

# SE 329 – Software Project Management

## Project Planning

Lotfi ben Othmane

# Goal

1. What is project planning?
2. Why do we need it?
3. When do we do it?
4. What does it include?

# Project Planning

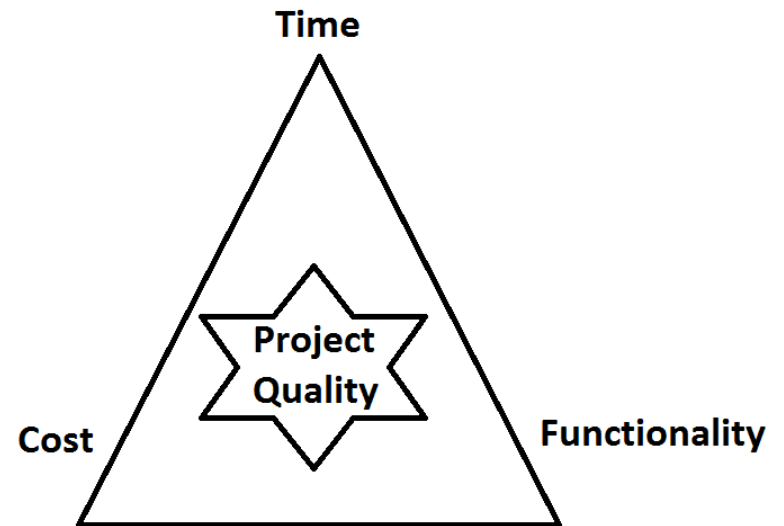
In preparing for battle I have always found that plans are useless, but planning is indispensable.



Dwight D. Eisenhower  
(1953-1961)

# Project

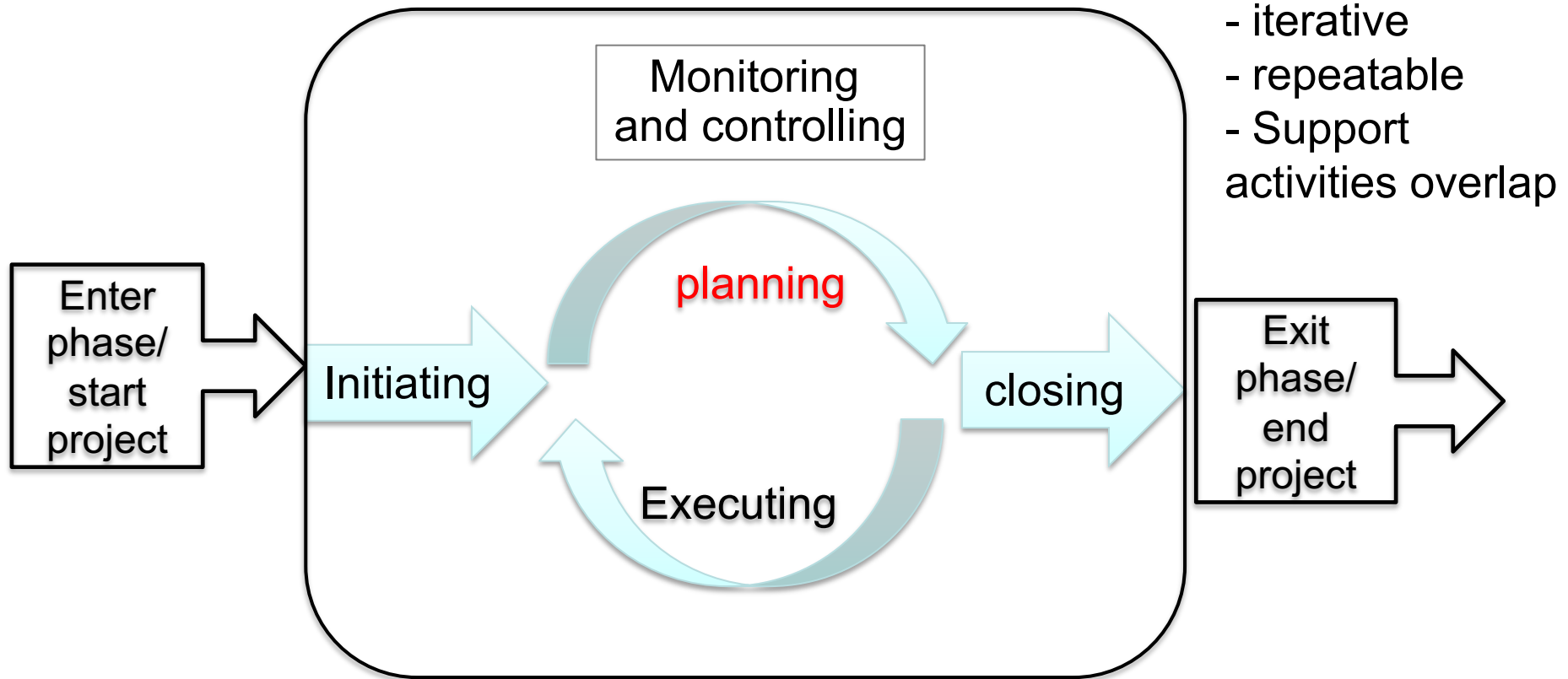
A project is a temporarily end-over undertaken to produce a set of outcomes.



