An Introduction to Project Management

September 14, 2023
Session 1

Today's objectives
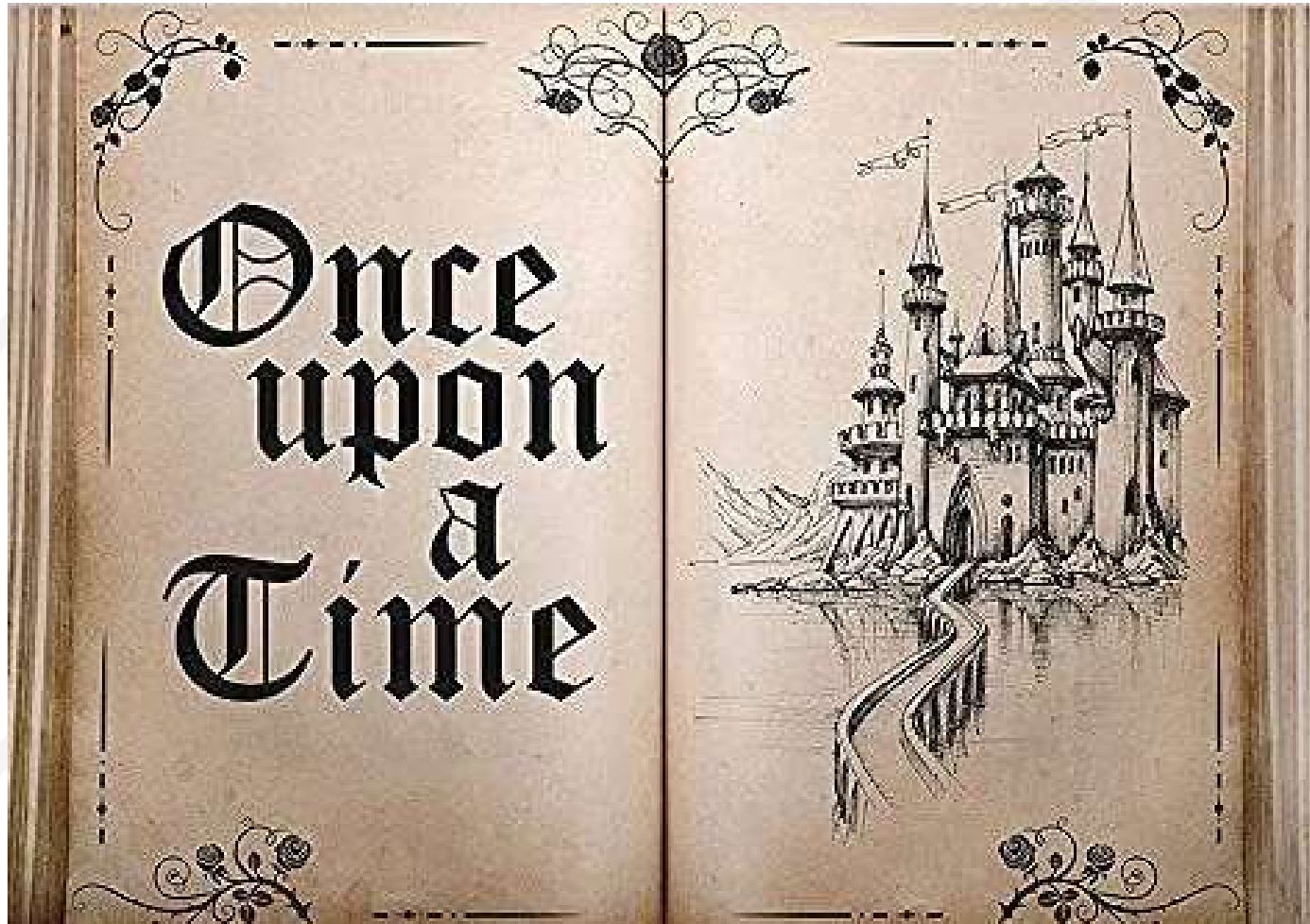
- Define "project" and "project management"
- Distinguish between a project and operations
- Describe the role of the project manager
- Explain the "waterfall" and "agile" approaches
- Highlight key tools used by project managers
- Discuss the benefits of project management
- Q & A session
- Plan for sessions 2, 3, and 4

Please introduce yourself to your neighbor

- Name
- Organization
- Experience with Project Management
- Favorite Fairy Tale

Fairy Tales and Projects

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

Project Management Institute (PMI). 2017. *A Guide to the Project Management Body of Knowledge (PMBOK Guide)* (6th ed.), p. 4.

