Software Engineering Presentation

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Content

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01

Cost Estimation

-Project can Only Come together
  with all the necessary materials & labor
  & that Cost Money 💸

THIS IS BUSINESS

-Putting Together a budget that
  keeps cost ⬇️
  while ⬆️ 🆙 the Project Quality/Scope
  Can be Challenging !
  that's why Proper Cost Estimation is
  Important ✅

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Cost Estimation

Process of forecasting the financial & Other resources needed to complete a project within a defined Scope

01 Accounts for each element required

–From Material to Labor & Calculates a Total Amount for Project's budget.

02 Initial Cost Estimate can Determine

–whether an Org. → Greenlight's a Project ✅ or not ❌

03 if The Project Moves Forward

–estimate can be a factor in defining project Scope, Cost Estimate is Used to manage all of it's affiliated cost → keep project on budget 💰

Cost Estimation Types

Direct Cost

Indirect Cost

Different Elements of Cost Estimation

Cost Associated with Single Area
Such as Department or Project
Ex.– Fixed Labour, Materials, Equipment

Cost Associated with Organisations at Large
Such as Utilities & Quality Control
Ex.– Salaries of Executives, Utility Costs

Labours, Materials & Equipments, Facilities, Vendors, Risk

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02

Effort Estimation

-Process of forecasting how much effort is required → Develop & Maintain a Software

-This Effort is Traditionally measured in the hours worked by Person/Money needed to pay for work

-used to help draft project plans & budgets in early stages of Software Development

-this practice enables project manager/owner to accurately predict cost & allocate resources

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Effort Estimation in Agile

01 — In Agile

–**it is more Associated with Agile Methodology**

–Project Owner manages a list of Project Deliverables known as → Backlog they will estimate the Effort required to complete each item

–Rather than using time/Cost estimates, they will look at **User Stories** & **Story Points**
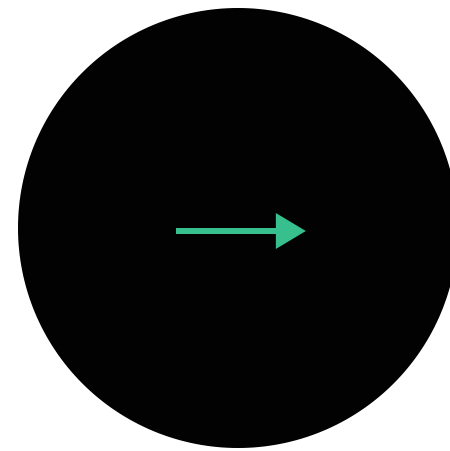
02 — User Stories

–is a **Tool Used to describe** a <u>Software Features</u> from the <u>Perspective of Consumer</u>

03 — Story Point

–is a **Unit** that measures **amount of work** in **implementing a user story**

–**taking into account** the <u>level of difficulty</u> involved & <u>potential risk</u> !

–Product owner will compare the features of new product with previous one to → determine complexity of their user story & assign Suitable Story points

Why Effort Estimation is Important ?

→

According to Forbes, estimation is "an Investment that you should factor into Software Development efforts of any Substance "

