PROJECT PLANNING & CONTROL

Lesson 1: Defining the Project

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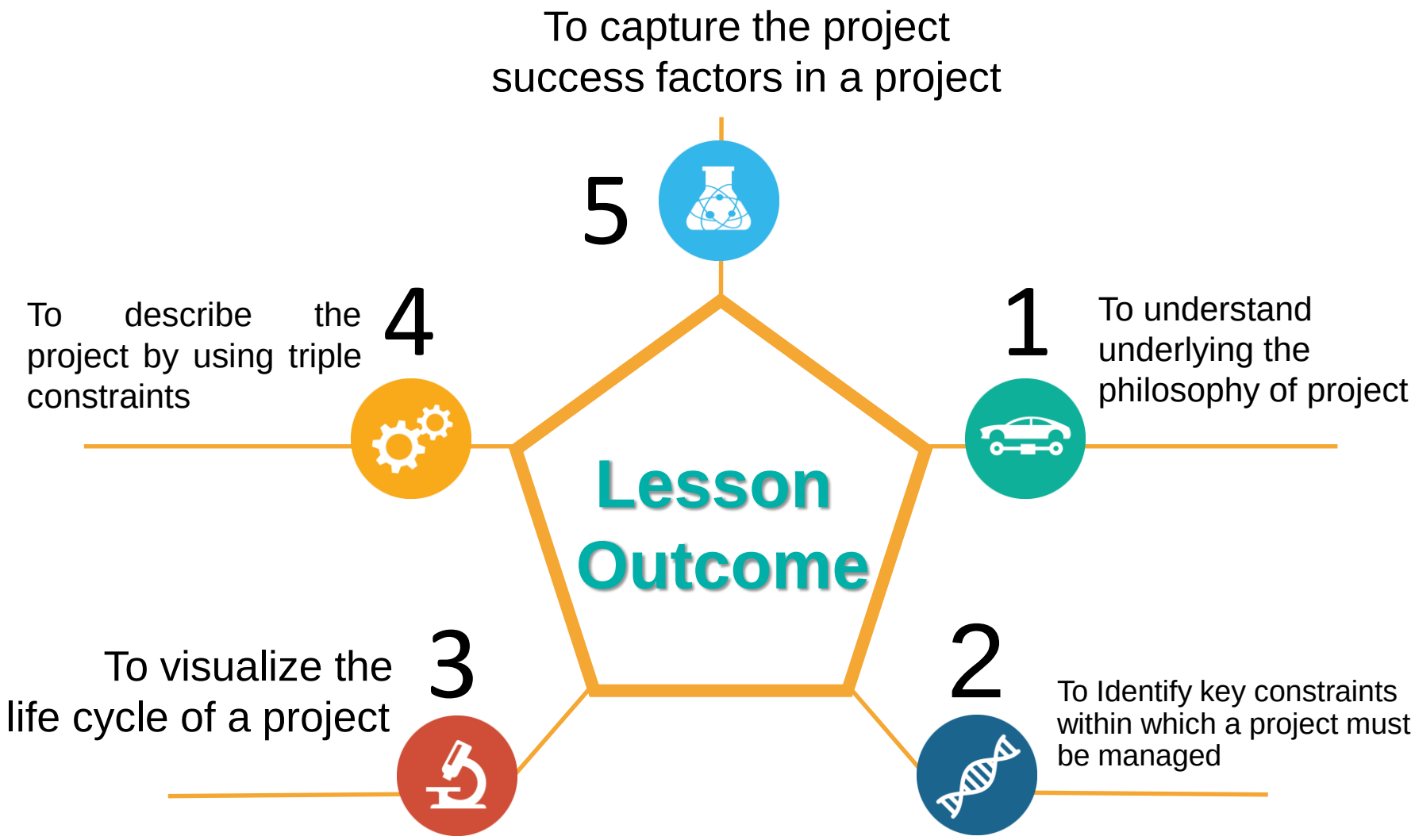
Chapter Description

- **Aims**
  - To expose and provide understanding and comprehensive knowledge to students regarding the project as a whole that are useful in project planning and control.

- **Expected Outcomes**
  - Students be able to understand the project definition AND philosophy and project success factor
  - Students be able to identify the project characteristics and constraints as well as project management failure

- **Learning References**
  - Lewis, J. P. Project Planning, Scheduling & Control, 4th Edition McGraw-Hill
  - Lester, A. Project Planning & Control, 4th Edition Butterworth-Heinemann
  - Carmichael, D. Project Planning & Control Taylor & Francis, Inc.