"Project Management is the application of **knowledge**, **skills**, **tools**, and **techniques** to project activities to meet the project requirements."

Project Management Institute (PMI). 2017. *A Guide to the Project Management Body of Knowledge (PMBOK Guide)* (6th ed.), p. 10.

Projects originate from strategy or necessity

- Market demand
- Strategic opportunity or business need
- Social need
- Customer requests
- Environmental considerations
- Technological advancement
- Legal or regulatory requirements
- A current or predicted problem

Is it a project?

1. Developing a new mobile app
2. Onboarding new employees
3. Designing a new drug
4. Reducing employee hiring time
5. Unloading a moving van
6. Using an app to track customer complaints
7. Administering flu shots
8. Buying a new home

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

A Project:	NOT a Project:
1. Developing a new app	2. Onboarding new employees
3. Designing a new drug	5. Unloading a moving van
4. Reducing hiring time	6. Using an app to track complaints
8. Buying a home	7. Administering flu shots

The Role of a
Project Manager

The role of a project manager

- The role of a project manager is critical in ensuring the successful planning, execution, and completion of a project.

- Project managers are responsible for overseeing all aspects of a project, from initiation to closure.

- Their role can vary depending on the specific project, organization, and industry.

PM key responsibilities and roles

- Project Planning
- Scope Management
- Stakeholder Management
- Team Leadership
- Risk Management
- Resource Allocation
- Time Management

- Budget Management
- Quality Assurance
- Communication
- Conflict Resolution
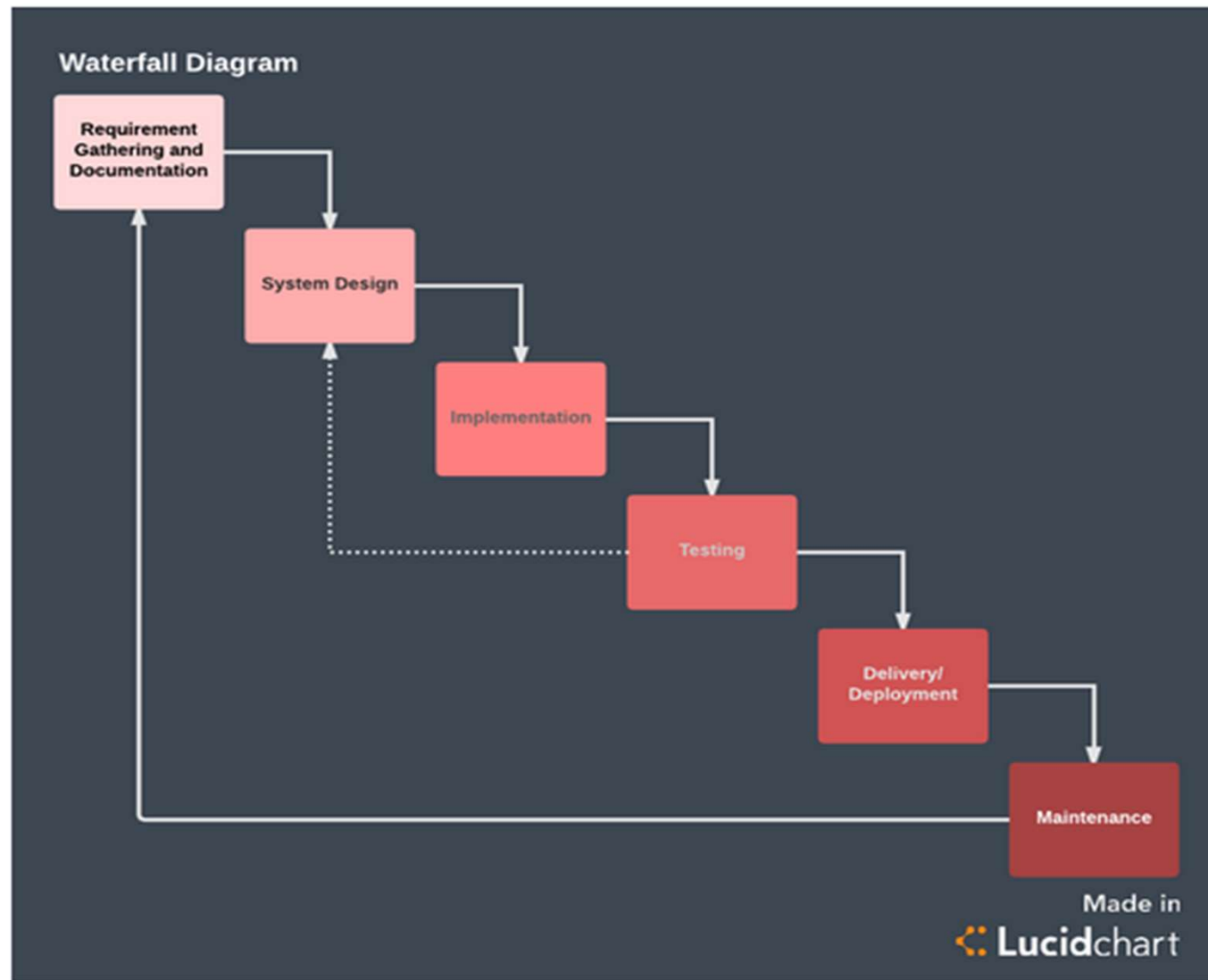- Closure and Evaluation
- Continuous Improvement

