

# **EE3242 - Project Management**

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## **Lecture 4**

# **Project Scope Management**

# What is the Scope of a Project?

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- Total amount of work that needs to be done to complete a project
- Defines the boundaries of what will and won't be part of the project work
- Once the scope of a project has been determined, it needs to be managed through a process known as project scope management

# Project Scope Management

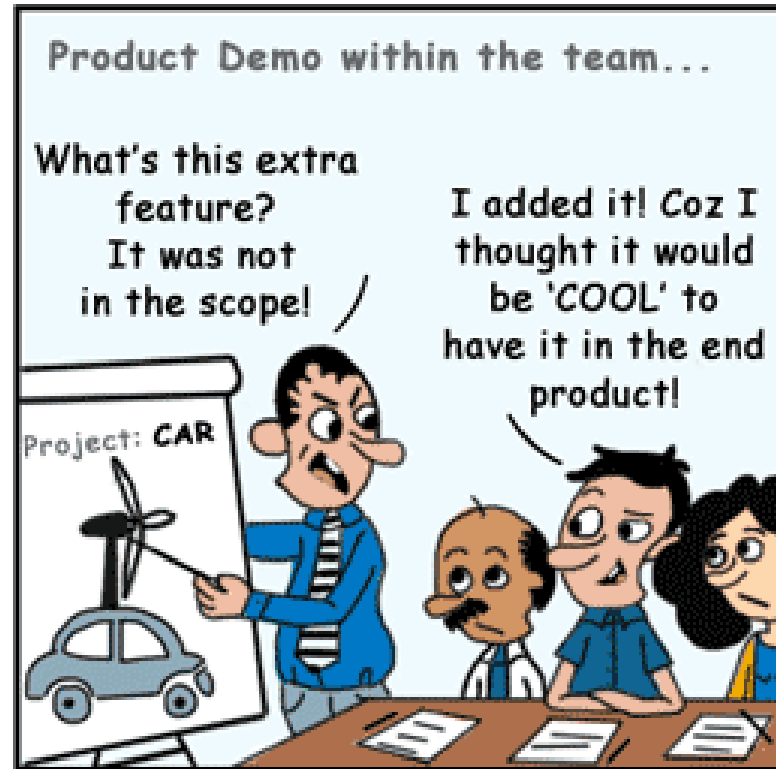
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- Project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.

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## Scope Management

'Gold plating' means the addition of feature not considered in the original scope plan & is considered a bad project management practice.

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# Processes of project scope management

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1

- Plan Scope Management

2

- Collect Requirements

3

- Define Scope

4

- Create Work Breakdown Structures (WBS)

5

- Validate Scope

6

- Control Scope

# 1. Plan Scope Management

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- Process of creating a scope management plan that documents **how the project and product scope will be defined, validated, and controlled.**
- **Product scope:** The features and functions that characterize a product, service, or result
- **Project scope:** The work performed to deliver a product, service, or result with the specified features and functions

# Plan Scope Management- Overview

## Plan Scope Management

### Inputs

- .1 Project charter
- .2 Project management plan
  - Quality management plan
  - Project life cycle description
  - Development approach
- .3 Enterprise environmental factors
- .4 Organizational process assets

### Tools & Techniques

- .1 Expert judgment
- .2 Data analysis
- .3 Meetings

### Outputs

- .1 Scope management plan
- .2 Requirements management plan



# Outputs

## 1. Scope management plan

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The scope management plan is a component of the project management plan that describes how the scope will be defined, developed, monitored, controlled, and validated. The components of a scope management plan include:

- i. Process for preparing a project scope statement
- ii. Process that enables the creation of the WBS from the detailed project scope statement
- iii. Process that establishes how the scope baseline will be approved and maintained
- iv. Process that specifies how formal acceptance of the completed project deliverables will be obtained

# Outputs

## 2. Requirements management plan

The requirements management plan is a component of the project management plan that **describes how project and product requirements will be analyzed, documented, and managed**. Some organizations refer to it as a business analysis plan. Components of the requirements management plan can include:

- i. How requirements activities will be planned, tracked, and reported
- ii. Configuration management activities such as:  
how changes will be initiated, how impacts will be analyzed , how they will be traced, tracked, and reported , the authorization levels required to approve these changes
- iii. Requirements prioritization process
- iv. Metrics that will be used and the rationale for using them
- v. Traceability structure that reflects the requirement attributes captured on the traceability matrix

