

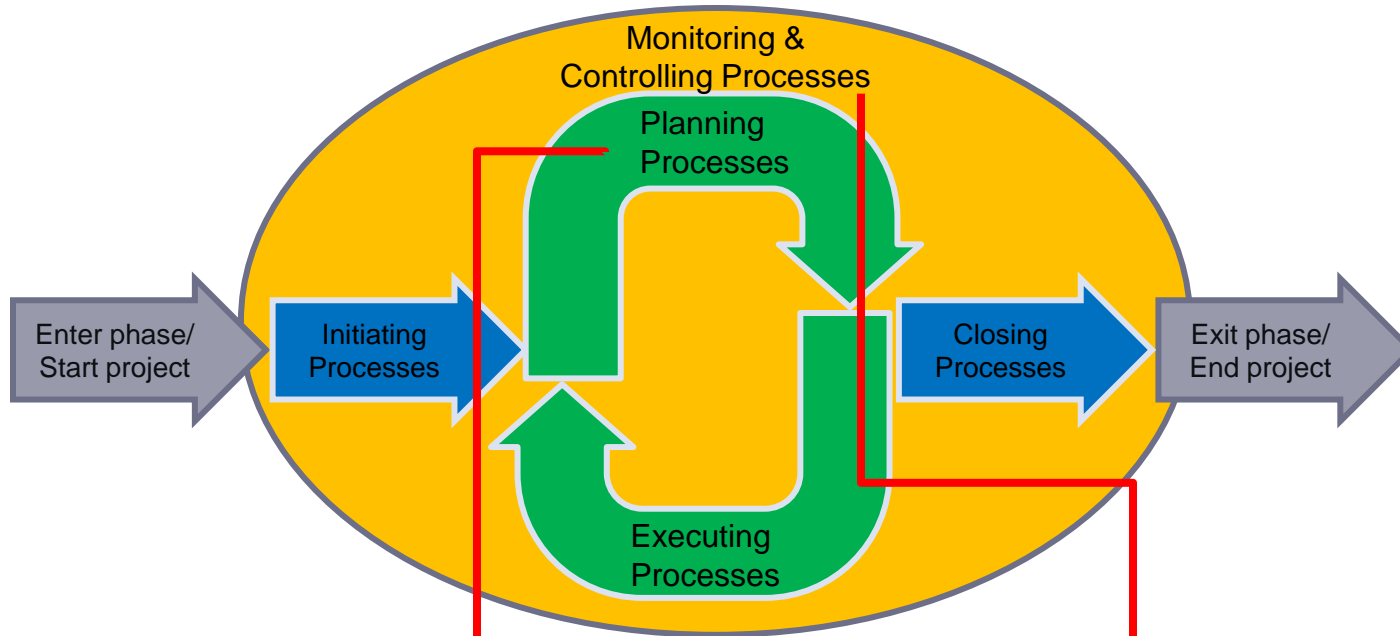
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PROJECT MANAGEMENT

PROJECT SCOPE MANAGEMENT

PROJECT SCOPE MANAGEMENT



Knowledge Area	Process				
	Initiating	Planning	Executing	Monitoring & Control	Closing
Scope		<ul style="list-style-type: none"> • Scope Management Plan • Collect Requirements • Define Scope • Create WBS 		<ul style="list-style-type: none"> • Verify Scope • Control Scope 	

PROJECT SCOPE MANAGEMENT

Process to ensure that the project includes all-and-only the work required, to complete the project successfully

Scope can refer to Product Scope & Project Scope

Scope Management Plan (part of Develop Project Mgmt Plan)

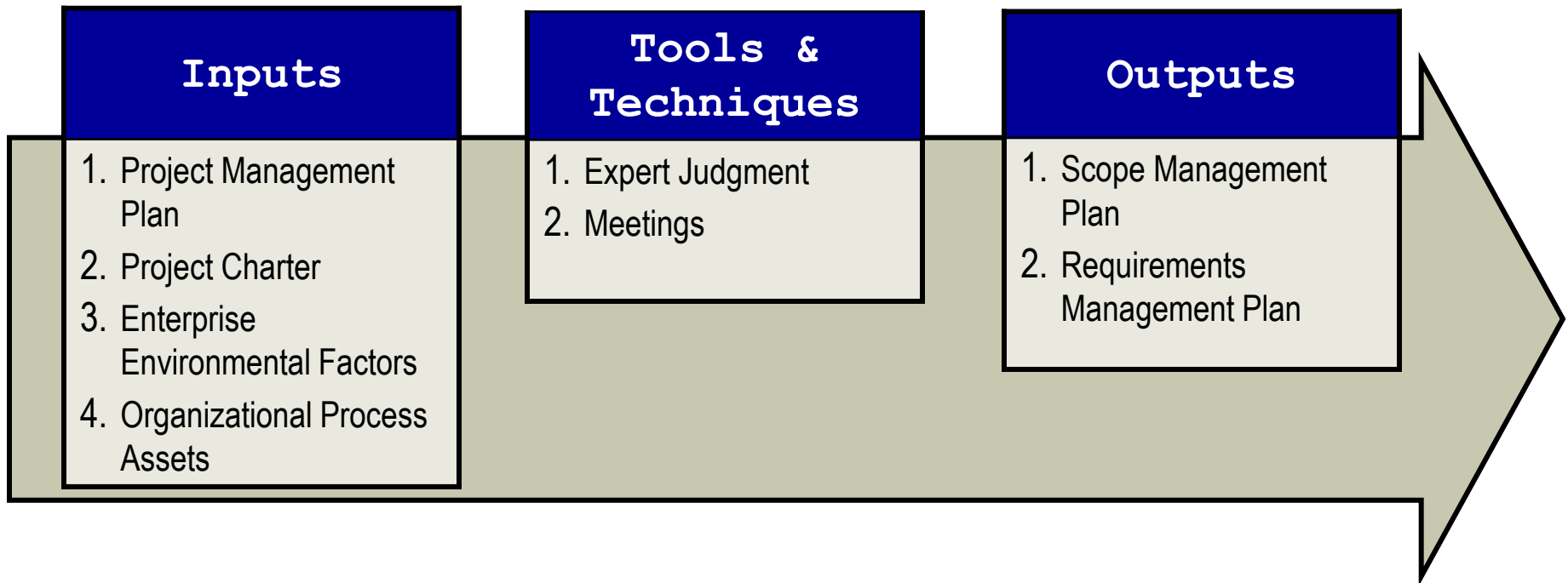
- How will I do the scope?
- Provides guidance on how project scope will be defines, documented, verified, managed, and controlled by project management team