Project Management Waterfall Approach

A **waterfall approach** to project management uses:

→ a sequential methodology

   → divided into distinct & iterative phases

      → to achieve the project goals.

Waterfall diagram

See https://www.lucidchart.com/blog/pros-and-cons-of-waterfall-methodology

Waterfall Approach:
Project Management Process Groups

- ✓ Initiating
- ✓ Planning
- ✓ Executing
- ✓ Monitoring & Controlling
- ✓ Closing

Waterfall Approach:
Project Management Bodies of Knowledge
("PMBOK")

- Scope Management
- Time Management
- Cost Management
- Quality Management
- Resource Management

- Risk Management
- Communications Mgmt
- Procurement Mgmt
- Stakeholder Engagement
- Integration Mgmt

Each **Process Group** has specific activities and deliverables.

PROJECT PROCESS GROUPS and ASSOCIATED ACTIVITIES & DELIVERABLES

INITIATING	PLANNING	EXECUTING	MONITORING/ CONTROLING	CLOSING
ACTIVITIES	**ACTIVITIES**	**ACTIVITIES**	**ACTIVITIES**	**ACTIVITIES**
Gather high-level information and requirements about project.	Build WBS Create project schedule Identify purchases Get quotes Define scope Identify risks Determine communications	Hold Kickoff Meeting Resources execute plan PM manage team / project Make purchases Ensure scope is adhered to Communicate Deliver product	Status meetings / reporting Change control activities	Transition to support Store documents Collect final invoices Finalize budgeted & actual costs Conduct Lessons Learned Write closeout report
DELIVERABLES	**DELIVERABLES**	**DELIVERABLES**	**DELIVERABLES**	**DELIVERABLES**
• Project Charter	• WBS • Project Schedule • Budget • Scope Document • Risk Plan • Communication Plan	• Work to be completed • Product and documents • Product / service	• Status Reports, metrics, information • Change Control documents	• Closeout Reports • Final budget • Support documents

Example: Stakeholder Engagement

Processes:
- Identify Stakeholders
- Plan Stakeholder Management
- Manage Stakeholder Engagement
- Control Stakeholder Engagement

Tools & Techniques:
- Communication skills
- Conflict management and negotiation skills
- Cultural awareness & political awareness