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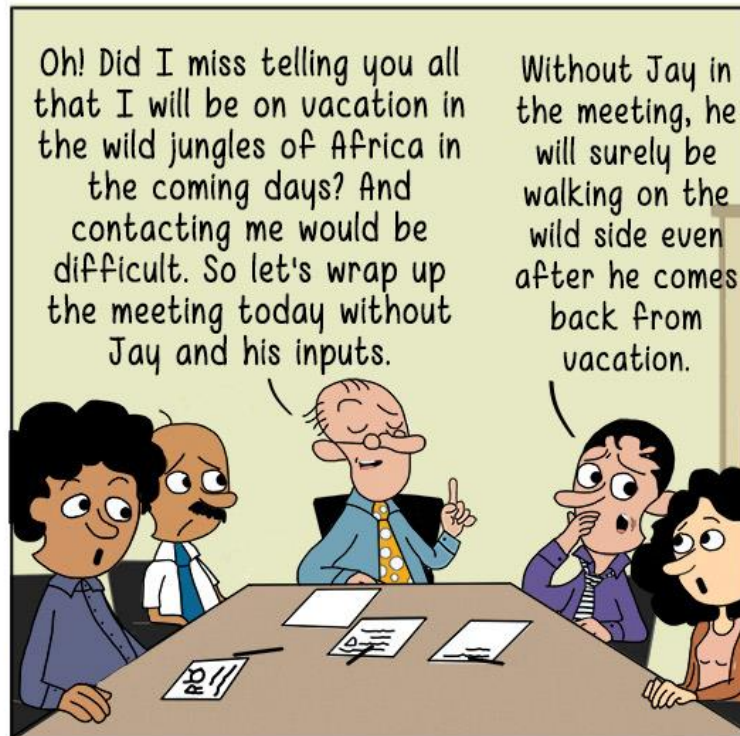
- Control Scope

# 2. Collecting Requirements

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- Process of determining, documenting, and managing stakeholder needs and requirements to meet objectives.
- The key benefit of this process is that it provides the basis for defining the product scope and project scope.

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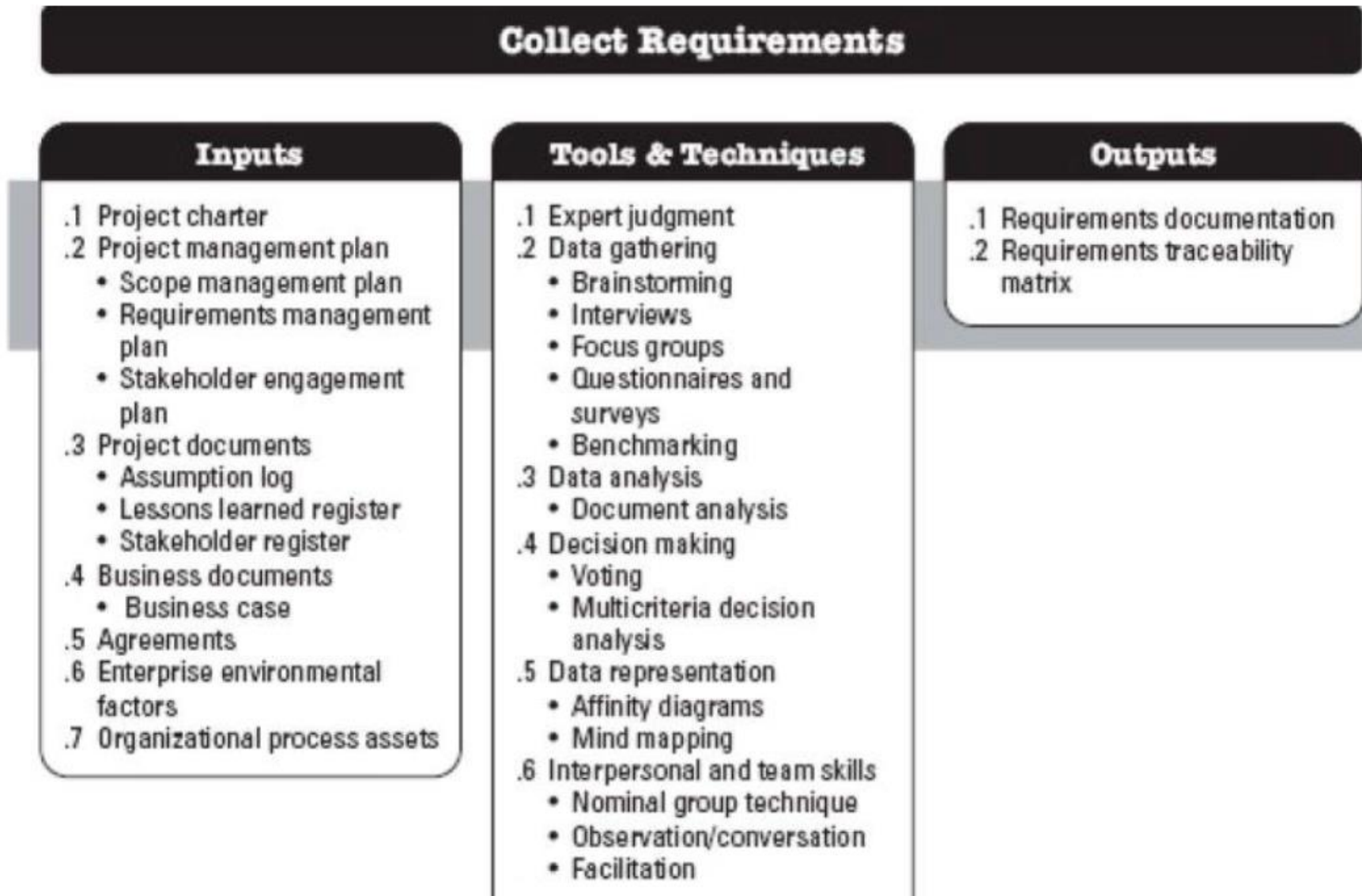
## Collect Requirements