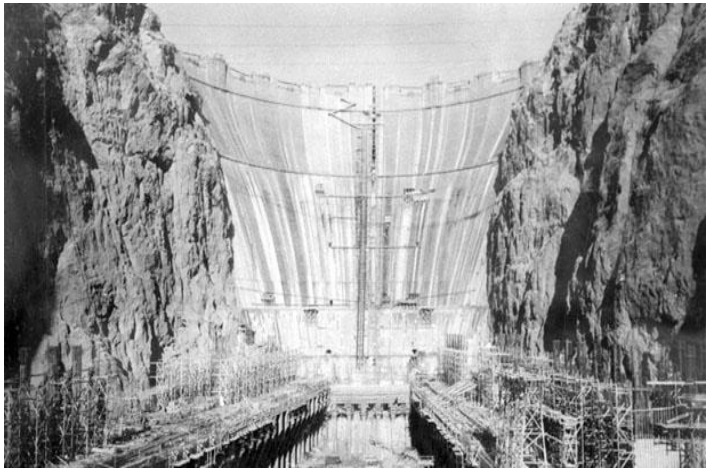
LESSON OUTCOME



CONTENT of LESSON 1
DEFINING THE PROJECT

- Project Definition
- Project Success Factors
- The Project Management Triangle/Triple Constraint
- The Project Terms of References (TOR)

PROJECT DEFINITION
Historical Perspective



PROJECT DEFINITION
Dimension of a Project

TIME

Project must completed/finished on time

RESOURCES

The project must be completed on time within the budgeted cost

SCOPE

The project must achieve its stated objectives

PROJECT DEFINITION
What is Project?

Author	Definition
Zulkiflee, Y (2002)	A project is an organized work towards a pre-defined goal or objective that requires resources and effort, a unique (and therefore risky) venture having a budget and schedule, requires a temporary organization and is not permanent in nature.
Upendra, K (2009)	A project is a sequence of related jobs usually directed toward some major output and requiring a significant period of time to perform.
Vivek, K (2017)	A project is a unique set of coordinated activities, with definite starting and finishing points, undertaken by an individual or organization to meet specific objectives within defined schedule, cost and performance parameters.
PMBOK	Project is a temporary endeavor with a beginning and an end, with a defined scope and resources.

- Project range in size, scope, cost and time from mega international projects costing millions of Ringgit's over many years – to small domestic projects with a low budge taking a just a few hours to complete.
- Consider the following projects:
  - *Career development (education & training courses)*
  - *The transition period during which a change occurs*
  - *Designing and constructing a building, a house or a yacht*
  - *Designing and testing a new prototype (a car or a washing machine)*
  - *The launch of a new product (advertising, and marketing project)*
  - *Implementing a new computer system (IT project, or upgrade)*
  - *Designing and implementing a new organizational structure (HR project)*
  - *Planning and conduction an audit (QMP)*
  - *Improving productivity within a target period*
  - *Disaster recovery (limiting the damage of fires, flood, or any type of accident)*
  - *Comanwell Games, SEA Games, KL Bukit Jalil Sport City (a sport project)*
  - *Legoland Malaysia, Bukit Gambang Resort, (an entertainment project)*

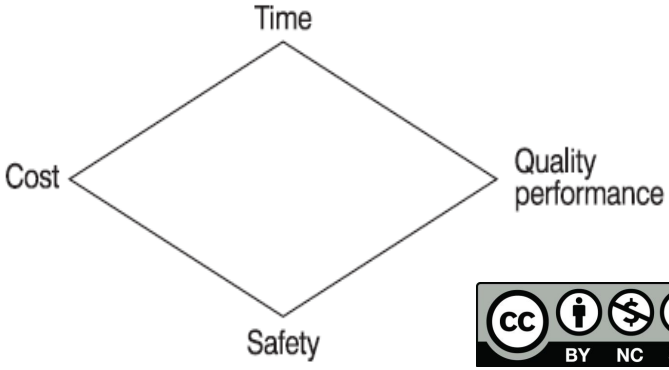
PROJECT DEFINITION
Project Characteristics

The major characteristics of a project are as follows:

- A project has a specific and measurable goal (scope).
- Projects have specific time frame.
- Projects use resources (cost).
- All projects consist of interdependent, individual steps.
- Activities that are essentially unique and non repetitive.
- Projects are not permanent in nature

Critical Industries such as airlines, railways, mining, etc. require safety as main criterion.

Project Triangle



PROJECT DEFINITION
Program vs. Project

Program

- *a group of related projects designed to accomplish a common goal over an extended period of time.*

Project

- Each project with a program has a project manager. The major differences lie in scale and time span

Program Management

- Program management is the process of managing group of ongoing, interdependent, related *projects* in a coordinated way to achieve strategic objectives.

