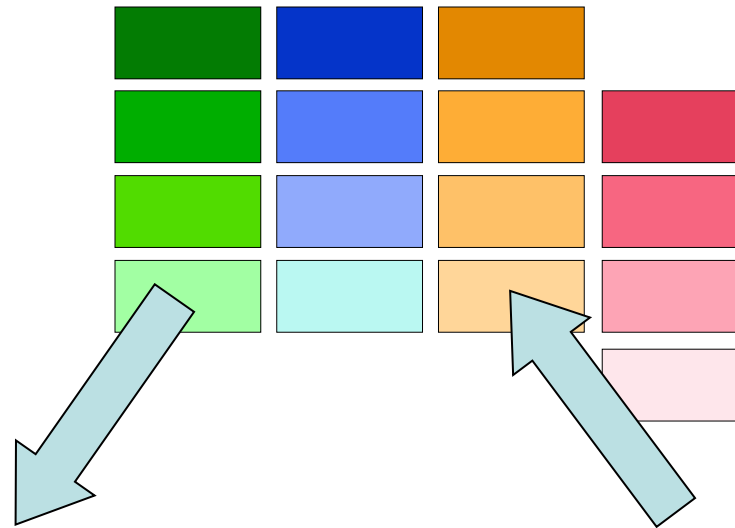
- **PROGRAMMING** - establishes a framework for project identification
- **IDENTIFICATION** - determines the relevance of a project idea, & screens it for further study
- **FORMULATION** - determines the feasibility & potential sustainability of a project
- **FINANCING** - commits the necessary resources to the project
- **IMPLEMENTATION** - executes the project & ensures it is on-track
- **EVALUATION** - assesses the outcome, & identifies lessons for future projects & programmes

Project Framework



Activity & Workplan & Budget

Activity



Workplan

Activities	1	2	3	4	5	6	etc	Who
1. Train staff	[Gantt bar]							
1.1 Conduct TNA	[Gantt bar]							A
1.2 Design modules		[Gantt bar]						A
1.3 Train staff			[Gantt bar]					A
2. Conduct extension	[Gantt bar]							
2.1 Design programme			[Gantt bar]					B
2.2 Organise farmers				[Gantt bar]				B
2.3 Run demonstrations					[Gantt bar]			B

Budget

Activities	Code	Unit cost	No.	Total	Rec.
1. Train staff					
• Salaries	A.1	200	20	4,000	4,000
• Equipment	B.3	350	4	1,400	
• Training materials	B.4	50	12	600	
2. Conduct extension					
• Salaries					
• Demonstration plots					
• Seeds & fertiliser					

