INF 151: Project Management

Week 4: Tuesday

Today's Agenda

Announcements:

- Work on Assignment 5 (Due 10/27)

Today:

- Project Scope Management
- Quiz 3!

Managing Scope

Scope refers to all the work involved in creating the products of the project and the processes used to create them

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Scope Management

Processes that fall within the boundaries of scope management

1. Planning
2. Collecting requirements
3. Defining the scope of the project
4. Creating a Work Breakdown Structure
5. Scope verification
6. Scope control

Scope Management

Scope Management Plan

A plan for the plan!

A brief document that describes how the key aspects of the scope statement will be managed:

➔ How the team will prepare the scope statement
➔ How the team will create the WBS
➔ How project deliverables will be verified when completed
➔ How change requests to project scope will be managed

Scope Management

Requirements:

A condition or capability needed by a **user to achieve** or a **system to satisfy** an objective.

Each requirement should provide enough detail to be assessed for time, cost, and implementation

Collection can occur through:

➔ Interviews
➔ Workshops or Focus groups
➔ Observation
➔ Questionnaires and surveys
➔ Group activities

Requirements are categorized by type, including: functional, service, performance, quality, and training.

Scope Management

Documentation: The Requirement Traceability Matrix (RTM)

Req. No.	Name	Category	Source	Status
A unique identifier to represent the requirement	A short description of the requirement (1-3 words)	The category the requirement belongs to	Location of original input that generated the requirement	Up-to-date status of requirement (in-progress, complete, on-hold, etc.)

Scope Management

Scope Definition

Good definition of scope helps to improve the accuracy of time, cost, and resource estimates.

Scope statement should include the following:

- ➜ Project description
- ➜ User acceptance criteria
- ➜ Overall objectives and justification
- ➜ Detailed descriptions of project deliverables
- ➜ Characteristics and requirements of products and services produced
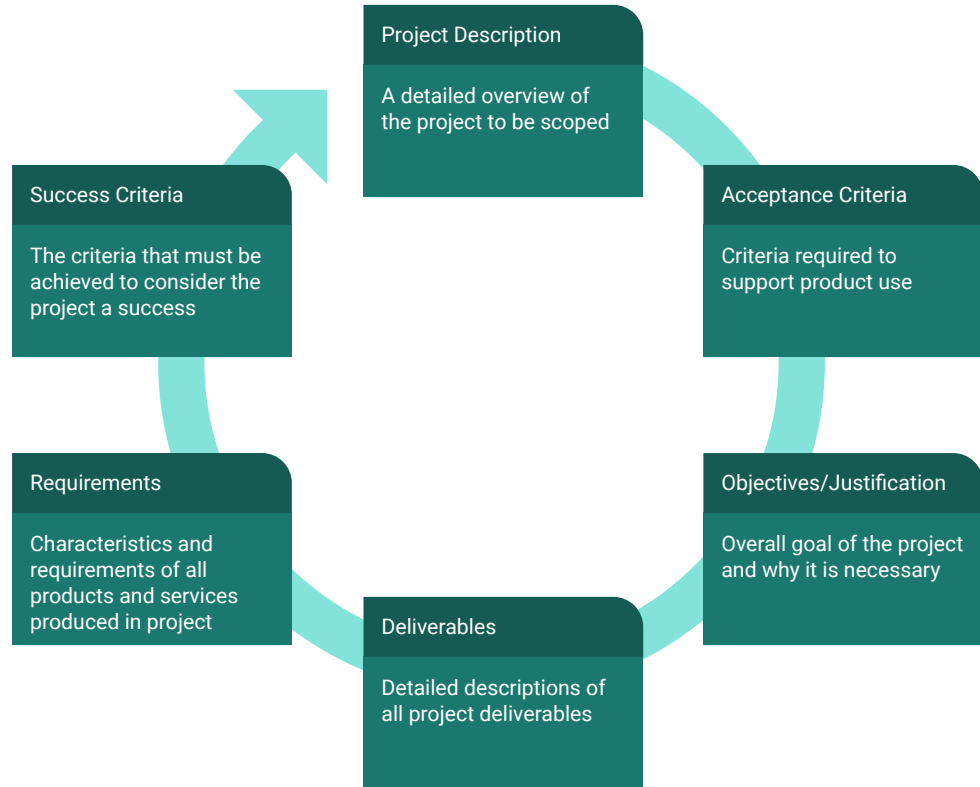- ➜ Success criteria

May also include: scope boundaries, risks, milestones, approval requirements, cost estimates

Scope Management

Scope Definition

You don't have to get it right the first time!