- Don't assume that requirements were determined before project began (not part of the project)
- Attitude to say no to unnecessary scope. It should go to project approval process

5.1. PLAN SCOPE MANAGEMENT

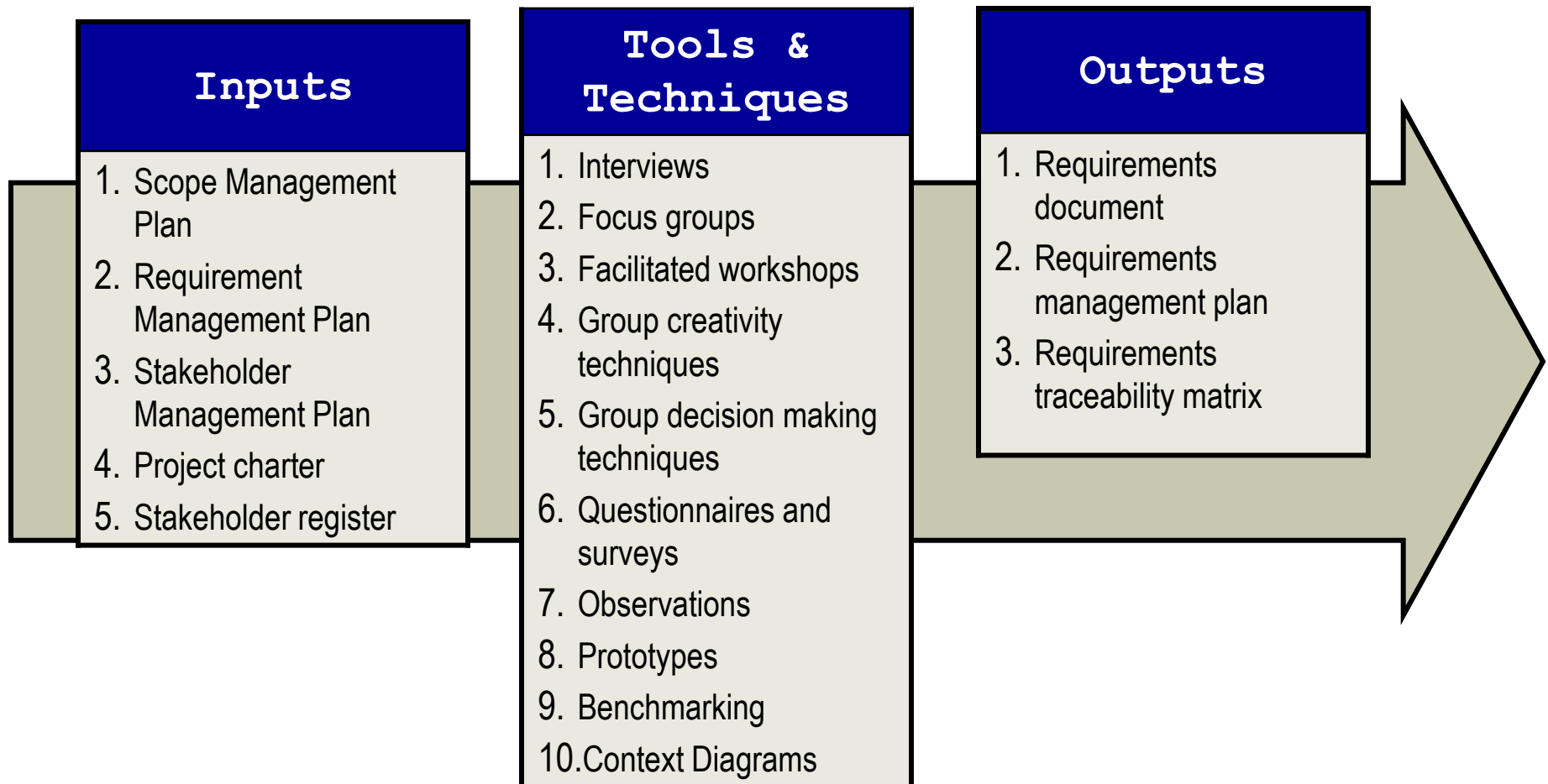
The process of creating a scope management plan that documents how the project scope will be defined, validated and controlled.



5.2 COLLECT REQUIREMENTS

The process of defining and documenting stakeholders' needs to meet the project objective

- Balance stakeholder's requirement: prioritizing requirement & resolve conflicts



COLLECT REQUIREMENT TECHNIQUES (1)

INTERVIEWS: Directly talk with stakeholders

FOCUS GROUPS: Interactive discussion with qualified Stakeholders & Subject matter experts

FACILITATED WORKSHOPS: Focused cross functional stakeholders.