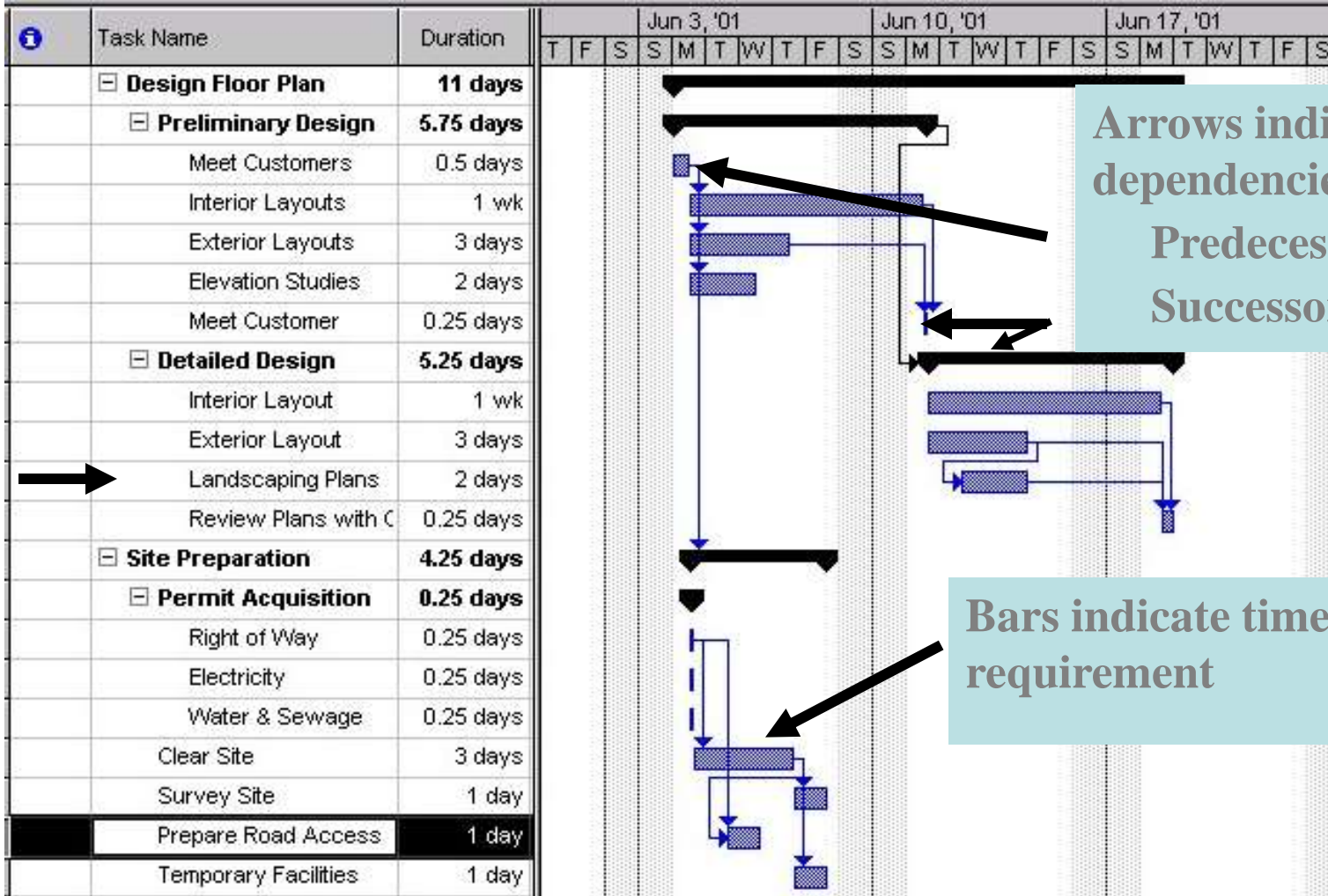
Check the *If/And/Then* Logic

Project Structure	Indicators of performance	Means of verification	Risks and Assumptions
Goal			
Purpose			
Outputs			
Activities			

The diagram illustrates the logical flow between project structure elements. It features a 5x4 grid with the following headers: Project Structure, Indicators of performance, Means of verification, and Risks and Assumptions. The rows are labeled: Goal, Purpose, Outputs, and Activities. The word *If* is written in red in the bottom-left cell (Activities, Indicators of performance). The word *then* is written in red in the middle-right cell (Outputs, Means of verification). The word *and* is written in red in the bottom-right cell (Activities, Risks and Assumptions). Arrows show the following dependencies: a horizontal arrow from Purpose to Indicators of performance; a horizontal arrow from Purpose to Risks and Assumptions; a diagonal arrow from Outputs to Indicators of performance; a diagonal arrow from Outputs to Risks and Assumptions; a diagonal arrow from Activities to Indicators of performance; a diagonal arrow from Activities to Risks and Assumptions; and a horizontal arrow from Activities to Means of verification.