-is **Vital for Software Development process** as → it **helps teams to ensure a Product** is Developed & Delivered on Time!
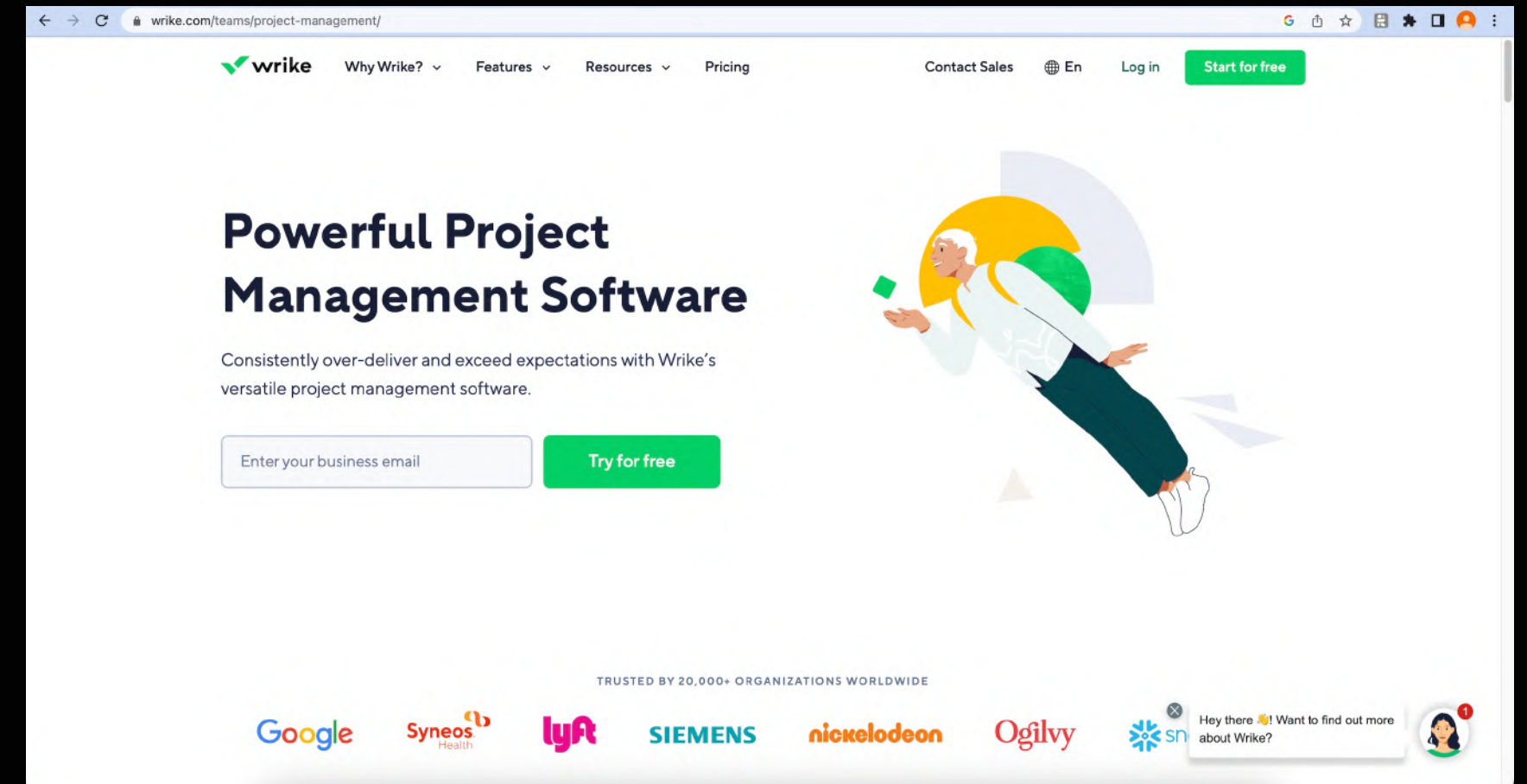
-For **Product Owners Specifically,** Effort Estimation enables them to Manage Resources

Pro Tip!

–Find Out How,
Wrike's Project Management Features
can help you Manage Effort Estimation   &
Achieve Success in Agile!

https://www.wrike.com/teams/project-management/

03
Work Breakdown Structure

-Breaking work into smaller tasks is a common productivity technique used to make the work more manageable and approachable.

The Work Breakdown Structure (WBS) is the tool that utilises this technique & one of the most important project management documents.

-it singlehandedly integrates scope, cost and schedule baselines ensuring that project plans are in alignment.