Project Manager Actions:
- ❏ Performs stakeholder identification, analysis, and risk management
- ❏ Assesses their influence, level of involvement and potential impact on the project
- ❏ Develops the Stakeholder Register
- ❏ Develops the Stakeholder Engagement Plan
- ❏ Executes, monitors & controls the plan

Example: Communications Management

Processes:
- Plan communications management
- Manage communications
- Control communications

Tools & Techniques:
- Communication requirements analysis
- Expert judgment, interpersonal skills
- Communication technology & methods
- Effective meetings & documentation

Project Manager Actions:
- ❑ Focuses on information and communication needs of project stakeholders; conducts requirements analysis
- ❑ Builds an effective project team
- ❑ Plans how to store, maintain, distribute, and retrieve project information and documentation; manages related processes.
- ❑ Creates Communications Plan, documenting expectations so project information reaches the people who need it, in the form and level of detail need for their roles.
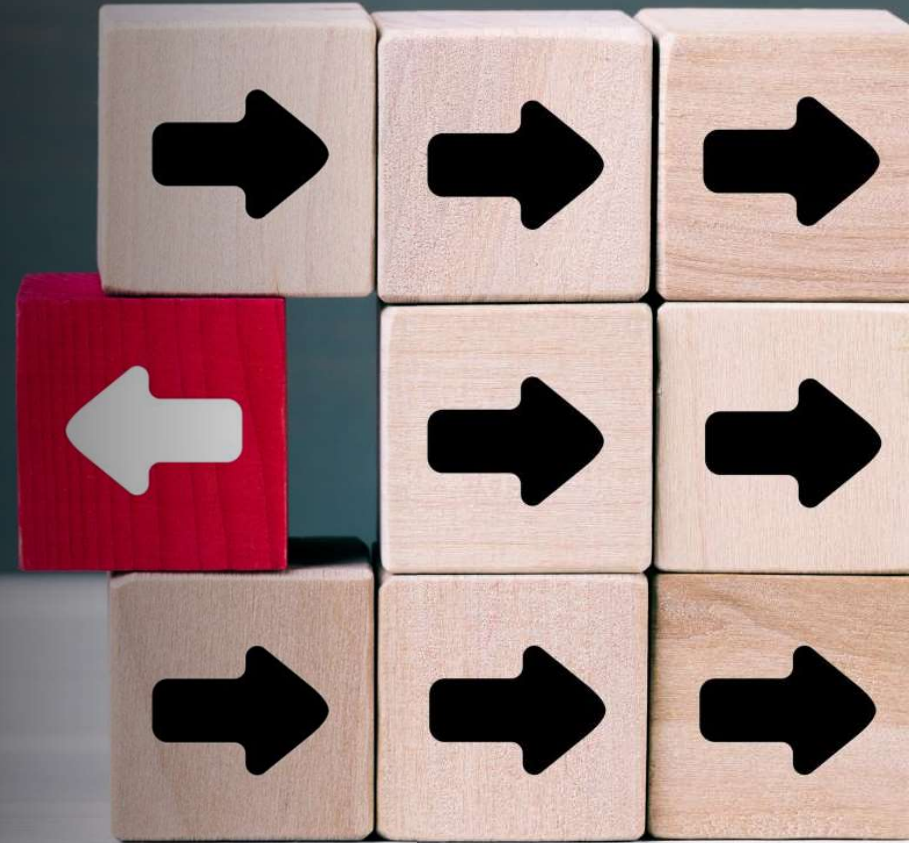- ❑ Executes, monitors & controls the communication plan

Waterfall (R)evolution

The linear, sequential approach to some projects is the right fit if structure and predictability is key to success.