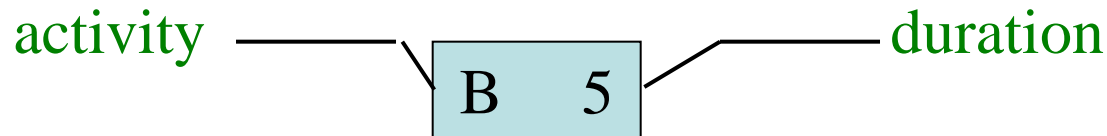
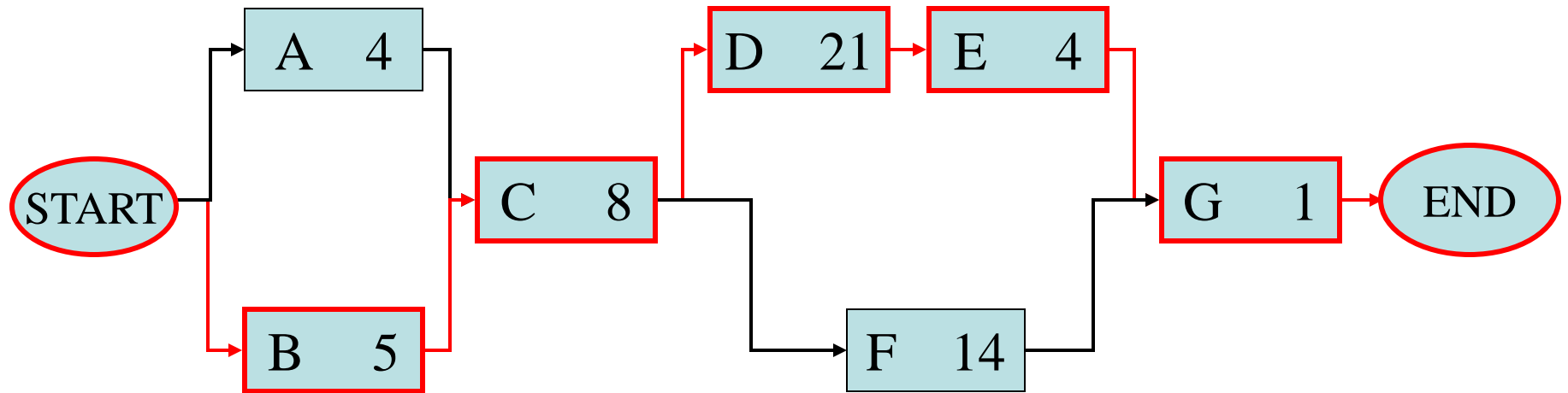
Gantt Chart – Workplan

Tasks

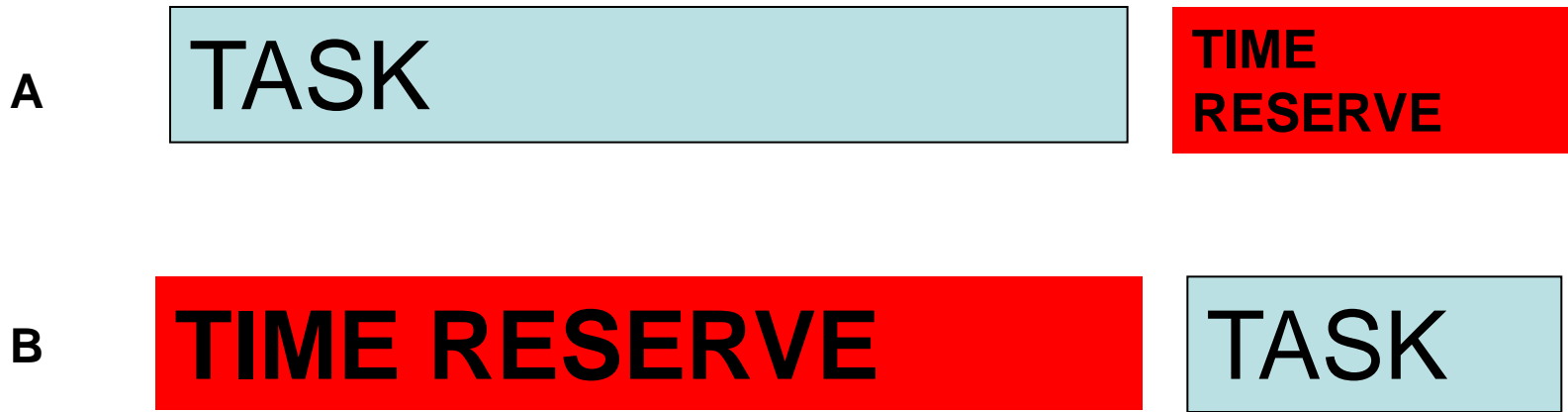


Estimated time to complete a task

The net diagram with the critical path



Which case could be named the Student's Syndrome ?