There are two Types of WBS :-

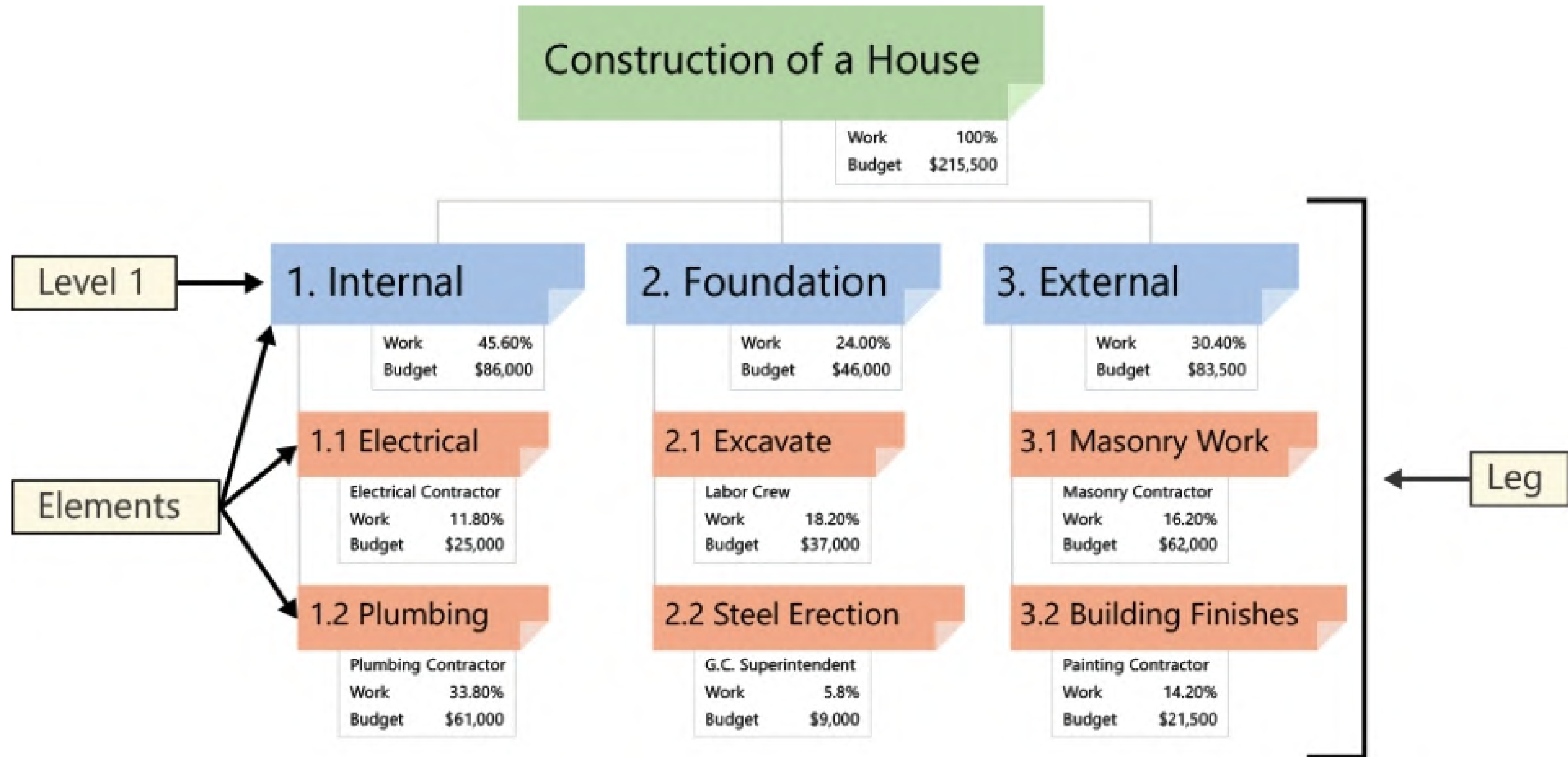| Deliverable-Based	Phase-Based
3 Levels	5 Levels

Types of WBS

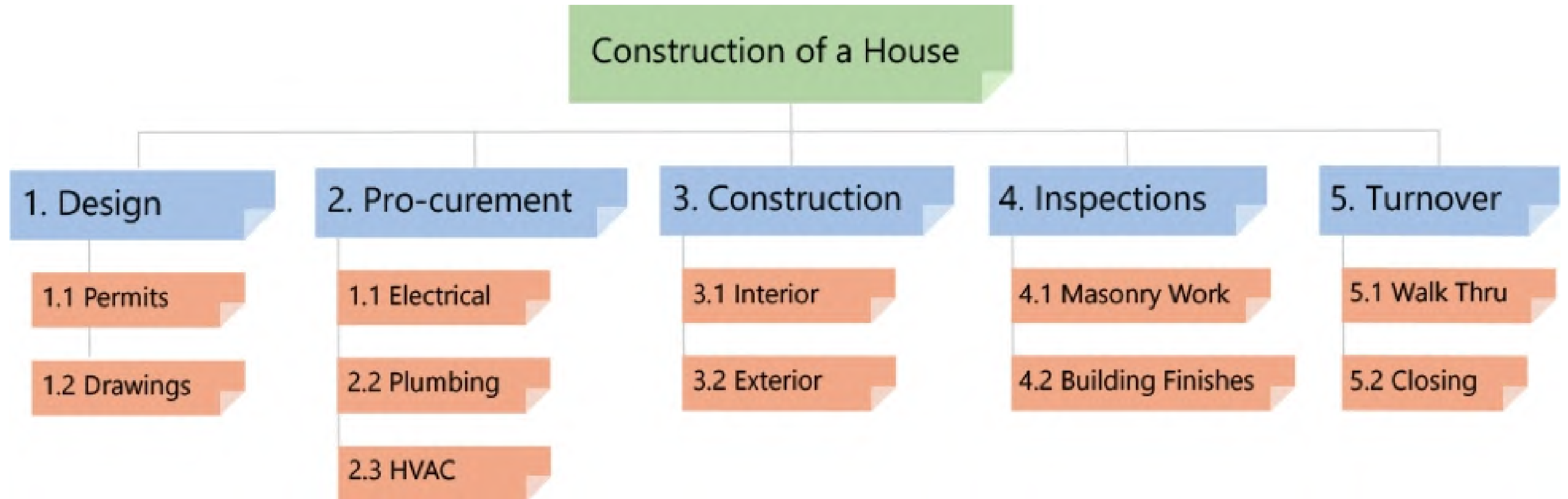## Deliverable-Based Work Breakdown Structure

