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# Industry Best Practice Guide for Project Management

## For Architecture, Engineering and Consulting companies

# Introduction

Architecture, Engineering and Consulting companies are undergoing rapid transformation and businesses are moving at an exponential rate. The need for mobility coupled with an increase in competition and clients squeezing margins, has made it increasingly important to deliver projects on time, to budget and of the highest quality, whilst ensuring the maximisation of return on employee efforts.

Figure 1 illustrates functional areas within project management of a typical business solution, and how it connects to an ERP solution.

This guide provides process improvements and potential supplementary solution information.

**Best practice** recommendations to consider applying to your business

**Tips and tricks** to consider when you apply the best practice in your organisation

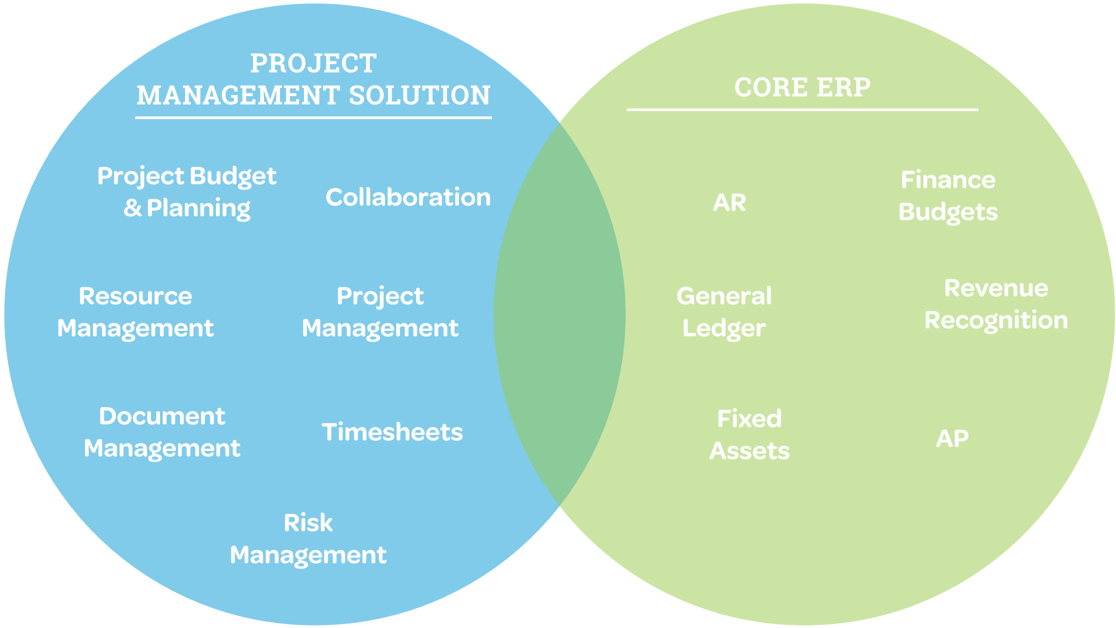


*Figure 1*

# Setting the Scene

## Core project financial model

Implementing positive change is simpler than one might think. By focusing on a few key project management best practices, companies can build a foundation to drive consistently successful project delivery. Below are four building blocks that will help ensure successful delivery and solid project profit margins. This guide will outline what it takes to implement these principles.


*Figure 2*

As part of improving project management we recommend you focus on the following key performance indicators (KPIs):

| Key Performance Indicators (KPIs) | DESCRIPTION |
| --- | --- |
| Cost Variance | Compare budgeted costs with actual costs to estimate and then protect project profit margins |
| Project Margin | Take revenue less project costs, less cost of labor to calculate project margins |
| % Complete | Percent progress against the set baseline |

# Set the Right Baseline

## Why do projects fail?

Projects can fail for a myriad of reasons. Perhaps the project wasn't scoped right, incorrectly staffed, or an overall lack of proper planning and estimating when the project was kicked off.

All of this can be categorised as "setting the baseline" correctly.

### FOUR KEY RECOMMENDATIONS:

1. **Estimate your project – establish your control point**
   Sales may use a sales price, but a project manager must have a price estimate and a cost estimate that he/she has approved, and will deliver against. This is a fundamental reference point for cost control.

2. **Establish the right project team before you start**
   Often projects are staffed with available people instead of the most qualified for the job. Take time pre-project, with the right decision makers and team leads to establish the best team for the project, to save time later on.