Budget



- **GENRIC arrangement** – shows how the money will be spend taking into account different cathegories of expenditures (salaries, travels, materials, etc.)
- **TASK arrangement** – shows how the money will be spend taking into account the task undertaken (development of webpage, training execution, etc.)

Generic Budget

SENIOR PERSONNEL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
1. PI -	\$15 000	\$15 600	\$16 224	\$16 873	\$17 548	\$81 245
TOTAL SENIOR PERSONNEL	\$15 000	\$15 600	\$16 224	\$16 873	\$17 548	\$81 245
OTHER PERSONNEL						
1. Postdoctoral Associates (# ___)		\$0	\$0	\$0	\$0	\$0
2. Other Professionals (# ___)		\$0	\$0	\$0	\$0	\$0
(Technician, Programmer, etc.)		\$0	\$0	\$0	\$0	\$0
3. Graduate Students (# 1 ___)	\$7 500	\$7 800	\$8 112	\$8 436	\$8 773	\$40 621
4. Undergraduate Students (# ___)		\$0	\$0	\$0	\$0	\$0
5. Secretarial-Clerical (# ___)		\$0	\$0	\$0	\$0	\$0
6. Other (# ___)		\$0	\$0	\$0	\$0	\$0
TOTAL OTHER PERSONNEL	\$7 500	\$7 800	\$8 112	\$8 436	\$8 773	\$40 621
TOTAL SALARIES	\$22 500	\$23 400	\$24 336	\$25 309	\$26 321	\$121 866
EQUIPMENT						
List item/dollar amount for each item exceeding \$5,000						
1. Thermo Sci Max Q 4000 Orb Shaker	\$6 320					\$6 320
2.						\$0
3.						\$0
4.						\$0
TOTAL, EQUIPMENT	\$6 320	\$0	\$0	\$0	\$0	\$6 320
TRAVEL						
1. Domestic			\$1 000		\$1 000	\$2 000
2. Foreign						\$0
TOTAL, TRAVEL	\$0	\$0	\$1 000	\$0	\$1 000	\$2 000

Task Budget

TASK BUDGET EXAMPLE 2007										
Entity (contractor or applicant)	Task Description	Cost			Restoration Funds	Cash Matching Funds		Inkind Matching Funds		Total
		Rate	Unit	Number of Units		Applicant	Other	Applicant	Other	
	Task 1: Project Management & Administration									
Applicant	Project Management	\$25	Hour	120	\$1 000			\$2 000		
Applicant	Project Management Overhead (100% x rate)	\$25	Hour	120		\$3 000				
				Task Cost	\$1 000	\$3 000		\$2 000		\$6 000
	Task 2: Stream Reconstruction									
Consultant X	Design, Permitting & Oversight									
	Draft & Final Design	\$70	Hour	40	\$2 800					
	Permitting	\$70	Hour	30	\$2 100					
	Construction Oversight	\$70	Hour	120	\$8 400					
	Design & Permitting Subtotal				\$13 300					
Contractor Y	Stream Restoration Construction									
	Install Boulders	\$55	each	130	\$3 575	\$3 575				
	Add Large Woody Debris	\$440	each	19	\$4 180	\$4 180				
	Channel Relocation	\$33	feet	1000	\$16 500	\$16 500				
	Subtotal				\$24 255	\$24 255				
	Construction Contingency 10%				\$2 426	\$2 426				
	Stream Restoration Construction Subtotal				\$26 681	\$26 681				
Contractor Z	Revegetation									
	Erosion Control Mat (Labor and Materials)	\$2	Sq Yard	300		\$600,00				
	Willow Plants (10 inch containerized stock)	\$1	each	500		\$500,00				
	Willow Sprigging	\$0,50	each	1 000		\$500,00				
	Reseeding (labor and seed)	\$800	Acre	2		\$1 600,00				
	Planting labor	\$25	hour	80		\$2 000,00				
	Revegetation Subtotal				\$0	\$4 600				

Laws of Project Management

- No major project is ever installed on time, within budget, or with the same staff that started it. Yours will not be the first.
- Projects progress quickly until they become 90% complete, then they remain at 90% complete forever.
- When things are going well, something will go wrong.
- When things just cannot get any worse, they will.

