PLANTA

Whitepaper

Resource Management

How Efficient Resource Management Cuts Costs and Increases Profits

trusted NOTE 1,2 Bestes Hybrides Projektmanagement

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LEARN MORE

Here you will find more for your projects:

Strategic cost planning

Strategic cost planning protects projects from budget overruns. Read how to keep track of your project funds.

To the whitepaper

Hybrid project management

Hybrid systems are more flexible than purely agile or traditional methods and let you respond to any project situation.

To the whitepaper

Multi-project management

Managing many projects at the same time involves risks but also opportunities. Learn how to keep track of all your projects.

To the whitepaper

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01

CHAPTER

Basics of Resource Management

Effective resource management enables the targeted use of personnel, equipment and funds to lead projects to success efficiently.

Definition and Extended Dimensions

Resource management covers the **planning, allocation and monitoring of all required resources** in order to implement projects efficiently and successfully. Resources are optimally utilized, projects receive what they need – and time, cost and quality stay in balance. In addition to personnel and machines, further dimensions are decisive today:

Availability over time
Seasonal fluctuations, vacation, absences and unexpected outages

Capacity and well-being
Resilience and well-being of employees, not just availability

Dynamics and flexibility
Adapting to new priorities, customer requirements and events

Technological availability
Software licenses, cloud services, network capacities, databases

Dependencies
Interactions, e.g. when a machine ties up certain specialists

Knowledge as a resource
Knowledge sharing and project-related documentation

Cultural and geographical aspects
Language barriers, different time zones and local public holidays

The Modern Approach to Resource Management

Modern resource management goes beyond mere administration: it creates **transparency**, increases **efficiency** and enables **flexibility**. Three areas are at the center:



Strategic planning
Align resources with corporate objectives



Operational control
Efficient use and adjustment in day-to-day business



Sustainable development
Careful use of resources and long-term optimization

Modern **resource management software** such as PLANTA combines these dimensions in one central platform – so that projects are controlled in a future-proof way and resources are used in the best possible way.

02

CHAPTER

Why Resource Management Often Fails

The most common challenges in resource management – and how modern software solutions master them.

Status Quo: Excel and Outlook as Supposed All-Rounders

54 % of small and medium-sized enterprises in Germany do not use **dedicated project management software**, according to a Capterra study, but rely on Excel, Outlook or manual methods. These tools are readily available but quickly reach their **limits** – especially in complex environments with several parallel projects.

According to PMI's "Pulse of the Profession 2026" report, 81 % of project professionals say that projects have become more complex. Projects with a structured approach are significantly more successful: 72 % compared with 61 % without one. Without a professional solution, potential remains untapped and the **risks of faulty planning increase**.

The Benefits of Modern PM Software

Project management software creates structure, transparency and efficiency in all project phases:

- **Project transparency**: All participants are always informed, and duplicate data entry is eliminated.
- **Smooth communication**: Instead of email floods, all project information is available centrally and up to date.
- **Resource overview**: Overload of individual employees and unnecessary idle times are avoided.

> Experts have long regarded resource management as the supreme discipline in project planning: "The high complexity and, at the same time, high relevance make resource management a success-critical area of project management." (Ahlemann)

Challenges Without Software Support

Projects usually run under strict conditions: limited budgets, fixed deadlines and resources shared across several projects. Without suitable software, the risks are:

Endangered delivery dates
Customers wait for results, poor planning leads to delays

Inefficient use of resources
Lack of overview leads to over- or underutilization

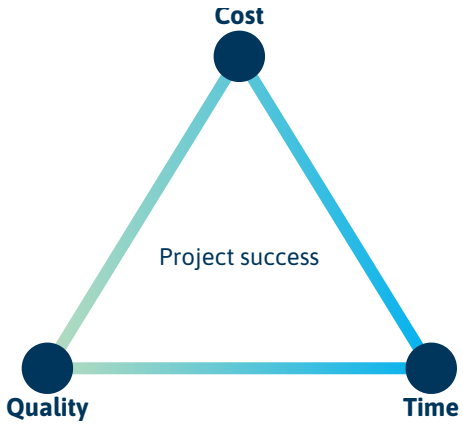
Loss of quality
Poor coordination impairs project quality

Especially in multi-project management – when projects compete for resources – **resource conflicts** arise that can hardly be resolved without software support.