Start with a preliminary statement, iterate until you feel you have captured the project as best as possible.

Project Description

A detailed overview of the project to be scoped

Acceptance Criteria

Criteria required to support product use

Objectives/Justification

Overall goal of the project and why it is necessary

Deliverables

Detailed descriptions of all project deliverables

Requirements

Characteristics and requirements of all products and services produced in project

Success Criteria

The criteria that must be achieved to consider the project a success

Scope Management

Work Breakdown Structure or WBS

The organization of all deliverables identified through the requirements gathering process

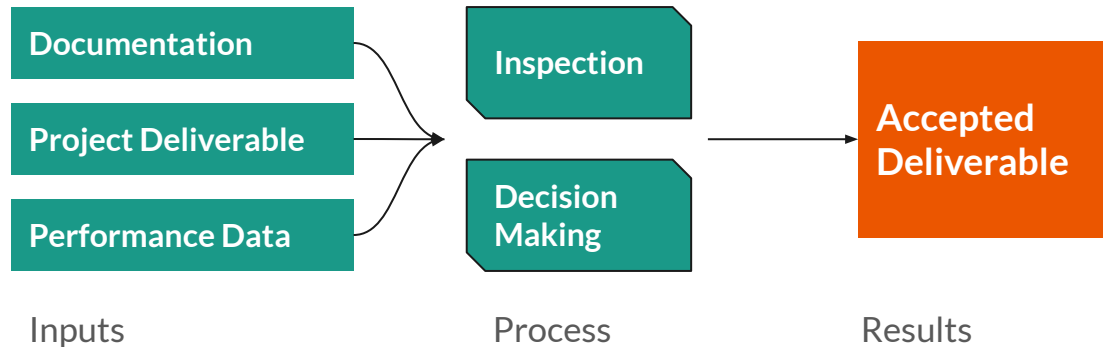Critical for **all** projects…source for project schedules, costs, resources, and changes

More on this shortly…

Scope Management

The validation and acceptance of **completed** project deliverables

Often completed with project stakeholders according to processes established in scope statement

Scope Verification

Inputs	Process	Results
Documentation	Inspection	Accepted Deliverable
Project Deliverable	Decision Making	
Performance Data		

Scope Management

Scope Control

The process of controlling changes that may occur over the life of the project

Change is inevitable!

Scope control defines how you manage that change:

➜ Influence factors that cause changes to scope
➜ Assure changes are processed according to established procedures
➜ Monitor and manage changes when they must occur

You cannot do a good job of controlling scope if you do not first do a good job of collecting requirements.

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Scope Management

Scope Control

The best way to control scope is to mitigate the risk of change

Strategies for Reducing Scope Change

➜ Regular meetings!
➜ Include users as often as possible/add to team/cross pollinate
➜ Deliver *something* on a regular basis (prototypes, documents, walkthroughs, etc)
➜ Do not overpromise and underdeliver

Work Breakdown Structure

Work Breakdown Structure (WBS)

A *breakdown* of the tasks necessary to complete a project deliverable

The WBS is organized by **levels**

Level 1

Should represent the entire project

Level 2

Main products to be delivered

Level 3
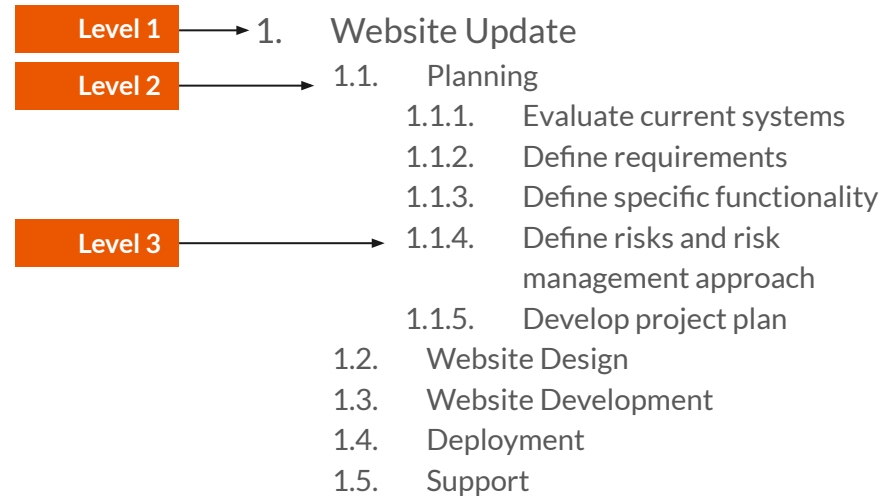
Individual items that comprise level 2 deliverables