A hybrid approach – taking the best of waterfall and blending it with greater flexibilities, like those used in an agile environment – is evolving.
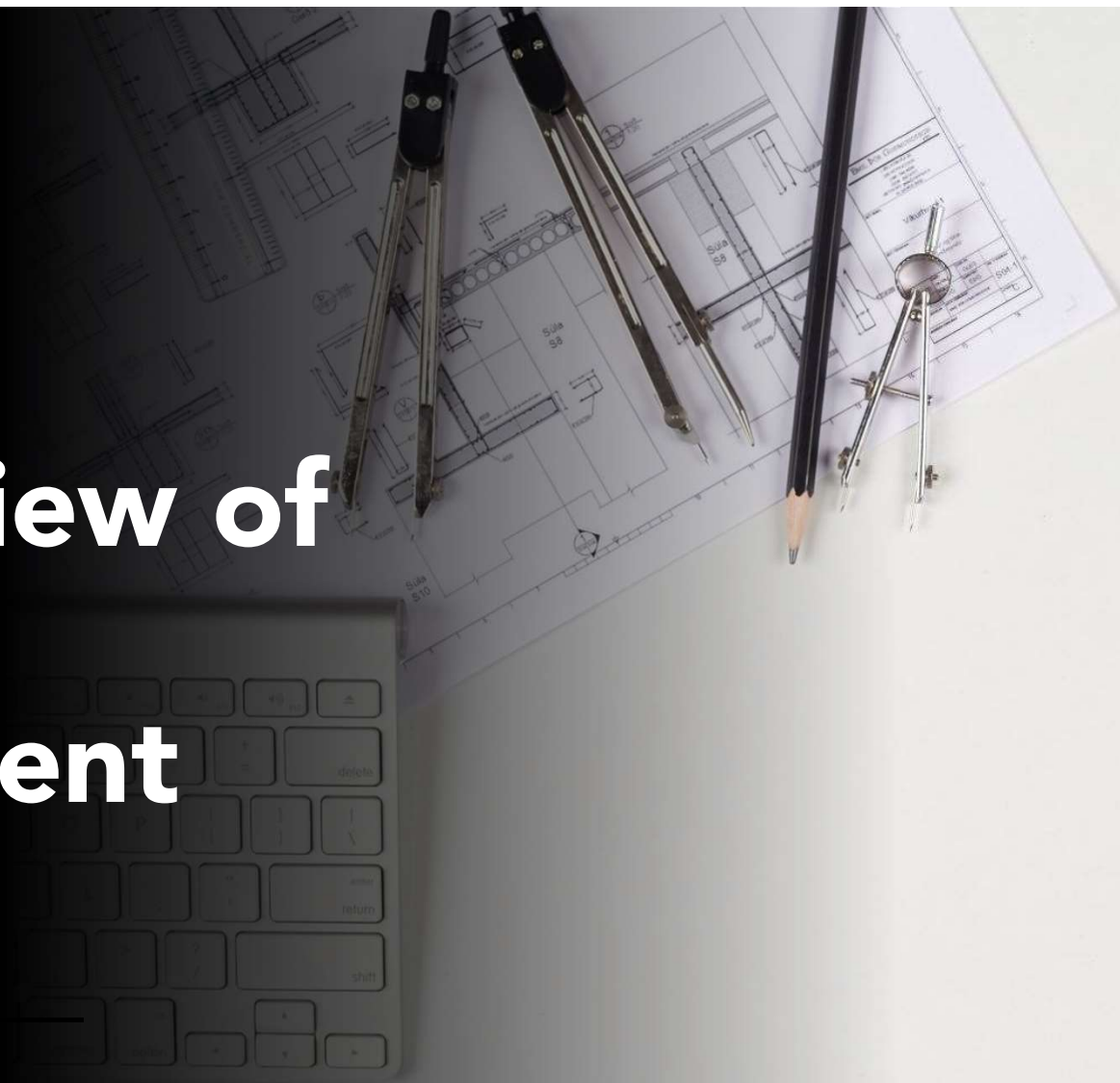
Agile
Methodology

Agile methodology is...

...a flexible and iterative approach to project management that focuses on delivering value to customers or stake-holders through frequent, incremental, and collaborative work. It is widely used in software development but can be applied to various types of projects

Detailed description of Agile methodology

- Iterative and Incremental
- Customer-Centric
- Cross-Functional Teams
- Product Backlog
- User Stories
- Sprints
- Daily Standup Meetings

- Continuous Testing and Quality Assurance
- Frequent Deliveries
- Retrospectives
- Adaptability
- Visual Tools

An Overview of Project Management Tools

Sampling of Project Management Tools

- Stakeholder List
- Problem Statement
- Scope Statement
- List of Requirements
- WBS
- Task Estimates
- Gantt Chart

