



Calculating and Managing Resource Utilization

in Professional Services
Organizations

Table Of Contents:

Calculating and Managing Resource Utilization in Professional Services Firms 3

Utilization Rate Calculations 4

Scheduled (Planned) Utilization Rate 5

Actual Utilization Rate 5

Realization Rate 6

Realized Rate 7

Target Utilization Rate 7

Target Billing Rate 8

Best Practices To Optimize Resource Utilization 10

Resource Management Software 16

Calculating and Managing Resource Utilization in Professional Services Firms

Project and delivery managers perform a juggling act. They ensure projects are running on time and within budget while simultaneously keeping on top of team members and their roles. The last thing they need is problems with tracking the proper utilization of resources.

It goes without saying that an underperforming project team, or one that is overburdened by workloads, is entirely counterproductive to getting the job done. Some employees may feel that they are always overwhelmed, never able to achieve their deadlines on time, while others may seem to have extra time to meet at the water cooler. But how do you measure these levels to correct imbalances and have everyone equally share the workload?

This is where the concept of managing resource utilization is useful. Resource utilization measurements are metrics that help visualize the amount of time team members are spending in their assigned roles.

Chapter one

Utilization Rate Calculations



Utilization Rate Calculations

Resource utilization is especially essential for professional services organizations that rely on Billable Hours. In this whitepaper, all formulas and definitions are based on the Billable Hours model.

Scheduled (Planned) Utilization Rate

Scheduled Utilization Rate = Scheduled Billable Hours / Total Hours Available * 100%

Scheduled Utilization Rate - the percentage of time your team is planned to spend, which can be billed to a client. It is always a good idea to measure it before a project begins.

Your total available hours or resource capacity may vary, but the standard seven to eight hours is used most of the time. This may or may not include vacations, sick days, or personal time depending on your business needs.

Actual Utilization Rate

Actual Utilization Rate = Actual Billable Hours / Total Available Hours * 100%

Actual Utilization Rate shows the ratio between the reported Billable Hours spent by the project team to their total available hours and is calculated as a percentage.

For example, if your team has marked in their timesheets 800 hours out of 1,000 hours as billable, your Actual Utilization Rate would be 80%.

In the Actual Billable hours variable, actual (reported) time is usually obtained from timesheets.

Utilization Rate is helpful to determine if you have enough billable work for your resources. If this number is low, it means your team is spending too much time working on internal projects.

Ideally, your Actual Utilization Rate should be equal to Planned Utilization Rate. If it is lower, you should run an analysis to determine which resources are logging less Billable Hours and why. If your Actual Utilization Rate is consistently higher than Planned, it is recommended to review your project estimation and scoping process.

Realization Rate

Realization Rate = Total Billed Hours / Total Billable Hours * 100%

Realization Rate metric compares total Billable Hours with the total available Billable Hours.

For example, let us say your engineering team has a capacity of 800 available hours per month. 60 hours are allocated to training and meetings, and the remaining 740 hours should be billed to clients. In reality, only 530 hours have been billed.

*Realization Rate = 530 / 740 * 100% = 71.6%*

A low Realization Rate indicates that your project profitability might be at risk.

Realized Rate

$$\text{Realized Rate} = \text{Realization Rate} * \text{Billing Rate (\$)}$$

Not to be confused with Realization Rate, Realized Rate shows your effective Billing Rate based on the Realization Rate and your resources' Billing Rate.

*For example, Linda, your Lead Engineer, has a Billing Rate of \$120/hour. Her Realization Rate is 75% (meaning that Linda only bills 75% of her available billing time per month). Linda's Realized Rate will be $75\% * \$120/hr = \$90/hr$*

Realized Rate is useful to determine how profitable your resources are and whether you need to increase your Billing Rates or the number of Billable Hours.

Target Utilization Rate

Now that you know how to calculate Utilization Rate, how do you decide the ideal or target Utilization Rate for your team?

To determine it, you need to know several important numbers:

- Your Billing Rate
- Target Profit
- Total cost of your resources (salary + overhead)

Using these metrics, you can calculate Target Utilization Rate as follows:

$$\text{Target Utilization Rate} = \frac{(\text{Total Cost of Resources} + \text{Target Profit})}{\text{Total Available Hours} * \text{Billing Rate} * 100\%}$$

Essentially, by knowing how much profit you want to make and how much you are going to charge the client, you can determine what percentage of their time your team or entire company needs to spend on billable work.

For example, let us say you are taking on a 6-month project. The total cost of resources for your team of 5 people will be \$252,000.

Your target profit margin is 30%, which is \$75,600.

Your billing rate is \$120/hr.

*Target Utilization Rate = $(\$252,000 + \$75,600) / (5040 \text{ hours} * \$120/\text{hr}) * 100\% = 54.12\%$*

As you can see, if your costs are relatively low and your Billing Rate is high, you can afford to have a rather low Utilization Rate.