The Magic Triangle: Cost, Time and Quality

Cost, time and quality determine project success – and are constantly competing with each other:

- If **costs** are reduced, quality often suffers.
- If **time** is to be saved, costs often rise.
- Higher **quality requirements** take up more time and resources.



Powerful project management software helps maintain this balance: deviations are **identified early**, and project managers can take corrective action in good time.

Take a look

Webinars

Project management know-how for everyone

Go to the webinars

03

CHAPTER

Software-Supported Resource Planning Process

A consistent process from rough to detailed planning helps to make optimal use of resources and avoid bottlenecks.

The Phases of the Resource Planning Process

1 **Create a proposal**

Templates for common use cases such as IT or engineering projects ensure a fast, consistent start and save time during initialization.

2 **Rough resource planning**

First, teams or generic resources with specific skills (e.g. Java developers or SAP experts) are assigned to the project phases. This **high level of abstraction makes it easier to get started**.

3 **Check availability**

The software shows the utilization of generic resources at an early stage and helps find suitable time slots – so that **no overloads** occur.

4 **Simulation and optimization**

Simulations play through scenarios, such as postponing lower-priority projects or alternative assignments. Saved simulations later serve as a **roadmap for future projects**.

5 **Project approval and detailed planning**

After approval, the project manager assigns **specific resources** from the pool and checks their availability and utilization in real time.

Advantages of Software-Supported Resource Planning

Automated processes

Transparent resource requests without email floods

Flexible planning

Resolve conflicts in a targeted way via utilization displays

Increased efficiency

Templates and real-time data simplify planning

No overload

Availability checks prevent bottlenecks and delays

04

CHAPTER

The Benefits of Resource Management Software

Software supports companies at strategic, operational and team level in planning projects more efficiently and successfully.

Benefits at All Company Levels

Level 1: Strategic resource management

Projects are specifically aligned with **corporate objectives**:

- **Prioritization** of projects based on strategic criteria
- **Capacity planning** with scenario simulations to prevent overload
- **Transparency** in the PPM cockpit on risks, capacities and conflicts

Level 2: Operational resource management

The software improves **day-to-day project control**:

- **Efficient cost planning**: Budgets and cost centers are managed centrally.
- **Real-time monitoring**: Progress and utilization can be retrieved at any time.
- **Standardization**: Automated reports and standardized processes save time and increase quality.

Level 3: Team collaboration

Team **productivity** increases and communication problems decrease:

- **Central management**: Tasks and documents are transparently available to everyone.
- **Agile working**: Combining agile and traditional project management promotes flexibility.
- **Efficient communication**: Collaboration tools minimize coordination effort and email floods.



Measurable Benefits

The economic benefits of the software are reflected in concrete savings. PLANTA customers report the following time savings:

4 hrs per month and project manager when creating status reports

2 hrs per month and project manager for reporting

4 hrs less planning effort per new project thanks to templates

5 min per employee and day for time recording

PLANTA customers report that improved data quality saves them around **one third of their time**. This allows them to handle tasks that previously remained undone due to capacity constraints and would have required an estimated **2–3 additional employees**.

Rationalization effects

- **More efficient resource planning**: Utilization displays and simulations enable fast decisions.
- **Automation**: Reports and plans are created at the push of a button.
- **Avoiding bottlenecks**: Availability checks prevent overloads and ensure balanced utilization.

PLANTA

One Software for Everything

PLANTA Project

Project Management Software

PM Methods

Plan your projects agile, traditional or hybrid – just as you need

PPM

Take no risks – with project portfolio management

Integrations

Adapt the software to your needs and extend it with our interfaces

Single and Multi-Project Management

Comprehensive project management software for every project.

