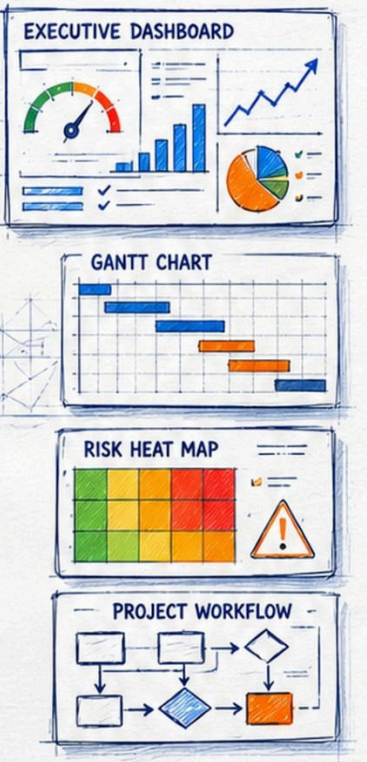
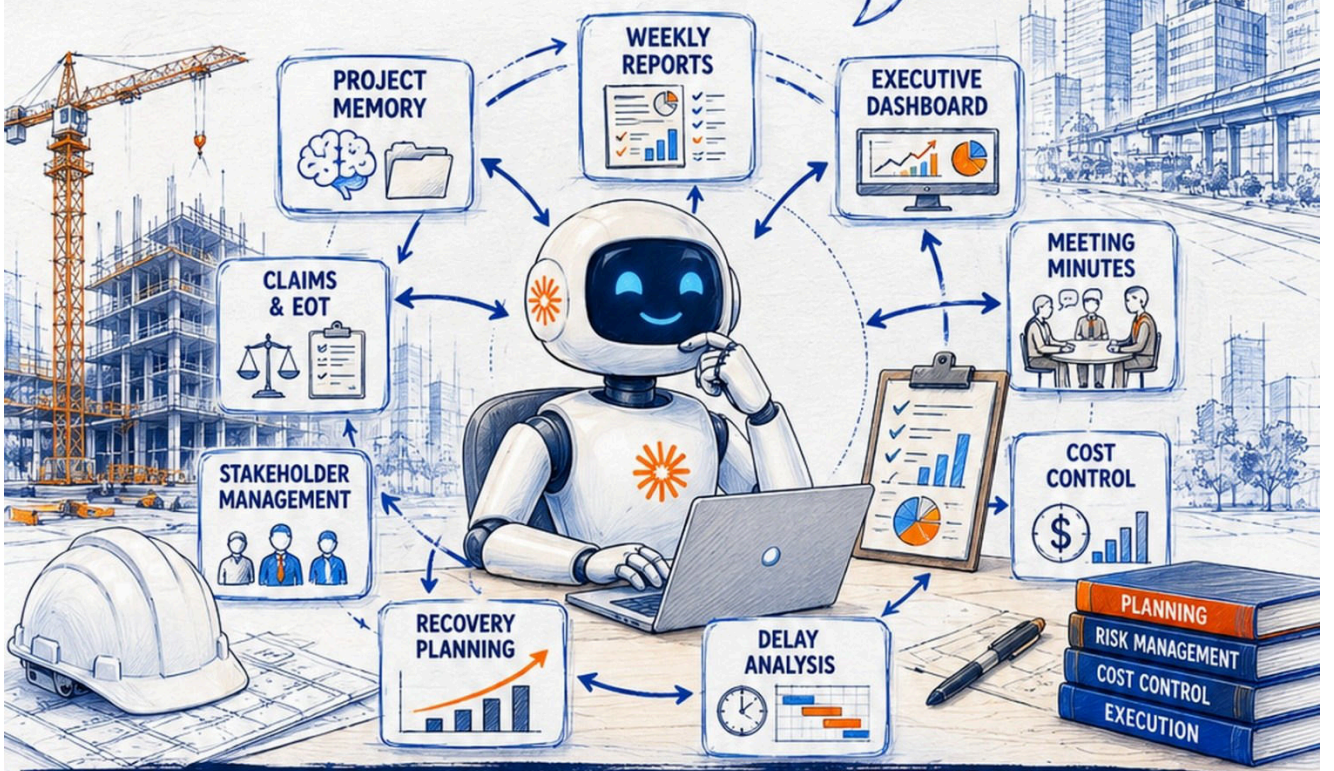
BUILD YOUR AI PROJECT MANAGER WITH CLAUDE