# Project Management Plan

A project plan is a document that describes how the project is **executed, monitored, and controlled.**

# Planning Time



# Need for Project Plan

Plan to avoid

1. loss of revenue or profit
2. contract penalty
3. loss of clients
4. high cost
5. resource waste
6. reputation damage

# Content of Project Plan

1. Project scope
2. Stakeholders
3. Solution
4. Schedule
5. Budget
6. Risk
7. Quality management
8. Human resources
9. Communication
10. Change management
11. Intellectual property



# Scope

- The scope would be more clear when we develop the plan → we have more details.

→ Then,

- Scope baseline is to be refined
- Deliverables are to be refined
- Solution is to be refined
- Budget is to be refined
- Timeline is to be refined

# Stakeholders



Users  
How do I..?

How will this make us better, faster, profitable?



Customers

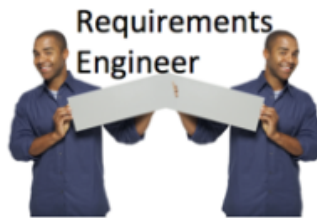


Services



Project Manager

How long will it take?  
How many people do I need?  
What does the customer want?  
What's my budget?  
What are the risks?  
...



Requirements Engineer

What are the goals?



Product Manager

What will it cost?  
How much will we make?



Developers  
What am I supposed to implement?



Marketer  
How many can we sell?



R&D Manager  
What are the technological risks/breakthroughs?

