

Uniting Globally Distributed Resources for Maximum Profitability: Resource Management Software Outlook



Remote teams are a reality of today. Employment doesn't have any borders anymore, and managers can hire people regardless of their location based on what really matters: knowledge, skills, and experience. Besides, business owners can have their facilities around the world independent of their place of residence or other teams that aren't involved in production. This simplifies the process of candidate search and helps reduce costs, but at the same time complicates the further management of all these types of resources.

DIFFICULTY OF MANAGING GLOBALLY DISTRIBUTED RESOURCES



HUMAN FORCE

As mentioned before, remote work opens up a lot of opportunities for highly-skilled professionals and lets companies hire the best world talents and reach their business goals with their help. Together with that, it creates extra challenges for project and resource managers; especially it's relevant for mid- and large-scale companies that hire thousands of people to work on multiple projects. Let's overview some of the challenges a project or resource manager faces in this kind of environment:

► Keeping track of all resource-related information

A resource manager needs to know not only what knowledge, skills, and experience each team member has, but also monitor their capacity and availability. Make also a note of the necessity to update this data if an employee passed another exam or took a course and his/her skill set changed.

► Allocating resources across projects based on related data and priorities

If we're talking about a single project, it's not a big deal to allocate resources to tasks for its successful completion. But if we have a limited number of resources and

multiple projects running simultaneously (which is typical for many industries today), resource allocation becomes a “mission impossible”.

▶ **Predicting the demand level**

To plan projects’ flows and apply efficient allocation strategies, a project or a resource manager has to know how many resources will be needed to perform the planned scope of work. Calculating and predicting this is extremely difficult for the human brain when there are thousands of tasks in the plan and resources are distributed geographically.

▶ **Reallocating resources in case of availability/capacity changes**

When some changes in an employee’s availability occur, a project/resource manager has to reassign his/her tasks to another team member. At that, not only skills, experience, and availability should be taken into account but also time zones of the globally distributed teams. It’s quite challenging, isn’t it?

▶ **Assigning the right resources to the right tasks**

In this context, apart from all the above-mentioned things that must be considered before allocating resources to project tasks, also the priorities and the complexity level of the tasks must be kept in mind.

FACILITIES AND EQUIPMENT



Controlling the consumption of raw materials

It’s difficult to keep track of all raw materials that are used for production, especially if the facilities are located in different countries. A resource/project manager must know the rate of their consumption as well as price rates and the related data that can have an impact on projects.



Supervising the work of remote equipment units

Knowing the capacity and availability of the equipment pieces necessary for projects is a must for a resource/project manager as they can be the source of uncertainty and risk for the project success in case of impairments or unavailability. Controlling and monitoring their proper utilization is essential but difficult for the globally distributed teams.



Assigning tasks to remote machines

Not only do people perform project tasks, but a lot of work is also performed by different kinds of equipment. The tasks executed by machines should also be assigned properly based on task priorities and the availability of equipment. When it’s located in different places, it becomes a real challenge.

How to address all these challenges properly so that you can make your resources as productive as possible?

As it was mentioned before, globally distributed resources are typical for mid-to-large-sized companies that run multiple projects in parallel, which is why we’re suggesting the tips that work for both.

TIP 1 CREATE CROSS-FUNCTIONAL TEAMS AND MANAGE THEM PROPERLY



Creating cross-functional, or multi-functional, teams is an efficient approach to managing multiple projects with a shared pool of resources that are distributed globally. Such a team is a group of employees who work for a common goal and can be substituted by one another if needed. This requires additional training to make employees gain necessary skills, but it's worth the effort.

For example, if one expert falls ill, a resource manager or a project manager doesn't have to hire a new resource and just puts another team member to that set of tasks. But another question arises here, which is "Who will do the duties of the employee who has been assigned to the new set of tasks?" - Nobody, and it's ok. Read further to learn what we mean.

Cross-functional teams work efficiently under certain conditions: the tasks must be prioritized across all projects, and none of the projects will suffer if some of the tasks are postponed.

Another aspect that must be considered here is employees' skills (together with capacity and availability). A resource/project manager has to find a perfect match between the employee's skills and the competency required for the task accomplishment. If we're talking about a multi-project environment with thousands of employees involved who are distributed globally and dozens of thousands of tasks to be completed, this becomes a super-challenge.



