EPIC

Effective   Professional   Inspiring   Competent

Project Management

Fundamentals

Projects & Project Management

Agenda

❖ **What is a Project**

❖ **Business Environment of Projects**

❖ **Project Approaches**

❖ **What is Project Management**

Project

What is a "Project"

*"A project is a temporary endeavor undertaken to create a unique **product**, **service**, or **result**.*

– PMBOK®

Temporary
- *A project has a definite **beginning** and **end**"*

Unique
- Something that is not done before
- "New" in terms of novelty of the output, circumstances, stakeholders etc

Output
- Product: A new creation or an enhancement to an existing one
- Service: Management of a business/technical function on others behalf
- Result: Document, report or any other valued asset

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Think of a personal project…

Let's consider your wedding (not marriage)!

Temporary:
- Wedding preparations start with date being finalized…
- Wedding celebration ends once couple leaves for their honeymoon…

Unique:
Getting married (to this person) for the first time! ☺

Output:
Successful celebration of the wedding ceremony – bride is happy!

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Projects vs Operations

Here are some examples of Projects & Operations – Can you tell the difference?

Projects	Operations
• Wedding	• Marriage
• Birthday Party	• Child's upbringing
• Going for a Trip	• Travelling to office
• Cooking for a party	• Cooking daily meals
• Shifting to a house	• Maintenance of house

Set of activities for a purpose | **Business as usual**

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Projects vs Operations

Now, let us think of some examples of Projects & Operations in IT firms

Projects	Operations
• Enhancement of a feature of the product • Improving an existing accounting system • Carrying out sales survey • Running a marketing campaign	• IT support • Accounting • Sales • Marketing

Projects differ from "operations", which are on-going & repetitive

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Lets play a Game!

Project or Operations?

ACCOUNTING

SALES

Sales Survey
Survey Questionnaire

Feature Development

Marketing

MARKETING CAMPAIGN

IT SUPPORT
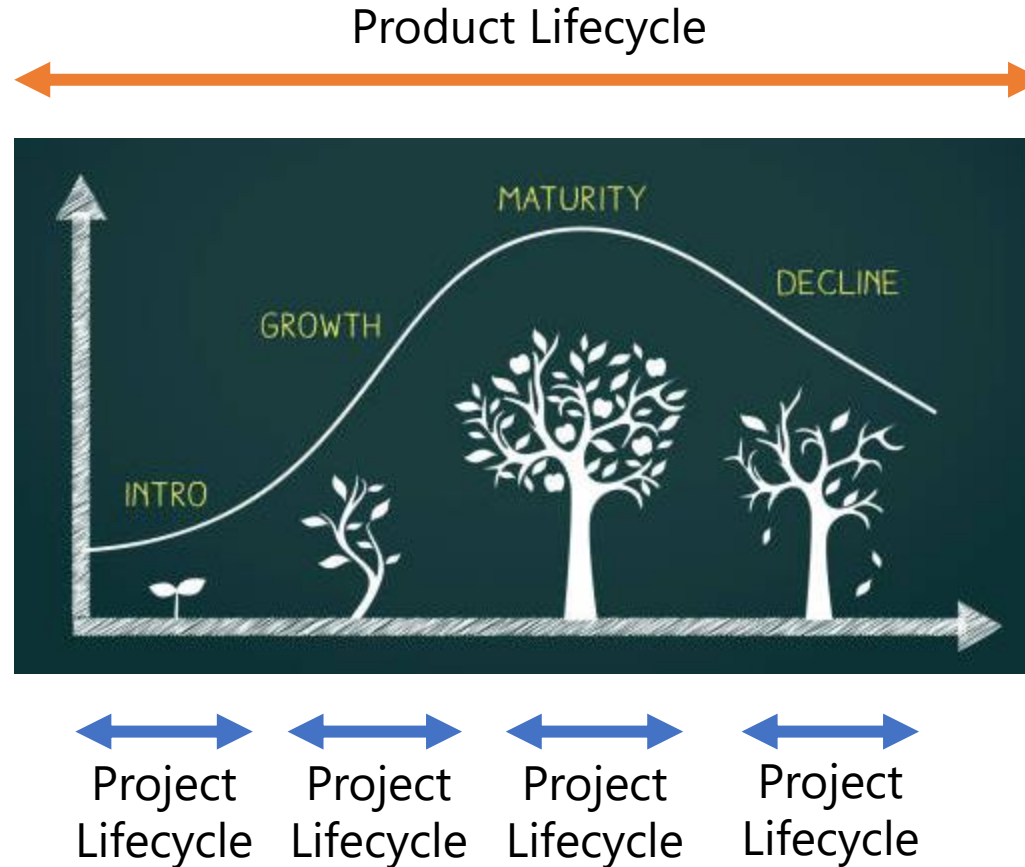
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Project vs Product Lifecycle

In the picture below, which colour lines depict **Product Lifecycle** & which colour lines depict **Project Lifecycle**?