PROJECT DEFINITION
Project Life Cycle

Project Life Cycle defines:

THE BEGINNING AND THE END

of a project.

PLC Defines:

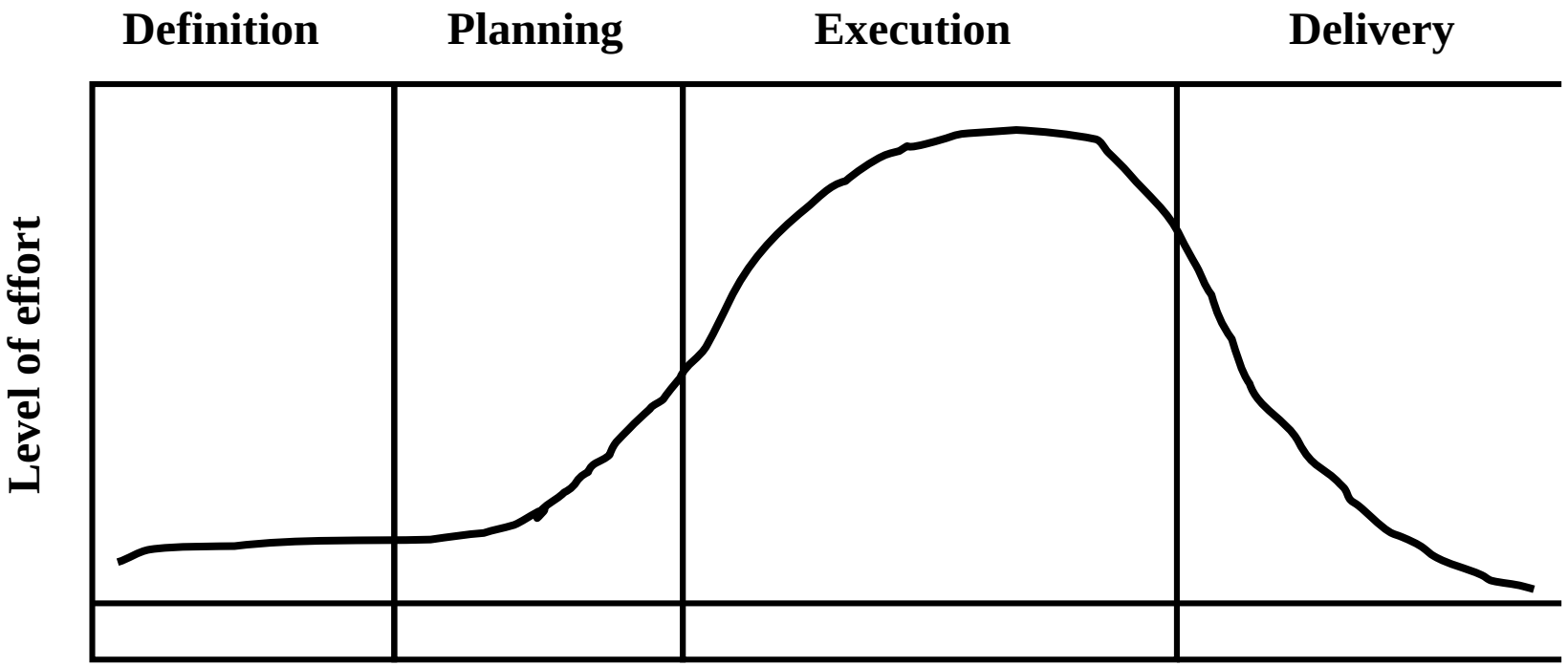
1. **What TECHNICAL WORK should be done in each project phase;**

2. **WHO should be involved in each phase.**

PROJECT DEFINITION
Project Life Cycle

- Another way of illustrating the UNIQUE nature of project work is in terms of the **project life cycle**.
- Some Project Managers find it useful to use the project life cycle as the cornerstone / fundamental for managing projects.
- The life cycle recognizes that projects have a limited life span and that there are predictable changes in level of effort and focus over the life of the project.
- Many are unique to a specific industry or type of project. The are a number of different life-cycle models in project management literature.
- The project life cycle typically passes sequentially through four (4) stages: defining, planning, executing and closing (delivering).