CLEAR & CORRECT PRIORITIES

+



SKILL MATCHING

+

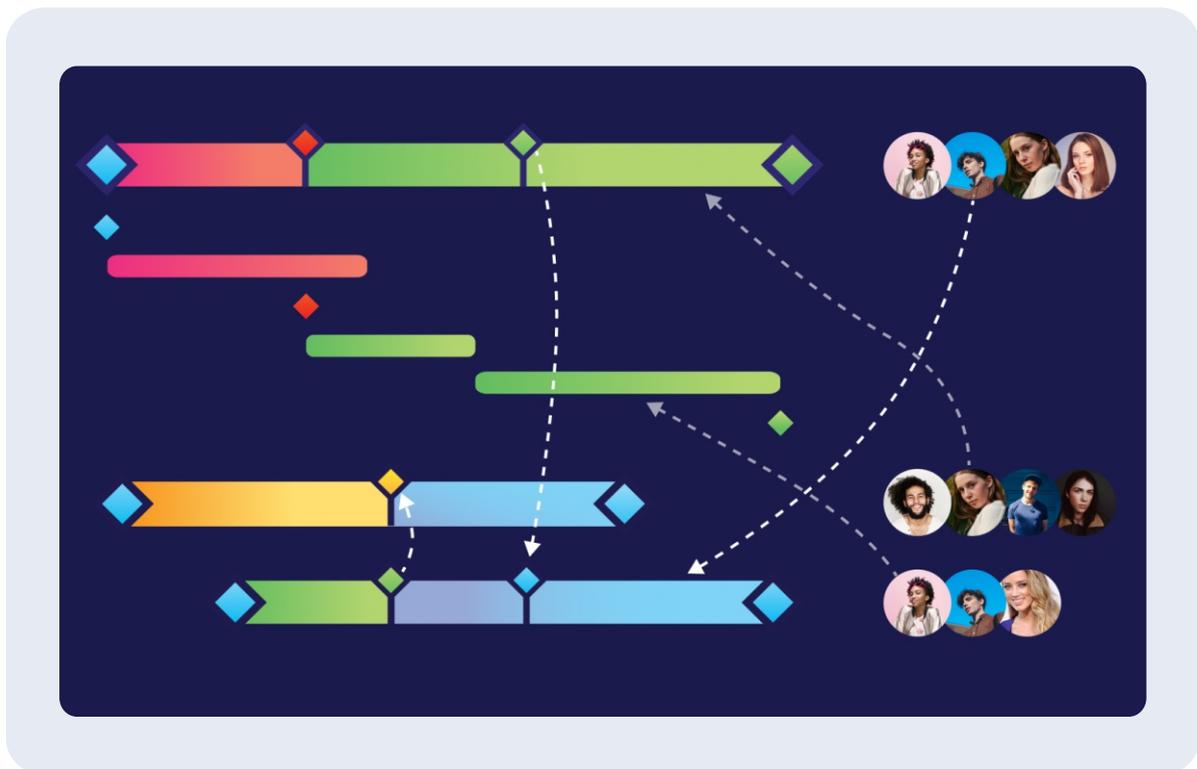


SUITABLE CAPACITY

TIP 2 USE THE RESOURCE MANAGEMENT SOFTWARE DESIGNED SPECIFICALLY FOR MULTI-PROJECT ENVIRONMENTS

Most modern resource management solutions that are capable of working in a multi-project environment have the features that can help improve the management of globally distributed resources. Let's overview the main functionalities that help reach this goal:

- ▶ collecting and processing all user-related information in one place,
- ▶ gathering all tasks and related information in one place,
- ▶ prioritizing tasks based on the analysis of the dependencies between all projects,
- ▶ showing the project flow on the pipeline and all changes in real time,
- ▶ detecting bottlenecks and naming the causes,
- ▶ supporting team collaboration (comments, chats, etc.),
- ▶ visualizing the teams' progress in various forms (charts, tables, etc.) including historical and real-time data.