Product Lifecycle

Project Lifecycle   Project Lifecycle   Project Lifecycle   Project Lifecycle

Project Lifecycle vs Product Lifecycle

What could be the difference between Project & Product Lifecycle?

Product Lifecycle	Project Lifecycle
• Starts from conception of idea right up to withdrawal of product from market • May include multiple projects	• Set of activities / phases to achieve a specified goal within a timeline • Part of Product Lifecycle
Usually Short	**Usually Long**

E.g. Child's Birthday Party   E.g. Child's Upbringing

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Summary

Project	Operations	Product Lifecycle	Project Lifecycle
• Creates something new / unique • Clear output – product / service • Not business as usual • Clear Start & End Date	• Business As Usual • On-going & Repetitive	• From conception to withdrawal	• Part of Product Lifecycle • Can have multiple phases

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Business Environment

Purpose of Projects

Drive change

- Transform business from one state to another
- Strategic shifts
- Organizational growth

Enable Business Value

- New market opportunities
- Response to competition
- Global expansion
- Improve profits

Meet complex challenges

- Technology changes
- World markets
- Regulatory requirements

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Business Documents

**Information about the project's objectives and contribution to the business goals.
They help the business to determine whether a project is worth the required investment**

Business case	Benefits Management Plan
• Justifies project and establishes boundaries • Cost-benefit analysis • Business need • Quality specifications • Schedule or cost constraints	• Plan for creating, maximizing, and sustaining the benefits • How and when the benefits of a project will be derived and measured

- Both are developed with the benefits owner **prior to the project being initiated**
- Additionally, both documents are **referenced after the project** has been completed
- Therefore, they are considered **business documents** rather than project documents

Project Selection

Which project will you choose?

Project 1

- Total Cost: $8000
- Earning Total Benefits: $12000

Cost Benefit Ratio: 12000 / 8000 = **1.5**

Project 2

- Total Cost: $11000
- Earning Total Benefits: $20000
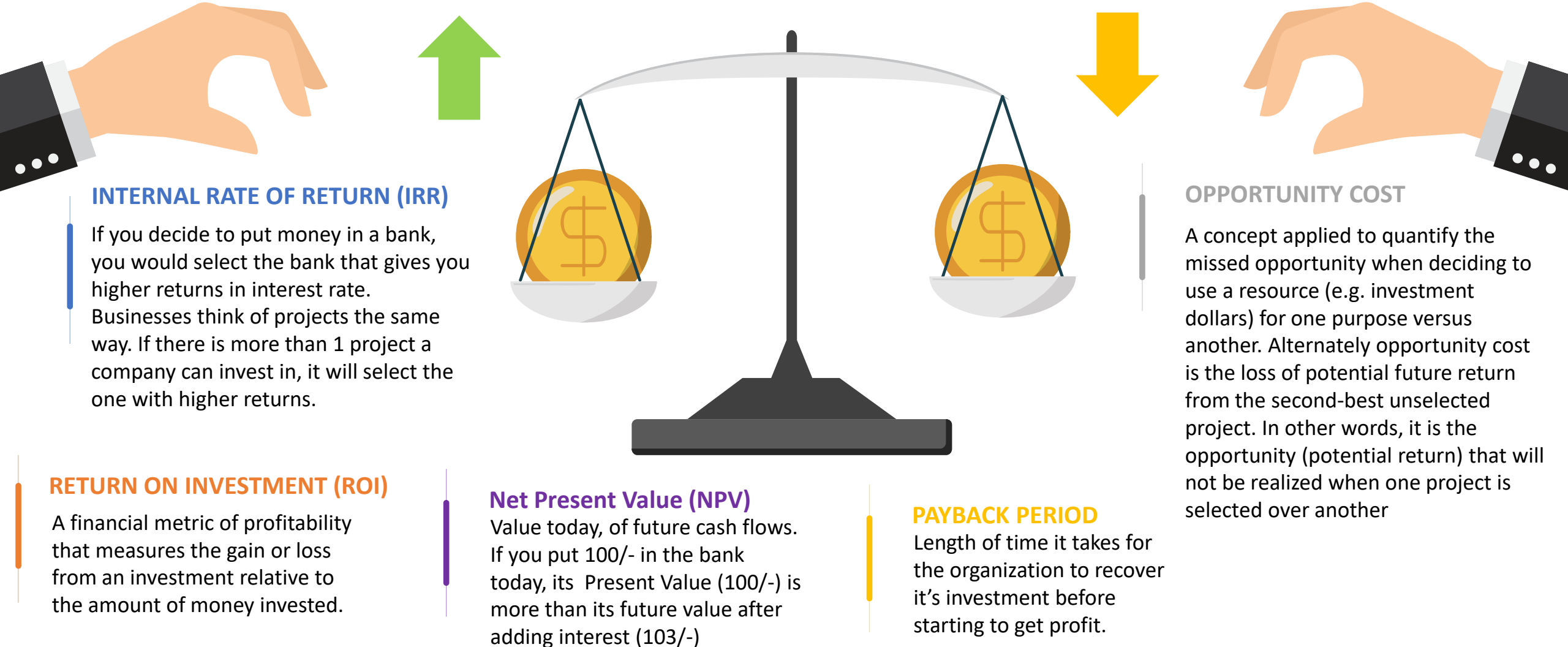
Cost Benefit Ratio: 20000 / 11000 = **1.8**