Figure 1.1 Project Life Cycle (Gray & Larson, 2006)

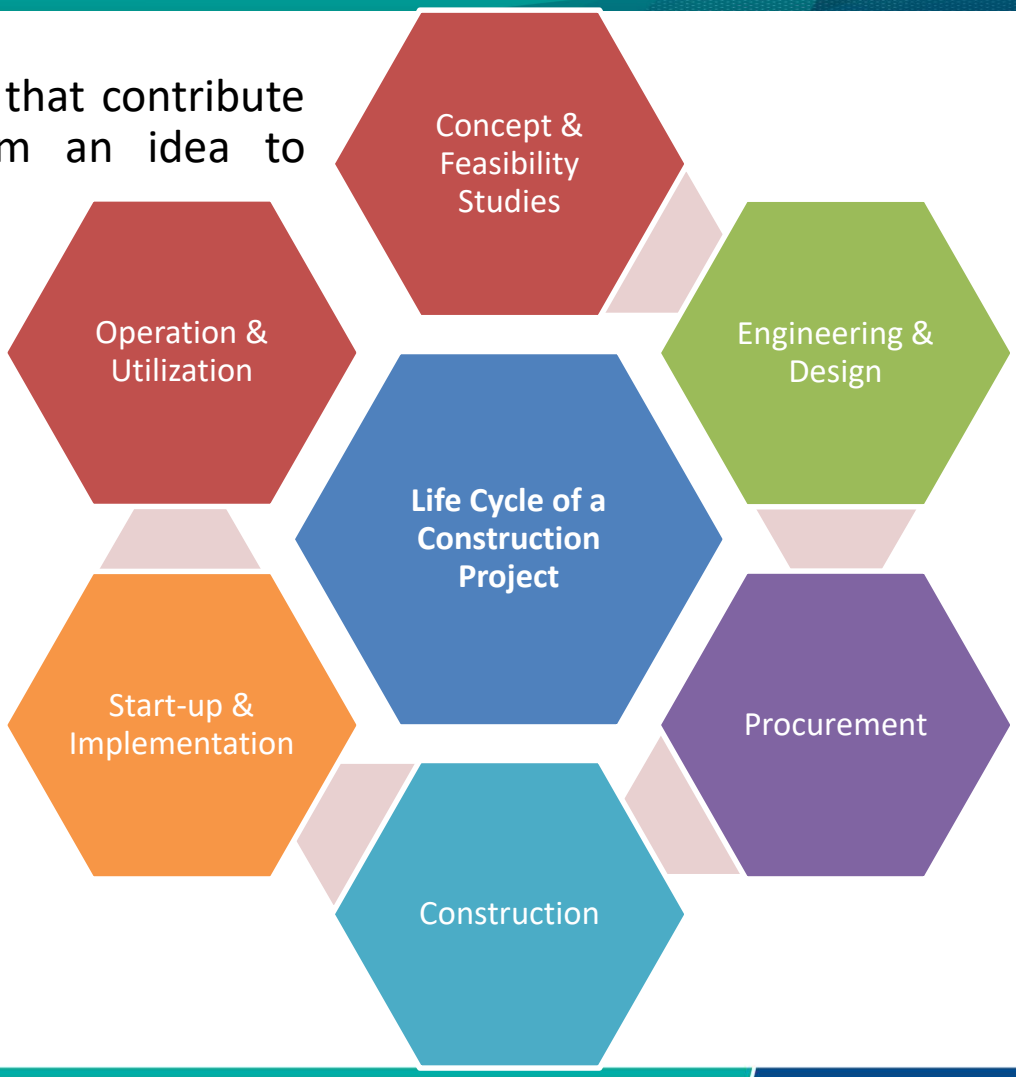


Definition	Planning	Execution	Delivery
1. Goals	1. Schedules	1. Status reports	1. Train customer
2. Specifications	2. Budgets	2. Changes	2. Transfer documents
3. Tasks	3. Resources	3. Quality	3. Release resources
4. Responsibilities	4. Risks	4. Forecasts	4. Reassign staff
5. Teams	5. Staffing		5. Lessons learned

No	Stages	Description
1	Defining Stage	Specifications of the project are defined; project objectives are established, teams are formed; major responsibilities are assigned.
2	Planning Stage	The level of effort increases, and plans are developed to determine what the project will entail, when it will be scheduled, whom it will benefit, what quality level should be maintained, and what the budget will be.
3	Executing Stage	A major portion of the project work takes place – both physical and mental. The physical product is produced (a bridge, a report, a software program). Time, cost, and specification measures are used for control. Is the project on schedule, on budget and meeting specifications?
4	Closing Stage	Closing includes three (3) activities; delivering the project product to the customer, redeploying project resources, and post-project review. Delivery of the project might include customer training and transferring documents. Redeployment usually involves releasing project equipment/materials to other project and finding new assignments for team members. Post-project reviews include not only assessing performance but also capturing lesson learned

Life Cycle of a Construction Project

There are SIX (6) Basic Phases that contribute to developing a project from an idea to reality:-