Collect Requirements is an essential part of any project and project management. It is the process of determining, documenting, and managing stakeholder needs and requirements to meet objectives. The key benefit of this process is that it provides the basis for defining the product scope and project scope

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# Collecting Requirements - Overview





## What are the glitches in our content creation process?



## Sample of an Affinity Diagram

# Outputs

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## 1. Requirements documentation

Describes **how individual requirements meet the business need for the project**. Requirements can be grouped into classifications allowing for further refinement and detail as the requirements are elaborated. These classifications include:

- i. Business requirements.
- ii. Stakeholder requirements.
- iii. Solution requirements.



# Outputs

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## 2. Requirements traceability matrix

- The requirements traceability matrix is a **grid that links product requirements from their origin to the deliverables that satisfy them.**
- The implementation of a requirements traceability matrix helps ensure that each requirement adds business value by linking it to the business and project objectives.

# Requirements Traceability Matrix Template

Template Is In The Description (.xlsx)

ID	Ass. ID	Requirements Description	Business Need, Justification	Project Objective	Requested By	Department	WBS Element	Specification	Design	Test Cases
1	1.1	Login Page	Clients need way to access protected content	Create Minimum Viable Program	Dmitriy N.	Content	2	<u>Finished</u>	<u>Finished</u>	1001
1	1.2	Forget Password Link	It will greatly reduce workload of support team	Create Minimum Viable Program	Dmitriy N.	Content	2.1	<u>Finished</u>	<u>Finished</u>	1002, 1003
1	1.2.1	Landing Page	A must-have starting point for a client.	Create Minimum Viable Program	Dmitriy N.	Content	3	<u>Finished</u>	In Progress	
1	1.2.2	Log Out Link	For security reasons we need to log out users.	Create Minimum Viable Program	Security Officer	Technical Control	2.2	Not Started	Not Started	
2	2.1	Welcome Email Sequence	A must-have initial information after purchase	Create Minimum Viable Program	Dmitriy N.	Content	3	Not Started	Not Started	
2	2.2	Unsubscribe Link	Required by anti-spam act.	Create Minimum Viable Program	Email Service Provider	Control	3.1	Not Started	Not Started	

# Processes of project scope management

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- Plan Scope Management

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- Collect Requirements

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- **Define Scope**

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- Create Work Breakdown Structures (WBS)

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- Control Scope

# 3. Defining Scope

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- Process of developing a detailed description of the project and product.
- The key benefit of this process is that it describes the product, service, or result boundaries and acceptance criteria.

