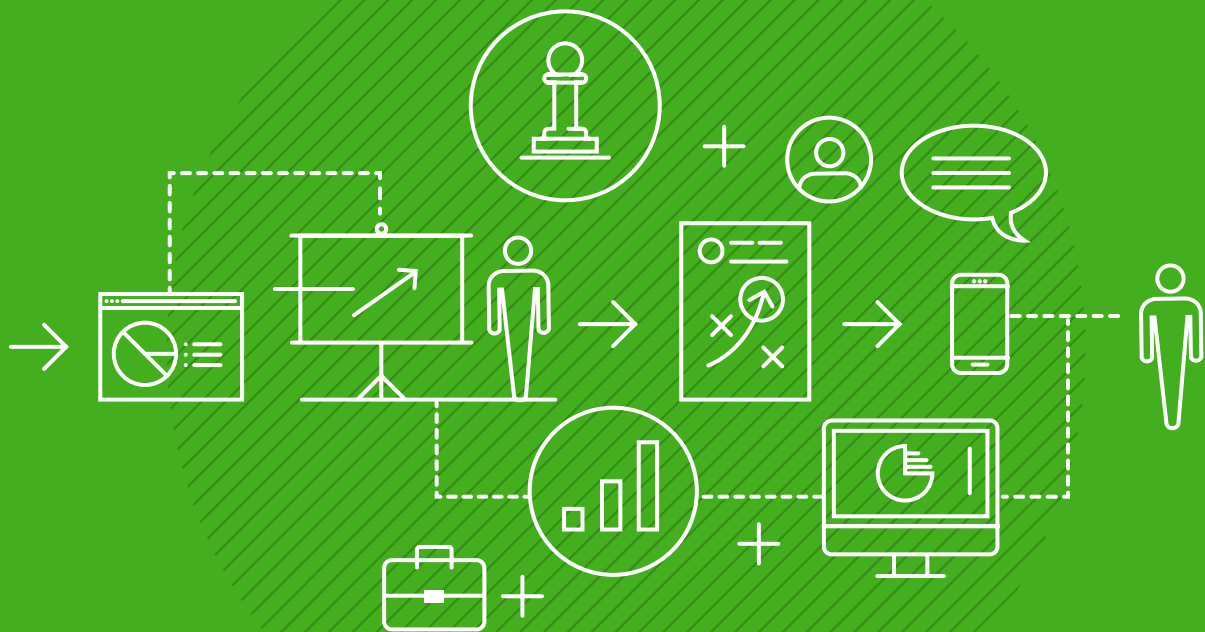


# RESOURCE MANAGEMENT FOR PROJECT MANAGERS BEST PRACTICES



## HI THERE!

It's great that you downloaded this ebook. It means that you care about resource management and want to make a difference at your company. Way to go!

Introducing best practices of resource management into your daily work as a Project Manager not only can improve your rapport with the team but it may also positively affect your project's outcome. A win-win situation? Yes! In this ebook, we will show you how you can manage your resources throughout the project's lifecycle. You'll also learn how to build an inspiring team culture and how technology can help you in the process.

The advice you'll find in this ebook comes from our experience in running IT projects. Methodology-wise, you'll see the techniques recommended by both the Agile and traditional approach. While you won't be able to use all of them at once, you can pick the ones that best fit your needs.

Feel free to bring out your crayons! Within this ebook, you'll find print-friendly checklists and room for your notes.

## A FEW WORDS ABOUT US:



We're Apptension, Poland-based creative software house. For the past few years, we've been pushing web technologies to create exciting digital experiences for our clients. In the meantime, we've learned a lot about managing resources in the context of IT projects and we gathered the most important lessons in this ebook. We're committed to making Project Managers' job easier also through the tools that they use. **teamdeck** – a resource scheduling and time tracking tool, is our latest product. We would like to make it your new favorite resource management tool. You'll find a dedicated offer at the end of this ebook (there's no sales-y stuff in the ebook itself, we hate spam as much as you do).

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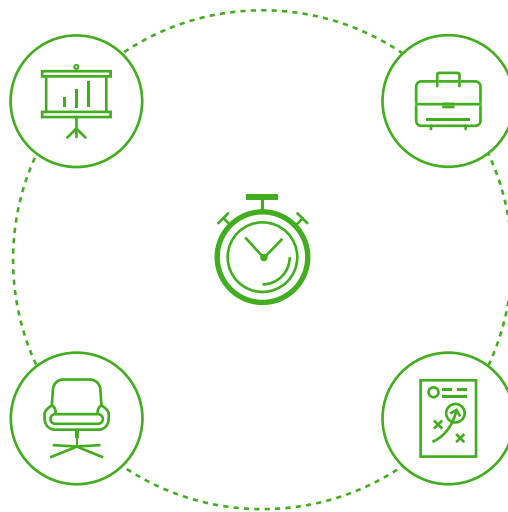