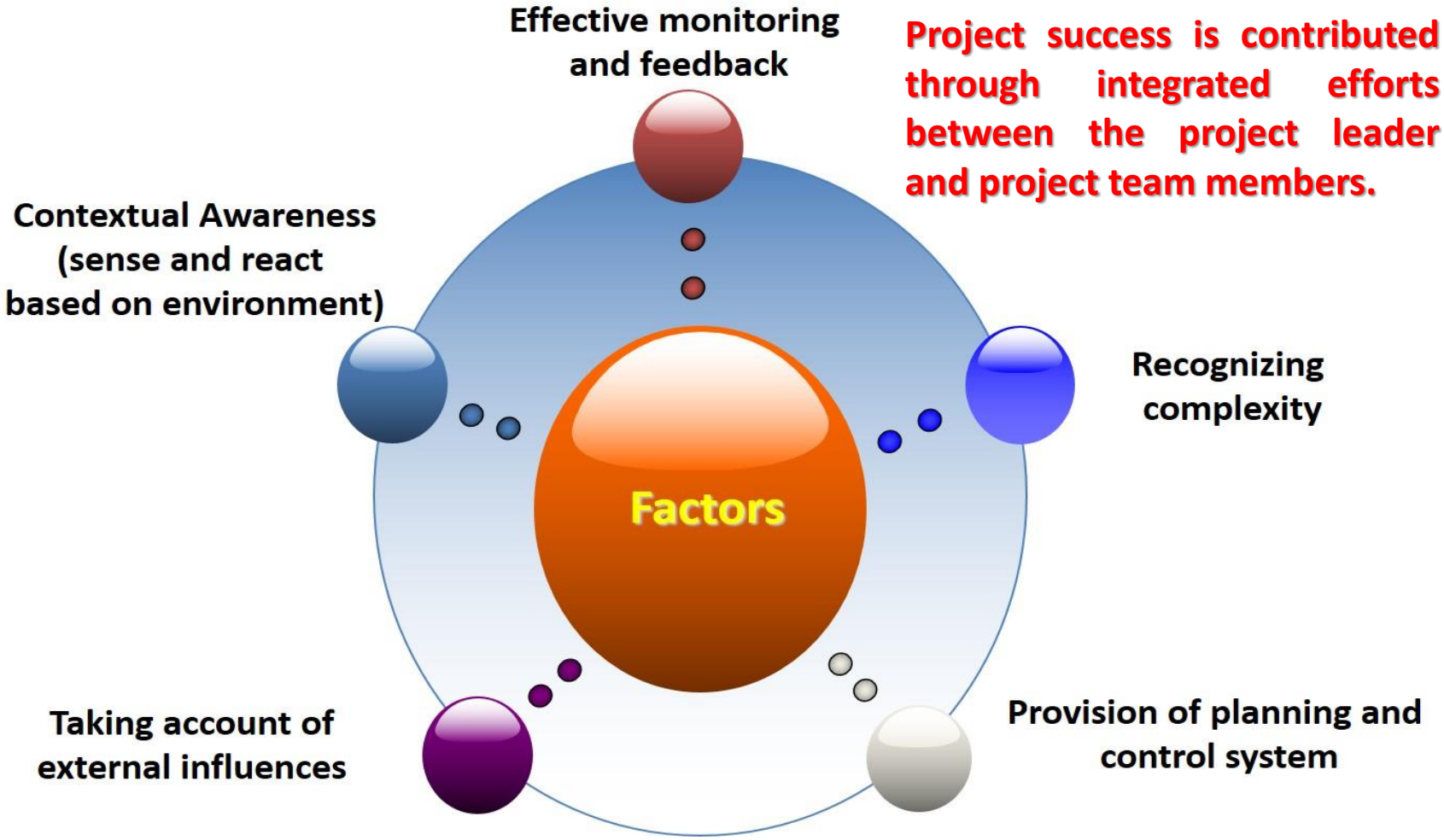


PROJECT SUCCESS FACTORS

- S = Select a dream
- U = Use your dream to set a goal
- C = Create a plan
- C = Consider resources
- E = Enhance skills and abilities
- S = Spend time wisely
- S = Start! Get organized and GO