- deliverable-based WBS will **break the project down into different areas of the project scope**, such as deliverables and work packages.

- It **clearly demonstrates the relationship between the project deliverables** (i.e., products, services or results) & **the scope** (i.e., work to be executed)

Phase-Based Work Breakdown Structure

- Phase-based WBS will divide the project into different phases.
A process-based WBS will have the overall project or deliverable at the top, with the different layers breaking the project up into different phases of work

- Phases can be broken down into subphases as needed to create an overall hierarchical outline of the work needed to be performed.
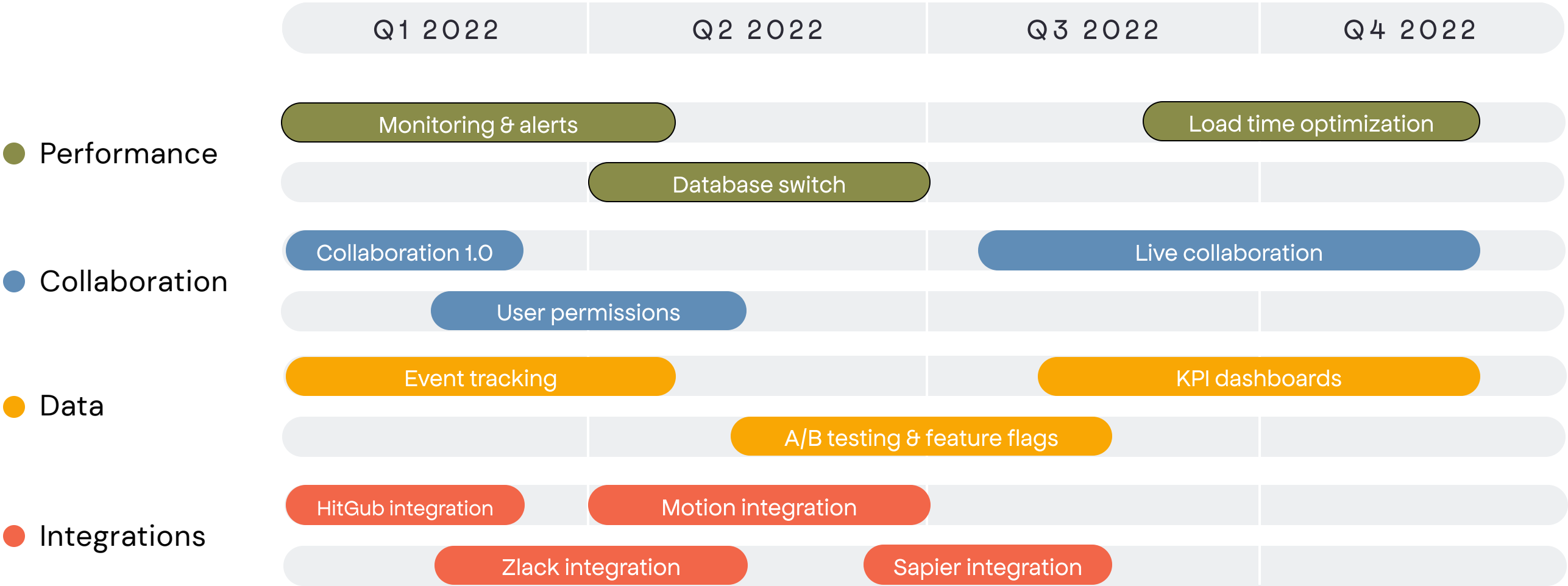
Deliverable Based Work Breakdown Structure

Phase Based Work Breakdown Structure

04

	Q1 2022	Q2 2022	Q3 2022	Q4 2022

Performance
- Monitoring & alerts
- Load time optimization
- Database switch

Collaboration
- Collaboration 1.0
- Live collaboration
- User permissions

Data
- Event tracking
- KPI dashboards
- A/B testing & feature flags

Integrations
- HitGub integration
- Motion integration
- Zlack integration
- Sapier integration

Gantt Chart

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Gantt Chart

–is a project management tool that illustrates a project plan.