Project Selection is based on Cost Benefit Analysis

Cost Benefit Analysis

INTERNAL RATE OF RETURN (IRR)

If you decide to put money in a bank, you would select the bank that gives you higher returns in interest rate. Businesses think of projects the same way. If there is more than 1 project a company can invest in, it will select the one with higher returns.

OPPORTUNITY COST

A concept applied to quantify the missed opportunity when deciding to use a resource (e.g. investment dollars) for one purpose versus another. Alternately opportunity cost is the loss of potential future return from the second-best unselected project. In other words, it is the opportunity (potential return) that will not be realized when one project is selected over another

RETURN ON INVESTMENT (ROI)

A financial metric of profitability that measures the gain or loss from an investment relative to the amount of money invested.

Net Present Value (NPV)

Value today, of future cash flows. If you put 100/- in the bank today, its Present Value (100/-) is more than its future value after adding interest (103/-)

PAYBACK PERIOD

Length of time it takes for the organization to recover it's investment before starting to get profit.

Summary

Lower is Better

- Opportunity Cost
- Payback Period

Cost Benefit Analysis

Higher is Better

- Internal Rate of Return (IRR)
- Net Present Value (NPV)

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Project Approaches

Types of Project Approaches

Construction project

- Builder is clearly aware of how much land is available, how much can be developed
- He makes a blue-print of the buildings down to the last detail
- Then he procures material & labour
- Work is done as per plan
- Any change in blue print requires major decision making & stakeholder involvement as it impacts cost

## Interior decoration of a new house

- You invite a decorator, give broad view of what house should look like
- Decide to start with sitting room/ hall
- Discuss specifics only about décor of hall initially
- Decorator starts work, Progress reviewed, and inputs given frequently
- Meet to discuss further requirements, as work progresses

Which Project is Predictive & which one is Adaptive?

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Predictive / Waterfall approach

- Requirements and Constraints are clearly known and understood
- Detailed planning is done for all areas (cost, schedule, resources, etc.) upfront, before the execution of the project begins
- Plan drives the project – team adheres to plan
- Change Requests are formal
- Changes are handled through formal Change Management process
- Risks carefully studied and managed