- **JAD** Joint application design, Session of users (4 hours to days)
- **QFD** Quality function development
Helps determine critical characteristic of new product development
Start by collecting customer need - VOC: Voice of the Customers

QUALITY FUNCTION DESIGN (QFD) CHART

INTERACTIONS:

- ⊗ Strong negative relationship
- × Mild negative relationship
- ⊙ Mild positive relationship
- Strong positive relationship

RELATIONSHIPS:

- ⊙ Strong relationship
- Moderate relationship
- △ Weak relationship

Customer Reqs.	Product Design Reqs.	Priority Weight	Bleed air ducting to interface pt. A	Low APU weight	Low turbine wheel weight	High equivalent shaft horsepower	Controlled turbine inlet temperature	Turbine assy. in- hub containment	Strong internal containment ring	Lightweight containment ring	Competitive Evaluation
											1 5
Cust. envelope/interface	3	3	⊙						⊙		⊗ ⊙
Max. Weight 160 lbs.	4	4	○	⊙	○			○		⊙	○ ⊗
Bleed air 75 lbs/min	4	4	○			⊙	⊙				○ ⊗
Turbine containment	5	5			○		○	⊙	⊙		⊗
Elect pwr. 40 KVA	3	3				⊙					⊗ ⊙
Reliable	5	5			○		⊙	○			⊗
Support oil-cooled gen.	5	5		○							○ ⊗
...											
Technical Evaluation ₁			5 ⊗ ○	5 ⊗ ○	5 ⊗ ○	5 ⊗ ○	5 ⊗ ○	5 ⊗ ○	5 ⊗ ○	5 ⊗ ○	
Target Value			Targ. Loc.	158lb	<6 lb	350hp	1850°	2.5 lb @ Pwr	3 lb @ Pwr	<6 lb	
Technical Difficulty			1	4	3	5	3	4	2	4	
Importance Rating			39	35	42	35	60	52	40	20	

EVALUATIONS:

- ⊗ We
- XYZ Co.

COLLECT REQUIREMENT TECHNIQUES (2)

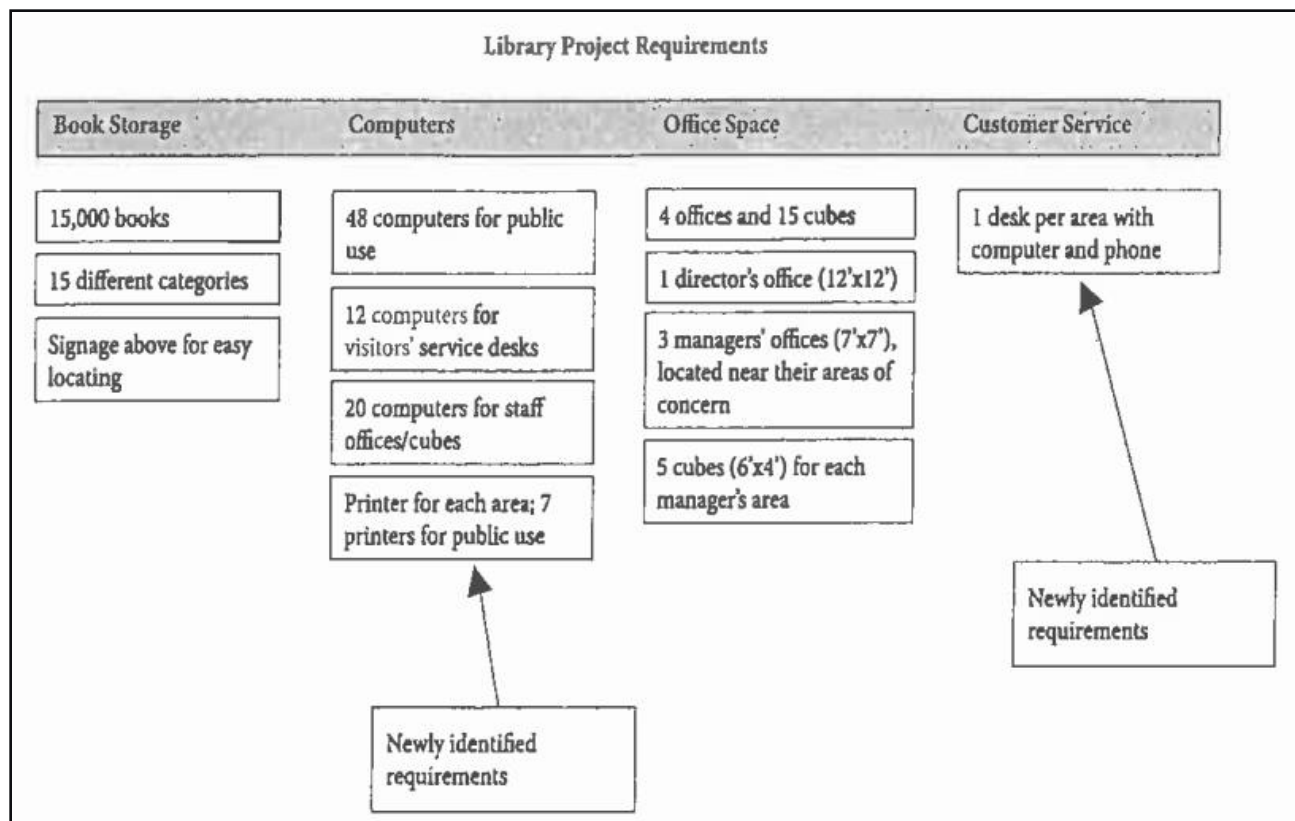
GROUP CREATIVITY TECHNIQUES:

- Brainstorming,
- **Nominal group technique:** enhance brainstorming with voting and ranking
- **Delphi Technique:** some expert answer questionnaire and give feedback
- Idea/mind mapping,
- **Affinity Diagram:** sort idea into groups
- **Taxability Matrix**

AFFINITY DIAGRAM

Requirement sorted into groups by similarities

- Easier to see additional scope (risk) that have not been identified



COLLECT REQUIREMENT TECHNIQUES (3)

QUESTIONNAIRE AND SURVEYS: wide number of respondents

OBSERVATION/JOB SHADOWING: viewing individual in their environment

PROTOTYPES: early feedback by providing a working model

BALANCE STAKEHOLDER'S REQUIREMENT

There is a need to balance stakeholder's requirement

Some issue are so complex they cannot be resolved by PM alone

- Facilitate the resolution of competing requirement, consider:
 - business case,
 - project charter,
 - project scope statement,
 - project constraints
- What you can do:
 - Conflict resolution, team building, meeting, problem solving skills, escalation, approval from stakeholder

Stakeholder request to do or add something that is not related to the reason of project created should be rejected!

REQUIREMENT DOCUMENT

Output of the Collect Requirement process

Helps make sure the requirements clear and unambiguous.

How will we know if the work we do will acceptability meet this requirement?

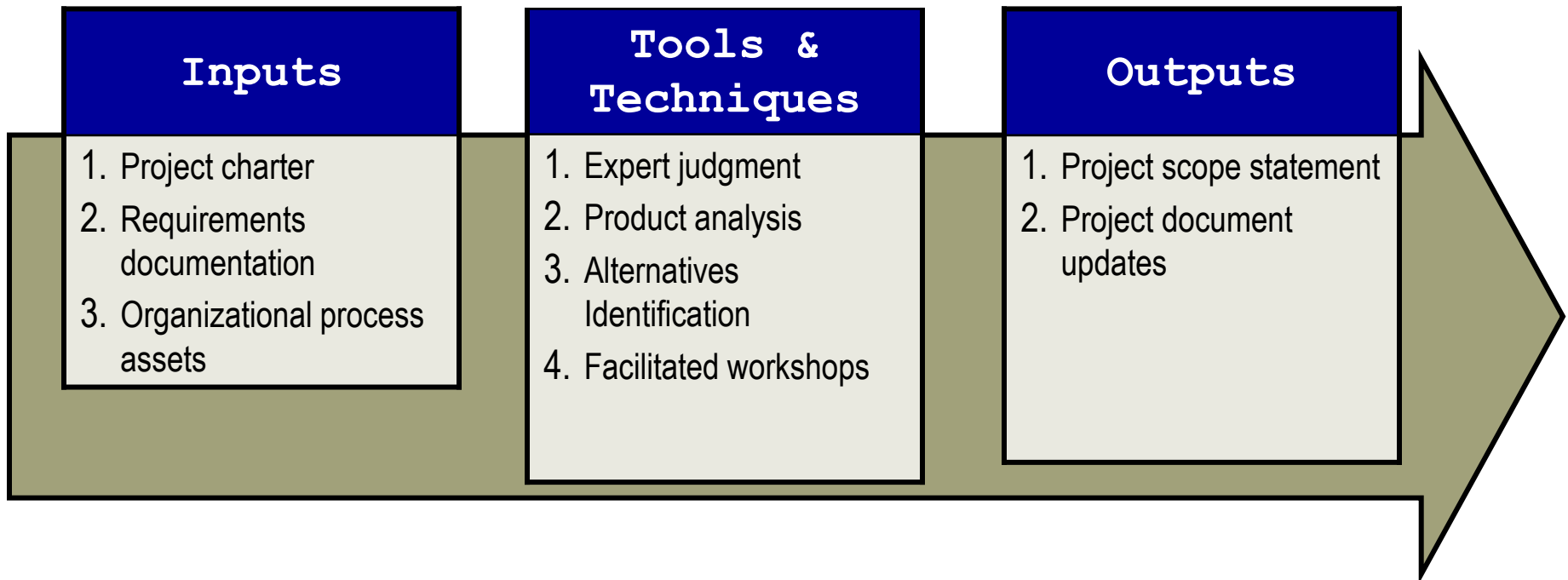
Rule of thumb

- **Specific** (Unambiguous)
- **Measurable** (How will we know we have finished?)
- **Achievable** (Can we do it?)
- **Relevant** (Is it the right thing to do?)
- **Timed** (When will we do it?)

5.3 DEFINE SCOPE

Process of developing a detailed description of the project and product

- Project scope statement may includes product scope, deliverables, product acceptance criteria, out of scope, additional risk, constraints & assumptions



DEFINE SCOPE (CONTINUE..)

Concern with what is and is not included in the project and its deliverables

You should maintain a realistic schedule and budget that can achieve the project's scope

- Iteration process should be done to maintain it
- Looking for options to adjust the project

Product Analysis

Analyze the objective and description of the product stated by the customer/sponsor and turn them into tangible deliverables.

