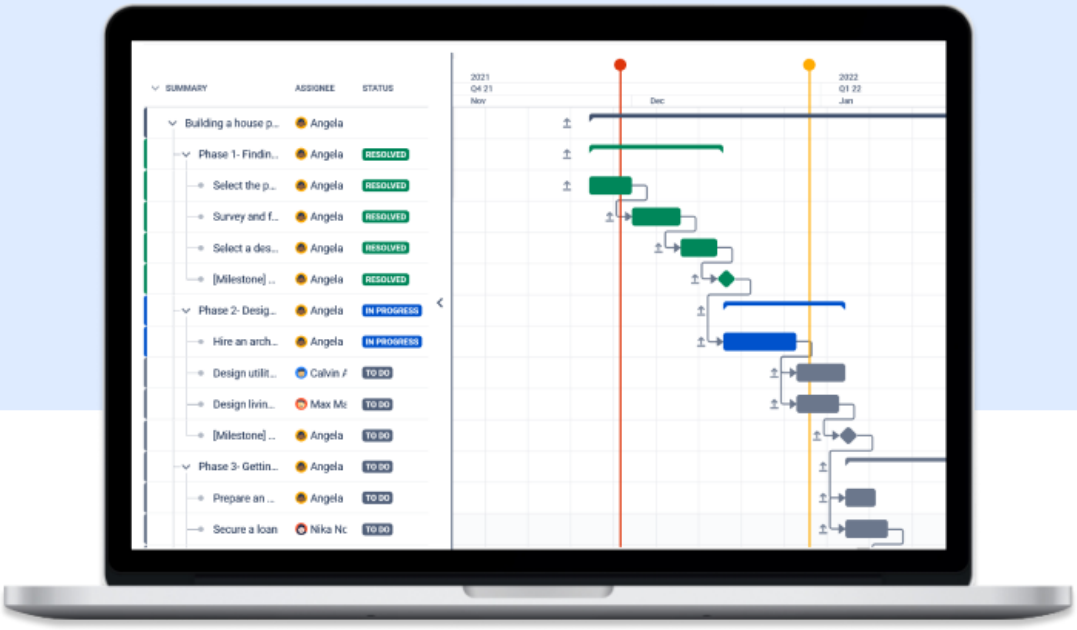


Gantt chart redesign

The Gantt chart is a timeline which illustrates the project schedule and help managers track work progress. I did its redesign in my previous company. I worked on BigPicture application - a tool for project portfolio managers - and the Gantt was one part of it.

ROLE

UX Designer & Researcher

TIME

01.19 – 08.20

Problem

Users reported difficulties in planning their projects in the Gantt chart. They lacked functions to improve their management process. We could not develop further improvements as the Gantt chart was based on old technology. Finally, we decided to change it.

Goals

At the beginning I set goals of the project with the Product Owner:

1. Improve management processes for waterfall and hybrid methodologies in the Gantt chart.
2. Refresh the look and feel of the module to match the rest of the app.

Exploratory research

To understand the foundation of user dissatisfaction, I wanted to look at the problem from various angles and all available sources. I used below methods.

Support tickets analysis

Consultant interviews

User interviews

Surveys

I analyzed problems sent by our users to Customer Support team. Together with Product Owner we categorized them on technical issues, pain point and feature ideas. From the Consultant Team I received information about the biggest clients. That helped me understand the scale problem. Small companies work and plan their projects differently than big ones, even if methodology is the same. Usually, bigger companies meant bigger needs. At the end, I scheduled seven interviews with our user to find out use cases of using our product. Having done that, using the simple survey method we ask customers to choose their main pain points and needs.

Key research insights

It is difficult to read the information from the chart, like dependencies.	It is hard to plan projects without clearly visible assignees and project dates.
The grouping function makes the chart hard to read. It is too gray and not all information is visible in the columns when turned on.	The timeline does not move smoothly, users cannot move tasks, drag dependencies, and scroll the timeline at the same time.
To zoom in or out on the timeline, the user must select a period and its aggregation time (week, month, etc.). This is too much thinking and clicking.	Users want to easily distinguish between tasks, from which projects or epics they are.
The high-level view (presenting years' time stamps) is useless because all parent tasks look the same. They are gray without status indicator and visible start and end dates.	