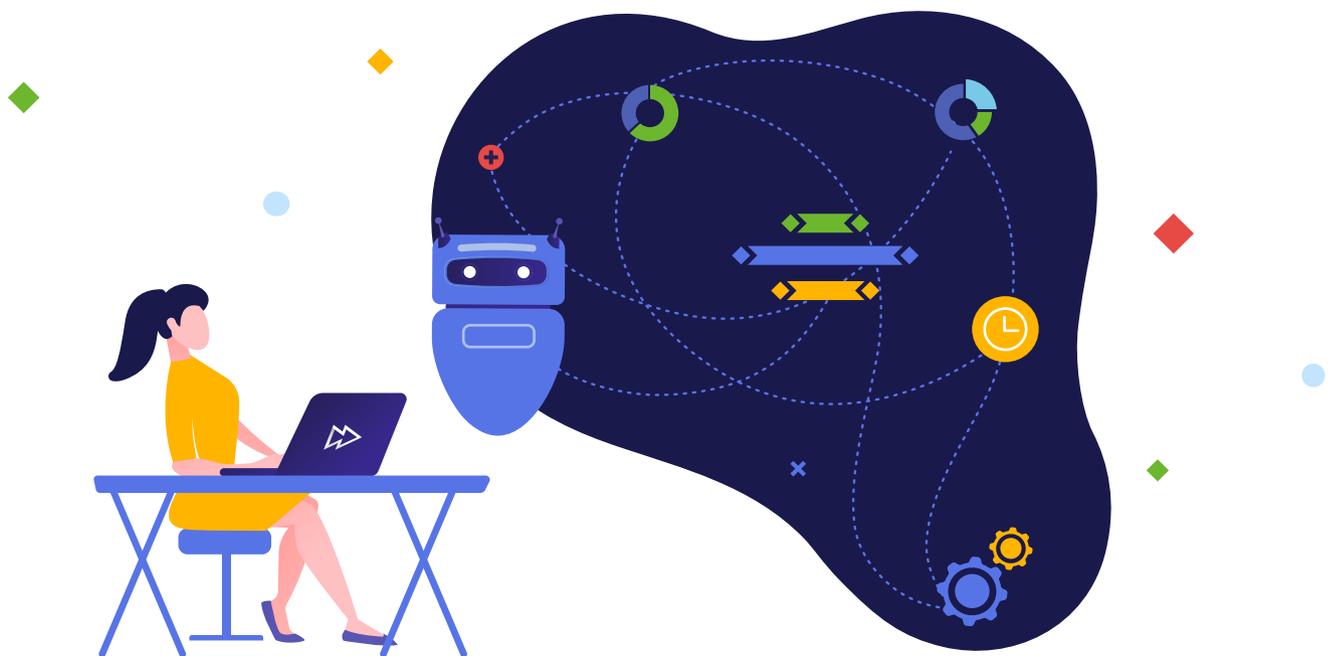


All the above-mentioned functionalities have their peculiarities depending on the product that must be taken into account by those who want to adopt one. And despite the benefits these features can give to project teams, sometimes they're not enough for efficient management of globally distributed resources. Read further what else can let your resource management effort bring maximum profit.

TIP 3 APPLY AI-DRIVEN FUNCTIONALITIES OF MODERN RM SOLUTIONS

Artificial intelligence is capable of interpreting and transferring extra-large amounts of data into structured datasets. It helps make informed resource allocation decisions and avoid resource conflicts. In large companies, these extra-large datasets include historical data throughout all completed projects together with thousands of people working on hundreds of current projects as well as all real-time data.

Let's say you have a bottleneck resource that is required in several projects, and he/she can't be assigned to all projects simultaneously. So, a resource/project manager has to consider all possible options, assess their benefits and advantages and make an informed decision that will potentially bring the biggest profit for the business. AI is a brilliant advisor here to suggest solutions and see their consequences before implementing them into the real environment.



For the teams that consist of people working from different countries and even AI-driven solutions is a point of contact; and for a project/resource manager, it's the only instrument to unite them into an integral whole and work together for the common goal like a well-oiled machine. The explanation is simple: a resource/project manager can't remember everything about every team member (keep in mind their skill levels and capacity) and calculate their availability and priorities between hundreds of projects. And machine learning algorithms can.