- Organization Chart
- Responsibility Matrix
- Budget
- Risk information forms
- Risk log
- Management Plans
- Request for proposal
- Project schedule

Stakeholder List

Name	Title	Department / Company	Objectives, Requirements and Interests
Fairy Godmother	Godmother	Heaven	Help Cinderella find her true love
Cinderella	Young Maiden	Home	Escape her current life

Name	Level of Influence (High, Medium Low)	Contributions	Concerns
Fairy Godmother	High	Love and magic	Cinderella gets home before midnight
Cinderella	High	Willingness to try	Does she have faith in herself

Problem Statement

Cinderella cannot escape her current life and enjoy her rights, freedom, and inheritance. She is given rags to wear, is treated like a slave and is not allowed to meet new friends, especially those who might want to court her.

Cinderella dreams of going to a royal ball, engage with society, and use her skills to contribute to society but this cannot be done due to her mean and controlling stepmother and stepsisters.

Scope statement

Cinderella and her team arrange for Cinderella to go to the royal ball, arriving at 8 pm in an elegant horse drawn carriage. She is wearing a beautifully fitted gown and enjoys all the other items shown in the list of requirements.

Cinderella networks with nobility who give her insights of how to escape her current circumstances and overcome her adversaries controlling influence.

List of requirements

- *Magic*
- Enclosed coach
- 4 white horses
- 2 footman
- Arrive at 8pm
- Leave at midnight
- Blue chiffon ball gown
- Pair of glass slippers

- Tiara
- Quartz crystal teardrop earrings
- Quartz crystal necklace
- Above the elbow white gloves
- Makeup
- Perfume