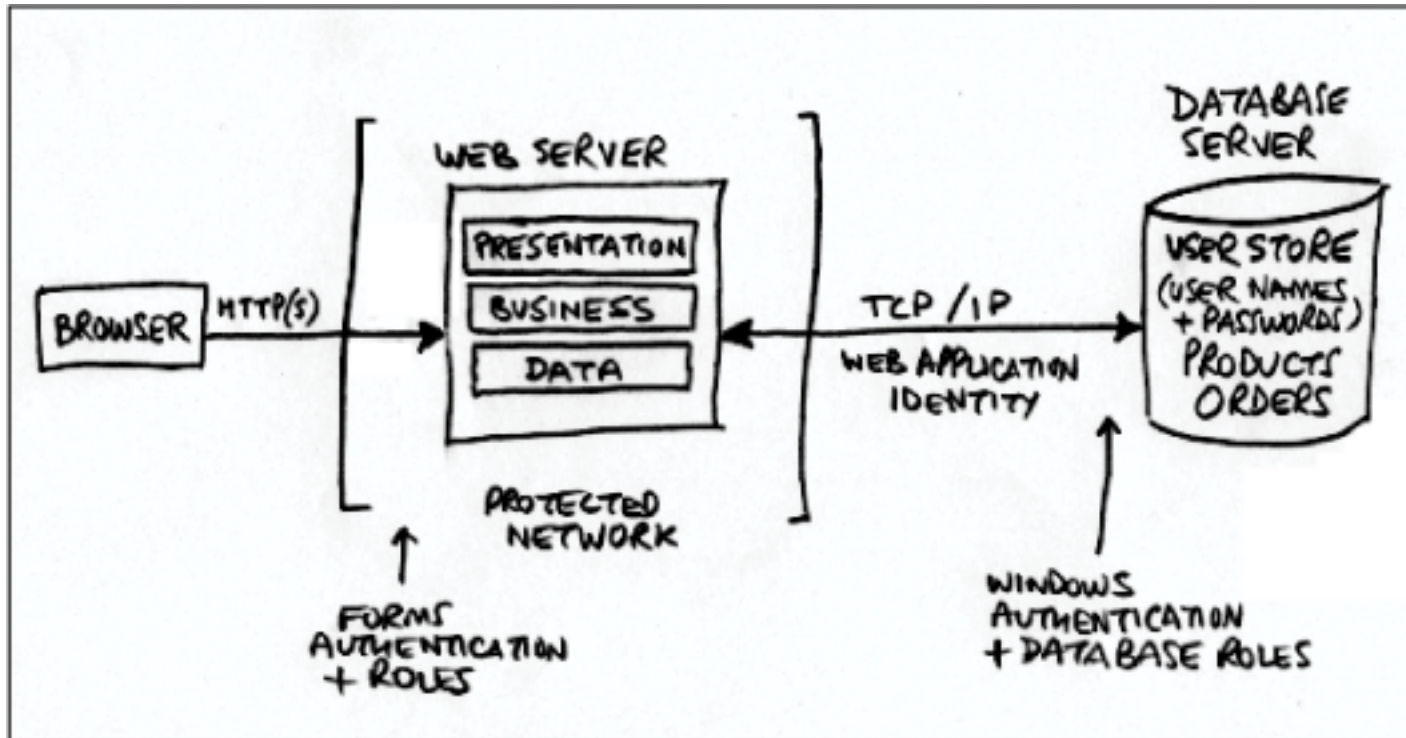


Tester  
What tests should I run?



Architect  
What are the design constraints?

# Solution



[www.microsoft.com](http://www.microsoft.com)

# Project Schedule

- Planning is performed at the start of the project for all development models, but with different degree of details.
- Revise the plan as the project progresses



<https://www.scruminc.com/product-backlog-item-pbi/>

“Long-range planning works best in the short term.” ~*Euripides*

# Project Schedule

- Planning could be implicit or explicit!
- Planning could be performed on different stages:
  - Plan for the project
  - Plan for cycles



<https://www.scruminc.com/product-backlog-item-pbi/>

# Schedule

Home My page Projects Easy Gantt Administration Help

## Business Implementation of Easy Redmine

Search:

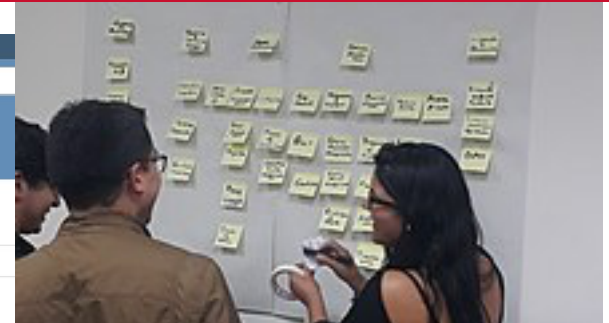
Overview Activity Roadmap Issues New issue Gantt Documents Easy Gantt Settings