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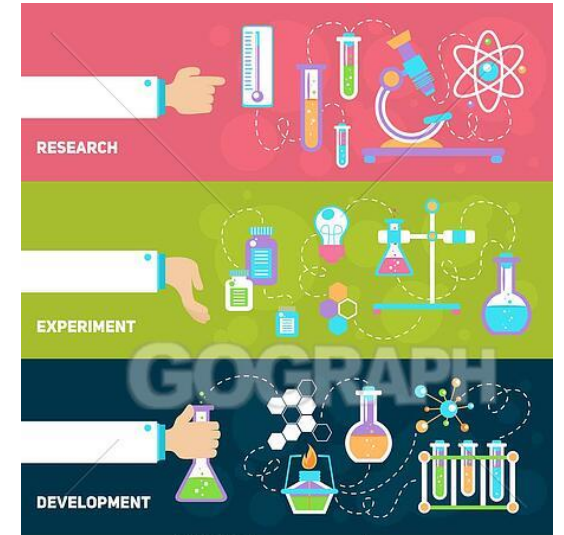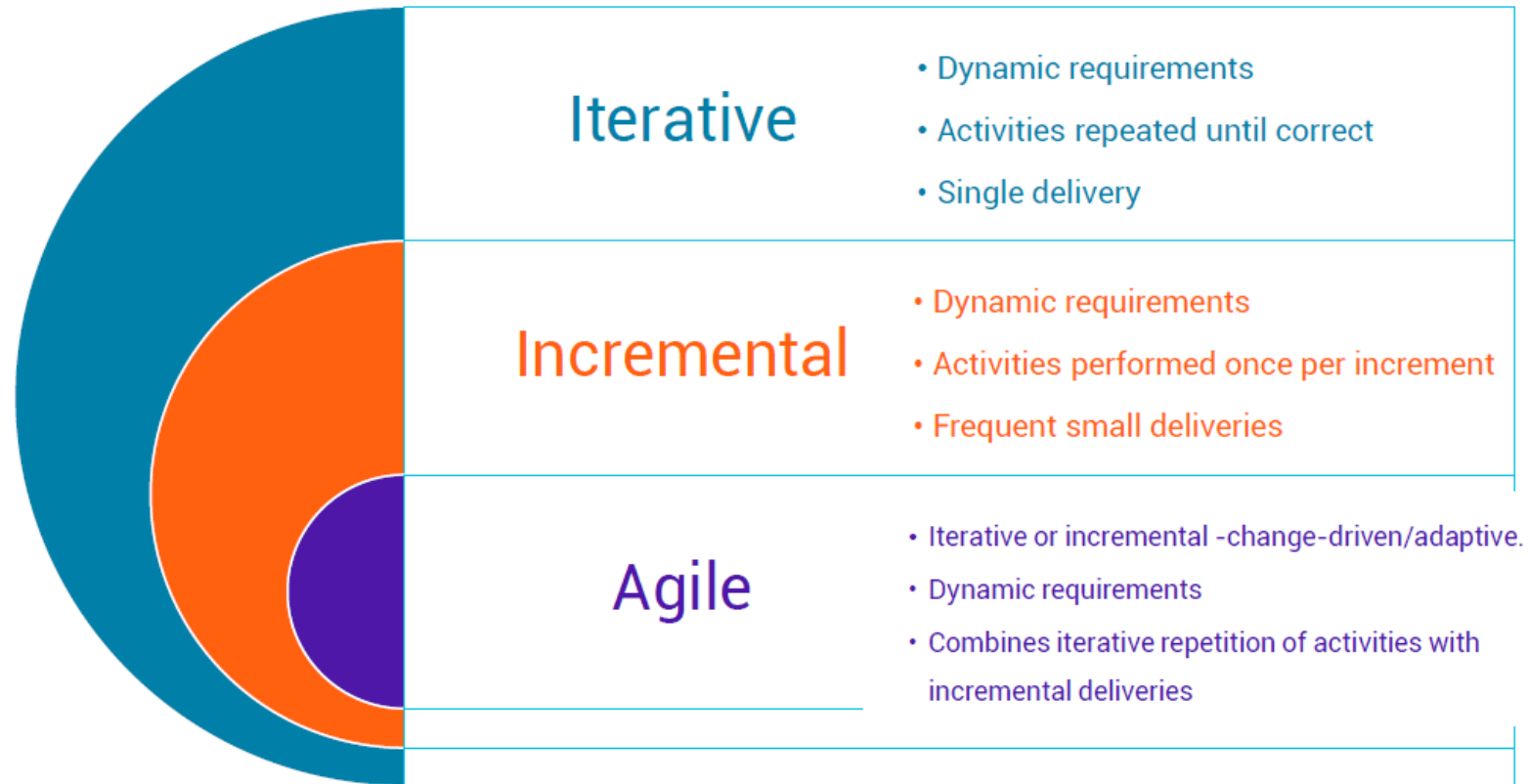An initiative of **excelencia**
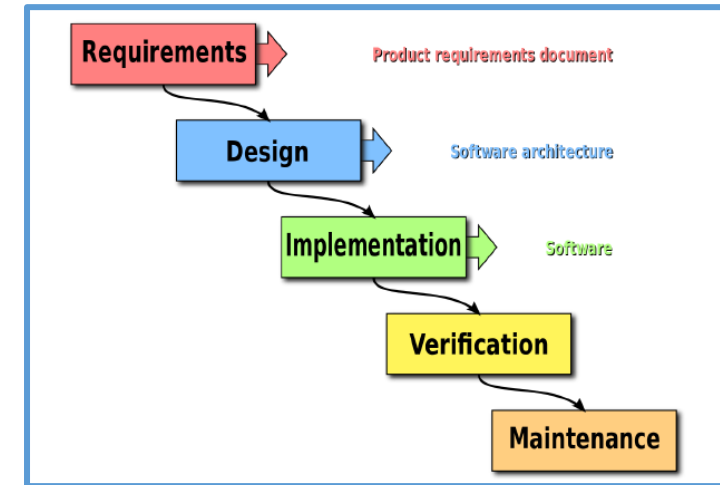
Adaptive Approach

- Definition of project scope is emerging

- Requirements are unclear or customer-driven, so needs further discovery

- Planning, execution & management happens in small time-boxed increments

- Changes can be easily made as more information about the project's requirements & constraints becomes available