Laws of Project Management

- When things appear to be going better, you have overlooked something.
- A carelessly planned project will take three times longer to complete than expected
- A carefully planned project will take only twice as long.
- Project teams detest progress reporting because it vividly manifests their lack of progress.

If you can't plan it, You can't do it



**If you can't measure it,
You can't manage it**

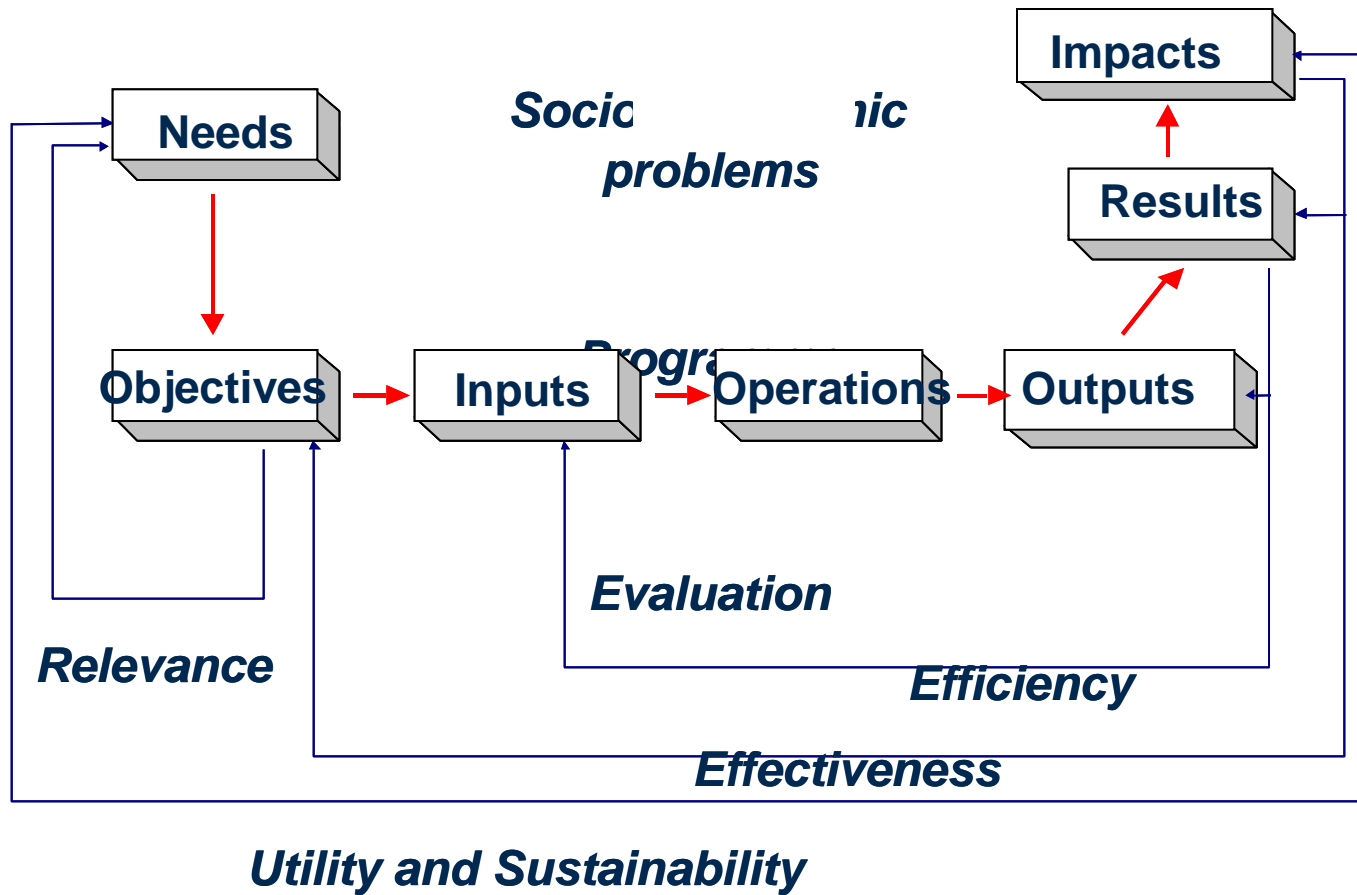


Evaluation in Theory