## CHAPTER 1:

# WHAT IS RESOURCE MANAGEMENT?

Looking for a definition of resource management in the Business Dictionary, you may stumble upon this one:

The process of using a company's resources in the most efficient way possible. Which, essentially, means using **the right resources at the right time on the right projects.**



When we put it like this, it sounds deceptively straightforward yet proves to be challenging. Among the reasons for project failure, many organisations list resource management-related issues:



"The High Cost of Low Performance" PMI's Pulse of the Profession 8th Global Project Management Survey

- resource dependency: 26%
- inadequate resource forecasting: 26%
- limited/taxed resources: 22%

**RESOURCES ARE NOT LIMITED TO PEOPLE - OFFICE SPACE OR EQUIPMENT SHOULD ALSO BE ALLOCATED.**

On the very basic level, people that are allocated to your project should be capable of working together and have the skills necessary to complete it. Resource management, however, needs to go further, covering not just the process of allocation, but also **monitoring and managing the resources throughout the project and reacting to the necessary changes.**

Why is it so important to keep that all in mind?

Well, when the resources are affected, the project timeline and your ability to deliver it in the desired form could be in great jeopardy.

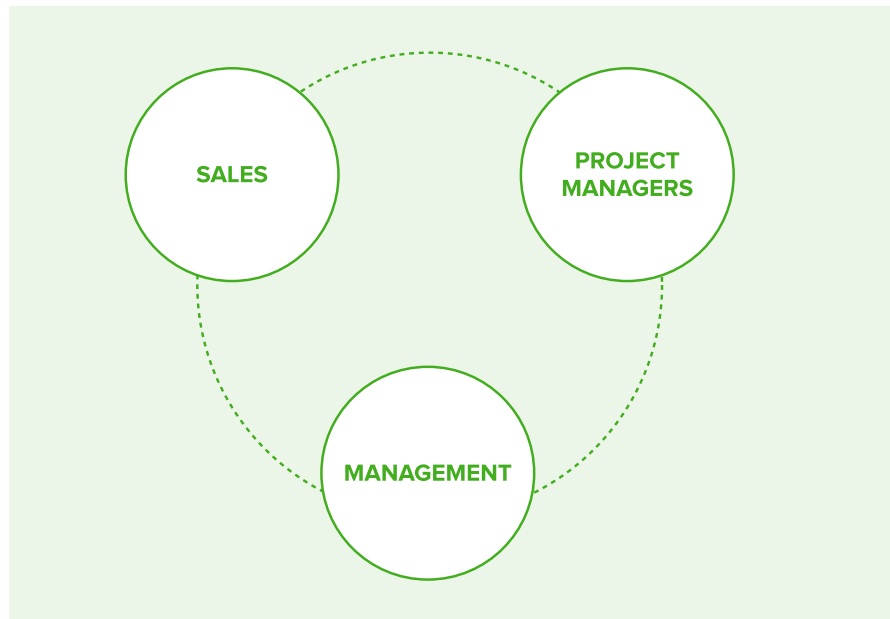
### WHY SHOULD YOU BOTHER?

As a Project Manager, you're often dealing with the unknown. A detailed perspective into the tasks needed to be performed and time necessary to complete them is rarely available at the very beginning of your project. In order to minimise the risks, you need to stay aligned with the resource management processes.

A centralised schedule of resources makes it possible for you to be constantly aware of the capabilities and resources available and, as a result, enables you to make smart project-related decisions. Add to that a transparent relationship with the resource management team (who coordinate the staff), and you're less likely to be surprised by any major team-related changes.

Your company's HR specialists are not the only people you have to align with resource-wise. Make sure to regularly touch base with:

- **SALES** to keep track of the upcoming projects' pipeline and projected capacity of people.
- **MANAGEMENT** to learn strategically important decisions.
- other **PROJECT MANAGERS** to regularly compare the historical data and discuss ideas for improvement.



All that is important for your overall visibility into resource pool and strategy, but there is an important part of resource management process that relies on you:



"A Guide to the Project Management Body of Knowledge (PMBOK® Guide) - Fifth Edition"  
Project Management Institute

**PM'S PROJECT HUMAN RESOURCE MANAGEMENT INCLUDES THE PROCESSES THAT ORGANIZE, MANAGE, AND LEAD THE PROJECT TEAM.**

Once the actual project happens, you're the one responsible for managing the resources within it. It can be a fascinating part of your job due to cooperating with people of different cultures and personalities; it can also be a grueling part because of the same reasons. The difference often lies in the way you approach resource management. In the next chapter we'll, share the best practices to employ in the different phases of your project lifecycle.