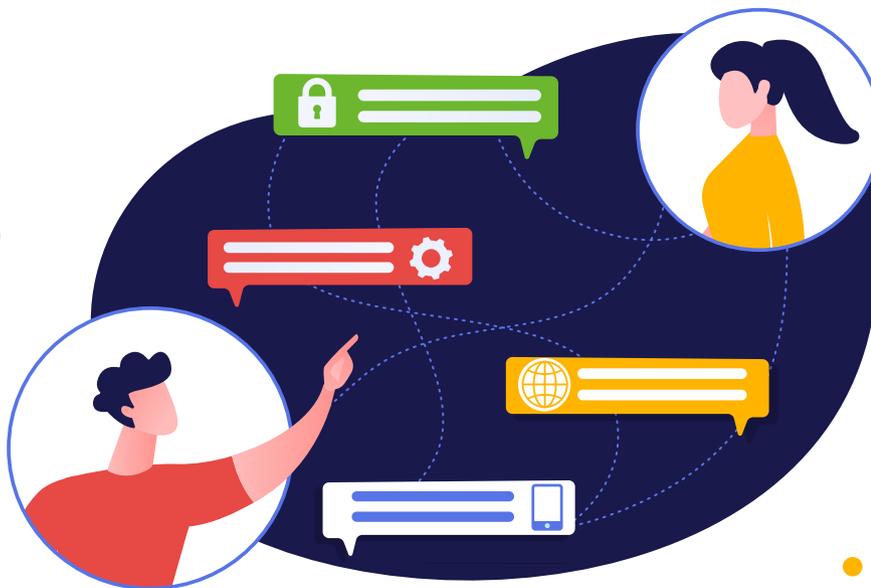
Some other attributes must also be taken into account: e.g., if a person has ever had experience with similar tasks, projects, or clients. A balance must be found: a highly-qualified employee shouldn't spend his/her time on simple tasks that can be performed by less competent resources, while an employee who doesn't have enough experience and competency shouldn't struggle to do a difficult task.

Therefore, an AI-driven resource management solution is capable of:

- ▶ Planning resource capacity
- ▶ Predicting the demand
- ▶ Bridging the capacity and demand
- ▶ Making automatic resource allocation suggestions based on demand, capacity, availability and competence levels
- ▶ Predicting bottlenecks and suggesting measures to mitigate risks

With AI-driven resource software, you always have the right person working on the right task at the right time in the safe project environment.

TIP 4 SIMPLIFY YOUR JOB WITH INTEGRATIONS



Integrating your project management software solution with a human resource management system is a great means to simplify your work. An HRM system is a tool that collects all available information about the people working for a company/project. It tracks employees' performance, attendance, payroll management, sick leaves and days off, vacations, and so on.

If a project management tool is integrated with an HRM system, all availability changes automatically appear in the PM solution. As soon as an employee takes a day off/sick leave, a team lead and an HR manager approve it, the capacity for this day gets automatically changed in the PM system. Therefore, a project/resource manager can react immediately to avoid any project flow difficulties.

EPICFLOW OUTLOOK: THE WORLD'S FIRST AI-DRIVEN SOLUTION FOR MANAGING GLOBALLY DISTRIBUTED TEAMS AND MULTI-PROJECT ENVIRONMENTS



Let's overview the functionalities that can help unite geographically distributed teams through the example of Epicflow - AI-driven resource management software designed specifically for a multi-project environment.

WORKING WITH USERS, GROUPS, AND SKILLS

RESOURCES

Annette Black (Front-End)

JavaScript Angular jQuery

Harald Steffen (Front-End)

JavaScript jQuery Angular

Viktoria Margit (Front-End)

JavaScript Angular jQuery

TASK REQUIREMENTS

Skills:

JavaScript

jQuery

Angular

Group:
Front-End

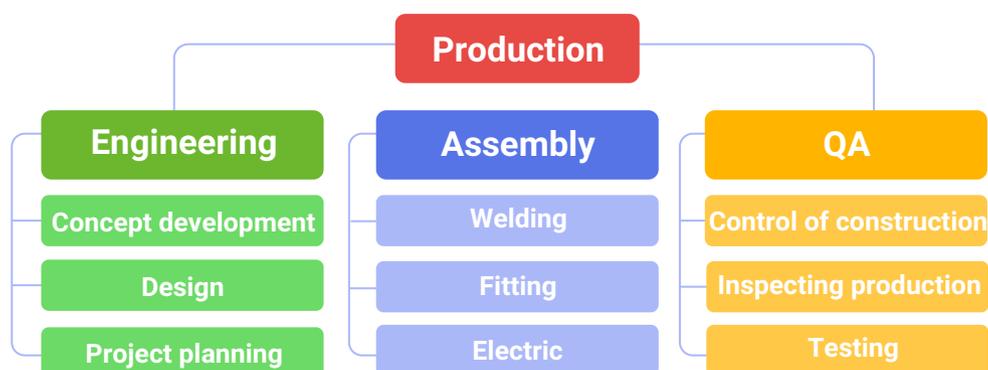
Total work:
42 mh

Working with globally distributed resources requires precise control of all user- and task-related information to ensure correct prioritization, resource allocation, smooth flow, and great performance.