Target Billing Rate

By knowing and having confidence in your Utilization Rate, you can determine your lowest possible Billing Rate that will allow you to have the desired level of profitability.

To calculate it, you are simply going to reverse the formula for Target Utilization Rate.

$$\text{Target Billing Rate} = \frac{(\text{Total Cost of Resources} + \text{Target Profit})}{\text{Total Available Hours} * \text{Utilization Rate} / 100}$$

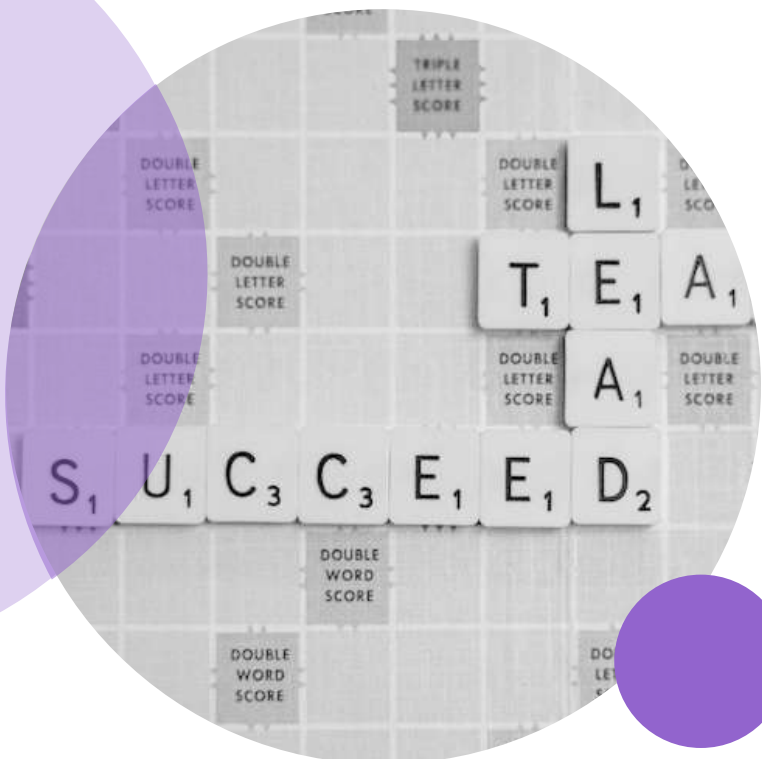
Assuming your team's utilization rate is 70% and using the example previously mentioned, you can calculate Target Billing Rate as follows:

$$\text{Target Billing Rate} = (\$252,000 + \$75,600) / (5040 \text{ hours} * 70\%) * 100 = \$93/\text{hr}$$

This means that if you are confident that your team can maintain their target of 70% Utilization Rate, you can afford to lower your Billing Rate to \$93/hr and still meet the 30% profit margin target.

Chapter two

Best Practices to Optimize Resource Utilization



Best Practices to Optimize Resource Utilization

After applying the necessary formulas and arriving at the results, where do you go from here? If your result was lower than expected Resource Utilization, the problem is essentially that you are overstaffed, or incomplete tasks may be blocking scheduled ones. Missed deadlines, delayed deliverables, and higher costs can be the consequences.

Conversely, if the formula shows a higher than expected figure, the project may be understaffed, which results in a lack of productivity and efficiency.

In order to avoid either scenario, here are some guidelines to help things run smoothly.

Set Reasonable Utilization Targets

As you plan your project, it might be tempting to forecast your team's Utilization Rate as close to 100% as possible. Do not. First of all, it is not realistic. There are always things that cannot be billed to clients. Setting the expectations of billing 100% of the time can stress and overwhelm employees.

The University of Calgary study of lawyers, notorious for their aggressive billing targets, shows a significant correlation between high billable hours targets and an increase in employee burnout. The study also showed a decrease in their self-assessed wellbeing and job satisfaction.

Second of all, you want to allocate enough time for skill improvement, training, and other internal or administrative projects to ensure that your team is always at the top of their game.

Setting your Utilization Rate too low obviously will negatively affect your profitability and might as well decrease your team morale - very few people want to spend half of their day in meetings.

While the average ideal Utilization Rate varies by industry, 70-80% target seems common for professional services organizations.

Use Timesheets

As Peter Drucker said, "If you cannot measure it, you cannot manage it." While using excel seems to be a popular go-to time tracking solution for many organizations, this approach is plagued with problems, such as data entry errors, delays in data consolidation, miscategorization, etc.

Having an easy-to-use time tracking system will ensure that your billable and non-billable time is tracked accurately. Ideally, time should be tracked daily, since some people filling their time logs on Friday night might not recall exactly how their time was allocated on Monday.