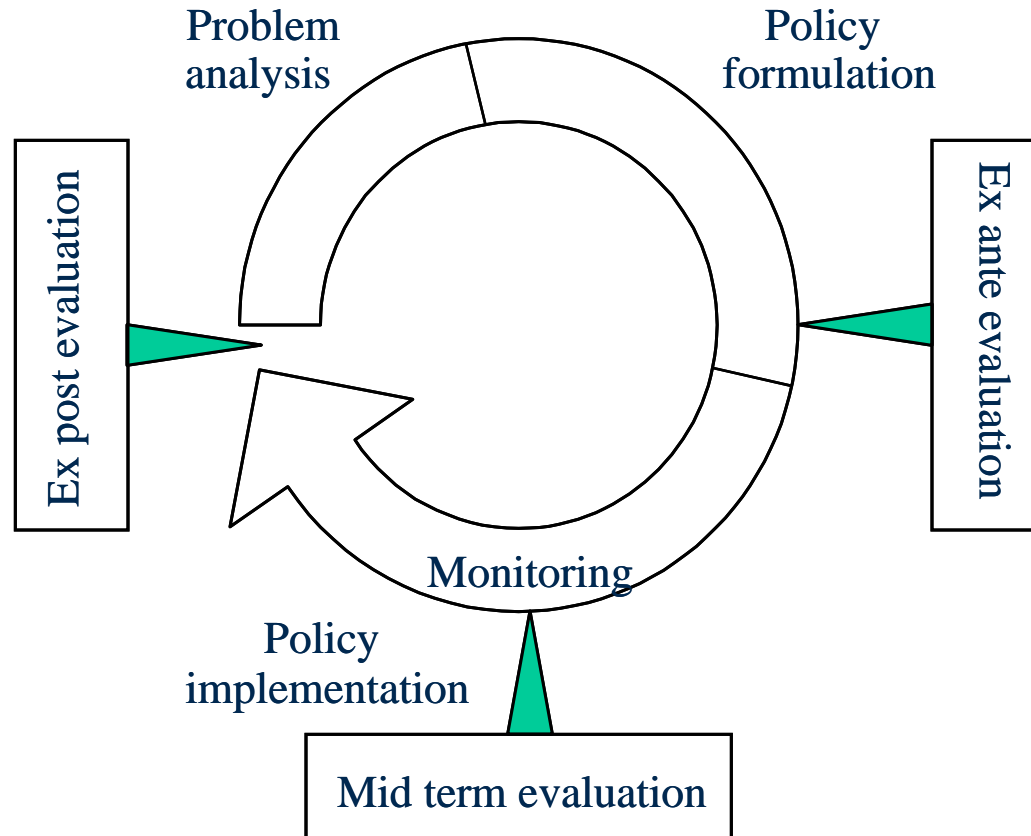


- **Relevance**: do we want to go from A to B ?
(need versus objective)
- **Effectiveness**: do we meet our objective
(do we arrive at B)?
- **Efficiency**: at what cost do we arrive at B?

Key evaluation issues



Evaluation & policy life cycle



Type of evaluations

- ***Ex ante evaluation***: will we spend this wisely?
- ***Mid-term evaluation***: are we spending this wisely?
- ***Ex post evaluation***: have we spent this wisely?