The system collects all user-related information in a User card: name, photo, user type, e-mail address, roles, competences and attributes, tags, as well as capacity and availability data.

Managing globally distributed resources can be also simplified by uniting them into groups based on shared characteristics or skills and **gathering them in multigroups for joint analysis of different resource groups.** You can unite the department which consists of several groups of specialists with different skills into a multigroup. For example, you can add people who work in Assembly, Construction and Welding into Production multigroup and track the data related to production in one place. It's easy to navigate through the multigroups going from one level to another and check not only subgroups but also their participants and their capacity.



Demand and supply can be bridged by finding the right talent based on competencies, experience and availability with the Competence Management feature. Users can add an unlimited number of skills and specify their levels for every resource, and then apply this information for smart resource allocation. Jump to the next section to learn how it works in terms of task management.



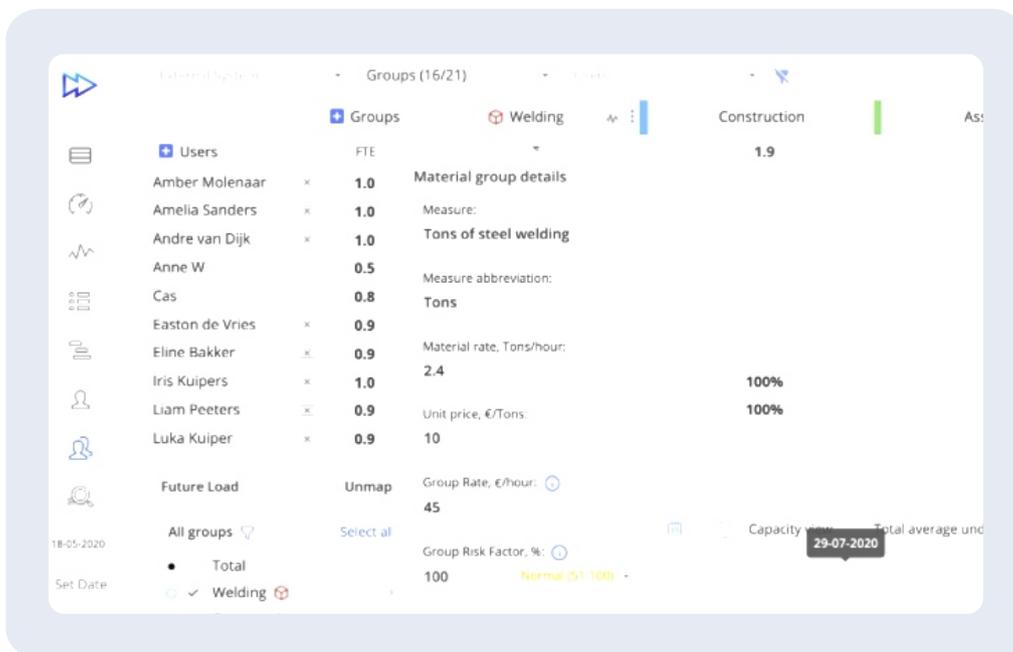
A PM or RM can create a customized list of users to check their progress, review recently completed or upcoming assignments. The Meeting view feature is a great means to unite remote resources that work in the same project environment.



A resource/project manager can also **assign and reassign multiple tasks to a single resource or a resource group** with a multi-assignment feature. It's convenient for multi-project environments with a shared resource pool as it saves time for allocating resources and assigning tasks from different projects to them.