The Complete Hands-On Guide to Creating an AI-Powered Project Management System

SMARTER REPORTING | BETTER DECISIONS | HIGHER PRODUCTIVITY | LOWER RISKS | STRONGER PROJECTS

Your Intelligent Project Manager Powered by Claude AI



DR HASSAN KHAMES ELIWA, PhD

AI Project Management & Project Controls Specialist

AI PROJECT MANAGER

WITH CLAUDE

The Complete Hands-On Guide to Creating an AI-Powered Project Management System for Reports, Meetings, Risk, Cost, Delays, Recovery Planning, and Executive Decision Support

DR HASSAN KHAMES ELIWA, PhD

AI Project Management & Project Controls Specialist

Eliwa Project Controls Limited
Auckland, New Zealand

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Dedication

To the project managers, planners, schedulers, project controls engineers, and every professional who works tirelessly behind the scenes - often long after everyone else has gone home - to keep projects moving forward.

To my beloved wife, Hanan Alaiwah, for her endless love, patience, encouragement, and unwavering support throughout every late night, every challenge, and every milestone of this journey. This book would not have been possible without you.

To my wonderful children, Yosif, Yehya, Jasmine, and Shadia, whose smiles, curiosity, and love inspire me every single day to dream bigger and strive for excellence.

To my parents, whose sacrifices, guidance, prayers, and belief in me laid the foundation for everything I have achieved. Your love and values continue to guide my life.

And to my entire family, thank you for your constant encouragement, understanding, and support throughout this journey.

This book is dedicated to all of you - with love, gratitude, and deep appreciation.

About the Author



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PhD in Construction Management

Dr Hassan Khames Eliwa is a project controls and planning professional with more than 17 years of experience across infrastructure, building, and engineering projects in New Zealand and internationally.

He holds a PhD in Construction Management and has published multiple academic and industry papers in project management, project controls, and construction technology. Throughout his career, he has specialised in planning, scheduling, delay analysis, project controls, earned value management, and executive reporting, using industry-leading platforms such as Primavera P6, Microsoft Project, and Synchro 4D.

He is the founder of PMMilestone.org, a knowledge-sharing platform dedicated to practical project controls education, and Director of Eliwa Project Controls Limited, New Zealand.

His mission is simple: to make professional project controls knowledge accessible, practical, and immediately useful for project teams worldwide.

About the Publisher

Eliwa Project Controls Limited

Auckland, New Zealand

Eliwa Project Controls Limited is a specialist project controls consultancy focused on planning, scheduling, project controls, delay analysis, reporting, and construction management support services.

The company combines practical project delivery experience with academic research to provide reliable, data-driven project controls solutions for infrastructure, building, and engineering projects.

Additional resources, planning tools, and professional insights are available at:

www.eliwa.co.nz
www.pmmilestone.org

Preface

I wrote my first weekly report in 2007. It was for a building project that was already running late, and I remember sitting in a site cabin well past nine at night, copying numbers from a printed Primavera schedule into a Word template, formatting tables that never quite aligned, and trying to write a progress narrative that was honest without sounding alarming. By the time I finished, I had spent almost four hours producing a document that people would skim for ninety seconds in the Monday meeting.

In the years since, I have produced thousands of these documents — weekly reports, monthly dashboards, risk registers, delay analyses, claim narratives, board papers. The numbers changed, the projects changed, but the pattern stayed the same. A huge share of a project professional's week is spent not on judgement or decisions, but on the mechanical work of gathering, formatting, summarising, and explaining information that already exists somewhere.

That is the work this book is about removing.

When I first started using Claude seriously on live projects, I treated it like a clever search engine. It was useful, but I was barely scratching the surface. The real shift came when I stopped asking it isolated questions and started building it into a system - giving it the context of my project, teaching it how I think, defining the formats I use, and feeding it real data. At that point it stopped being a chatbot and started behaving like an experienced colleague who never forgets, never gets tired, and can produce a polished first draft of almost anything in minutes.

This book is the system I wish someone had handed me fifteen years ago. It is not a theoretical book about artificial intelligence, and it is not a collection of generic prompts you could find anywhere. It is a practical, field-tested method for turning Claude into an AI Project Manager that genuinely supports the daily reality of delivering construction, infrastructure, and engineering projects.

Everything here has been used on real work. The examples are drawn from real situations — late concrete pours, crane breakdowns, design changes that ripple through a programme, claims that hinge on whether you kept good records. The prompts are the ones I actually use. The workflows are the ones that survived contact with busy people and tight deadlines.

A word of honesty before we begin: AI does not replace the project manager, and anyone who tells you it does has not delivered a difficult project. Judgement, relationships, accountability, and the courage to make an unpopular decision remain entirely human. What AI replaces is the hours of administration that stand between you and that judgement. Used well, it gives you those hours back.