# Defining Scope - Overview

## Define Scope

### Inputs

- .1 Project charter
- .2 Project management plan
  - Scope management plan
- .3 Project documents
  - Assumption log
  - Requirements documentation
  - Risk register
- .4 Enterprise environmental factors
- .5 Organizational process assets

### Tools & Techniques

- .1 Expert judgment
- .2 Data analysis
- .3 Decision making
  - Multicriteria decision analysis
- .4 Interpersonal and team skills
  - Facilitation
- .5 Product analysis

### Outputs

- .1 Project scope statement
- .2 Project documents updates
  - Assumption log
  - Requirements documentation
  - Requirements traceability matrix
  - Stakeholder register

# Outputs

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## 1. Project scope statement

- The project scope statement is the description of the project scope, major deliverables, assumptions, and constraints.
- The project scope statement documents the entire scope, including project and product scope.

# Outputs

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## 2. Project documents update

- Project documents that may be updated as a result of carrying out this process include but are not limited to:
  - i. Assumption log
  - ii. Requirements documentation
  - iii. Requirements traceability matrix
  - iv. Stakeholder register

# Processes of project scope management

1

- Plan Scope Management

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- Collect Requirements

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- Define Scope

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- **Create Work Breakdown Structures (WBS)**

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- Validate Scope

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- Control Scope



# 4. Creating WBS

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- Create WBS is the process of subdividing project deliverables and project work into smaller, more manageable components.
- The key benefit of this process is that it provides a framework of what has to be delivered.

# Creating WBS - Overview

## Create WBS

### Inputs

- .1 Project management plan
  - Scope management plan
- .2 Project documents
  - Project scope statement
  - Requirements documentation
- .3 Enterprise environmental factors
- .4 Organizational process assets

### Tools & Techniques

- .1 Expert judgment
- .2 Decomposition

### Outputs

- .1 Scope baseline
- .2 Project documents updates
  - Assumption log
  - Requirements documentation

# Tools and Techniques

## Decomposition

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Decomposition is a technique used for dividing and subdividing the project scope and project deliverables into smaller, more manageable parts.

Decomposition of the total project work into work packages generally involves the following activities:

- i. Identifying and analyzing the deliverables and related work
- ii. Structuring and organizing the WBS
- iii. Decomposing the upper WBS levels into lower-level detailed components
- iv. Developing and assigning identification codes to the WBS components
- v. Verifying that the degree of decomposition of the deliverables is appropriate

# Outputs

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## 1. Scope baseline

- The scope baseline is the approved version of a scope statement, WBS, and its associated WBS dictionary, which can be changed only through formal change control procedures and is used as a basis for comparison.
- It is a component of the project management plan.

