

Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

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| Date | 29 October 2022 |
| Team ID | PNT2022TMID46534 |
| Project Name | IOT Based Smart Crop Protection System For Agriculture |

Product Backlog, Sprint Schedule, and Estimation

Use the below template to create product backlog and sprint schedule

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority |
|---------------|--------------------------------------|--------------------------|--|---------------------|-----------------|
| Sprint-1 | Simulation Creation | USN-1 | Connect sensors, Arduino and esp8266 | 2 | High |
| Sprint-1 | Software | USN-2 | Develop an application with MIT App inventor (Login page with firebase) | 2 | High |
| Sprint-2 | Software and Hardware | USN-3 | Connect the hardware with IBM Cloud and API Integration | 2 | Medium |
| Sprint-2 | Software | USN-4 | Application development for project | 2 | High |
| Sprint-3 | Software | USN-5 | Establishing Node-Red connection | 2 | Medium |
| Sprint-3 | Software | USN-6 | Connecting application with Node-Red and further application development | 2 | High |
| Sprint-4 | Testing | USN-7 | Testing developed application and working model of hardware | 2 | High |

Project Tracker, Velocity & Burndown Chart:

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Completed (as on Planned Date) | Points End | Sprint Release Date (Actual) |
|---------------|---------------------------|-----------------|--------------------------|----------------------------------|---|-------------------|-------------------------------------|
| Sprint-1 | 16 | 5 Days | 25 Oct 2022 | 29 Oct 2022 | | | 30 Oct 2022 |
| Sprint-2 | 16 | 8 Days | 31 Oct 2022 | 07 Nov 2022 | | | 08 Nov 2022 |
| Sprint-3 | 16 | 6 Days | 09 Nov 2022 | 13 Nov 2022 | | | 14 Nov 2022 |
| Sprint-4 | 8 | 6 Days | 15 Nov 2022 | 17 Nov 2022 | | | 17 Nov 2022 – 18 Nov 2022 |

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$\begin{aligned}\text{TotalSprint} &= 4 \\ \text{Total Sprint Points} &= 56 \\ \text{Average Velocity} &= 56/4 = 14\end{aligned}$$

Burndown Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.