Users

To keep in mind problems and needs of users, I used our internal personas created by my teammates. I joint them with what we discovered during the research phase. Based on that with the Product Owner, we decided to focus on the main user needs.

For **Project Portfolio Managers**, it is crucial to receive information about upcoming milestones and deadlines. However, they do not want to feel overwhelmed by all information.

On the other hand, **Project Managers** need to monitor the status of the projects and the schedules, as well as supervise dependencies between teams and projects.

Competitive analysis

We are not the only app on the market that offers a Gantt chart. There are increasingly comparable products, such as Teamgantt, Proggio, Proofhub or GanttPRO, so we had someone to compare and inspire ourselves.

During analysis, I reviewed the features, wrote down their pros and cons, checked the layout, system feedback, or information architecture. I gathered all the information in Figma, so they were easy to access during design phase.

Jobs To Be Done

During the process, I referred to the 5-layer framework as there is no single user flow in complex applications. Gantt is a tool – it allows multiple actions, but users do not have to perform them in a linear order. We defined the most important Jobs to Be Done based on the first research phase and competitive analysis.

Building task structure

Linking tasks to each other

Scheduling projects

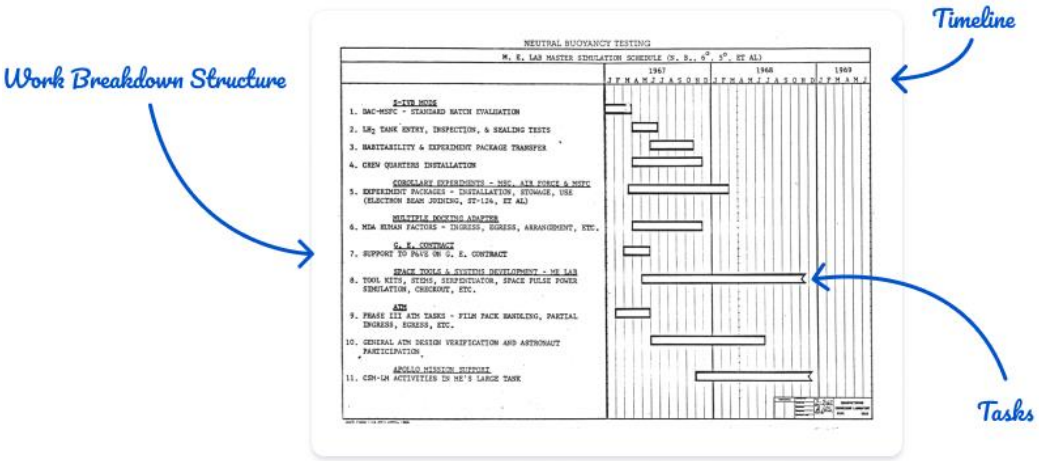
Marking valuable time in calendar

Zooming in and out on a timeline

Grouping tasks by status, epic, assignee

Information architecture

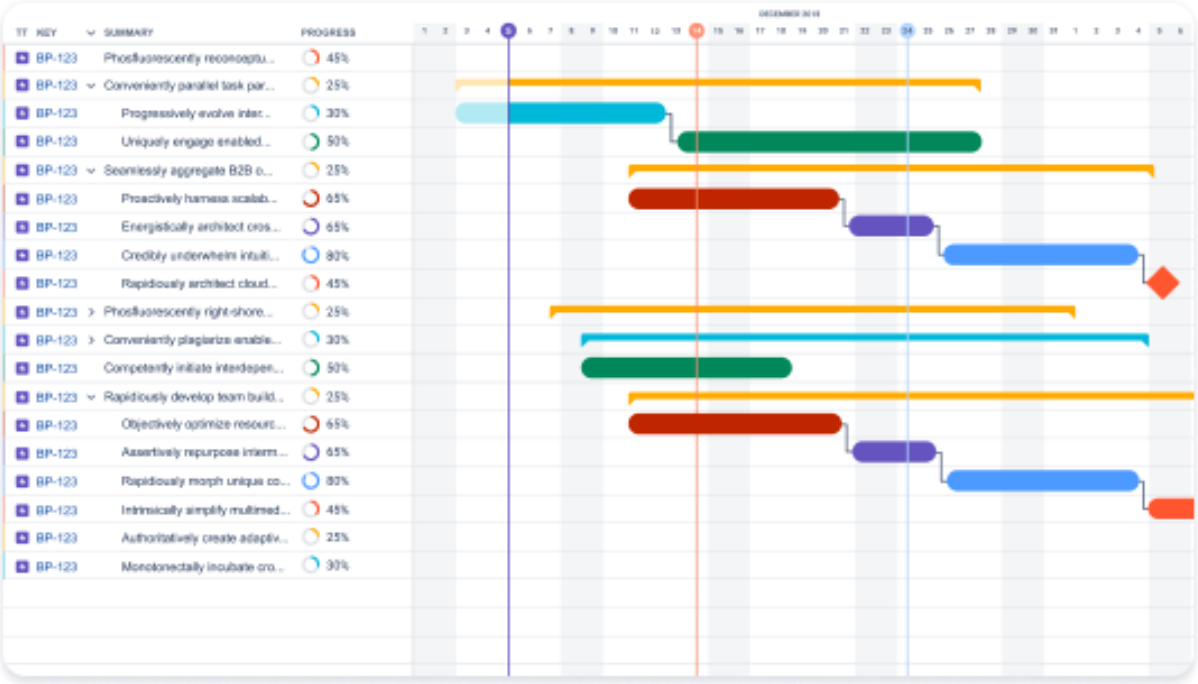
Users already have their mental models because Gantt charts have existed for around one hundred years. I arranged main elements as in traditional Gantt charts. Their order is logical and does not force users to change their habits.



Traditional Gantt chart

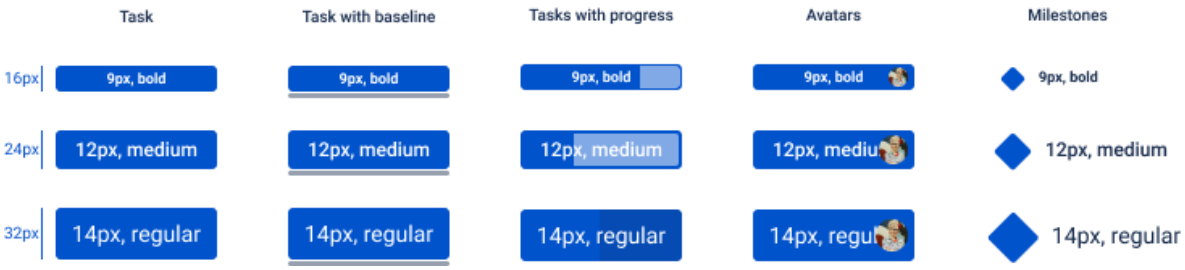
(Source: https://www.apm.org.uk/blog/a-brief-history-of-gantt-charts/)

Keeping that in mind, I created very first layout with an uncomplicated design.

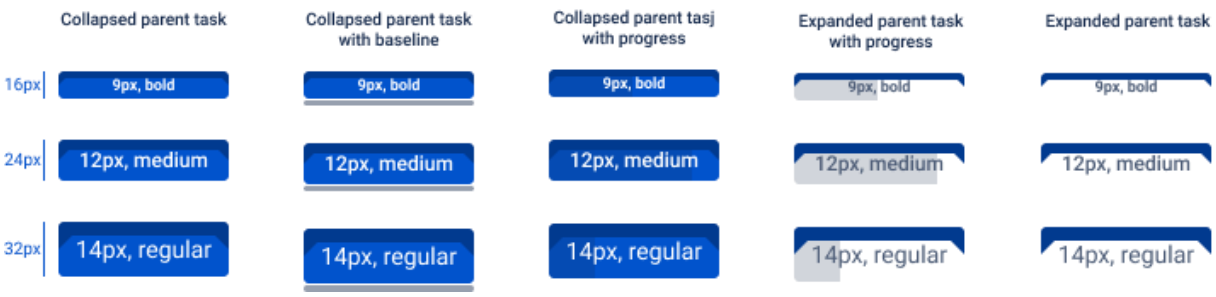


Task design

Tasks are at the heart of Project Managers' work. Depending on the user actions and the size of the chart rows, I adjusted the task states to their functions. I had to consider the height, font size, colors, task progress. Below I present the final design that matches the style of the application.



One of the needs of the users was to distinguish between 'parents' of tasks. Before that, they were always gray in the shape of a horizontal clip. I have added color to them and when users collapse them, they look like normal tasks, but their clip is still visible.