Work Breakdown Structure (WBS)

A *breakdown* of the tasks necessary to complete a project deliverable

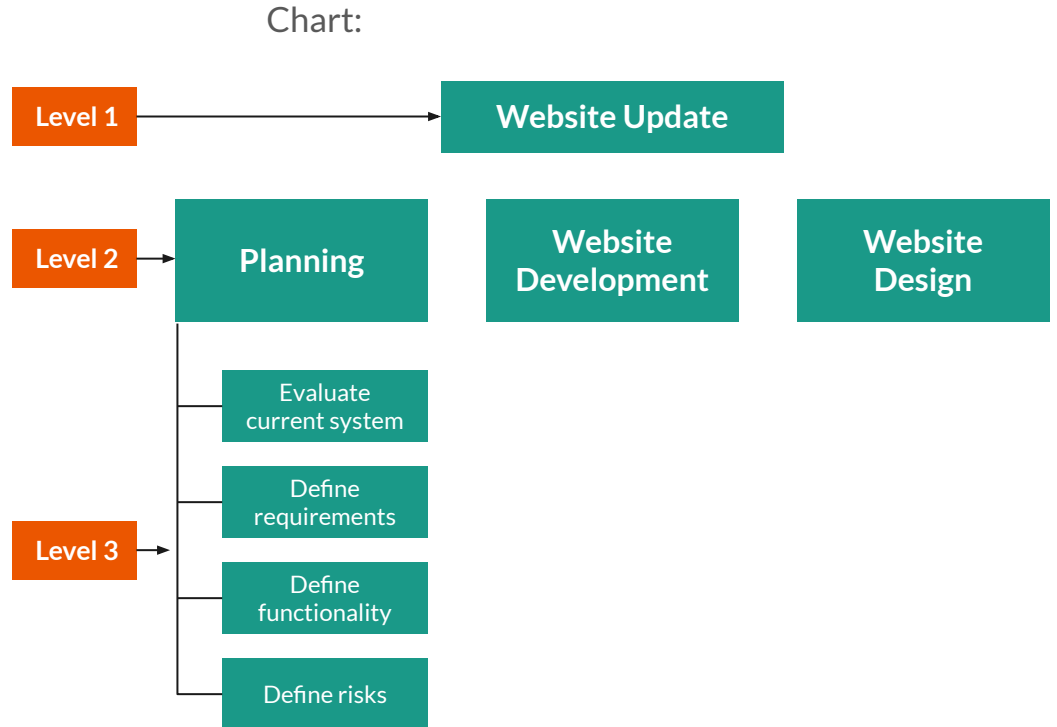**Two** common methods of WBS representation: **Tabular** and **Chart** forms

Tabular:

Level 1

Level 2

Level 3

1.   Website Update
1.1.   Planning
     1.1.1.   Evaluate current systems
     1.1.2.   Define requirements
     1.1.3.   Define specific functionality
     1.1.4.   Define risks and risk management approach
     1.1.5.   Develop project plan
1.2.   Website Design
1.3.   Website Development
1.4.   Deployment
1.5.   Support

Work Breakdown Structure (WBS)

A *breakdown* of the tasks necessary to complete a project deliverable

Two common methods of WBS representation: **Tabular** and **Chart** forms

Chart:

Level 1 → Website Update

Level 2 → Planning | Website Development | Website Design

Level 3 →
- Evaluate current system
- Define requirements
- Define functionality
- Define risks

Work Breakdown Structure (WBS)

Work Package

A collection of related requirements that accommodate time, cost, and resource requirements