- Built on assumption of high degree of change

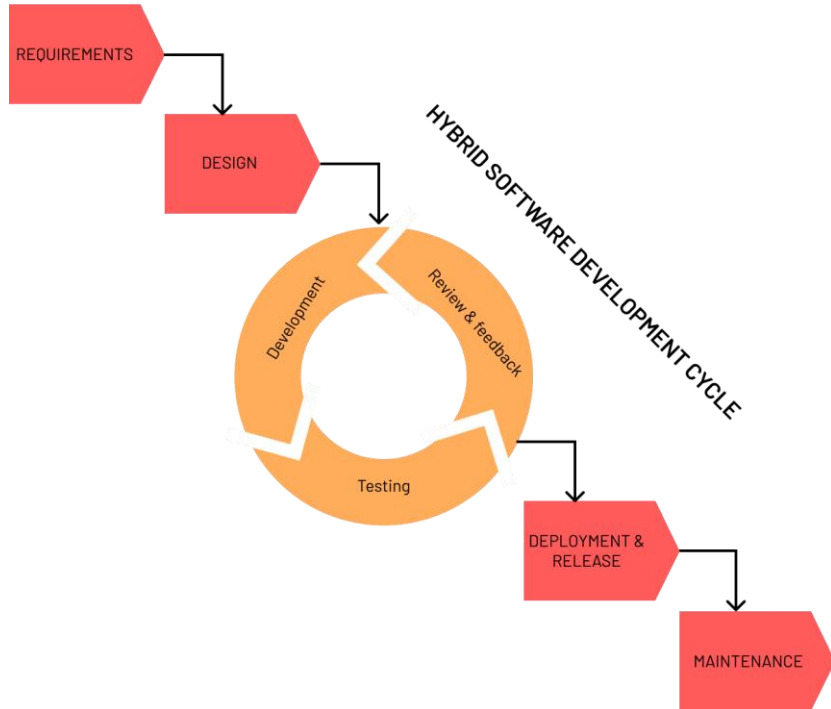- High tolerance of risk with guardrails for risk management

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Adaptive Approach

Iterative
- Dynamic requirements
- Activities repeated until correct
- Single delivery

Incremental
- Dynamic requirements
- Activities performed once per increment
- Frequent small deliveries

Agile
- Iterative or incremental -change-driven/adaptive.
- Dynamic requirements
- Combines iterative repetition of activities with incremental deliveries

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Wedding – Which Project Approach?

Uses aspects of both predictive & agile methods?

This is the Hybrid Approach

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Hybrid Approach

HYBRID SOFTWARE DEVELOPMENT CYCLE

REQUIREMENTS
DESIGN
Development
Review & feedback
Testing
DEPLOYMENT & RELEASE
MAINTENANCE

- Combines adaptive and predictive life cycles and/or development approaches

- Useful when requirements are uncertain or risky

- Also useful when deliverables can be modularized, or when deliverables can be developed by different project teams