Project lifecycle term

PROJECT SCOPE STATEMENT

The primary result of the Define Scope process

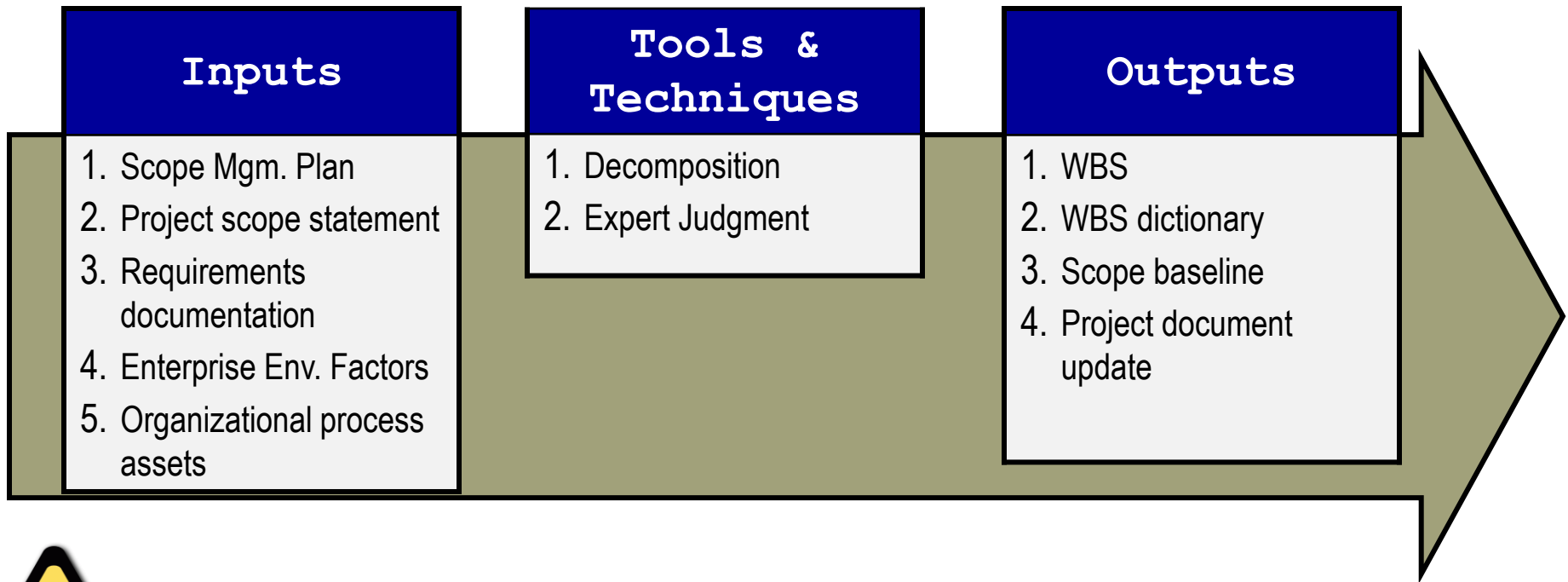
Along with the WBS and WBS dictionary, comprise the scope baseline is part of project management plan.

May includes:

- Product scope
- Deliverables
- Product acceptance criteria
- What is not part of the project (out of scope)
- Additional risks
- Constraints and assumptions :
Constraints: factors that limit the team's options
Assumptions: Things that assumed to be true (may not be true)

5.4 CREATE WBS

Process of subdividing project deliverables and project work into smaller, more manageable components.



- WBS does not show dependencies
- Dividing work package into activities is part of the time management process (Define Activities)

CREATE WBS

WBS includes the project management works.

Work package: lowest level WBS component which can be scheduled, cost estimated, monitored and controlled.

WBS Structure can be organized by

- Phases
- Major deliverables
- Subprojects e.g. contracted work

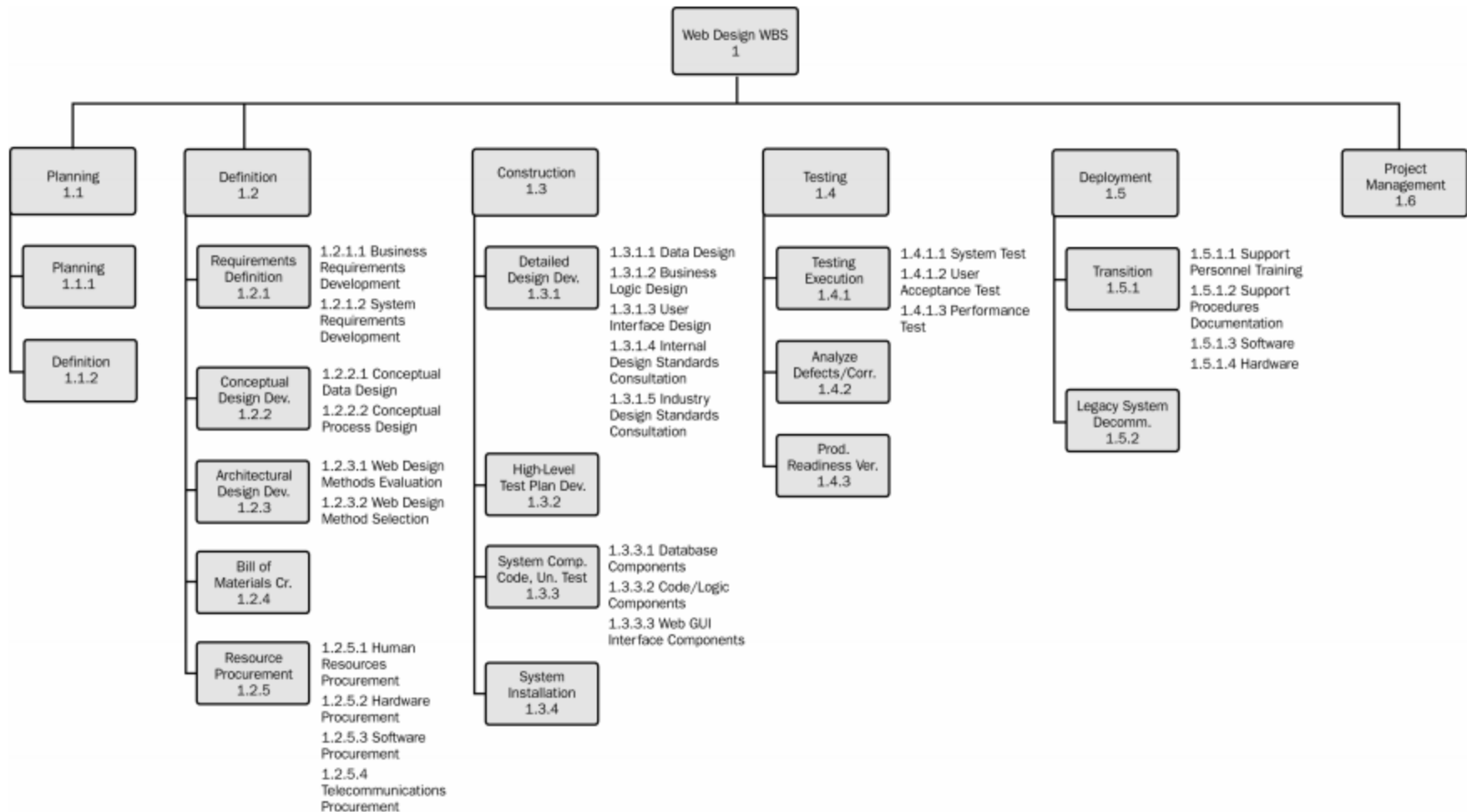
Beware of excessive decomposition. It can lead to non-productive management effort, inefficient use of resources (performing work)