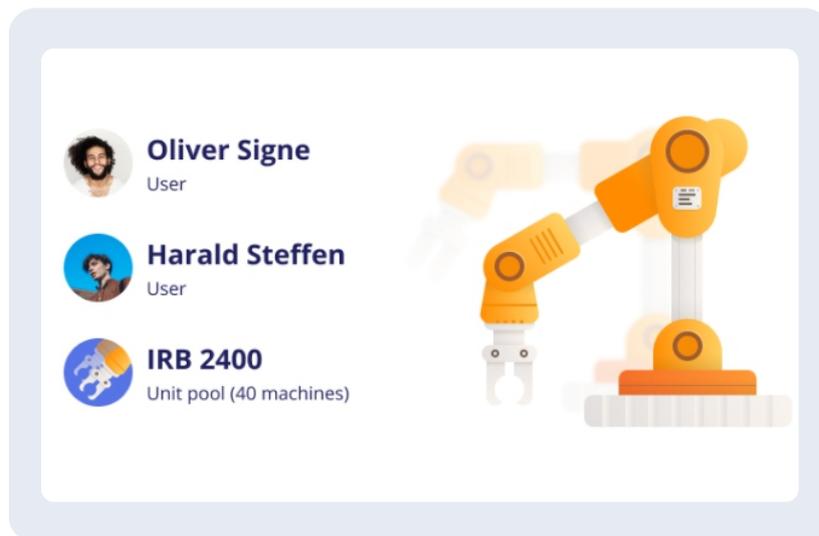
MANAGING EQUIPMENT



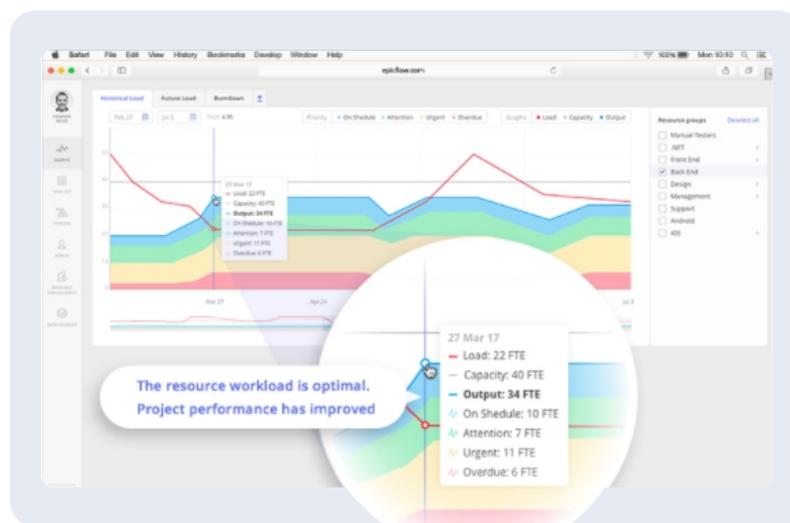
Together with human resources, raw materials can be registered in the system and united into groups. Epicflow is capable of collecting information about the type of material, its measure, price, group rate and group risk factor, which makes it possible to easily control

the consumption of these resources and take into account price or consumption changes throughout the whole project's life cycle.

Similar to the human resource pool, equipment pieces are collected in the system into the Unit Pool. Users can pick one or several pieces of equipment from the pool and assign them to tasks and team members as well as add the number of working hours per day and the number of machines in the calendar, which is convenient for scheduling their maintenance. Their capacity and availability are specified, so that a manager always knows how many tasks can be assigned to a unit and when.