- Uses iterative and incremental development

Summary

Traditional

structured

plan driven

detailed

compliant

safe

controlled

Hybrid

situational

contextual

complex

diverse

Agile

open

feedback driven

vision counts

open
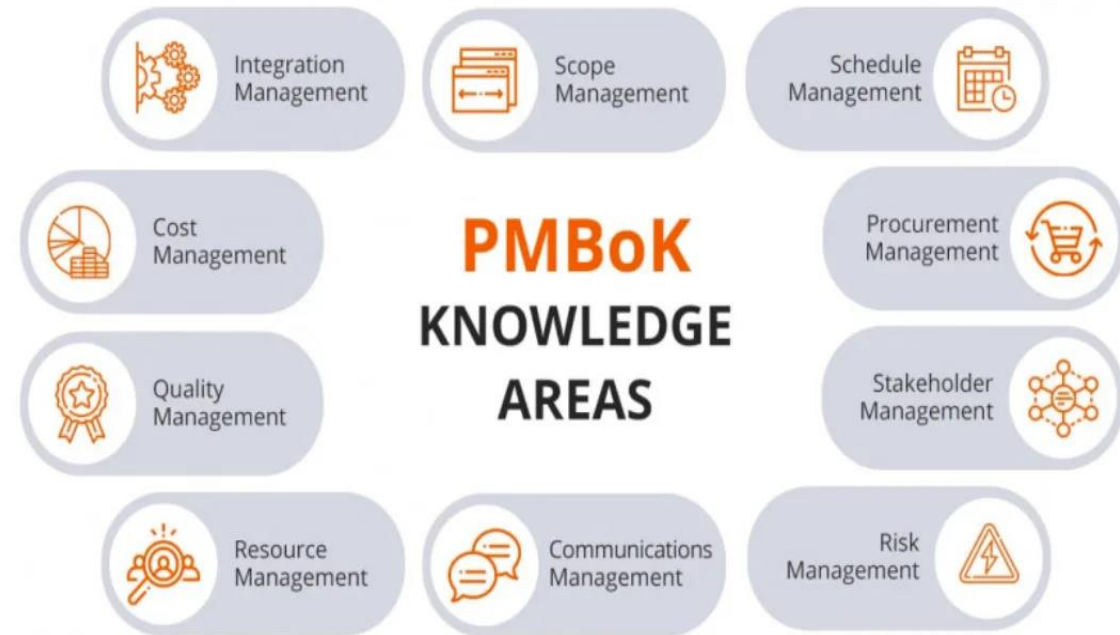
lean

flexible
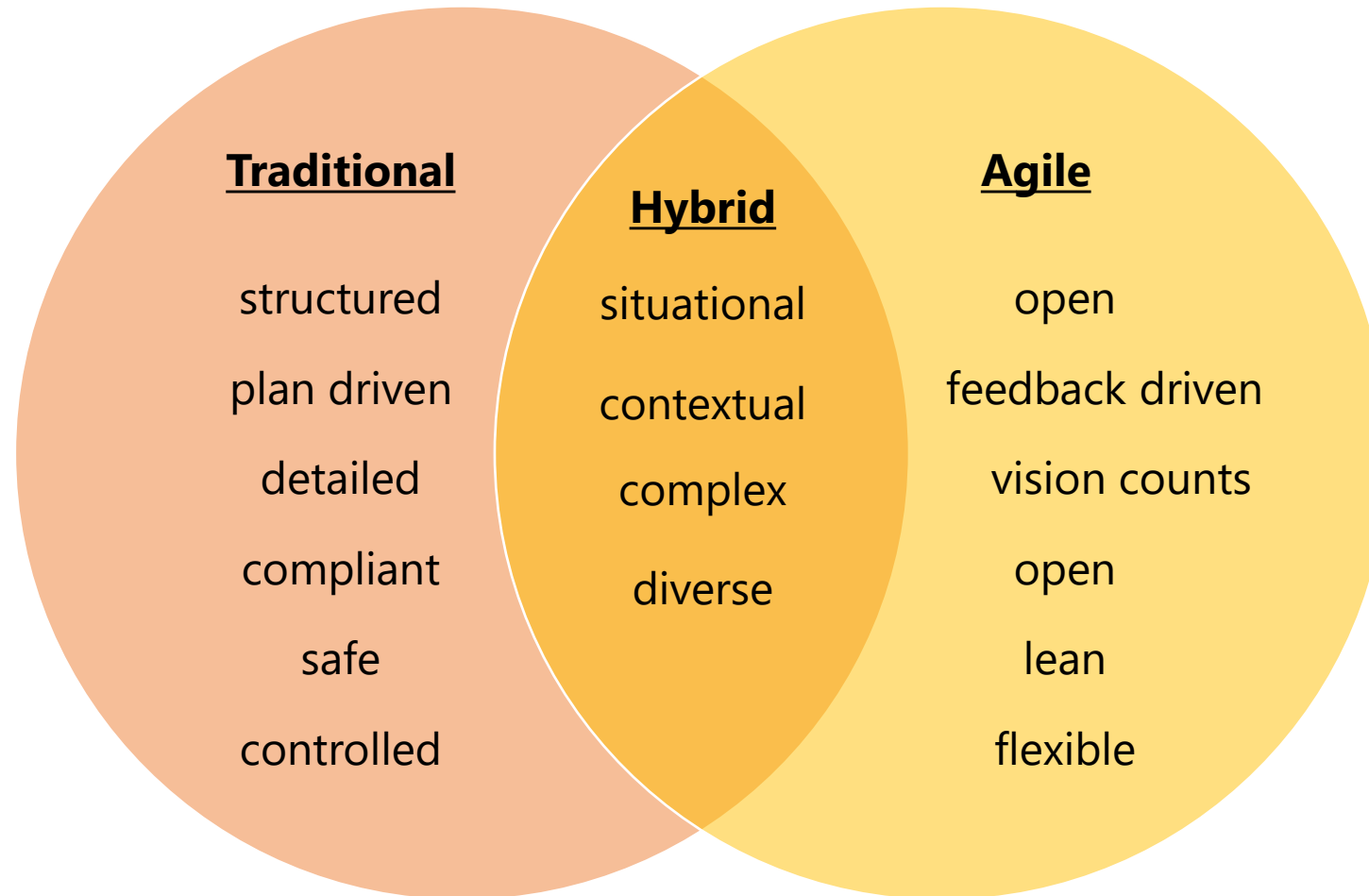
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Definition

"Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements" – PMBOK®
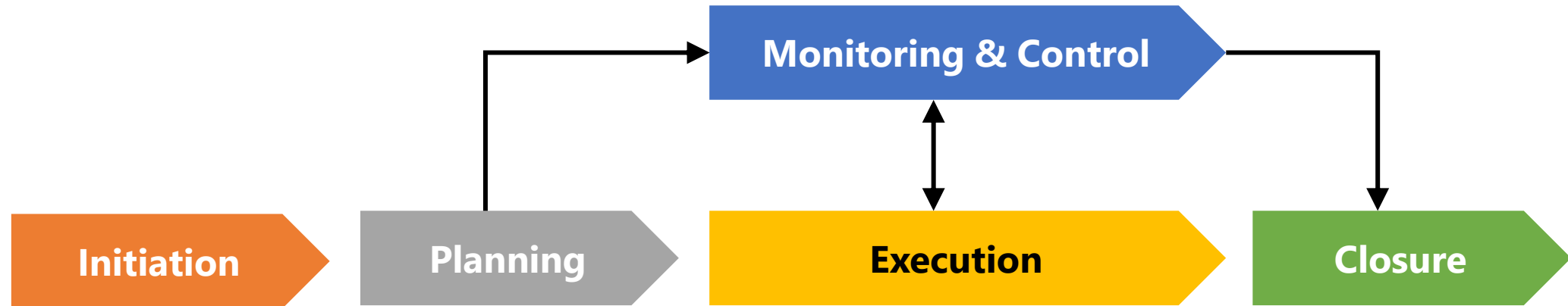

Group of project management **activities / processes** to be done, to complete the project successfully
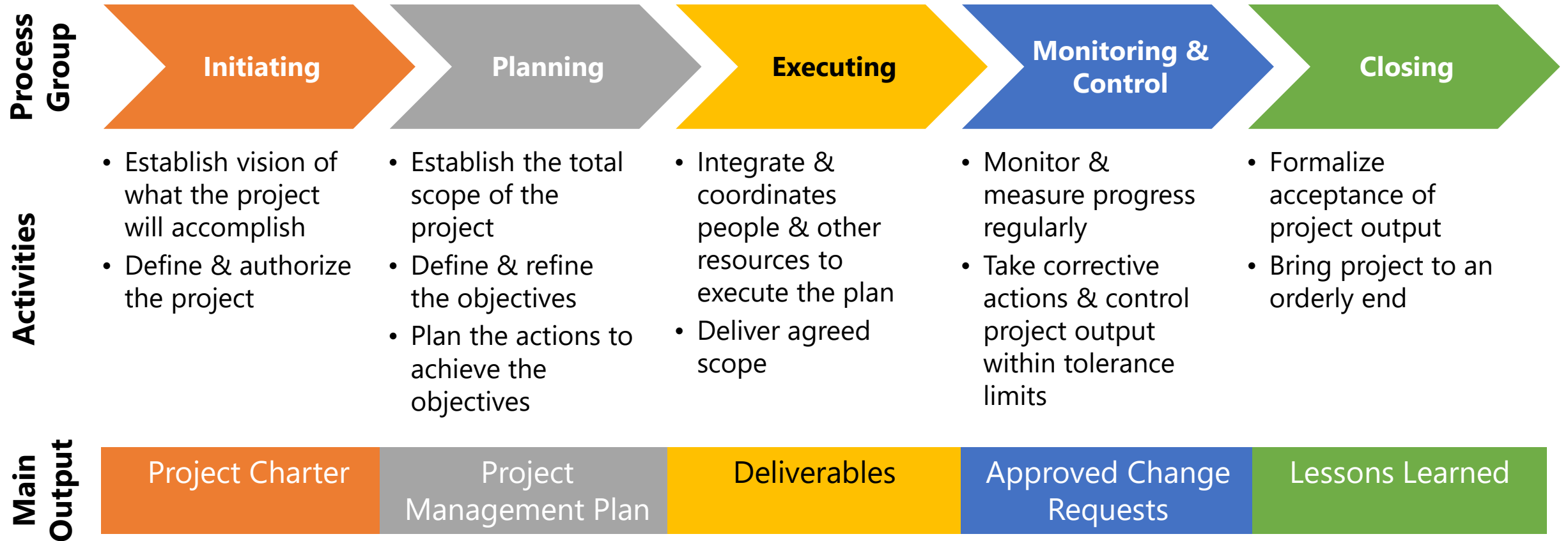

Areas of project management about which a project manager needs to have knowledge, to manage the project successfully

Project Management Lifecycle

As Defined by PMBOK®

Process Groups

Process Group	Initiating	Planning	Executing	Monitoring & Control	Closing
Activities	• Establish vision of what the project will accomplish • Define & authorize the project	• Establish the total scope of the project • Define & refine the objectives • Plan the actions to achieve the objectives	• Integrate & coordinates people & other resources to execute the plan • Deliver agreed scope	• Monitor & measure progress regularly • Take corrective actions & control project output within tolerance limits	• Formalize acceptance of project output • Bring project to an orderly end
Main Output	Project Charter	Project Management Plan	Deliverables	Approved Change Requests	Lessons Learned

Initiating

- Refer to company culture / existing systems
- Understand business case
- Divide large projects into smaller projects
- Collect historical data
- Identify stakeholders
- Determine their expectations & interest & impact
- Develop assumption log
- Identify risks
- Identify constraints
- Define measurable outputs
- Identify critical success factors
- Kick off meeting!