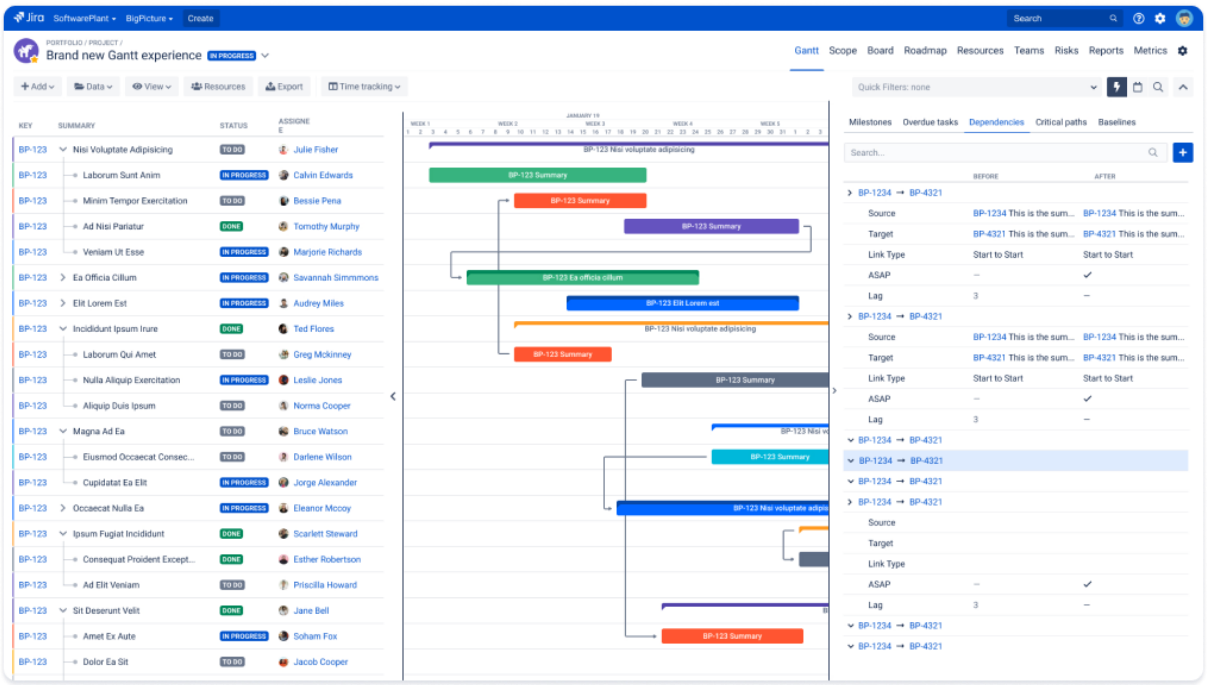


Dependency management

To have full control over all dependencies between tasks, projects, programs, or portfolios, we have created a sidebar with a quick overview of dependencies in this space. it is important to understand how they affect the timeline of your entire portfolio.

From the sidebar (which we called ‘infobar’), as well as from context menu, the user can jump from the beginning to the end of the dependency. These activities help to plan and reschedule tasks.