**BUT FIRST!**

Here's a couple of key notions that can't be overlooked when talking about best practices in resource management. They may come into play every time you deal with a group of people working on a project (doesn't that sound like something you do everyday?). Keep these basic terms and strategies in the back of your mind when applying techniques from the next chapters:

**Billability & profitability:**

There's a good chance your agency operates on the billable hour model. This means the profitability of your company is tightly connected to the number of hours spent on the particular projects. That's why it could be useful to use a time-tracking tool or a time sheet that allows you to export reports concerning billable hours. At the same time, it's important to make sure to account for the billable hours - it can be also achieved by tracking hours spent on each project. You'll learn more on that in the **Toolbox section**. →

**Resource underutilization**

Not using the available resources to their full potential is not only a damage to the company's overall profitability, but it also significantly affects productivity and employee motivation. With overutilization having negative effects as well, it should be a crucial part of any resource management plan to allocate resources in an optimal way.

**Backup plans**

What happens when your team member doesn't show up at work? Do you have a backup plan at hand? It is, of course, extremely difficult to foresee most of the risks, but having visibility into the resources available at a company level proves to be a tremendous help in such situations. In big enterprises, there is a huge emphasis on contingency plans - the bottom line is to keep the company going (and the project delivered). In your agency/software house, these corporate strategies might not be in place but you will benefit from having a backup plan of your own and encouraging other Project Managers to do the same.







## CHAPTER 2:

# STARTING OFF THE PROJECT

The beginning of your project, the scoping, the estimating and putting your team together is where you can make some costly mistakes. On a happier note, it is also the time for you to set the tone for the whole project and establish an effective and positive culture for your team. How to make sure you start off on the right foot?

### UNDERSTAND THE PROJECT

Not just as in “we’re building a game for kids”. Make sure you can answer the following questions:

- What are the expectations of the stakeholders in terms of the end product?
- What is expected from your team?
- What are the success criteria? (Some potential and measurable ones are: delivering on time, staying within the initial budget, achieving sales targets.)



**Pro tip:** Your team should work on a project with the final business value in mind. Particular tasks are the way to achieve it, but the ultimate goal should be in the spotlight.

### IDENTIFY:

- the roles needed to complete the project (you might want to put it as “the roles without which the project can’t be completed” – this little rephrasing can prevent you from taking too many non-critical roles on board). Remember that there are usually more ways to achieve a goal, so try to think of alternative options for the roles you need and pick the best one.
- the people with the right skills (based on the roles needed). Here, you need to take the availability of employees into account – an up-to-date resource calendar is essential.
- the equipment needed to complete the project (hint: create a global equipment calendar for your office).

The time estimation for each task should be prepared only after the particular people were chosen for the team. Otherwise, your initial estimates are likely to change when you take into account the experience (or lack of it), daily availability and the historical performance of the people that end up on your team

### DO THE GROUNDWORK:

Yes, being a Project Manager means you have to deal with some paperwork, from technical documentation to the client-agency contracts. Resource Management is no different - you need to make sure you and your team have access to the big picture:

#### Resource Management Plan:



roles within the project



how long will the resources be needed



who is working on your project



a project calendar that includes:

- availability of all resources (take time zones into account when working with remote teams)
- other work commitments and tasks
- planned days off for each team member
- local holidays during which people from different countries will not be available

Another thing is to make sure your team is aware of the responsibility flow. You can create a document that designates roles and responsibilities such as a RAM (Responsibility Assignment Matrix) or a RACI chart for different activities.

**RACI stands for:**

**Responsible** - these people actually do the activity

**Accountable** - they own the activity, their heads will roll if things go wrong

**Consult** - team members who should be consulted before a decision or an action


**Inform** - people who should be kept in the loop

The chart could look like this:

	Project Manager	Frontend Developer	Tech Leader
Project planning	R, A	I	I
Code design	A	C	R, A
Coding	A	R, A	C

**SMART PLANNING**

There's every reason to think that the planning phase can make or break your project. Inaccurate estimates, bad personal decisions and overlooking potential risks is what often causes delays and budget changes.

 "The High Cost of Low Performance" PMI's Pulse of the Profession 8th Global Project Management Survey

**ACCORDING TO THE 2016 DATA ONLY 49% OF PROJECTS ARE COMPLETED ON TIME. ADDITIONALLY, 53% OF ALL PROJECTS STAY WITHIN THE BUDGET SCOPE.**

Planning the project is inextricably connected to the resources management: you need to choose the right people, identify the dependencies between their roles or tasks and, finally, estimate the time they need to complete the activities. Let's take it step by step.

### ESTIMATING RESOURCES AND TASKS

There is much to be said about picking the ideal resources for a given project. You could take into account their expertise on paper, experience in similar projects (make sure you go beneath the professional career – often you can find relevant experience in people’s side projects or even past academic assignments) or analyse how a given group of people would mesh together. In an ideal case – that’s what you can and should do before you allocate a group of people to the project.