The lowest level tasks on your WBS

Level 1 → **Website Update**

Level 2 → **Planning**

Level 3 →
- Evaluate current system
- Define requirements
- Define functionality
- Define risks
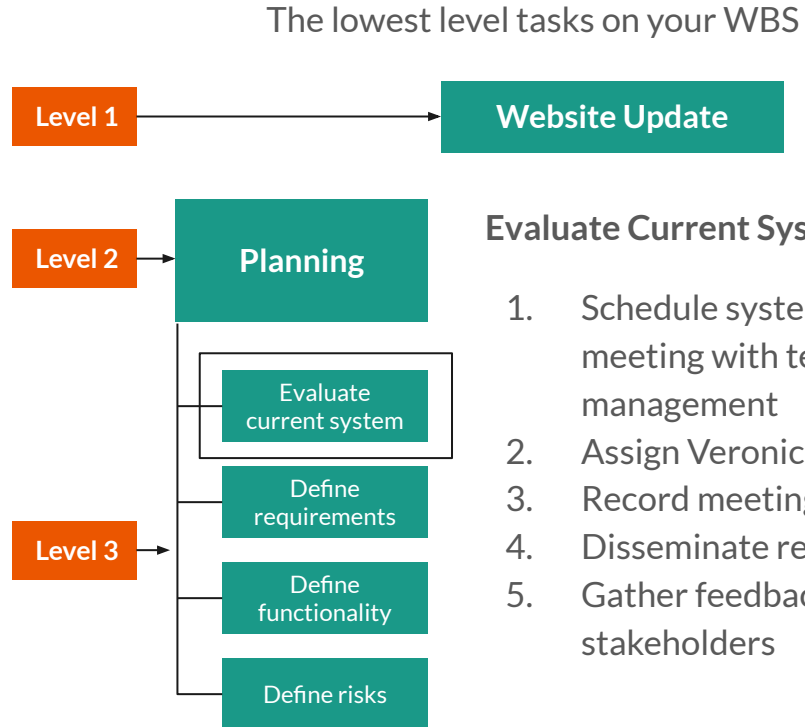
Evaluate Current System

1. Schedule system walkthrough meeting with team and management
2. Assign Veronica to lead
3. Record meeting using X system
4. Disseminate results on Intranet
5. Gather feedback from stakeholders

Work Breakdown Structure (WBS)

Transition to Gantt

	ID	Activities	Dependency	Start Date	Scheduled End I	Completion	Type	Task Owner
1	ID	Activities	Dependency	Start Date	Scheduled End I	Completion	Type	Task Owner
2	Task 1	Website Update		11/1/2022	12/1/2022	0%	Main Task	Bob
3	Task 1.1	Planning		11/1/2022	11/9/2022	31%	Main Task	Bob
4	Task 1.1.1	Evaluate current	Task 1.1	11/1/2022	11/2/2022		Sub Task	Veronica
5	Task 1.1.2	Define requireme	Task 1.1.1	11/2/2022	11/3/2022		Sub Task	Xi
6	Task 1.1.3	Define specific fu	Task 1.1.2	11/3/2022				
7	Task 1.1.4	Define risks and	Task 1.1.3	11/4/2022				
8	Task 1.1.5	Develop project	Task 1.1.4	11/7/2022				
9	Task 1.2	Website Design	Task 1.1	11/10/2022	1			
10	Task 1.3	Website Develop	Task 1.2	11/18/2022	1			
11	Task 1.4	Deployment	Task 1.3	11/25/2022	1			
12	Task 1.5	Support	Task 1.4	11/28/2022	1			
13								
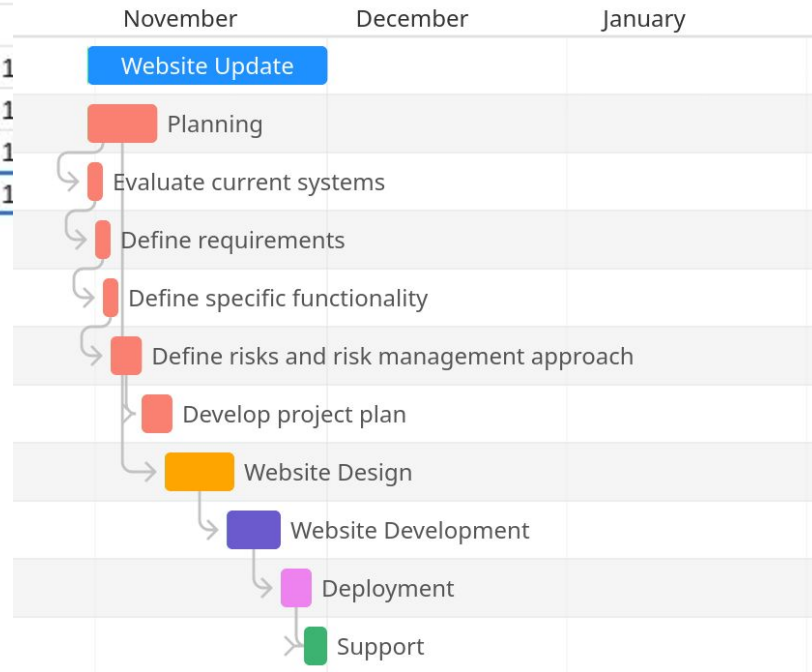
Work Breakdown Structure (WBS)