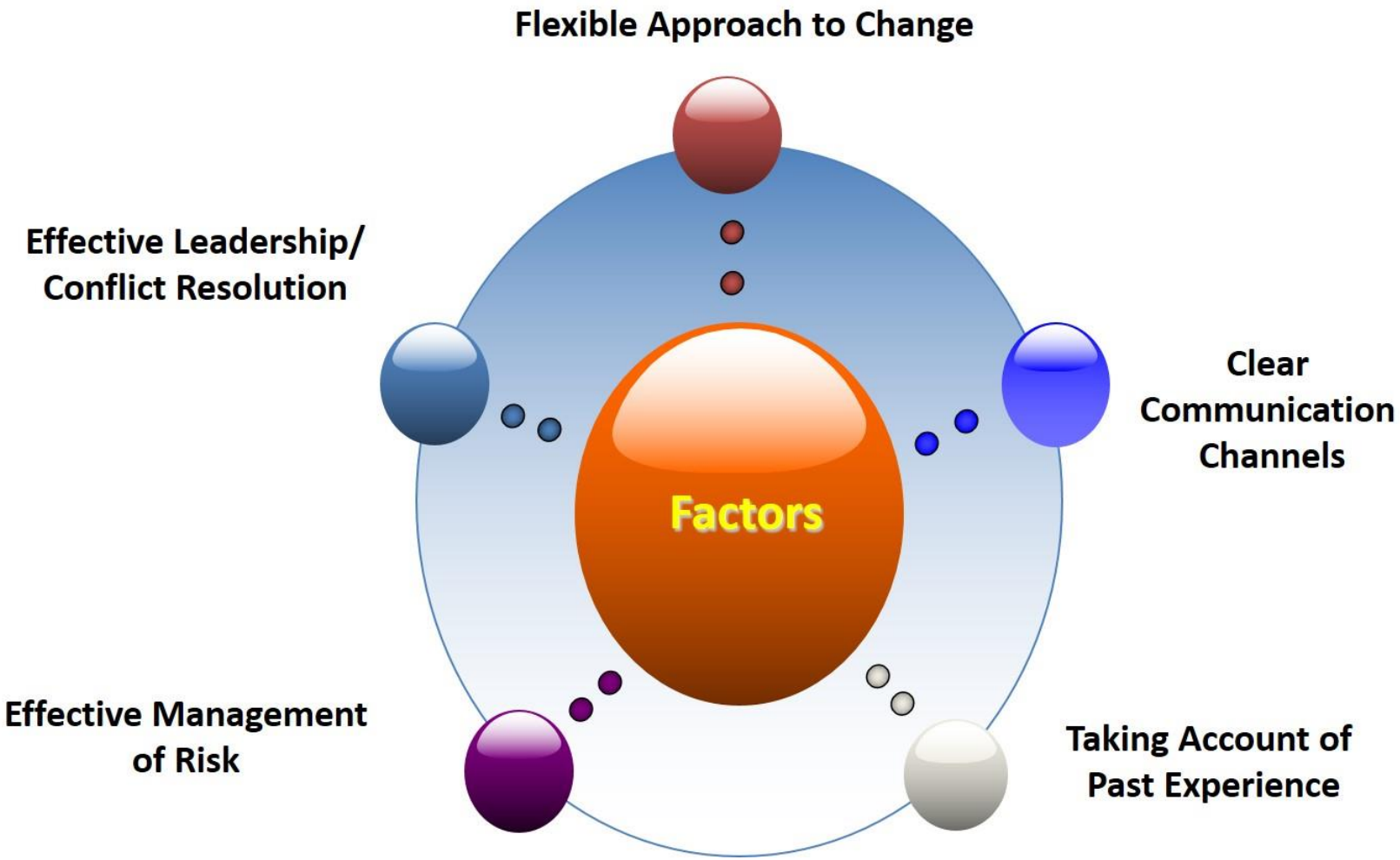
--- it is of those acro-whatevers, said Pooh.

PROJECT SUCCESS FACTORS (1)