3. **Get the scope precise and signed off**
   Projects sometimes start without a proper scope. Create templates for all contractual aspects and do not start any project without a signed Statement of Work (SOW). Alternatively, if you decide to start a project without client sign-off, ensure a process is in place to mitigate over-servicing.

4. **Kick off the project and get everybody aligned**
   Once the budget has been agreed, the right team is in place, and the SOW is signed, it is important to ensure the project is kicked off correctly. Invite the core team first and eventually the client team to establish deliverables, governance and time line.

### SOME PRACTICAL TIPS ON IMPLEMENTING THIS:

- Define project templates for the work breakdown structure (WBS) of your projects – potentially even including estimates and check lists.
- Apply a price setup based on "employee categories" (suggest max 20). This provides a straightforward pricing approach for project managers to estimate and simple for clients to understand.
- Build solid templates for Statement of Work variations in your solution and use them as a foundation for putting your quote/proposal together.

# Execute Project & Control Progress

Client demands continuously grow and expectations on project deliverables increase over time. Therefore, the focus of project management must be twofold - to monitor money spent and provide clarity on progress against budget.

With public tenders and defined ways of working around these, the scope is usually clear and pre-defined.

We have applied what we call ”core model of progress management” below:

| Baseline | Actual | | ETC | | EAC | %-Complete |
|---|---|---|---|---|---|---|
| 100 | 60 | + | 60 | = | 120 | 50% |

*Figure 3*

The baseline reflects the contractual budget, the actual is what is spent so far, and the ETC or Estimate to Complete, provides the balance. Add the Actual and ETC together, for the EAC or Estimate at Completion.

This is a basic way of managing progress on projects. Some companies may use a more sophisticated Earned Value Management method.

An additional next step is to establish a monthly process for risk assesment – especially on major projects to avoid unforeseen risks and lack of a mitigation process.

### FOUR KEY STEPS IN PROJECT MANAGEMENT:

1. Set the baseline and a clear scope (statement of work)
2. Follow up weekly on hours – approve and control against plan
3. Manage progress through weekly stand-up meetings and provide clear assignments based on plan
4. Establish more formal progress reporting – either as part of month end, or more frequently – and apply risk assessments for projects of a certain size, complexity and matter

### SOME PRACTICAL TIPS TO FOLLOW FOR YOUR SOLUTION USAGE:

- Ensure your ERP solution supports the ability to set a baseline budget and track all variations.
- Ensure that you get the process of progress management migrated between your project management solution and your finance solution – so that revenue recognition is automised. This is a fundamental requirement that many ERP solutions can handle.

# Manage Project Financials

Project managers must ensure strong control over project financials. This involves invoicing clients in a timely manner. Although this may seem an unnatural task for PMs, it is important.

Additionally, the Statement of Work should be clear and accurate, as it will serve as your baseline. Below are a set of financial related recommendations that should be embedded in the Statement of Work (SOW). Should your company already incorporate a few of these in a Master Service Agreement (MSA) with the client, then reference to the MSA is simply required.

## GET THE RIGHT CONTRACTUAL TERMS FOR THE FINANCIALS

**Payment terms:** Ensure that your contract (MSA and/or SOW) has a clear definition of payment terms.

**Delivery dependent payments:** When you enter fixed price contracts, make the payments dependent on the deliverables. This ensures you have a strong reason for when you can invoice the client. This will require clear deliverables in the SOW. Alternatively, create a date dependent payment plan, with for example, upfront payment.

**Type of contract:** Make it clear in the contract, whether the project is fixed price or time and materials or something else.

**Expense handling:** Clearly outline in your SOW how expenses will be treated, for example are they invoiced on a cost spend basis.

**Assumptions:** Make clear assumptions in your SOW of expectations and dependencies of your deliverables.

## GETTING A HANDLE ON THE PROCESS OF MANAGING THE INVOICING AND CASH FLOW

1. Ensure hours, expenses and costs are registered and approved every week, so the foundation for invoicing is always updated. For control, include an approval process.
2. Confirm that the signed contract is always at hand in your ERP solution. Having the documentation to hand allows you to see what can be invoiced and when, for all projects.
3. Utilise solutions that allow you to master an invoicing plan as the foundation for your invoicing and automize with reminders when it is time to invoice.
4. Get clear sign off from the client when deliverables have been achieved and document it in your ERP solution, thereby documenting your right to invoice and receive payments.
5. Let the PM be in charge of the invoicing – with Finance as the review and control point. PMs understand the project status and timing, and should be held accountable for it.