The agency reality is, however, that very often you have to play with what you’re dealt. And by that, I mean being only able to pick the people that are available for your project at a given moment. It is a common model and most of the agencies and software houses make it work. As long as the projected capacity and visibility into sales pipelines allows the Resource Managers to have the necessary number of people with matching roles on board, you’re good. All you need to do is to estimate the tasks, the time and, of course, the budget.

There are several ideas for making a plan that is more effective and easier to control.



Read more in Mike Cohn’s “Agile Estimating and Planning”

**Measure user stories in story points.** Story points are the units of measure that allow you to assess the size of different user stories. They’re relative, meaning that a 4-point story is two times bigger than a 2-point one. Once you establish story points (the scale can be 1-10) you need to fit them into the team’s velocity. If the team was able to complete 14 points’ worth of stories in the previous iteration, they’re likely to complete the same amount of work again. When you have the story point estimates for all desired elements in your project, you can divide this number by the team’s velocity and come up with a number of iterations needed to complete the project:

$$\frac{97 \text{ story points}}{14 \text{ velocity}} = 6,92 \text{ iterations}$$

You can plan for 7 iterations when creating the project calendar.



Read more in Mike Cohn's "Agile Estimating and Planning"

**Ideal time vs elapsed time.** When allocating time to particular people, take their capacity into account, in terms of both how much work they can do based on their experience and the “workable hours” during the day. Make sure you understand the difference between the ideal time and elapsed time. Note that when you ask the developers how much time will a given task take, they will provide you with an estimate in the “ideal time”, that is, an uninterrupted work period.

When estimating the actual time, you need to remember that there are meetings, calls or other issues that increase the difference between the ideal time and the ultimate time count for this user story (elapsed time).

**Use expert judgement.** People with thorough technical expertise as well as experienced Project Managers can offer an invaluable contribution into your estimation process. Don't be afraid to ask them for help if that assistance process isn't established at your company already.



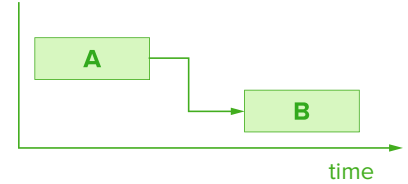
**Group decision.** You need to plug in the team for your estimation process - you can use, for example, **the planning poker technique**. Not only are you getting more realistic estimates, but also people are more committed to the tasks and feel this extra sense of responsibility. Bonus - you can build a stronger team culture from the get-go, making people care about the project and each other.

**Be aware of task dependencies (and communicate them).** Tasks don't exist in a vacuum, most of them are dependent on each other. These relations can form a complicated web, which is why you need to map it out and make sure everyone in the team understands the dependencies.

There are four main dependency types between tasks:

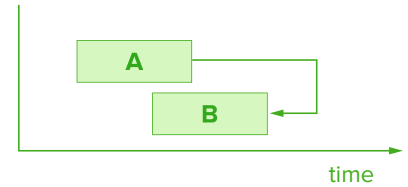
- **FINISH TO START (FS)**

It means that task A has to be finished before task B can start  
*(Creating the initial design for the landing page) FS (Coding the landing page)*



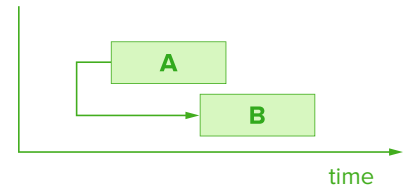
- **FINISH TO FINISH (FF)**

It means that task A has to be finished so that task B can be finished but B can be started before A is completed.  
*(Writing the book) FF (Proofreading the book)*



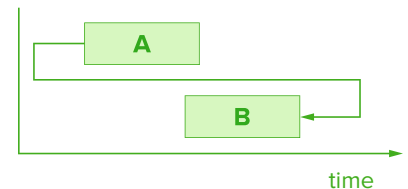
- **START TO START (SS)**

Here, task B can't start until task A starts but B can be finished before A is completed.  
*(Project activities) SS (Programming part of the project)*



- **START TO FINISH (SF)**

In this case, task B has to start so that task A can finish. This is a very rare type of task dependency, probably best illustrated by the shift work example. A day shift can't be effectively finished until the night shift worker comes and clocks in:  
*(Day shift) SF (Night shift)*



Both FF and SS task dependencies (overlapping time) help to reduce the overall time of the project.



**Use three-point estimation.** It is a good method to quantify the estimation, regardless of the uncertainties and risks. In order to do it, you need to come up with three time estimations ( $T_e$ ) – realistic (the most likely one, represented by  $T_m$ ), the optimistic one (best case scenario –  $T_o$ ) and the pessimistic one, accounting for various possible mishaps ( $T_p$ ).