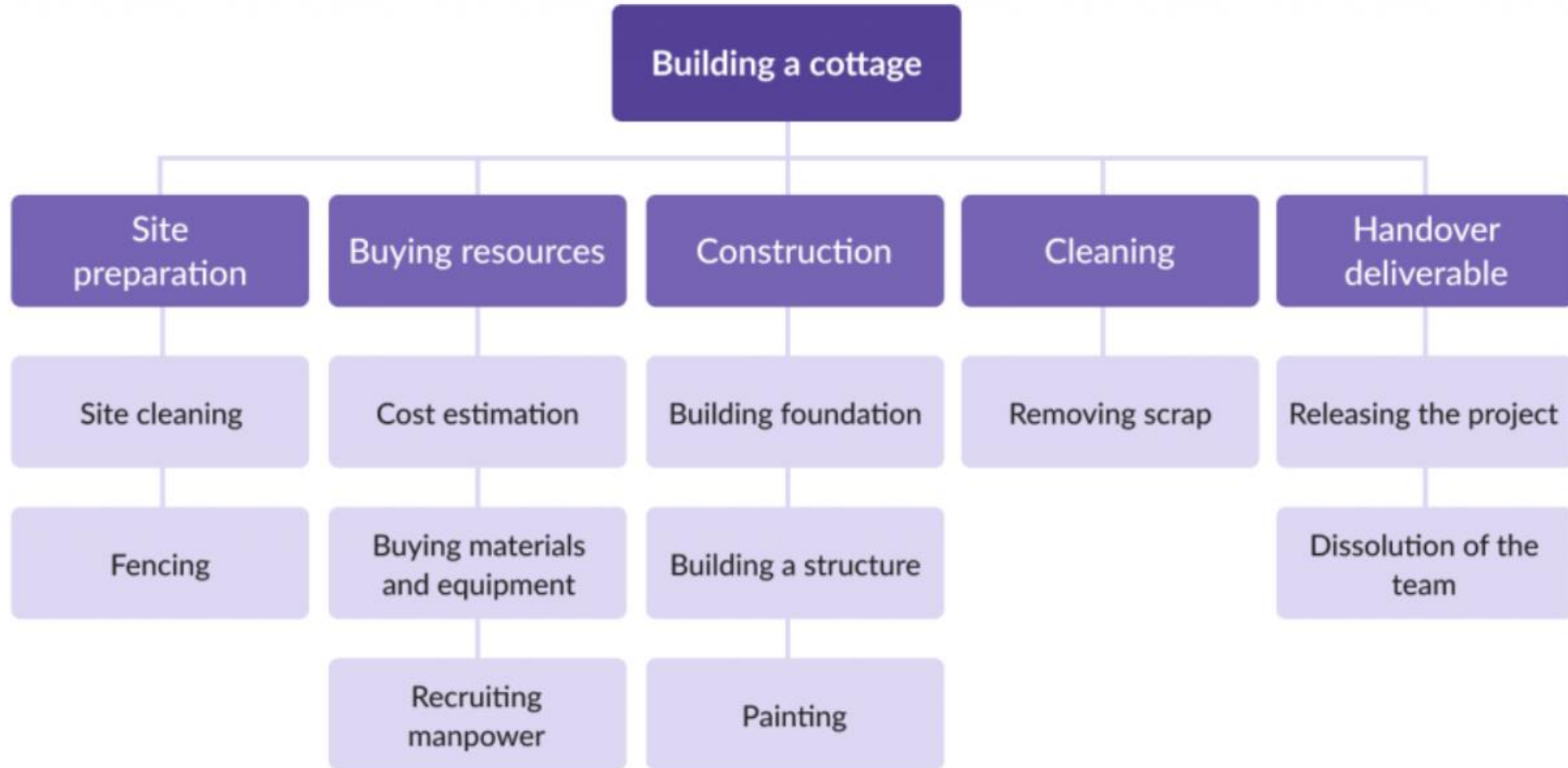
# Outputs

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## 2. Project documents updates

- Project documents that may be updated as a result of carrying out this process include but are not limited to:
  - i. Assumption log
  - ii. Requirements documentation

# WBS - Example



# Activity

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- Develop a Work Breakdown Structure for one of the following projects.
  - Construction of an Office Building
  - Development of a Mobile App to obtain Customer Feedback

# Processes of project scope management

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- **Validate Scope**

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# 5. Validating Scope

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- Process of formalizing acceptance of the completed project deliverables.
- The key benefit of this process is that it brings objectivity to the acceptance process and increases the probability of final product, service, or result acceptance by validating each deliverable.

# Validating Scope - Overview

## Validate Scope

### Inputs

- .1 Project management plan
  - Scope management plan
  - Requirements management plan
  - Scope baseline
- .2 Project documents
  - Lessons learned register
  - Quality reports
  - Requirements documentation
  - Requirements traceability matrix
- .3 Verified deliverables
- .4 Work performance data

### Tools & Techniques

- .1 Inspection
- .2 Decision making
  - Voting

### Outputs

- .1 Accepted deliverables
- .2 Work performance information
- .3 Change requests
- .4 Project document updates
  - Lessons learned register
  - Requirements documentation
  - Requirements traceability matrix

# Outputs

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## 1. Accepted deliverables

- Deliverables that meet the acceptance criteria are formally signed off and approved by the customer or sponsor.
- Formal documentation received from the customer or sponsor acknowledging formal stakeholder acceptance of the project's deliverables is forwarded to the Close Project or Phase process.

# Outputs

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## 2. Work performance information

- Work performance information includes information about project progress, such as which deliverables have been accepted and which have not been accepted and the reasons why.

# Outputs

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## 3. Change requests

- The completed deliverables that have not been formally accepted are documented, along with the reasons for non-acceptance of those deliverables.
- Those deliverables may require a change request for defect repair.
- The change requests are processed for review and disposition through the Perform Integrated Change Control process.