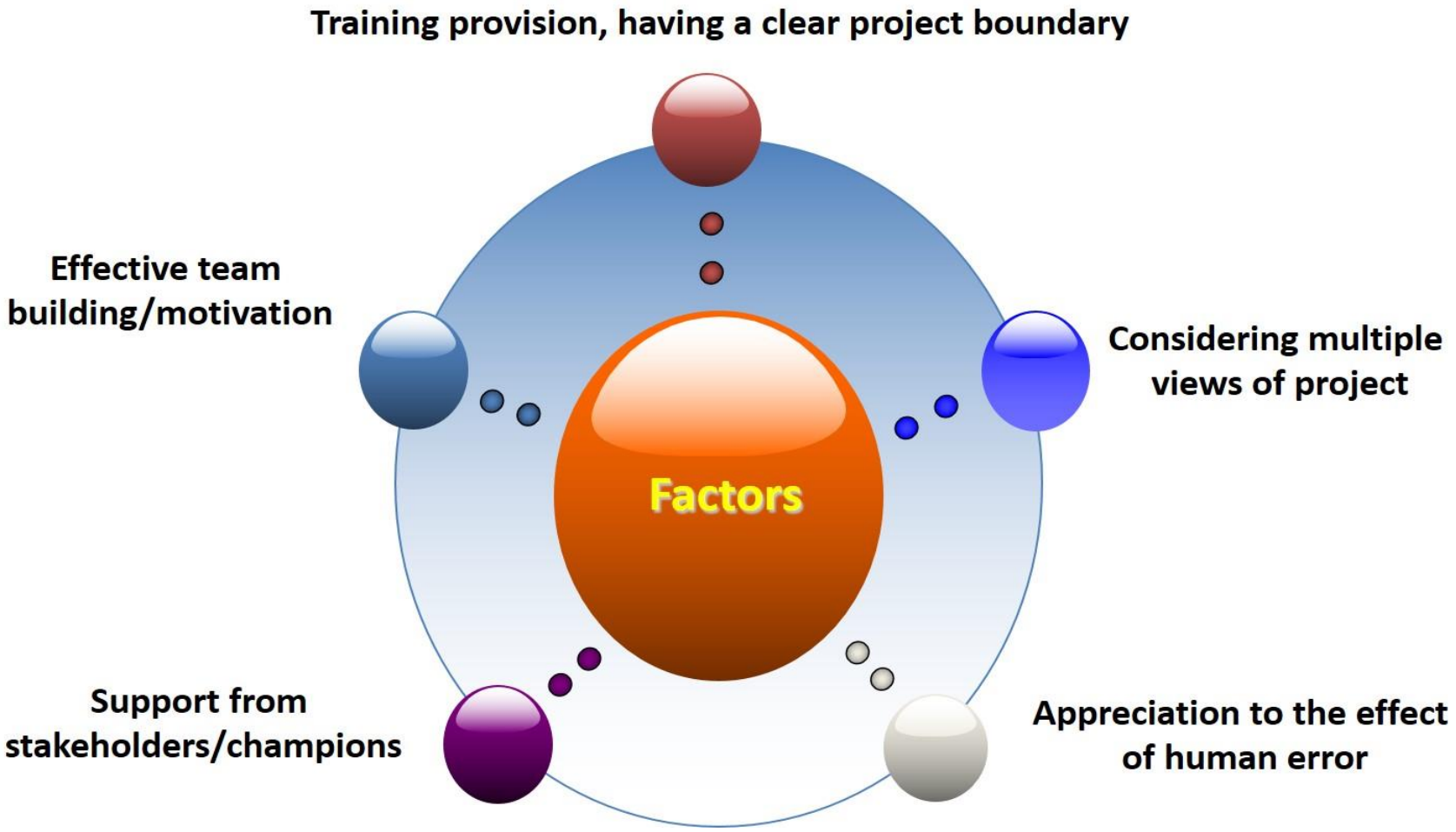


Project success is contributed through integrated efforts between the project leader and project team members.

PROJECT SUCCESS FACTORS (2)



PROJECT SUCCESS FACTORS (3)



Project Failure

Catherine's study team had changed so many times, she'd done more staff inductions than site initiations!

Project Failure

- A project is considered a failure when it has not delivered what was required, in line with expectations.
- In order to succeed, a project must deliver to cost, to quality, and on time; and it must deliver the benefits presented in the business case.
- We need to ask these important questions:
  - What kind of failure was it?
    - e.g. incomplete, unreliable, off-schedule/budget
  - Who was responsible?
  - What happened?
  - What did not happen?
  - Which process(es) broke down?
  - What module(s)/feature(s) failed?