### Issues gantt

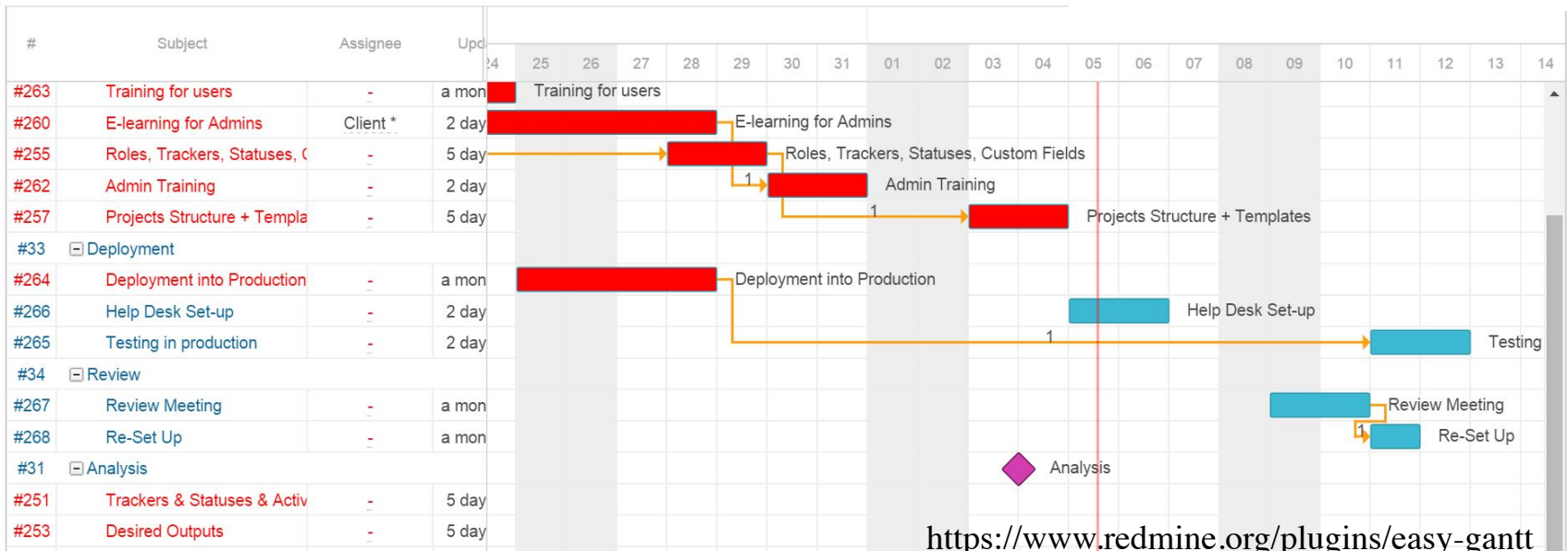
▸ Filters  
▸ Options

✓ Apply 🗑️ Clear

🏠 Back 🖨️ Print 📅 Days 🔍 Weeks 📅 Months ✎ Edit ➕ New Issue 📊 Resource manager



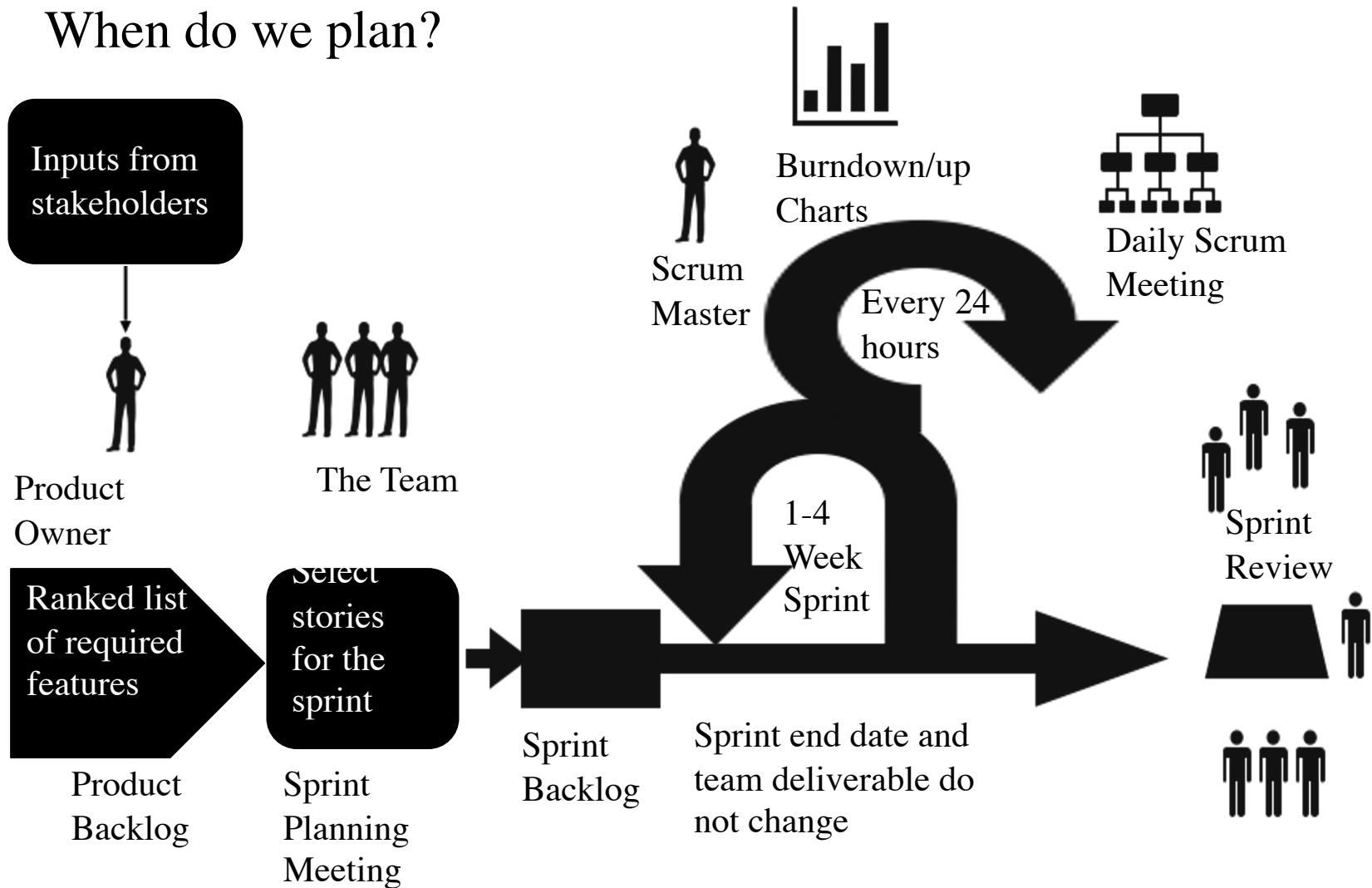
<https://id.wikipedia.org/wiki/Berkas:Project-wbs.jpg>



<https://www.redmine.org/plugins/easy-gantt>

# Project Schedule in Scrum

When do we plan?



# Budget

- A budget needs to include HR cost
- In addition, it includes the cost of the hardware to be used and administrative cost
- The budget needs often to be split based on the deliverables -- the customer may pay each deliverable separately.

No	Part	Description	Price
1	Raspberry PI 3	Runs the Fleet Data Collector component	\$69.99
2	PICAN2	Communicates with the vehicle's CAN-bus	\$48.95
3	OBD-II - DB9 cable	Connects the PICAN 2 to the vehicle's OBD-II	\$10.09
4	Adafruit Ultimate GPS	Gets the current position	\$39.95
5	Hologram Nova	Communicates the PI and the server through the cellular network.	\$54.00