To come up with the result, you can use the triangular distribution formula:

$$T_e = \frac{(T_o + T_m + T_p)}{3}$$

or use this formula in which the realistic is weighed most heavily:

$$T_e = \frac{(T_o + 4T_m + T_p)}{6}$$

**When uncertain** – use analogous analysis. Compare the current project with the past work (as similar projects as possible). It is not the most accurate method but it can help tremendously at the early stages of your project.

**Confront resources with other factors.** The unforeseen dependencies between different factors can sink your project. Let's use an example here:



Imagine you (correctly) took into account the fact that the project would be developed by juniors, and, separately, that a new technology would be used. The project happened and it turned out that it took much more time than estimated. It was so because you hadn't been able to comprehensively estimate the time it would take for junior developers to learn a completely new thing and then develop it.

It can be the case at the beginning of the project that you don't know the people on your team and their working styles. You need to designate some time to get to know the team and the social dynamics within it. The same goes for the team members themselves: they might have never worked together (or in a team at all); some of them might have worked together but don't appreciate each other's working style. **A warm-up period** allows you to notice these dynamics and react to them.





## CHAPTER 3:

# KEEP UP WITH THE TEAM THROUGHOUT THE PROJECT

This part is devoted to managing your project resources during the project lifecycle. You need to be able to establish a good relationship between your team and the client as well as between the team members.

**Get it right from the beginning.** Use the kickoff call with the client to outline the roles and people behind them. Be inclusive about this process so that your resources can fully commit to the project.

**Maintain the visibility.** Make sure people understand what others need to do and what they're all responsible for – draw a hierarchical chart (check Chapter 2 for more on resource documentation), a skill matrix, or prepare a more elaborate description of everyone's contribution to the project.

**Align project estimation and capacity.** Avoid overbooking and underbooking, as both are detrimental to the project progress and employee motivation. Monitor the workload to keep people from burning out and give them some space for development.

#### WHAT IF YOU RUN INTO ANY ISSUES?

There is a chance that, no matter how hard you try to map out the process, somewhere along the line you'll stumble upon issues such as conflicting bookings when more people are needed than available.

You can try to resolve them using these resource optimisation techniques:

##### Resource leveling.

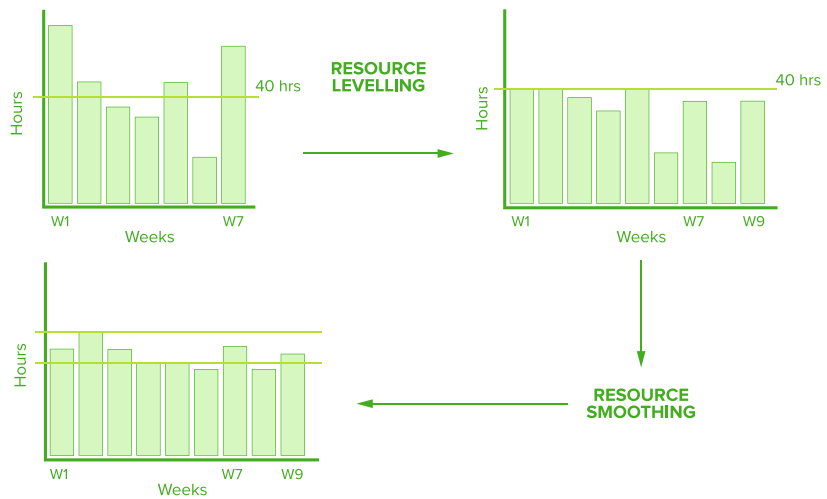
According to the PMBOK® Guide, resource leveling can be defined as:

A technique in which start and finish dates are adjusted based on resource constraints with the goal of balancing demand for resources with the available supply.

Whenever you see any overtime booking (see the diagram below), you may want to divide the activities and move some of them to the upcoming days/weeks. This way, you avoid overbooking. The downside is, however, that the project path changes and there are usually delays in the whole process.

**Resource smoothing.**

This technique should be used after resource leveling. It allows you to make use of the slack that was created in the leveling process so that the hours are more evenly distributed.



**Remember about the Brooks' Law.** When you're running late with the project and/or you're pressed by your management to come up with a solution to this precarious situation, it is tempting to simply add extra resources to your team. Keep in mind that new people will need their share of time for onboarding, will significantly increase the cost, and could even impact the productivity of the core team. This phenomenon was summed up by Fred P. Brooks Jr in his 1975 book *The Mythical Man-Month*:

ADDING MANPOWER  
 TO A LATE SOFTWARE PROJECT  
 MAKES IT LATER.

**Beware of the death march.** A death march could be a project in which people have to work insane hours but it's still doomed to fail. Team members are following it against their better judgement. This is a tricky case because death march projects could seem exciting at the beginning – a tight deadline might be motivating. While potentially it's possible to “steal time” for the short term, in the long run death marches are deadly to your team morale and the final outcome.