Learn more

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05

CHAPTER

The Future of Resource Management

Megatrends such as sustainability, digitalization and artificial intelligence are making resource management more efficient, more responsible and more flexible.

Sustainability

Sustainability is a key requirement for modern companies. Software helps make processes and resources more environmentally friendly:

Less overcapacity
Precise planning and availability checks avoid waste, overload and idle time.

Optimal use of equipment
Balanced utilization extends the service life of machines and reduces costs.

Sustainable supply chains
External resources can be selected according to environmental standards.

This creates economic advantages and strengthens the company's **image** at the same time.

Digitalization and AI

The integration of AI in particular is changing how companies manage their resources. According to Capterra (2024), 44 % of project managers in Germany already use AI in their PM tools:

Proactive suggestions
AI analyzes historical data and ongoing processes and recommends optimized deployment plans.

Error reduction
Over- or underbookings are detected automatically and bottlenecks resolved proactively.

Adaptive planning
Plans adapt flexibly to market changes, crises or short-term requirements.

This makes resource management smarter, more precise and **future-proof**.

06

CHAPTER

Best Practices

Proven practices help control projects efficiently and sustainably and make optimal use of resources.

1 Prioritize clearly

- Rank projects by their contribution to corporate objectives
- Define realistic, measurable objectives
- Communicate priorities to all participants

2 Templates and standards

- Use project templates for different project types
- Share experience across the company
- Review templates regularly

3 Plan realistically

- Plan resource buffers as a time reserve
- Do rough pre-planning with generic resources
- Test scenarios with simulations

4 Monitoring and flexibility

- Track progress and bottlenecks in real time
- Act early in the event of deviations
- Respond flexibly to new priorities

5 Communication and collaboration

- Manage tasks and documents centrally
- Clarify open questions in short meetings
- Give everyone access to relevant information

6 Think sustainably

- Efficiency before maximization: avoid overcapacity
- Schedule equipment and machines with care
- Select suppliers based on sustainability criteria

07

CHAPTER

Testimonials

The ideal solution for resource management is a hybrid project system: traditional reporting with milestones and schedules for management, agile planning and fast time recording for the teams – as the basis for reporting and planning new projects.

Thyssenkrupp AG

“The PLANTA software has replaced all MS Project schedules and Excel tools. Linking all projects in multi-project management enables better planning quality and significantly optimizes the effort required to manage the projects.”



Ketek GmbH

“Our greatest success is that we now have a well-organized multi-project management. All projects are stored centrally in PLANTA. Our colleagues now have a better overview of the projects and can plan dependencies between them.”



Losan Pharma GmbH

“The benefit of the new tool is not limited to the fact that it enables all employees to manage their tasks in boards, but it also improves communication and collaboration significantly.”



Read how our customers have improved their projects: **planta.de/en/references**

08

CHAPTER

FAQs, Conclusion and Sources

Why is resource management so important for project success?

It ensures that personnel, equipment and budgets are used optimally. Without structured planning, bottlenecks, overload or idle time threaten – and with them risks to time, money and quality.

Is resource management software also worthwhile for small companies?

Definitely. Small companies in particular benefit from more efficient processes: the effort for planning and coordination decreases and resources are used in a targeted way – saving time and money.

How exactly does resource management software help?

It creates **transparency** across all resources and projects in real time, **efficiency** through automated processes and **flexibility** for fast, precise adjustments. This reduces costs, increases project quality and relieves employees.

Conclusion

Good PM software supports project managers throughout the entire resource planning process – from cost planning and strategic capacity planning to operational resource management. It always shows the **current utilization** of all company resources and makes risks such as impending delays visible in every project phase.

Replanning and coordination are supported efficiently, and time-consuming manual reconciliation is eliminated. Resources are **utilized efficiently without being overloaded** – project costs fall, profits rise.

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