# Risk

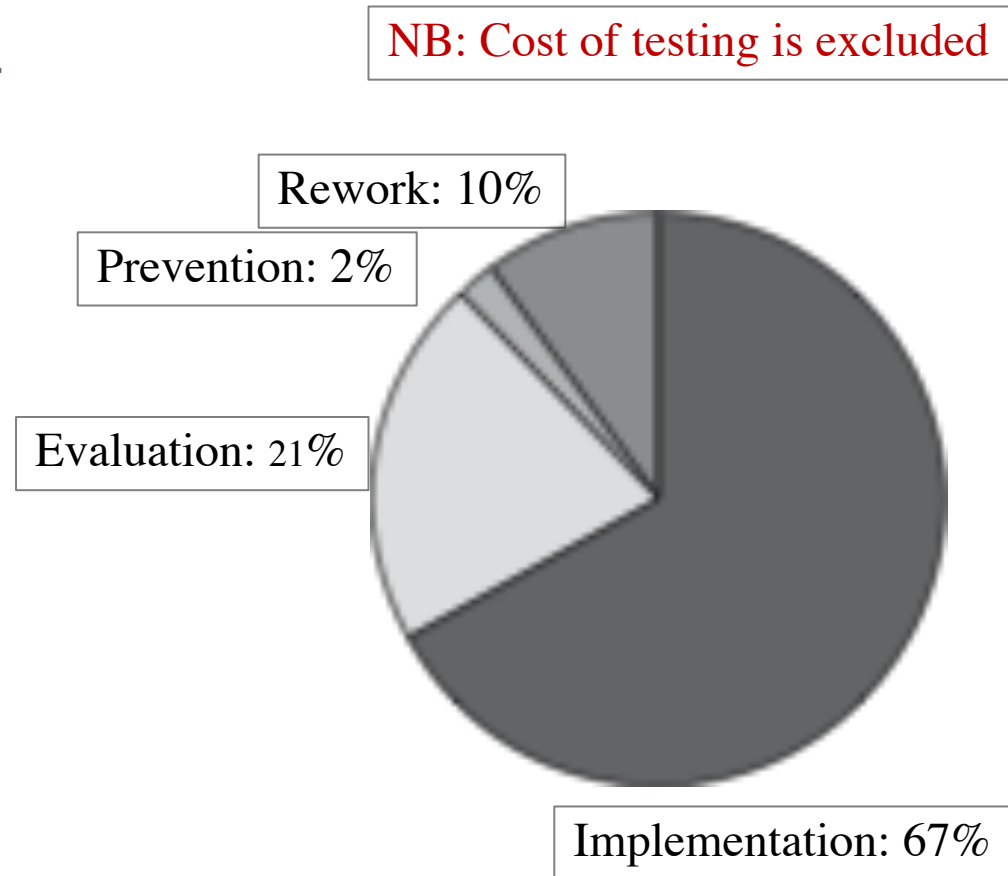
Details for each of the identified risks

1. Description
2. Occurrence
3. Impact
4. Exposure
5. Response strategy
6. Response
7. Etc.



# Quality Management

- Set QA requirements for the project
- Set rules for addressing defects
- Set a process of evaluations and reviews
- Decide on the tools to use in the project
- Identify criteria for customer acceptance



# Human Resource Plan

- What is the plan for acquiring the team?
  - How many? What skills?
  - How to hire the needed staff?
- How to develop the team?
  - How to train them?
- How to manage the team
  - How to track their performance?
  - How to solve conflicts?

# Communication Plan

Communication content	Communication objective	Frequency	Medium	Lead	Audience
Kick-off meeting	Introduce project	1	F-to-F	PM	Sponsors
Dev. Retrospectives	Status of PM	1 in 2 weeks	F-to-F	PM	technical team
Status report	Status to sponsors	Based on check points	Presentation Report	PM	Sponsor
....	....	....	....	....	....

And other information....

# Change Management

Define how changes (requirements and code) will be managed:

- Who approves what and when?
- What are the frequencies of changes?
- How to ensure success of the deployment?
- What is the escalation procedure?