TRACKING TEAMS' PROGRESS

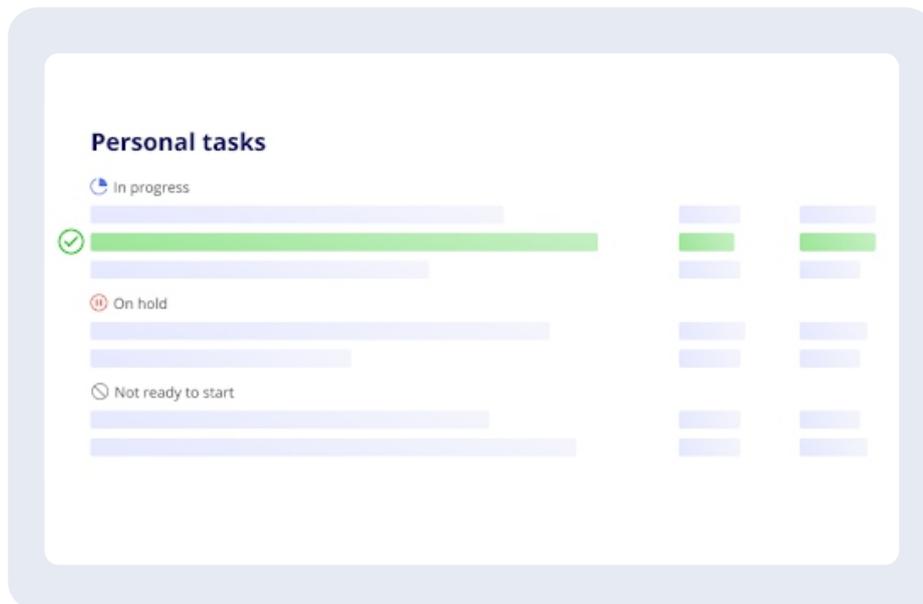


Epicflow provides a **detailed overview of the output produced by teams** on the historical timeline in the Timesheet. **Users can also register and correct their working hours** there. The opportunity to apply **timesheet filters** lets resources easily find necessary data and save their time.

You can see how the workload and capacity of your resources changed over time as well as the amount of work done on the Historical load graph.

WORKING WITH TASKS AND ASSIGNMENTS

When you have dozens or hundreds of projects with thousands of tasks, tracking the progress according to each assignment is a must but really challenging for a project/resource manager. Let's see how Epicflow can assist.



The software gathers all task-related information in a Task Card: assignees; total, spent, and remaining hours; project and summary this task belongs to; its predecessors and successors if there are any; its business value and priority coefficient; milestones; required and inherited skills, and more. **Users can add estimates, update progress on the task, check and update its status, assign and reassign resources, do cross-group assignments, and close their tasks.** Team collaboration is also supported by the opportunity to **add comments to each task and summary in the system, edit them and add replies.**



As we mentioned before, information about skills and their levels is collected in User Card and Task Card, which is then analyzed by machine learning algorithms. After the analysis, **the system suggests the most optimal alternatives for resource allocation decisions based on competence and availability.** This makes it possible to find the right balance: highly-qualified employees do complex tasks and aren't burdened with repetitive tasks, while less competent team members do easy monotonous work.

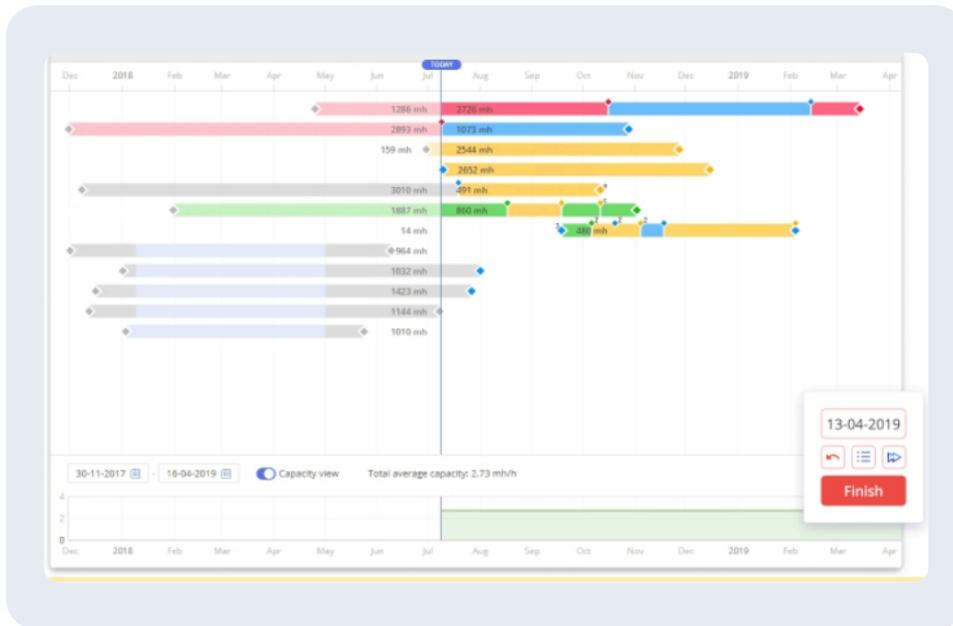


A project or a resource manager as well as every team member can see everyone's tasks in the Task List together with their own assignments in the Personal Task List tab. **All tasks are ordered according to the priorities that are calculated by AI-driven algorithms with regard to inter-project relations and dependencies.** Every user can change the statuses of their tasks there as well as log the hours they spend on each task. If a user works on it for several days and doesn't log the hours daily, the system can automatically distribute the time across the sprint based on the user's capacity.