Strategies for Developing a WBS

Apply guidelines. PMI has a practice standard you can follow [1]
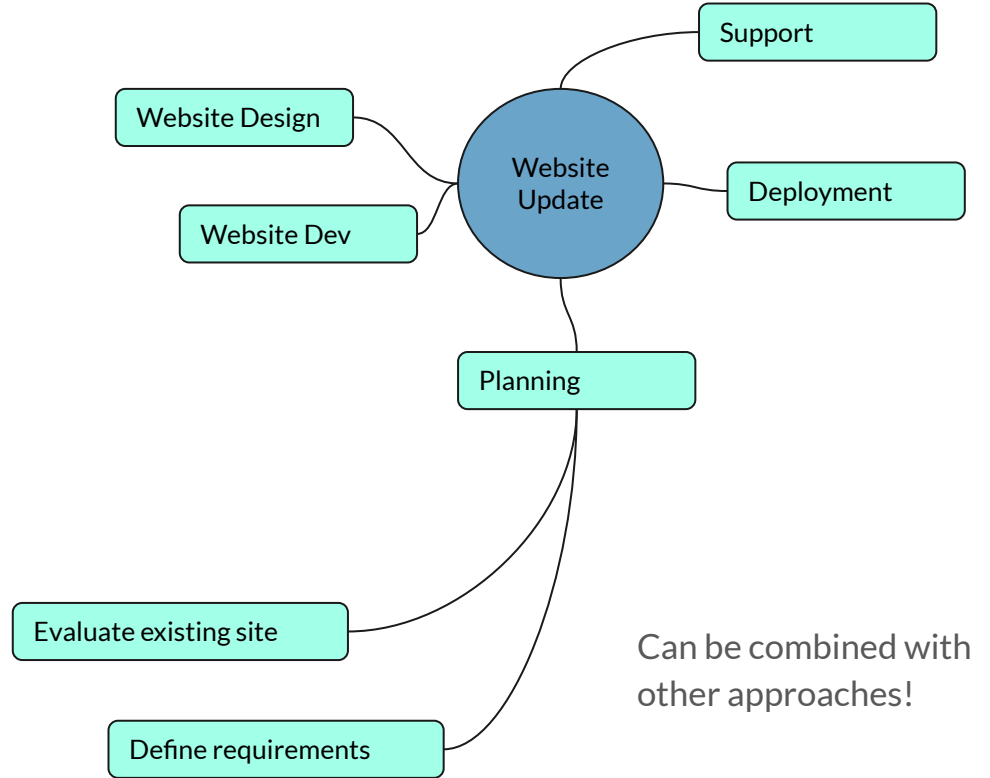
Use analogies. Model your WBS after similar projects

Use top-down or bottom-up approach.

Use mind-mapping. Free form or non-linear structure for capturing tasks and task breakdowns

Work Breakdown Structure (WBS)

Strategies for Developing a WBS

Mind Mapping

Website Design

Website Dev

Support

Website Update

Deployment

Planning

Evaluate existing site

Define requirements

Can be combined with other approaches!

Work Breakdown Structure (WBS)

Strategies for Developing a WBS

The WBS Dictionary

Provides detailed information about each item in the WBS

Not definition of *terms* (fine to have, but put in appendix)

Typically a short paragraph that describes each work package

Work Breakdown Structure (WBS)

Strategies for Developing a WBS

The WBS Dictionary

WBS ID	1.1.1
WBS Name	Evaluate current systems
Description	Although there are several known issues with the current website, the organization has yet to clearly identify and describe them. This package will identify all issues through a meeting and series of follow surveys to key stakeholders.

Work Breakdown Structure (WBS)

Strategies for Developing a WBS

General Advice

Identifying requirements and building an accurate WBS is hard! Practice and experience are key factors for success.

Although a WBS item may be carried out by multiple people, only one person should be responsible for its completion.

Do not develop the WBS in isolation. Include as many stakeholders as possible.

Ensure that each item in the WBS is in the Dictionary

Quiz

https://api.socrative.com/rc/**tsEjN7**

"Enter your name" = ***@uci.edu**

Next Class

Thursday 10/20

- Quiz 4
- Finish reading 5 & 6 and articles posted to course website

Team Management

Schedule Management

References

1. https://www.pmi.org/learning/library/work-breakdown-structure-basic-principles-4883
2.