Control account: management control point for performance measurement (one or more work packages)

WBS dictionary provides more detailed components, e.g. description of work, responsible organization, acceptance criteria

Agreed Scope baseline includes project scope statement, WBS, WBS dictionary

WBS SAMPLE



WBS

100% rule: WBS includes 100% of the work defined by project scope and capture ALL deliverables (external, internal, interim) in term of work to be completed including project management.

WBS creation method:

- Top-Down
- Bottom up
- WBS Standard
- WBS Templates

Don't mind with WBS view

- Outline View
- Tabular View
- Tree structure view (vertical, horizontal, centralized)

WBS DICTIONARY SAMPLE

Includes (but not limited to):

Code of account identifier

Description of work

Responsible organization

List of schedule milestone

Associated schedule activities

Resource required

Cost estimates

Quality requirements

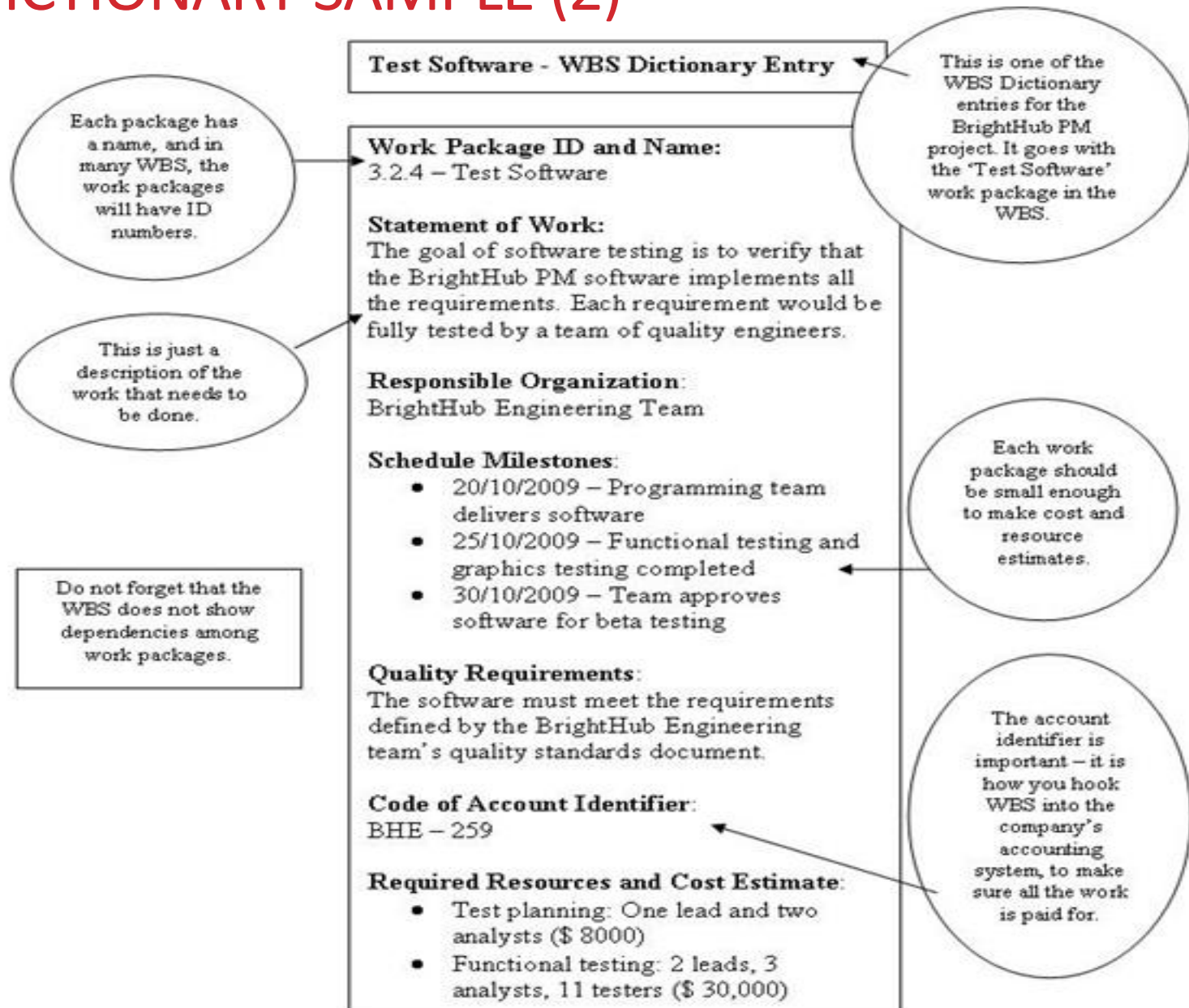
Acceptance criteria

Technical references

Contract Information

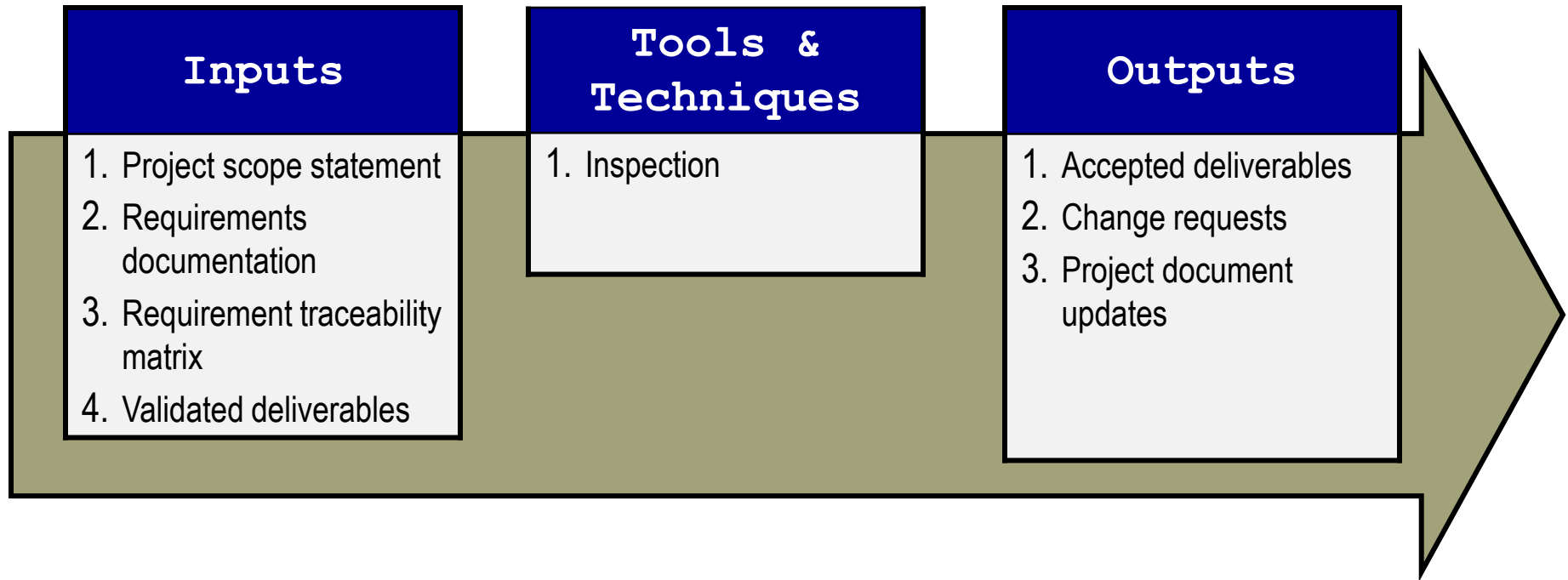
Level	WBS Code	Element Name	Definition	Cost Control Number	Responsible Organization
1	1	Bicycle WBS	All components and subassemblies required to specify design, assembly and testing of a custom bicycle.		Customer Sales and Support
2	1.1	Frame Set	The individual components that together constitute the frame once assembled		Customer Sales and Support
3	1.1.1	Frame	The unit tubular steel structure to which other components are attached. Provides basic design and strength.		Customer Sales and Support
3	1.1.2	Handlebar	Used by rider to steer bicycle. Also serves as point of attachment for hand brakes, lights, and other accessories. Style to be selected by customer		Customer Sales and Support

WBS DICTIONARY SAMPLE (2)



5.5 VERIFY SCOPE

Process of formalizing acceptance of the completed project deliverables.



VERIFY SCOPE

- Different with quality control which concerned with correctness of deliverables. Can be performed before or parallel
- **NOT** making sure you have the right scope during project planning
- But, to gain formal acceptance of deliverables during monitoring and control.