# Outputs

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## 4. Project documents updates

- Project documents that may be updated as a result of carrying out this process include but are not limited to:
  - i. Lessons learned register
  - ii. Requirements documentation
  - iii. Requirements traceability matrix

# Processes of project scope management

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- **Control Scope**

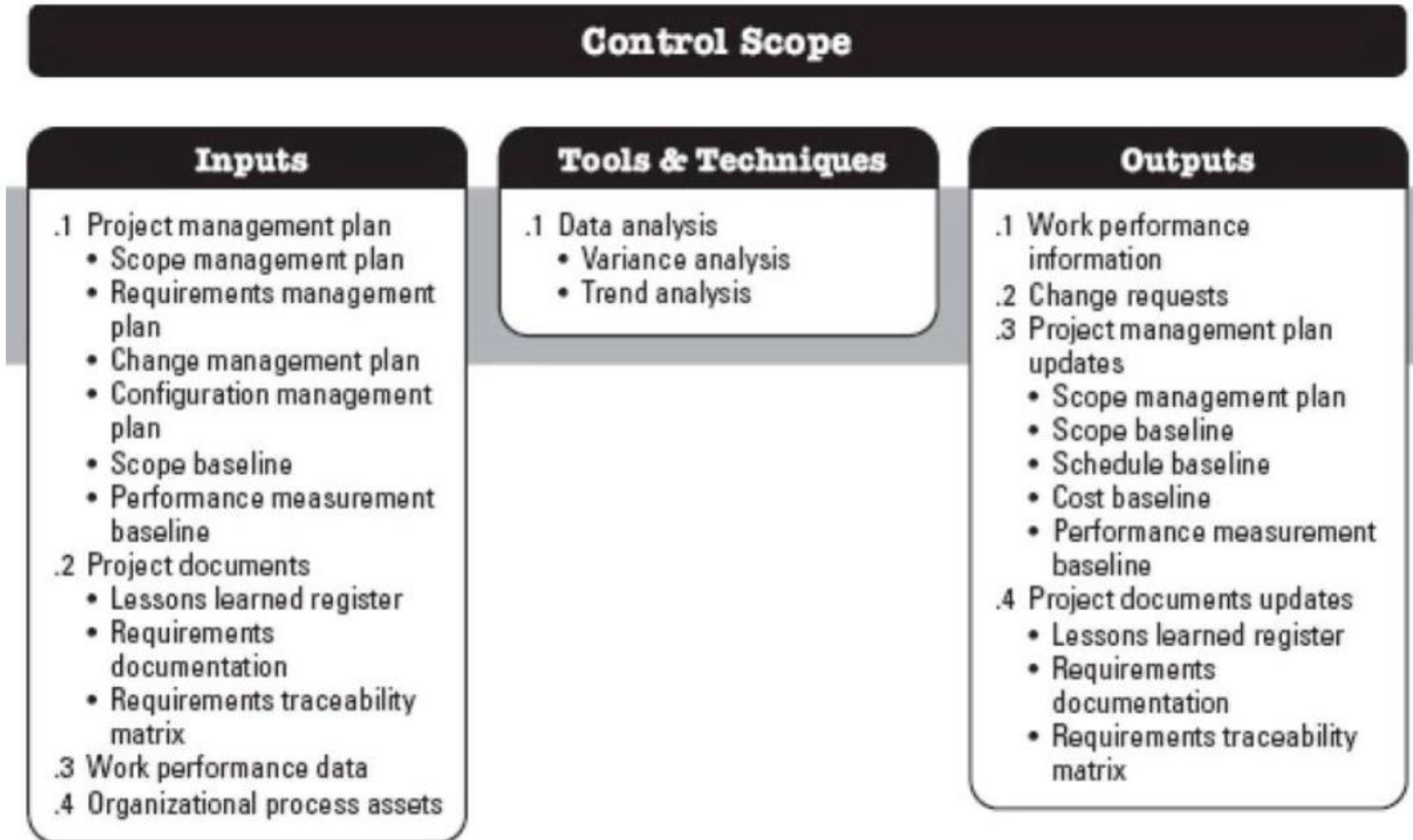
# 6. Controlling Scope

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- Control Scope is the process of monitoring the status of the project and product scope and managing changes to the scope baseline.
- The key benefit of this process is that the scope baseline is maintained throughout the project.



# Controlling Scope - Overview



# Outputs

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## 1. Work performance information

- Work performance information produced includes correlated and contextualized information on how the project and product scope are performing compared to the scope baseline.
- It can include the categories of the changes received, the identified scope variances and their causes, how they impact schedule or cost, and the forecast of the future scope performance.

# Outputs

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## 2. Change requests

- Analysis of project performance may result in a change request to expand, adjust, or reduce project scope, product scope, or quality requirements and other components of the project management plan.
- Change requests are processed for review and disposition through the Perform Integrated Change Control process.