**Weigh in on the negotiations.** It might happen that you will need to negotiate with other Project Managers over the resources you both need. Decide together as to what should be taken into account when deciding which way the key resource goes (commercial gain, time priority) and try to accommodate for the change if it happens – maybe you can shift the timeline of your project to make it possible for certain people to take part in it after all.





## CHAPTER 4:

# BUILDING A TEAM CULTURE

For Project Managers, Resource Management is about people making use of their full potential when working on a project together. It can't be achieved without a strong team culture that helps people understand the purpose of their job and fuels them to give it all.

You might think that this is an unnecessary addition and that you have no time to worry about team culture. The truth is, however, that when you're not sure what kind of culture you want to develop, the culture will develop itself. Sadly, then you'll have very little control over it.

### HOW TO START?

Team culture is not a being separate from company culture, and these certainly shouldn't contradict each other. If your company culture is somehow codified, you have an easier job, but if it's not written down or officially defined in any way, you can still brainstorm some core ideas that are characteristic of it.

Is it the fact that everyone is encouraged not to be afraid to ask questions? Is it the respect towards each other? Is it the Friday pizza that you all eat together? Your company has probably already formed a set of habits that make you who you are and strengthen your brand internally, which is great. Think of a way you can translate these into your project work and try to come up with more project-specific ideas to focus on. It could be assigning a common goal for this particular project and communicating it clearly. Some companies encourage people to come up with branding (name, logo, T-shirt design) for their teams to reinforce the sense of commitment.

Whatever you choose to do, make sure you are consistent about it. Once people notice that this is not a one-time thing or a temporary change, they're more likely to follow it and embrace the team culture you're fostering.



Tribal Leadership, Dave Logan, John King,  
Halee Fischer-Wright, Harper Business

According to **Tribal Leadership**, the highest stage of workforce tribe culture is where the team focuses on "we're great" and the shared goal to make history. Only 2% of workforce tribes can be characterised with this approach.



**MANAGING FOR HAPPY TEAMS - CHECKLIST**

When managing your resources during a project, you need to remember about these rules. Go through them to check if you're following them all on a daily basis:

- Embrace your role as the leader
- Be inspiring and stay inspired
- Remember that the attitude could be as important as capabilities
- Foster collaboration and mutual feedback
- Keep your feedback fact-based
- Play to people's strengths
- Share accountability
- Don't micromanage
- Be firm, yet polite
- Monitor progress (not people)
- Keep everyone in your team in the loop



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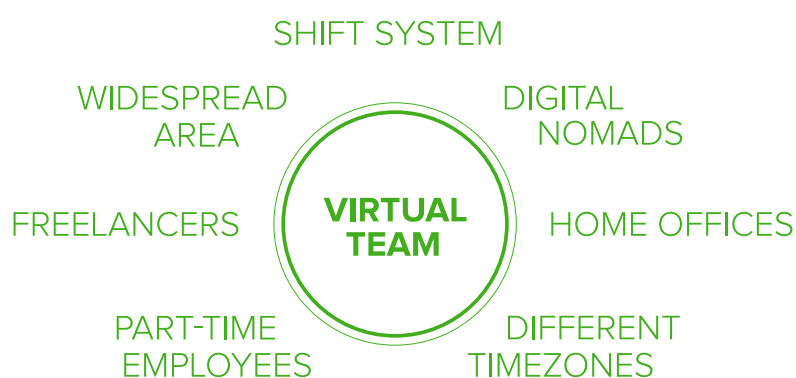
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**MANAGING RESOURCES IN THE REMOTE AGE:**

The resource landscape is getting more and more geographically dispersed these days. Leading agencies rely on people working from all over the world, often forming dedicated tech hubs. More people are also deciding to choose a digital nomad lifestyle or simply work from home. All these factors make you more likely to have to manage a **virtual team**.