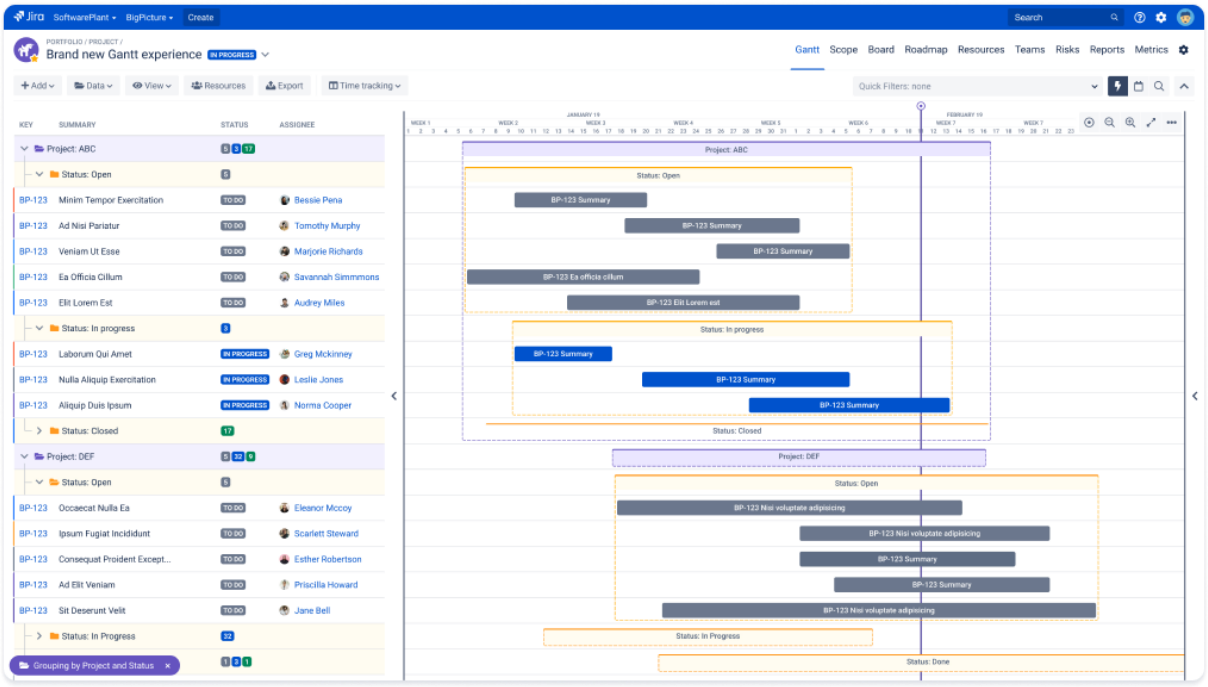
Finally, we improved the dependency dragging feature, and the timeline keeps moving when user drags the dependency. Previously, this manual action was useless and very frustrating for users.



Grouping

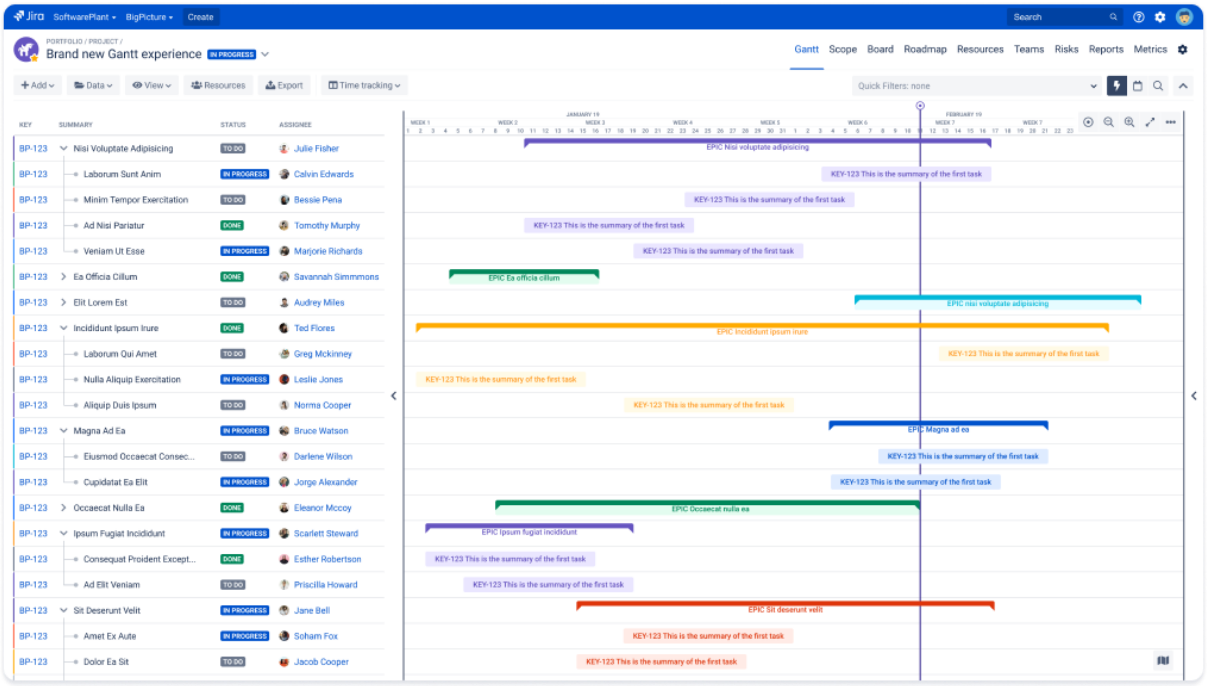
For better organization of tasks and structure planning, I focused on the grouping. Until now, the grouping was vague and gray. Users can choose a color to represent the group, and, in