# Outputs

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## **3. Project management plan updates**

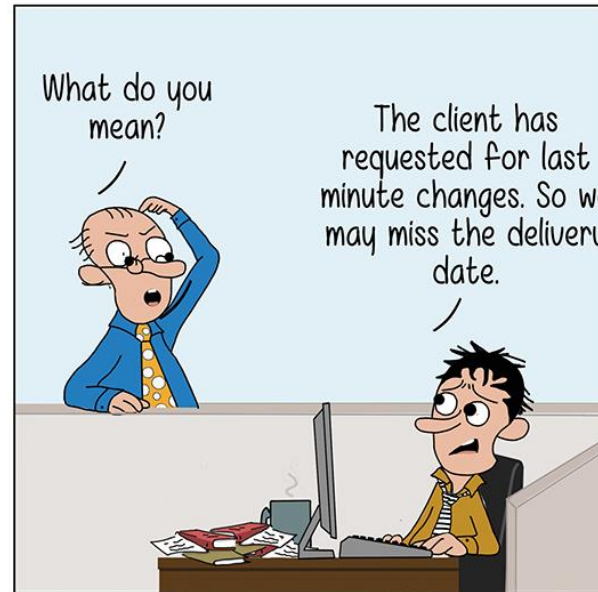
- Any change to the project management plan goes through the organization's change control process via a change request. Components that may require a change request for the project management plan include but are not limited to:
  - i. Scope management plan
  - ii. Scope baseline
  - iii. Schedule baseline
  - iv. Cost baseline
  - v. Performance measurement baseline and schedule baselines or other components of the project management plan.

# Outputs

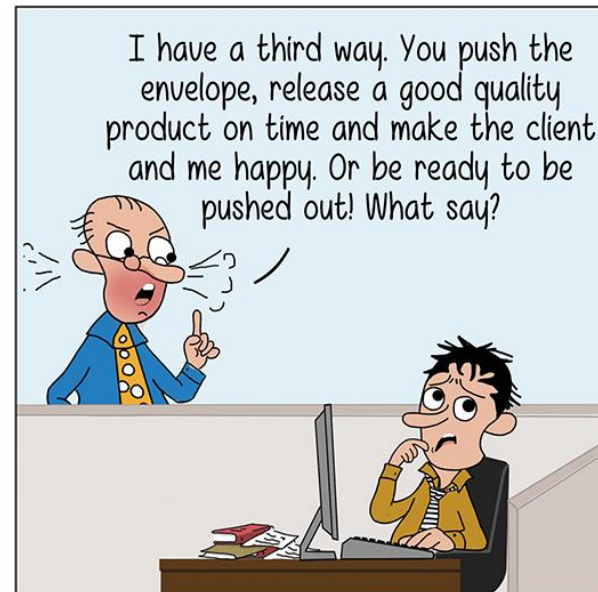
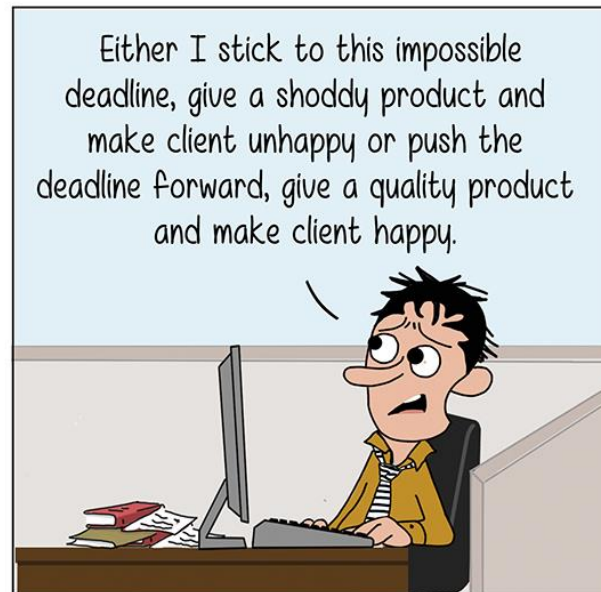
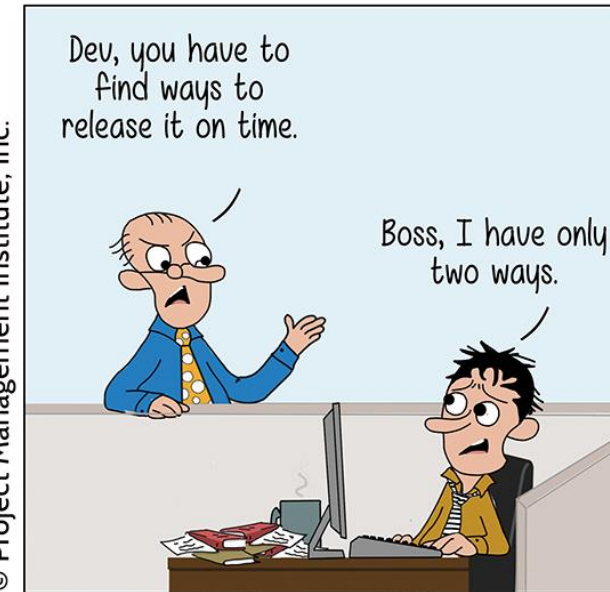