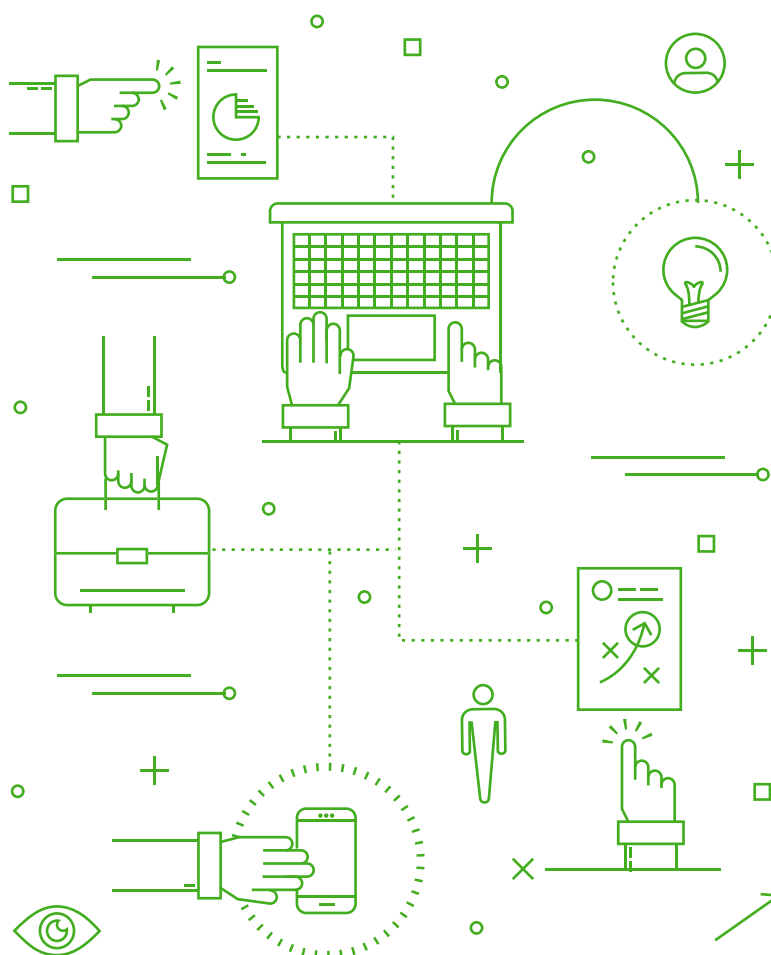


Managing a virtual team, you have to remember that the established processes and smooth communication are of the utmost importance: everyone has to be in the loop because it's very easy to miss a crucial piece of information. Additionally, think of:

- creative ways to integrate the team. They're not working together in the same office so a get-together might be out of the question, but there are different ways for them to “hang out” outside of working on the project.
- try to be fair for different time zones. A good idea is to rotate the meetings so that every time zone gets to attend a meeting at the most convenient time every once in a while. Remember to remind people about the changing schedule!
- local holidays and customs that may take you by surprise. Being culturally aware and sensitive always goes a long way.

### CULTURE NEEDS INFRASTRUCTURE

Whether you're managing a virtual team or working with people based in your office, you need to come up with an effective infrastructure to support your efforts and maintain the team culture. Think of the processes you follow or the way you prepare for and manage meetings. The next part of this ebook will help you figure out an essential part of your PM infrastructure - the software tools you use.





## CHAPTER 5:

# TOOLBOX

The tools you choose to use for communication, project management and, of course, resource management can positively affect the whole project you're working on. Wisely picked tools minimise the information clutter, increase visibility and provide the much needed collaborative space.

### DO I NEED TO BOTHER WITH THE TOOLS?

You do. Regardless of your company size, successful project management requires visibility into the processes and the existence of centralized communication channels for the team. The thing is, you will certainly use different tools than the ones created for huge enterprises.

It could be the case that your company **already has a set of tools in place** – evaluate them against the points below and decide whether or not they're the best fit for you. If they're not – you should share this insight with other Project Managers and the management staff. Maybe they've already noticed the same shortcomings? Together you can decide on a tool that is tailored to your company's needs and also not painful to switch to (this could be easily overlooked: difficult onboarding may waste a lot of your time and, by proxy, money).

Speaking of money, this is **the argument for your boss**, should they not be convinced to have any specialised tools in the first place. Of course, you could argue that not having a centralised schedule of resources in place could cause clashes in bookings and, as a result, failed projects. The truth is, tools make you save money on a daily basis, not just when the worst case scenario happens. Picture this:



Let's say your company charges on average \$50 per hour and you're a team of 30 people. If you save 10 minutes per person per day because of having an easy way to schedule bookings and tasks, you are able to save **around \$1200 per week**. That's what a well-suited tool does for you.

The savings can go a long way if you decide to use time-tracking software. People tend to misestimate the time spent on each task, especially when they fill out the timesheets retrospectively. A time-tracking tool is a good way to receive accurate performance reports.

### CHOOSING THE RIGHT RESOURCE MANAGEMENT TOOL

#### Focus on your needs:

Before you start browsing through different tools, you need to narrow down your real needs and then go down the checklist to make the decision.

Try to establish these points:

- 1** **the features you really need** – what problems are you trying to solve with it?
- 2** **your general toolbox** – what solutions do you use for Project Management, etc? The resource management tool will have to complement them.
- 3** **your team and their needs** – will they use the tool on the go? Are they working remotely?

When assessing different Resource Management tools, you have to keep in mind that it needs to be user-friendly for both admins (Project Managers, Resource Managers) but also users – the regular employees who will use it to alter their availability (for part-timers) or to simply check the upcoming bookings.

**PERFECT RESOURCE MANAGEMENT TOOL CHECKLIST:**

Try to to answer these questions and check whether the tool you’re considering addresses your needs.