Origin

- In early part of the 20th century → Henry Gantt revolutionised project management with Gantt charts.
- At that time, they were written out on pieces of paper.

Typically includes two sections

- Left side outlines → list of tasks
- Right side → timeline with schedule bars that visualize work.

Modern Softwares for Gantt Chart

- roadmap tools like → Jira Software include features like a collapsible task structure and resource management panels.

Gantt Chart

Reasons to use :-

Build and manage a comprehensive project

- Gantt charts visualize the building blocks of a project and organize it into smaller, more manageable tasks.

Determine logistics and task dependencies

- Gantt charts can be employed to keep an eye on the logistics of a project.
- Task dependencies ensures a new task can only start once another task is completed!

Monitor progress of a project

- As teams log time towards issues in your plan → you can monitor the health of your projects & make adjustments as necessary.

Benefits of using a Gantt chart

01 ## Makes easier to create complicated plans

- especially those which involve multiple teams and changing deadlines.

- help teams to plan work around deadlines and properly allocate resources.
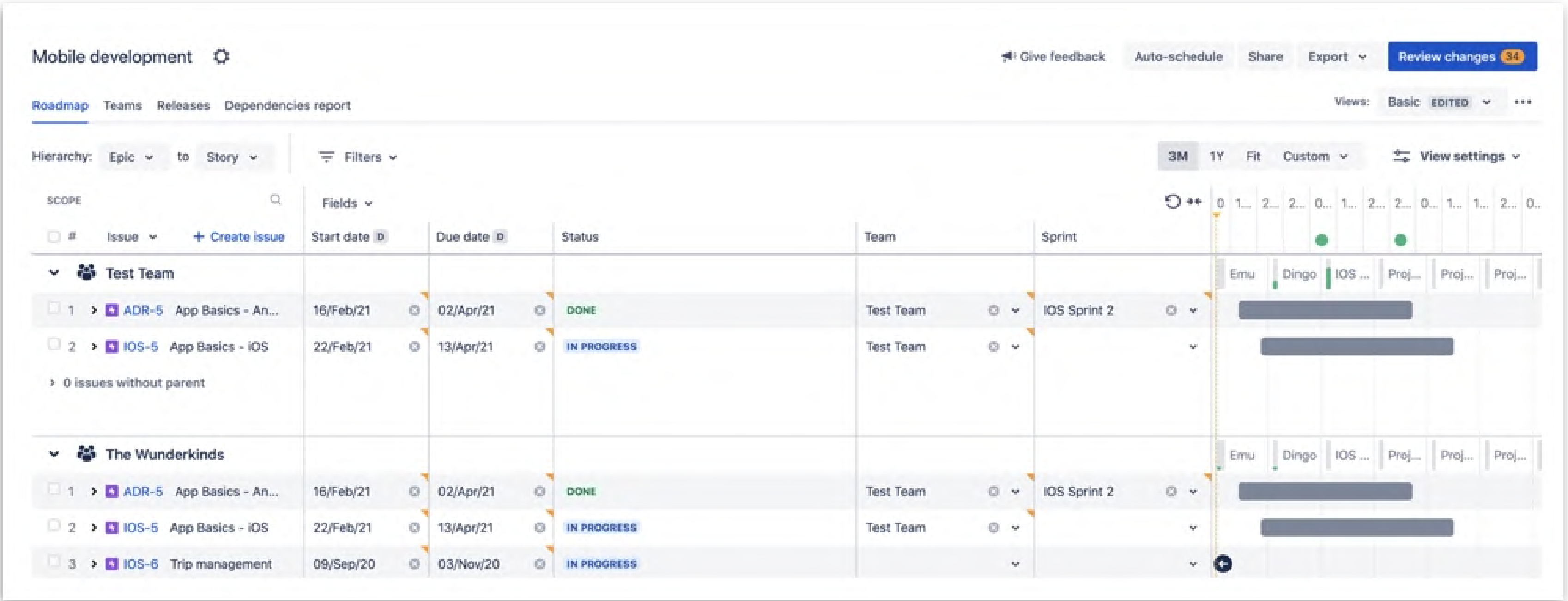
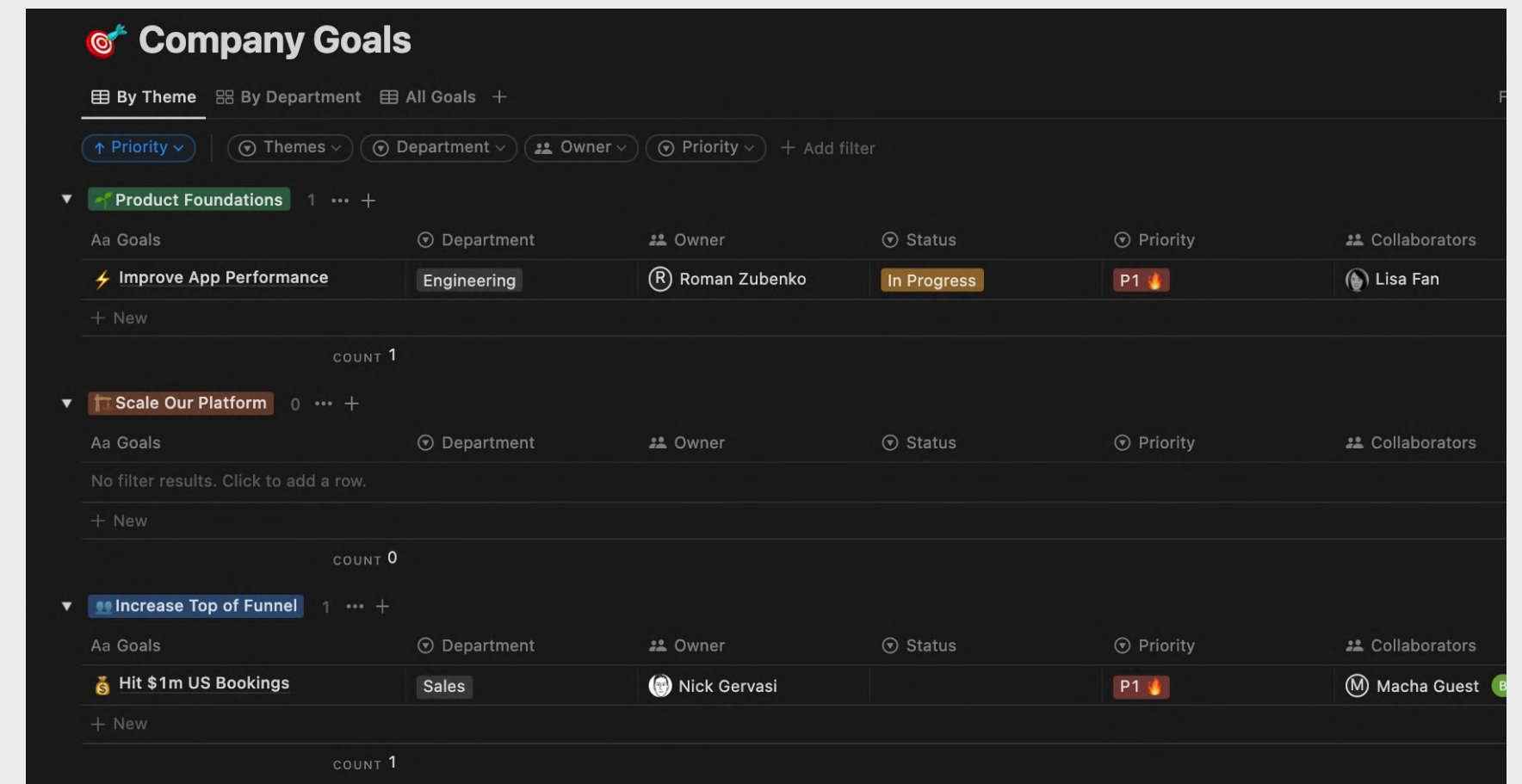**02** ## To maintain a bird's eye view of projects

- They depict, the relationship between the start and end dates of tasks, milestones, and dependent tasks.

- Modern Gantt chart programs also depict Roadmaps synthesise information and illustrate how choices impact deadlines
  Ex → Jira

Advanced Roadmaps

Pro Tip!

– We can use [N] **Notion** to Create a Timeline that looks like Gantt Chart, for Free !

https://www.notion.so/

Sources

https://www.workbreakdownstructure.com/

https://www.wrike.com/teams/project-management/

https://www.taradigm.com/what-is-a-work-breakdown-structure-wbs/

Thank you

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