# Create Core Business Process

There are many potential practices and rules to establish ongoing processes for managing projects. This document focuses on four core areas, allowing you to scale beyond that as desired.

We recommend establishing the following processes. Although these may be the  minimum for success, when executed precisely, project margins and utilisation improvements can be achieved.

Once the four processes are in place, a more sophisticated project delivery model can/should be evaluated.

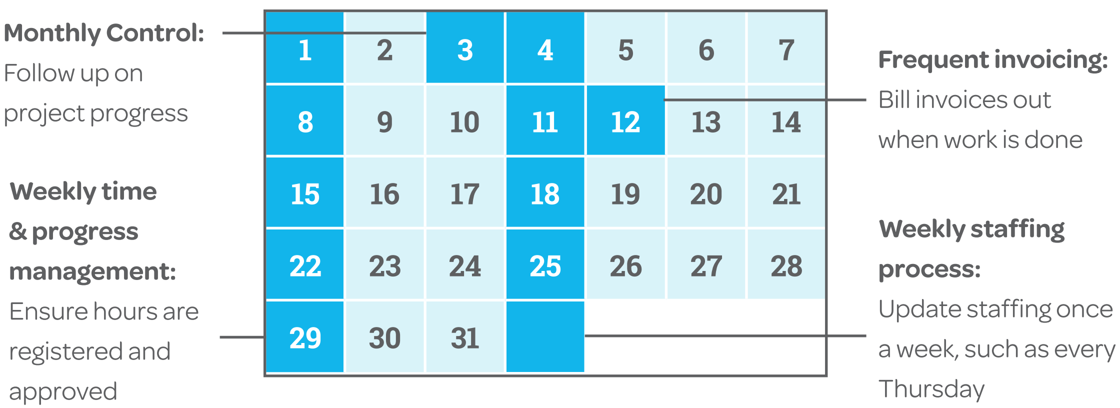


*Figure 4*

1. **Monthly control**
   As part of the finance team's month end, project managers should provide details on project status and evaluate the progress in terms of the value of work in progress (WIP), Time and Materials (T&M) and the percentage completion of the project (Fixed Price).
2. **Frequent invoicing**
   Invoicing should happen when the work is done or the invoicing plan payment date has been reached. Ensuring it happens at least every month, and setting deadlines that PMs must follow allows the firm to improve cash flow. Decentralising the process to PMs or allowing finance to drive it, differs from one company to the next. The person closest to the client should own the execution, which is often the project manager.
3. **Weekly time & progress management**
   Accurate and prompt time registration is critical. To maximise return on employee efforts, it is essential that time registration is completed, no later than a Monday morning. Then, a secure approval process is required. This provides the accuracy required for project managers (PMs) to follow up weekly on progress against projects.
4. **Weekly project staffing process**
   In an ideal world, project staffing would be updated and managed when required. Ideal worlds don't always exist, therefore it is crucial that on a given day of the week, typically a Thursday, project staffing is updated. This leaves Friday to clarify any booking conflicts before the following week. Resource planning is useless if all plans are not accurate. If your projects are primarily long-term, this frequency may not be as necessary.

# Conclusion

As clients increasingly demand higher quality work faster, and at a lower cost, Architecture, Consulting & Engineering companies are having to build agility and mobility into their project management processes.

Mobile, responsive project management starts with four building blocks, continues with four key processes, and ends with four recommendations that can help you avoid common project pitfalls.

If you follow these steps and carefully manage project progress and financials, you can streamline and simplify your project management.

This isn't an easy task for the modern Architecture, Consulting & Engineering firm. But with the right partner, you can better estimate project timelines and costs – and deliver higher quality work, faster, and within more stringent budgets.

| BUILDING BLOCKS | KEY PROCESSES | RECOMMENDATIONS |
|---|---|---|
| • Set the right baseline<br>• Execute project and control progress<br>• Control your financials<br>• Create core business processes to support it | • Monthly control<br>• Frequent invoicing<br>• Weekly time and progress management<br>• Weekly staffing process | • Estimate your project and establish a cost control point<br>• Establish the right project team before you start<br>• Scope the project precisely and get sign-off<br>• Align the team, budget, and SOW before kick-off |

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