WBS

Prepare for Ball

1. Clothing

1.1 Sew Gown

1.2.Sew Gloves

1.3 Create Slippers

2. Accessories

2.1 Make Tiara

2.2 Make Earrings

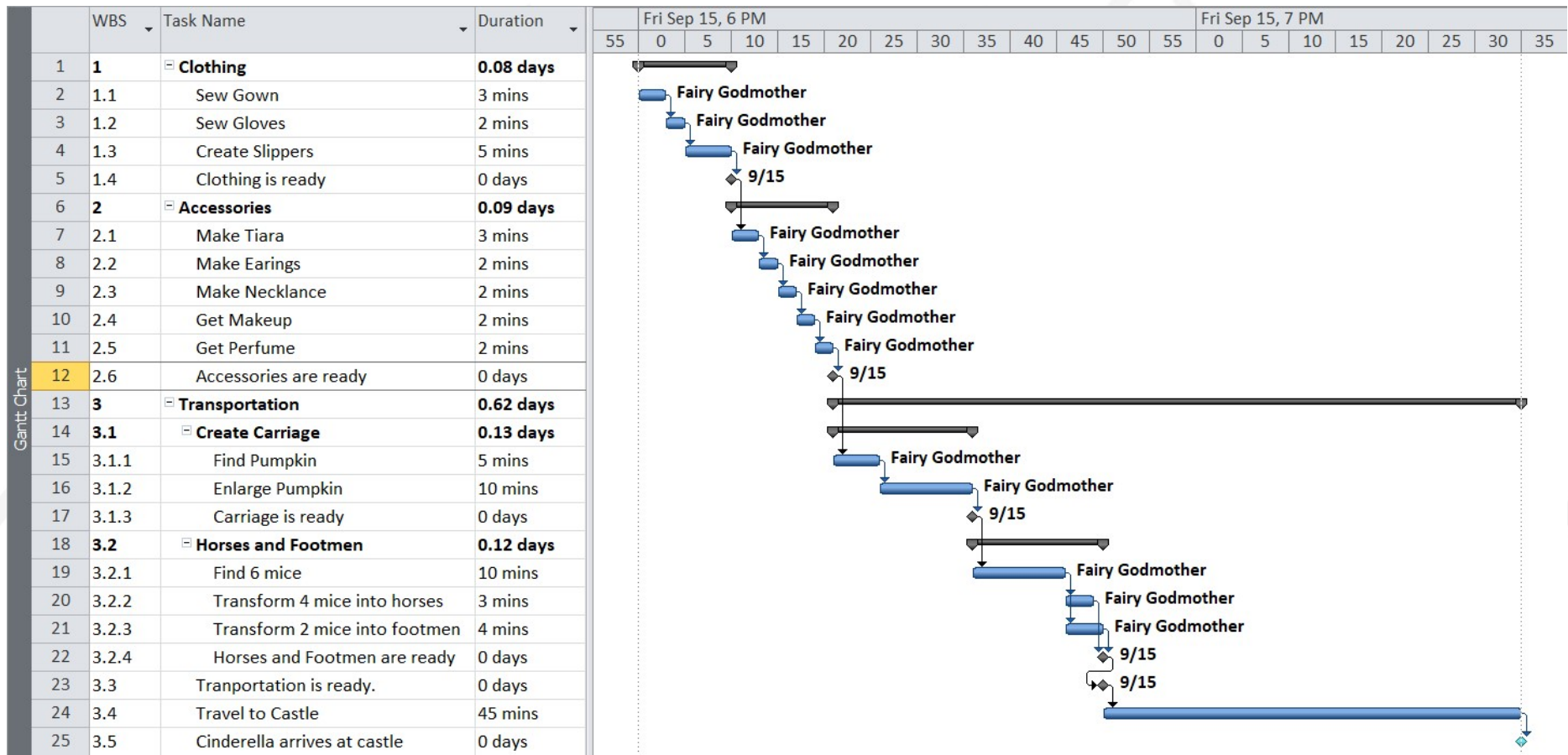2.3.Make Necklace

2.4 Get Makeup

2.5 Get Perfume

3. Transportation

3.1 Create Carriage
3.1.1 Find Pumpkin
3.1.2 Enlarge Pumpkin

3.2 Horses and Footmen
3.2.1 Find 6 mice
3.2.2 Mice into horses
3.2.3 Mice into footmen

Task Estimates

Task Name	Duration
Clothing	
Sew Gown	3 mins
Sew Gloves	2 mins
Create Slippers	5 mins
Accessories	
Make Tiara	3 mins
Make Earings	2 mins
Make Necklance	2 mins
Get Makeup	2 mins
Get Perfume	2 mins

Task Name	Duration
Transportation	
Create Carriage	
Find Pumpkin	5 mins
Enlarge Pumpkin	10 mins
Horses and Footmen	
Find 6 mice	10 mins
Transform 4 mice into horses	3 mins
Transform 2 mice into footmen	4 mins
Travel to Castle	45 mins

Gantt Chart

	WBS	Task Name	Duration
1	1	⊟ **Clothing**	**0.08 days**
2	1.1	Sew Gown	3 mins
3	1.2	Sew Gloves	2 mins
4	1.3	Create Slippers	5 mins
5	1.4	Clothing is ready	0 days
6	2	⊟ **Accessories**	**0.09 days**
7	2.1	Make Tiara	3 mins
8	2.2	Make Earings	2 mins
9	2.3	Make Necklance	2 mins
10	2.4	Get Makeup	2 mins
11	2.5	Get Perfume	2 mins
12	2.6	Accessories are ready	0 days
13	3	⊟ **Transportation**	**0.62 days**
14	3.1	⊟ **Create Carriage**	**0.13 days**
15	3.1.1	Find Pumpkin	5 mins
16	3.1.2	Enlarge Pumpkin	10 mins
17	3.1.3	Carriage is ready	0 days
18	3.2	⊟ **Horses and Footmen**	**0.12 days**
19	3.2.1	Find 6 mice	10 mins
20	3.2.2	Transform 4 mice into horses	3 mins
21	3.2.3	Transform 2 mice into footmen	4 mins
22	3.2.4	Horses and Footmen are ready	0 days
23	3.3	Tranportation is ready.	0 days
24	3.4	Travel to Castle	45 mins
25	3.5	Cinderella arrives at castle	0 days

Sampling of Project Management Tools

- ✓ Stakeholder List
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- Organization Chart
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Excuse me...

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Do I really need all these tools and methods?

Question & Answers

Plans for sessions 2, 3, and 4