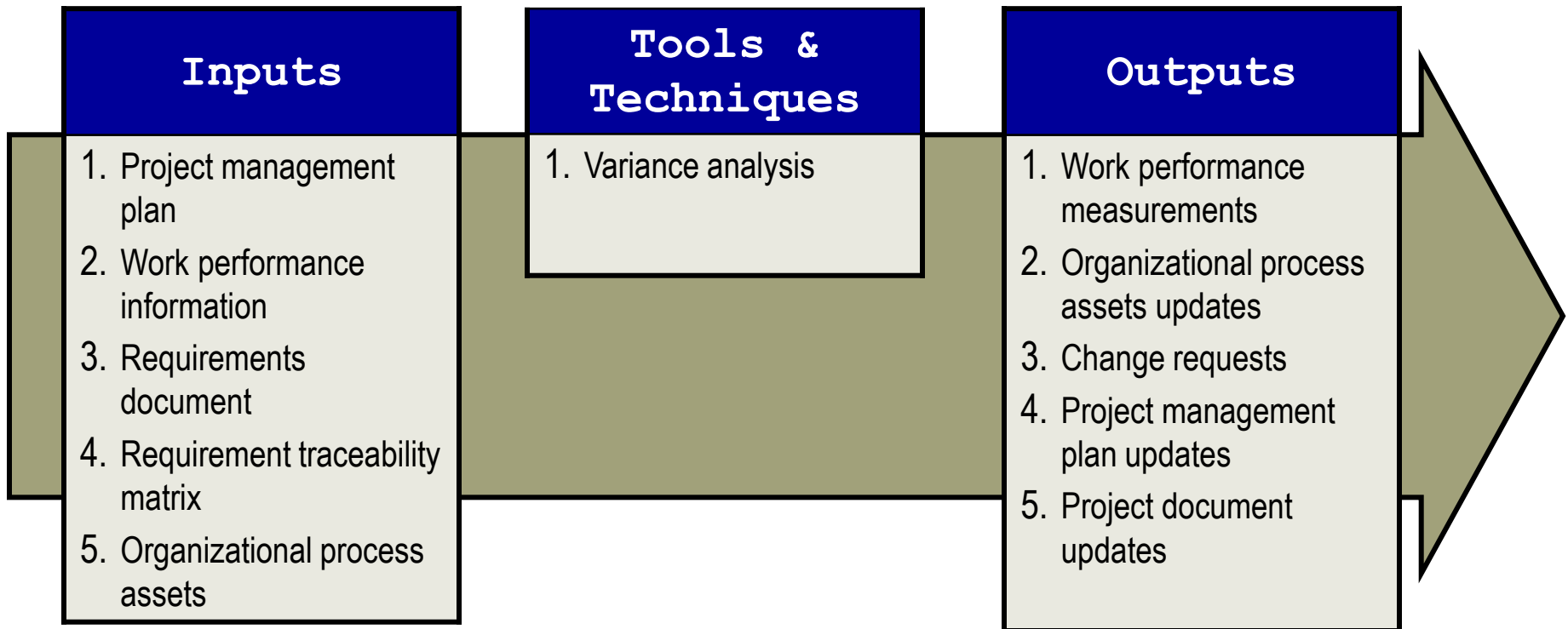
Inspection = review, product reviews, audits, walkthroughs

- Measuring, examining, verifying to determine work and deliverables are meet requirement & product acceptance criteria

5.6. CONTROL SCOPE

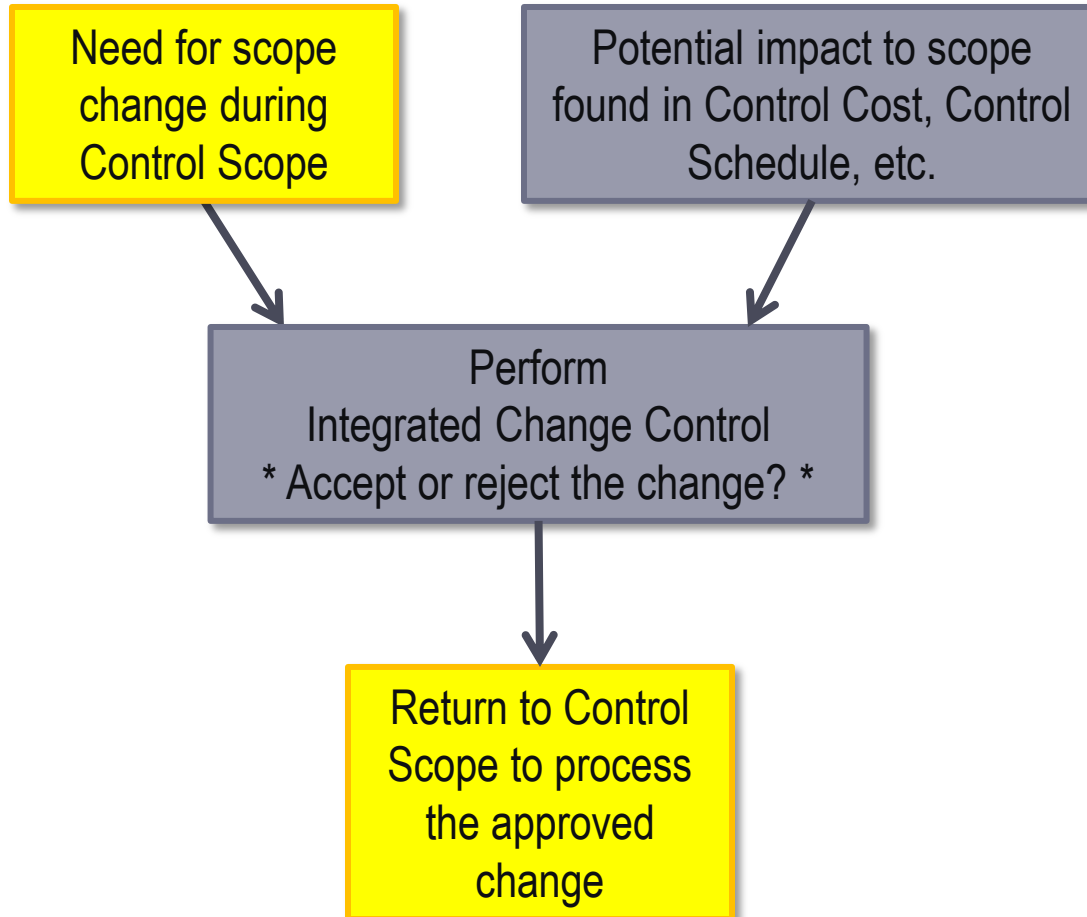
Process of monitoring the status of the project and product scope and managing changes to the scope baseline

- The cause and degree of variance relative to the scope baseline
- Decide corrective/preventive action required



CONTROL SCOPE

Relation with Perform Integrated Change Control Process



NEXT TOPIC:
PROJECT TIME MANAGEMENT

Thank You