Timesheets will also help you review historical actual Utilization Rate to help forecast future work.

Track Intelligently

Some organizations take a shortcut and only track their Utilization Rates for the entire company or best case - by projects. A better approach is also to track the Utilization Rates for individual contributors, roles, and teams. It will allow identifying bottlenecks with your resources or give you insights into what additional employees or contractors you might need to bring in.

For example, you might discover that your engineering team is consistently approaching a 100% Utilization Rate - a clear sign that you need to expand.

Plan Well in Advance

As you plan your project, it might be tempting to forecast your team's Utilization Rate as close to 100% as possible. Do not. First of all, it is not realistic. There are always things that cannot be billed to clients. Setting the expectations of billing 100% of the time can stress and overwhelm employees.

- Delivery schedule: tight deadlines may cause higher Utilization Rate;
- Availability of team members with required skills;
- Planned team vacations and absences;
- Planned internal company events;
- Dependencies on other projects or tasks;
- Schedule conflicts with other projects.

All these items can be tracked and managed manually with spreadsheets; however, comprehensive work and resource management software can drastically reduce time required to collect, aggregate, and analyze all this data.

Identify and Reduce Resource Management Inefficiencies

As mentioned earlier, every professional services firm has some important non-billable activities. However, if you find that your actual or planned Utilization Rate is consistently too low, it may mean that you have some inefficiencies in your resource management process. The following are a few things to consider:

- **What type of non-billable activities are prevalent?**

For example, you might find that some teams spend disproportionate amounts of time in meetings.

- **Do you have enough billable time for all roles within your project team?**

For example, a long delay in the legal review might cause delays in starting the delivery process and, therefore, reduce your Utilization Rate.

- **What is the Utilization Rate of your managers?**

If it is too low, perhaps there are some inefficiencies in your administrative processes or workflows. Time to engage your operational excellence team.

Track Utilization in Real Time

Not having a real-time understanding of your Resource Utilization is one of the biggest threats to a professional services organization's profitability. A week delay in getting complete resource data may cost your company tens of thousands of dollars in wasted time or missed billing opportunities.

One of the best resource management practices is to have multiple dashboards with reports and KPIs aimed at different management levels. The following are some examples.

Project and Delivery Managers, Daily, and Weekly:

- Resource loading by skill and team;
- Actual vs. Estimated Hours;
- Actual Utilization Rate;
- Actual Realization Rate;
- Billable vs. Non-billable hours;
- Top 10 resources falling short of projections.

PMO, Weekly, and Monthly:

- Resource loading by skill and team;
- Actual Utilization Rate by program or division;
- Actual Realization Rate by program or division;
- Demand projections;
- Labor projections;
- Top 10 projects falling short of projections;
- Team Utilization Report.

Executive Team, Monthly, Quarterly, and Annually:

- Actual Utilization Rate by company, project, client;
- Actual Realization Rate by company, project, client;
- Demand forecast;
- Labor forecast;
- Utilization Rate forecast;
- Profitability (actual and forecast).

Plan for the Unexpected

A good manager hopes for the best but plans for the worst. You should have a contingency plan for any unexpected potential disasters. Managing resources effectively includes the ability to handle any curveballs thrown at you at any time during the project. For example, how would you source external resources quickly and efficiently if the need arises?

Chapter three

Resource Management Software



Resource Management Software

Many of the actions outlined can be efficiently implemented through the use of project management software. While Excel spreadsheets have been the traditional method to calculate and manage Resource Utilization, there are now more robust software packages that can accomplish this and many other tasks.

These same software packages can produce intelligence reports to better visualize the project's ongoing status. These can include the following:

Status Reports

A snapshot of where the project stands at present in comparison to scope, time, and cost.

Progress Reports

Details what has been completed since the last reported progress.

Resource and Capacity Forecasting Reports

What demand is expected to occur, future performance, and expected Utilization Rate for the project.

Trend Reports

Comparison of performance and resource utilization compared on a monthly, quarterly, semi-annually, or annually time frame. It can be used to examine if Utilization Rate has improved or degraded.

Variance Reports

Shows the comparisons between the planned and actual Resource Utilization, Billable Hours and Non-billable Hours, Actual and Estimated Time, etc.

Birdview

is a comprehensive work and resource management platform that can help plan, manage, and analyze many aspects across the organization. Birdview helps professional services organizations with the following:

- Track and manage resource loading and utilization;
- Automate workflows with template-driven projects or tasks;
- Set and control budgets, costs, expenses, revenue, and profits;
- And much more!

The Birdview platform can be implemented across every department in the organization. Project managers, team members, executives, and clients will realize greater efficiency in their project roles. Deadlines and assignments can be easily tracked to optimize resource allocation and utilization.



Contact The Birdview Team

for more information on how Birdview can help
your team work smarter when it comes
to project management.

Contact Us