**IS IT A GOOD FIT FOR YOUR COMPANY?**

*The tool needs to reflect your company’s maturity level and be able to grow with you.*

- Is it a tool for a specified company size/type (agency, enterprise, etc)? If so, does it fit your company description?
- Do you recognise the customers that are using this tool? Are they similar to you?
- Can it scale along with your company?

If the tool works for them, it could be a good sign.

**IS IT A GOOD FIT FOR YOUR TEAM?**

*The software you choose has to be comfortable to use for all users, otherwise it will be quickly abandoned.*

- Is it mobile-friendly?
- Does it provide real-time sync?
- Is it suited for people with part-time availability?
- Is it user-friendly for regular users? Are the bookings clear at the first glance?

Essential for remote teams.

It will be important to you if you work with part-timers or freelancers.

**IS IT A GOOD FIT FOR YOU?**

*As a Project Manager, you will spend quite a lot of time with this tool, updating the timesheets and editing the bookings. It needs to work seamlessly with you and with your whole tool ecosystem.*

Best case scenario is that you can save some work by integrating, for example, your PM tool with the resource management one.

- Can it be integrated into your tool space?
- Does it provide the customisation you need?
- Does it provide reports useful for you and stakeholders/clients?

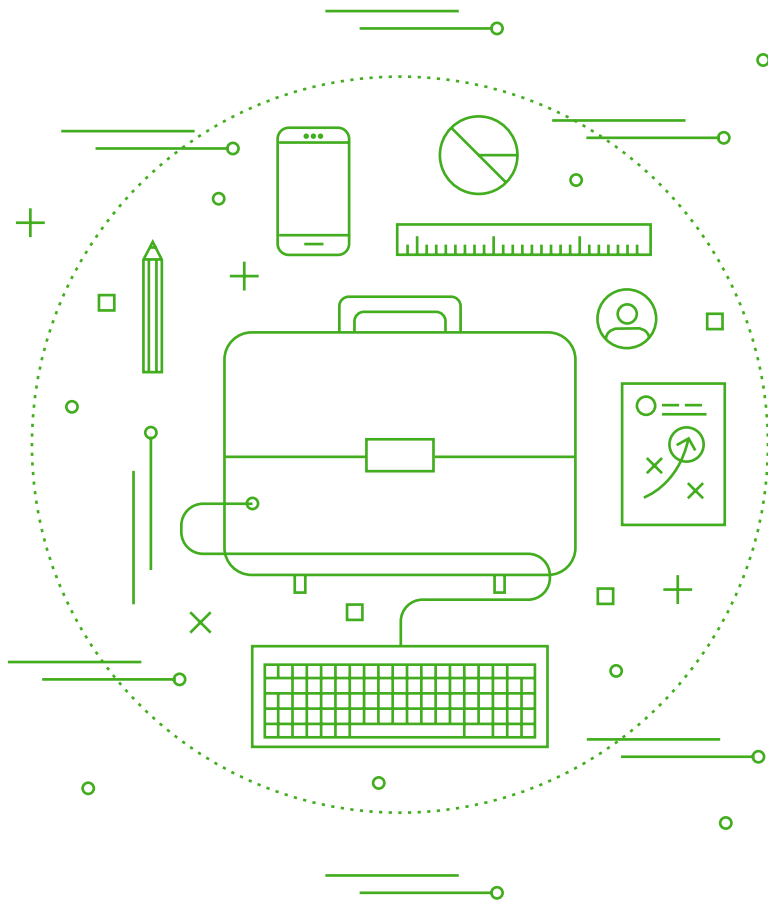
These questions should have narrowed your choices (or maybe even left you with this one perfect tool?), but moving on, you should also take into account whether the company provides a smooth onboarding process and ongoing customer support.

### What if your boss is adamant about using a tool that doesn't seem useful for you or is a pain to use?



"The real cost of unused software"  
2015 report by 1E

Research shows that companies are wasting 37% of their software spending on software that was deployed and then remained unused. Granted, this is data concerning large-scale companies but any financial waste is even more severe for small and mid-sized agencies where the problem of "shelfware" might have been noticed and averted early.





### IT'S A WRAP!

There you have it, a collection of best practices and advice on Resource Management. We curated it based on our own experience, knowing that it is a challenging subject in the dynamic agency environment.

Not that long ago, we had a resource management-related problem. Being a dynamically growing software house, we couldn't find a resource management tool to cover our needs without it being unnecessarily complicated. As a result, we decided to build our own solution which proved effective for us – it is now available for everyone as [teamdeck](#). In short, it is a resource scheduling, time-tracking and leave management tool that's easy on the eye and comfortable to use. We especially recommend it for agencies and software houses.

It would be great if you decided to check it out and let us know your feedback. The setup is quick and we offer dedicated onboarding and support for the readers of this ebook:

GET STARTED FOR FREE