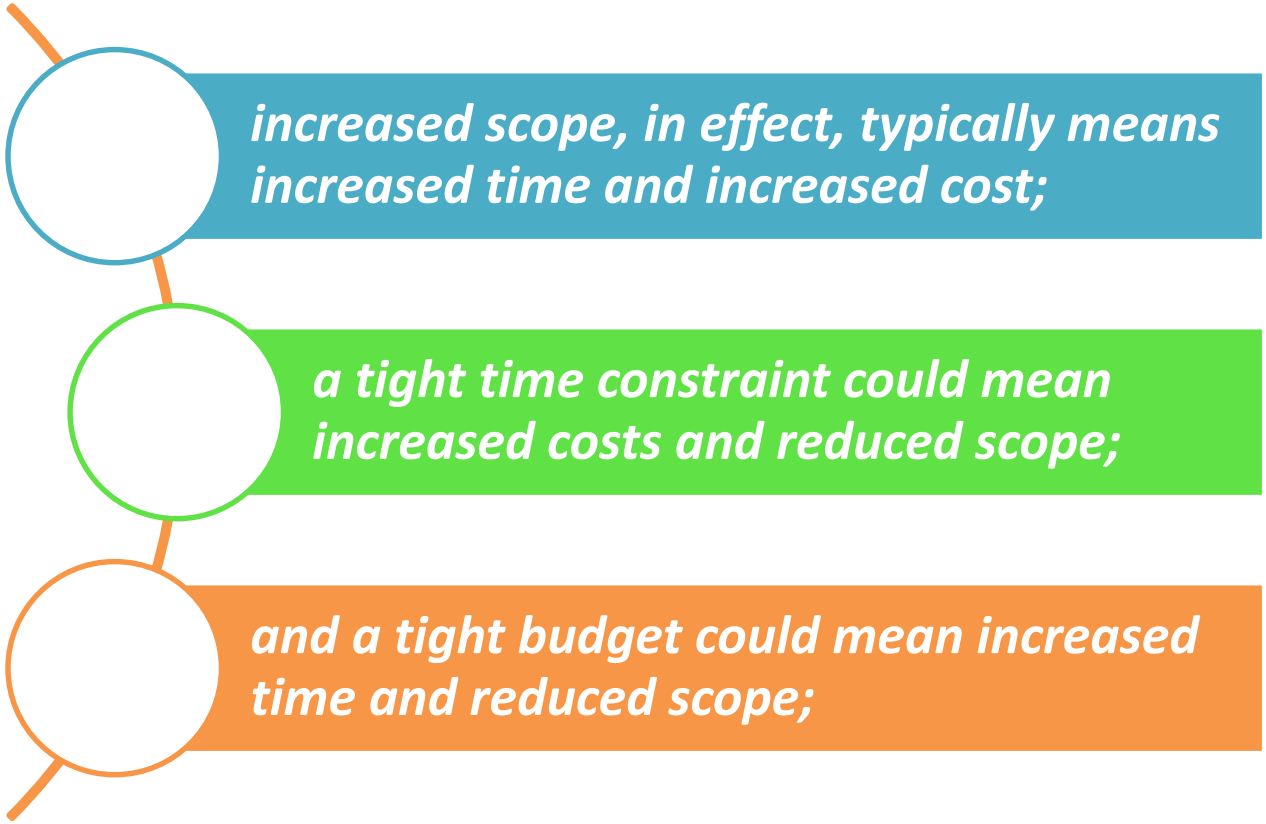
Avoiding Project Failure

- Avoiding project failure – what we will learn?
- **Project Planning and Scheduling** – ensure project finish on-time;
- **Estimating and Finance** – ensure the project cost within the budget;
- **Risk and Contingency Management** – ensure the project will have a very minimum risk which will affect the quality and cost;
- **Controlling and Tracking** – ensure the project progress as planned.

PROJECT MANAGEMENT TRIANGLE
Triple Constraint

- Specific time, cost and performance requirements bind projects
- Projects are evaluated according to accomplishment cost, and time spent.
- These triple constraints impose a higher degree of accountability than you typically find in most jobs.
- These three (3) also highlight one of the primary function or project management, which is balancing the trade-offs between time, cost and performance while ultimately satisfying the customer.

Project Constraints



If safety is the paramount, the end product may cost more than budgeted, may be late in going into service and certain quality requirements in terms of comfort may have to be sacrificed.

PROJECT TERM OF REFERENCE (TOR)

- **Terms of reference**, or **TOR,** describe the purpose and structure of a project, committee, meeting, negotiation, or any similar collection of people who have agreed to work together to accomplish a shared goal.
- The TOR of a project is often referred to as the ***project charter***.
- It is critical that the Terms of Reference for the evaluation are prioritised in response to the precise project situation, and to help the evaluation team focus on the essential issues.

PROJECT TERM OF REFERENCE (TOR)

- The Terms of Reference should, at a minimum, cover the elements listed below:

- ✓ Purpose
- ✓ Background
- ✓ Objectives
- ✓ Scope
- ✓ Constraints
- ✓ Interfaces
- ✓ Roles and responsibilities
- ✓ Reporting
- ✓ Methods
- ✓ Deliverables
- ✓ Success criteria
- ✓ Assumptions
- ✓ Dependencies
- ✓ Key milestones
- ✓ Costs

Conclusion of The Chapter

- Conclusion #1
  - A project is a unique venture with a beginning and an end, conducted by people to meet established goals within parameters of costs, schedule and quality.
- Conclusion #2
  - Project life cycles vary in length, from a few weeks to several years. Not all projects formally go through all four phases of the project life cycle

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