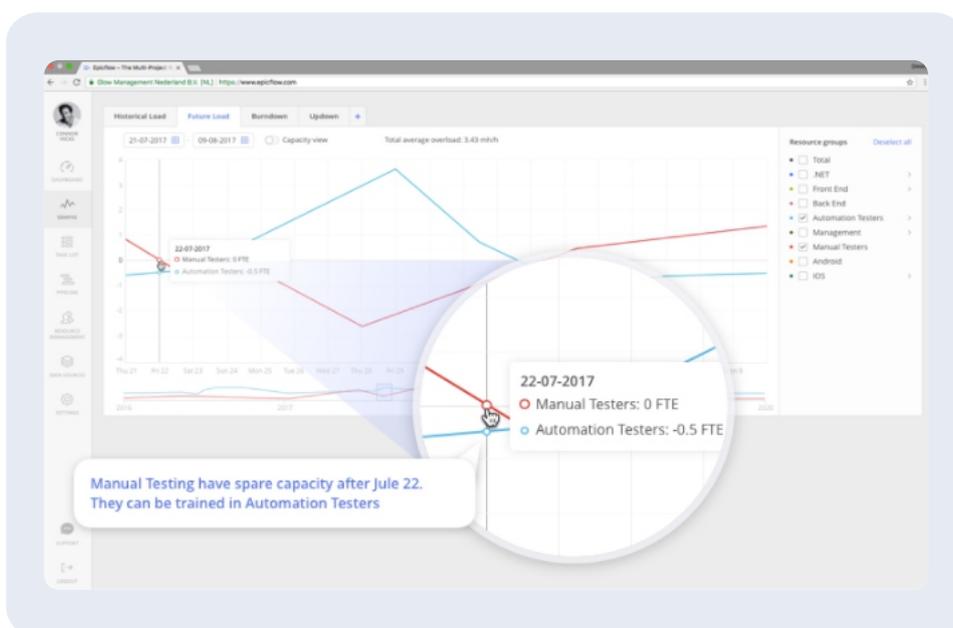


Monitoring teams' progress towards completing the project they're working on is also available in Epicflow. On the Burnup chart, **users can check the amount of work that was completed and how much must be done alongside the approved budget.**

MAKING INFORMED DECISIONS



You can check **the load vs capacity vs output including real-time information and the way they will change in the future** with the help of the Future load graph whose work is based on predictive analytics mechanisms. The tool automatically **foresees the demand levels** after the analysis of all project-related data and **shows possible overload** that is dangerous for other resources and even resource groups.



You can also check the impact of all your project decisions before making them with another AI-driven feature called What-if Simulation. It **predicts potential bottlenecks and shows the way the workflow will distribute in the course of time.** It analyzes milestones'

feasibility which helps you make decisions about the reasonableness of project transformations when some change requests occur. What's also important is that it's possible to make ad-hoc decisions if needed, and a **PM or RM doesn't have to change the schedule: Epicflow will change tasks priorities throughout the portfolio right away.**

INTEGRATIONS

Epicflow can be integrated with any project or resource management software or an HRM system as well as any project management methodology used by the company or an individual team.

At the moment, Epicflow has **ready-made integrations with Jira, MS Project Oracle Primavera, and Hurma human resource management platform.** When the integration is users get access to all Epicflow features and can apply all of them while working in their fine-tuned, home-like environment without the necessity to move their data manually.



CONCLUSION

Today more and more companies hire remote employees and have their facilities located in different countries, which significantly reduces costs and makes it possible to employ the best talents regardless of their place of residence. This, in turn, creates a number of challenges for project and resource managers who have to unite these globally distributed resources, including human and material ones, and manage them properly across a multi-project environment.

We suggest some tips on how to make your geographically distributed resources a close-knit team with maximum productivity:

-  Create cross-functional teams (this requires additional training to make one employee capable of replacing the other one).
-  Employ the resource management solution designed specifically for multi-project environments.
-  When considering an RM tool, pay attention to the ones that have AI-driven functionalities, because machine learning and predictive analytics greatly simplify the job of a project/resource manager and help get the best possible outcomes.
-  Consider the opportunity to integrate your RM tool with an HRM system for automatic resource availability change updates.
-  Epicflow is a perfect example of a resource management solution that serves all the above-mentioned purposes because
 -  it has been designed specifically for a multi-project environment,
 -  it has a lot of AI-driven features,
 -  it can be integrated with any PM, RM, or HRM tool.