Ex ante evaluation in 6 steps

- 1 Analysis of **previous evaluation results**
- 2 Analysis of **strengths, weaknesses and potential**
- 3 Assessment of the **strategy**
- 4 **Quantification** of objectives
- 5 Evaluation of **expected impact**
- 6 Quality of **management & implementation arrangements**

Mid-term evaluations in practice

- A useful ***management tool*** for programme management
- A useful ***communication tool*** between EC and member state / region
- Only limited possibilities for impact assessment as projects are not finished (results are maximum)

Ex post evaluations in practice

- How to isolate programme impacts from exogenous factors
- Awkward timing of ex post evaluations in the policy life cycle
- Limited quality and availability of data

Evaluation versus Monitoring

- Evaluators start where monitors stop (and vice versa)
- Monitoring data (inputs and outputs) form the starting point for evaluations (and vice versa)
- Evaluators concentrate in particular on results and impacts (ex ante, mid-term and ex post)

Evaluation principles of the European Commission

- Evaluation as an **integrated part** of programme management;
- Sufficient **resources** (staff, funds and skills) should be made available;
- Standards for **quality**: relevance, access to information, stakeholders interests; reliability, transparency & objectivity
- Results should be **publicly available**

Timing of EU Structural Funds evaluations in practice

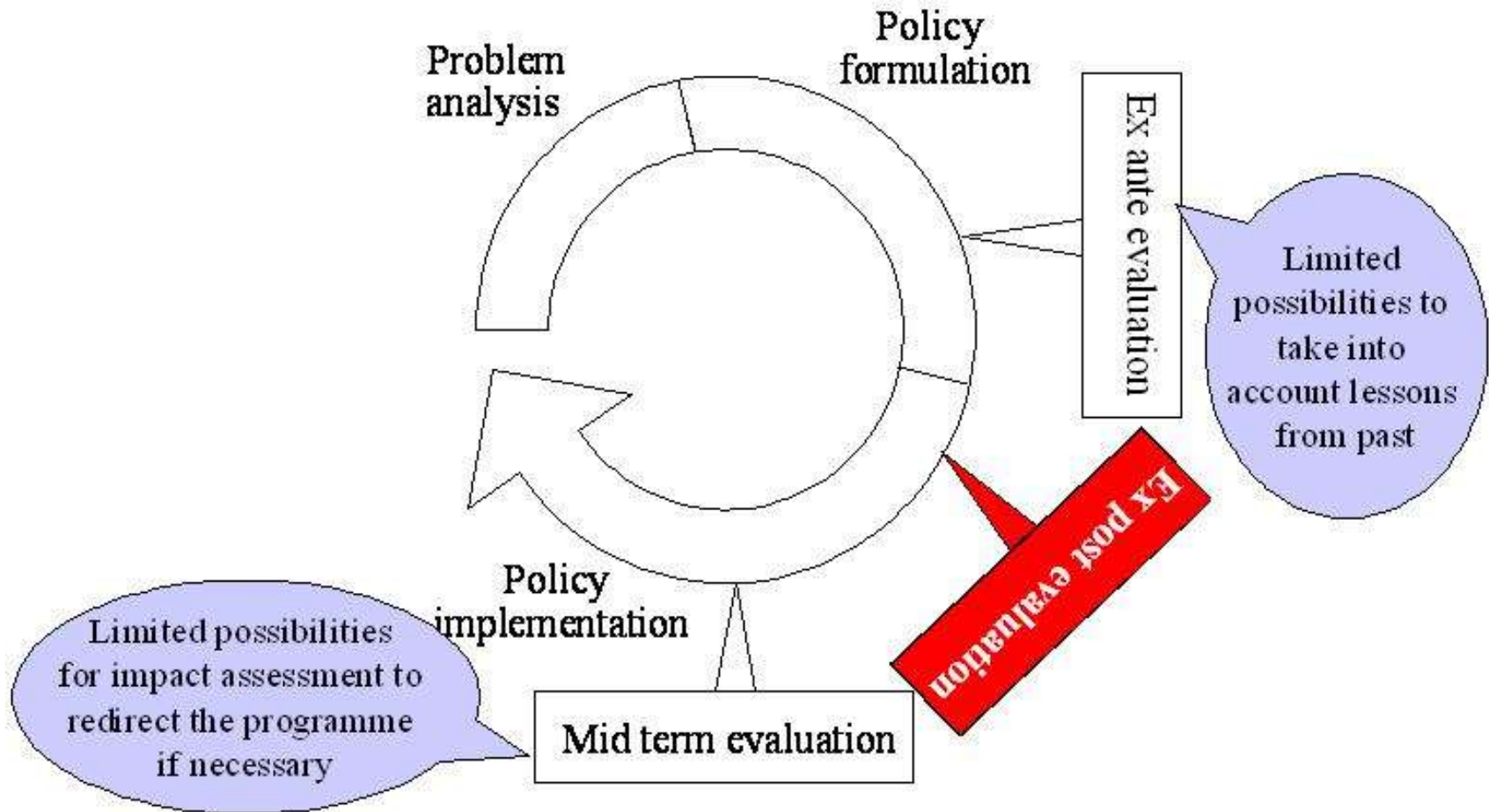


Table 1.2 Summary of Factor Rankings for Successful, Challenged, and Impaired Projects

<i>Rank</i>	<i>Factors for Successful Projects</i>	<i>Factors for Challenged Projects</i>	<i>Factors for Impaired Projects</i>
1	User involvement	Lack of user input	Incomplete requirements
2	Executive management support	Incomplete requirements	Lack of user involvement
3	Clear statement of requirements	Changing requirements & specifications	Lack of resources
4	Proper planning	Lack of executive support	Unrealistic expectations
5	Realistic expectations	Technology incompetence	Lack of executive support
6	Smaller project milestones	Lack of resources	Changing requirements specifications