the future, they will choose to color by epics, status, risk of others. In the previous version of Gantt, it was not visible where the groups start and end. Therefore, I added a clear structure to the left of the WBS and boundaries in the chart.



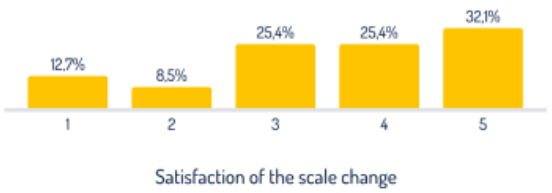
Epic management

At Jira Software, managers create Epics that represent a wide range of work. Sometimes tasks from one Epic split into multiple projects. For easier management, we defined grouping and coloring by Epics functions. This feature we will implement in the future due to technical issues.

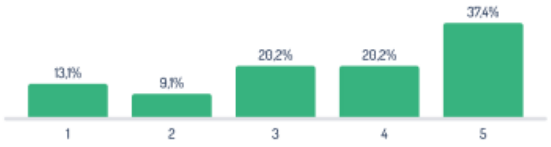


User feedback

During the development process, we created an alpha version of the Gantt chart to check the basic functions in the production environment. In the survey included in the application, we collected about five hundred responses. At least 50% of users were satisfied with the changes.

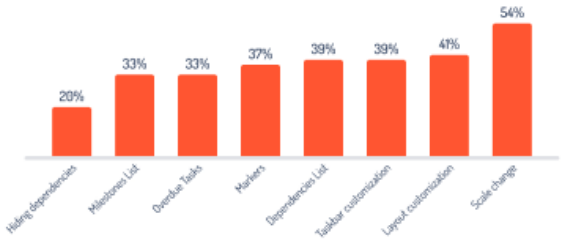


Satisfaction of the scale change



Effectivenes of creating and editing dependencies

Satisfaction of the taskbar personalization



Most useful Gantt's features

In addition to that, I organized moderated usability tests with our BigPicture LAB clients. During six sessions, I checked performance of the basic actions like creating dependencies, scale change, or grouping. I also watched the Hotjar recordings to see real user interactions with the latest version of the module.

Research findings

Most users like the new Gantt chart design because of its clarity and enhanced management capabilities.	Users prefer to customize their views (layout, tasks) and we will focus on this more in the future. Users supported the idea of preconfigured views.
At least half of our users are satisfied with the changes we have made in the new release, such as dependency management, rescaling, and taskbar customization.	The infobar is especially useful for users. They said it is extremely helpful in their management processes and they can navigate faster through individual items on the timeline.
Adjusting timeline scale occurred to be the most useful function of Gantt. It is important that users can easily navigate through the timeline.	Users prefer the new grouping, but still expect better coloring and more variables to group by. They would like to personalize the view more.

Majority of users have turned dates on next to tasks to see immediately when they start and end. This option is also available on mouse over.

Conclusions

I have never worked on such a large and complex project before. It required many meetings with stakeholders and users. But the MVP we prepared was better than we expected, which confirmed enthusiasm of the users.

We still need to improve some features, but the core of the Gantt chart itself is ready. With such a complex module, it was difficult to perform user testing until the project was ready. We tried this with static pages, but it did not give us useful feedback. Next time, we should quickly iterate solutions with imperfectly coded small fragments of the project and gather conclusions on the fly. Especially that the project was exceptionally long. During that time, we made a lot of compromises between business, tech, and user needs.

For me, it was new experience. As I earlier mentioned, Gantt chart actions are not linear, so I could not prepare one user flow. That was incredibly challenging. With many actions possible the most difficult part was checking if one action does not interfere with another. Close cooperation with developers really helped here. I learned that developers had a lot of experience in their field and have great ideas. They always explained me all tech solutions so we could choose the best one. I really appreciate that cooperation.