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## 4. Project documents updates

- Project documents that may be updated as a result of carrying out this process include but are not limited to:
  - i. Lessons learned register
  - ii. Requirements documentation
  - iii. Requirements traceability matrix



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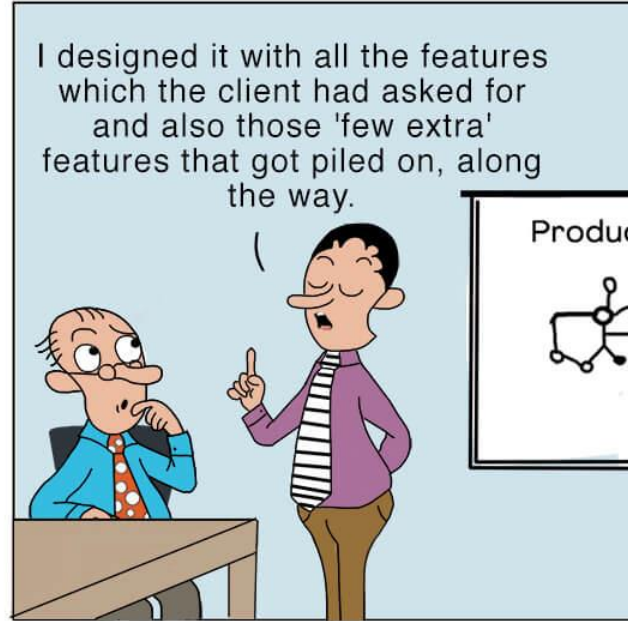



## Project Scope Management

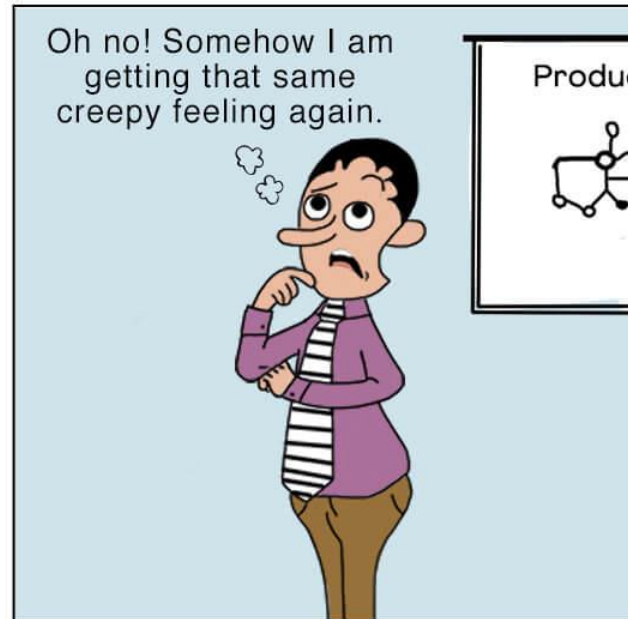
Follow the pre-established policy or plan for making changes in scope. Also, plan your approval and documentation process in advance. Transparency and open communication builds confidence and trust amongst all respective stakeholders.

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## Project Scope Management

Project Scope creep is one of the most devious problems commonly faced by project managers. To avoid it, a clear and well-managed scope is a key element to successful projects. If the product scope and its requirements are not clear and specific, it is a breeding ground for scope creep.



# - Activity -

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- What is Scope Creep?
- Develop a scope statement for a selected project.