7	Competent staff	Unrealistic expectations	Lack of planning
8	Ownership	Unclear objectives	Didn't need it any longer
9	Clear vision & objectives	Unrealistic time frames	Lack of IT management
10	Hard-working, focused team	New technology	Technology illiteracy

SOURCE: Adapted from The Standish Group, *CHAOS* (West Yarmouth, MA: 1995), <http://www.standishgroup.com/visitor/chaos.htm>.

Leadership-in-Action Project Management Simulation



http://forio.com/simulation/lead-demo/change_frame.h

The screenshot shows the 'Leadership in Action' simulation interface. At the top, there are four status indicators: 'Project: On Schedule', 'Team Morale: Good', 'Team Stress: Normal', and 'Productivity: Normal'. Below these, a message states: 'Your project is not yet complete. Ratings will likely change as the project progresses.' The main content area is divided into four panels:

- Project Cost:** Project Cost Rating is 5 stars (★★★★★). Cumulative Number of Person Days: 19 days. Maximum Team Size During Project: 4 people.
- Success Meeting Goals:** An on-schedule rating (0 to 5 stars) will be provided when the project is complete. Initial Completion Goal: Initial goal has not yet been set. Actual Completion Date: Project is not completed.
- Team Attitude:** Team Attitude Rating is 4 stars (★★★★☆). Average Stress Level During Project: Normal. Average Morale During Project: Good.
- Personal Tasks:** Personal Tasks Rating is 0 stars (☆☆☆☆☆). Tasks Left Unfinished: 90 out of 100 tasks. Average Hours Worked Each Week: 74 hours.

On the left side, there is a sidebar with navigation buttons: Intro, Team Info, My Workload, Project Info, Coaching, Summary, and Graphs. Below these are 'Decisions and Goals for Week 2' with dropdown menus for Team size (4 people), Hours to spend in meetings (4 hours), Hours to coach team members (None), Personal tasks to delegate (0 tasks), and Complete project by week (10). There are 'Submit Decisions', 'Reset', and 'Exit' buttons at the bottom left. The footer includes 'POWERED BY Forio Business Simulations'.

TASK 3:

Play the game. Be a project manager in practice.

Wish you a successful projects



Thank you