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Planning

- Decide development approach & life cycle
- Prioritize requirements
- Create project scope document
- Assess procurement needs
- Create Work Breakdown Structure (WBS) & activity list
- Estimate duration & cost requirements
- Determine critical path
- Develop schedule & budget
- Determine team roles & responsibilities
- Plan communication & stakeholder engagement
- Perform risk analysis & decide risk responses
- Develop realistic plan & baselines
- Get formal approval of plan
- Identify Key Performance Indicators (KPIs) – Quality, Schedule and Effort

Executing

- Execute activities as per plan
- Produce deliverables
- Gather performance data
- Request changes
- Implement only approved changes
- Continuous improvement
- Share information, get feedback
- Plan next few activities in detail
- Follow processes
- Manage team
- Evaluate performance, Provide training
- Resolve conflicts
- Report on project performance
- Manage stakeholder expectations
- Update plan

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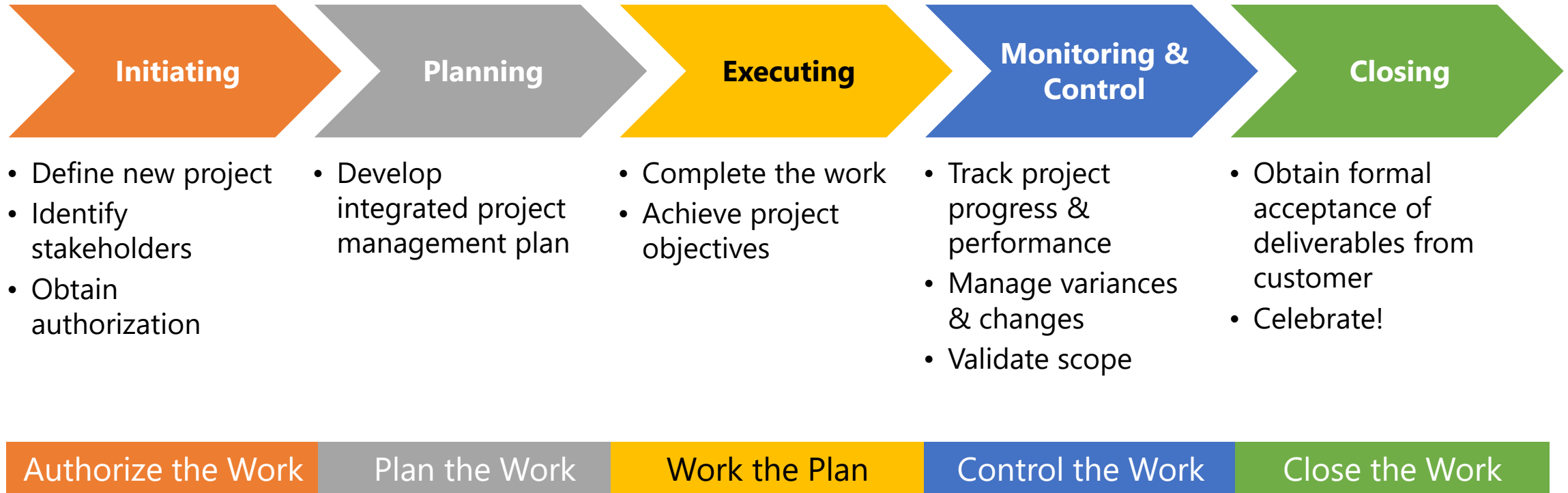
Monitoring & Control

- Monitor Risks
- Monitor Stakeholders
- Monitor Reserves
- Analyze & evaluate work performance data & variances
- Take corrective or preventive action on variances
- Do root cause analysis
- Request Changes & follow change management plan
- Replan & update project management plan for approved changes
- Control Scope & Schedule
- Control Costs
- Control Quality
- Control Resources
- Control Procurements

Closing

- Confirm work is done as per requirements

- Complete procurement & payments

- Get final acceptance of delivery

- Financial closure – revenue

- Hand over product / service

- Get feedback about project

- Present final project performance report

- Save records & files

- Capture lessons learned

Summary

Initiating	Planning	Executing	Monitoring & Control	Closing

- Define new project
- Identify stakeholders
- Obtain authorization

- Develop integrated project management plan

- Complete the work
- Achieve project objectives

- Track project progress & performance
- Manage variances & changes
- Validate scope

- Obtain formal acceptance of deliverables from customer
- Celebrate!

Authorize the Work	Plan the Work	Work the Plan	Control the Work	Close the Work

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Note down the top 3 Key

Take-aways for you from

this session

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Thank You

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