=> Define a process and forms to use to monitor and control changes

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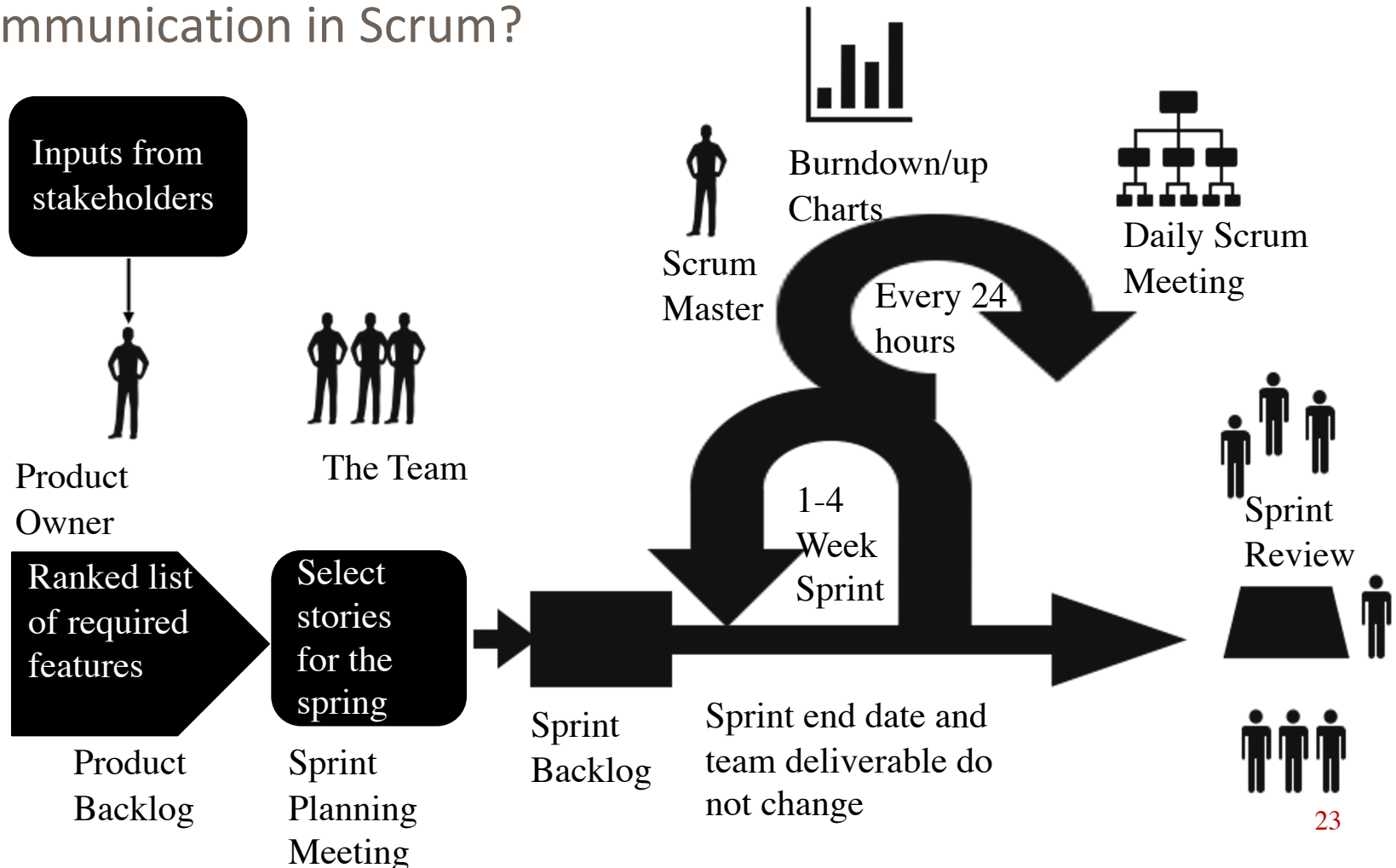
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# Project Planning in Scrum

**Discussion:** Do we plan for time, HR, quality, and communication in Scrum?



# Project Planning in Scrum

## ToDo List

ID	Story	Estimation	Priority
7	As an unauthorized User I want to create a new account	3	1
1	As an unauthorized User I want to login	1	2
10	As an authorized User I want to logout	1	3
9	Create script to purge database	1	4
2	As an authorized User I want to see the list of items so that I can select one	2	5
4	As an authorized User I want to add a new item so that it appears in the list	5	6
3	As an authorized User I want to delete the selected item	2	7
5	As an authorized User I want to edit the selected item	5	8
6	As an authorized User I want to set a reminder for a selected item so that I am reminded when item is due	8	9
8	As an administrator I want to see the list of accounts on login	2	10
<b>Total</b>		<b>30</b>	



“Those who plan do better than those who do not plan, even though they rarely stick to their plan.”



Winston Churchill

# SELF-CHECK

1. What is project planning?
2. Why do we need it?
3. When do we do it?
4. What does it include?