Let's build it.

— Dr Hassan Khames Eliwa, Auckland, 2026

How to Use This Book

This is a working handbook, not a novel. You do not have to read it front to back, although the chapters are arranged so that each one builds on the last. Here is how to get the most from it.

If you are new to AI tools

Start at the beginning. Chapters 1 to 3 explain why this matters, how to set Claude up properly, and how to give it the memory it needs to behave like a real assistant. Skipping this foundation is the single most common reason people get disappointing results. Twenty minutes of setup saves you hours of frustration later.

If you want results today

Jump to the chapter that matches your most painful task — weekly reporting (Chapter 4), executive dashboards (Chapter 5), meetings (Chapter 6), risk (Chapter 8), cost (Chapter 9), or delay and claims (Chapter 11). Each chapter stands on its own, with ready-to-use prompts you can adapt in minutes. Then come back and build the wider system.

How the chapters are structured

Every chapter follows the same rhythm so you always know where to find things:

1. A short explanation of the problem and why it matters on real projects.
2. Step-by-step instructions you can follow immediately.
3. Professional Claude prompts you can copy and adapt.
4. A real-world example drawn from construction or infrastructure work.
5. Key takeaways, expert tips, and common mistakes to avoid.

The icons you will see

Throughout the book, coloured boxes flag the parts worth slowing down for:

☑ **Key Takeaways** — the essential points to remember from a section.

★ **Expert Tip** — a practical shortcut learned the hard way.

⚠ **Common Mistakes** — errors that quietly ruin results, and how to avoid them.

▬ **Claude Prompt** — ready-to-use text you can paste into Claude and adapt.

> **A NOTE ON CONFIDENTIALITY**
>
> Before putting any project information into an AI tool, check your organisation's data and confidentiality policies. Many of the techniques in this book work perfectly well with anonymised data — generic activity names, rounded figures, and removed party names. When in doubt, strip identifying details first. Good results do not require sensitive data.

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Chapter 1 — Introduction to AI Project Management

Imagine having an experienced Project Manager, Planning Engineer, Project Controls Manager, Commercial Manager, and Executive Assistant working for you twenty-four hours a day. That is what you are going to build.

Let me be clear about what this book is and is not. It is not a book about the theory of artificial intelligence. It will not explain how a large language model works under the hood, and you do not need to understand that to get enormous value from one — in the same way you do not need to understand combustion to drive to site. This is a book about getting real project work done faster and better, using a tool that happens to be the most capable thinking assistant most of us have ever had access to.

Over the next seventeen chapters you will turn Claude into something I call an AI Project Manager: not a gimmick, not a chatbot you ask trivia, but a structured, reliable assistant that prepares your reports, analyses your data, tracks your risks, remembers your decisions, documents your meetings, and helps you and your executives make better calls. We start here with the why, because if you understand why this works, you will use it far more effectively.

Why AI is Transforming Project Management

Project management has always had a dirty secret: a large fraction of the role is administration. Studies of project professionals routinely find that experienced managers spend somewhere between 30% and 50% of their week not making decisions, but preparing the information that decisions are based on. Pulling progress figures together. Reformatting them. Writing narratives. Updating registers. Chasing actions. Producing the same report in three different layouts for three different audiences.

None of this is the job you trained for. You trained to plan work, sequence it logically, see problems coming, protect the programme, and steer a team through difficulty. But the administrative tax sits on top of that real work, and on a busy project it can swallow the very hours you need for thinking.

AI changes the economics of that administrative tax. A task that took two hours — drafting a weekly report from a pile of inputs — can take fifteen minutes. A task that most people simply skip because they never have time — a clean lessons-learned log, a properly structured risk narrative, a tidy decision register — becomes something you can produce on demand. The transformation is not that AI does clever things you could never do. It is that AI does ordinary, necessary things at a speed that frees you to be a better manager.

KEY TAKEAWAYS

- Most of the project manager’s week is information work, not decision work.

- AI does not replace your judgement; it removes the administration that stands in front of it.
- The real prize is time — hours returned to planning, problem-solving, and leading people.

Why Claude?

There are several capable AI assistants available, and the principles in this book transfer broadly. I have chosen to build the system around Claude for three practical reasons that matter on real projects.

First, it handles long, complex documents well. Project work is full of dense material — programmes, contracts, specifications, monthly reports, registers. Claude is comfortable reading and reasoning across a large amount of context at once, which is exactly what you need when you ask it to compare this month's report against last month's, or to find the clause that supports a claim.

Second, it is genuinely good at structured, professional writing. Project communication has a particular register: clear, measured, defensible. Claude produces this register naturally, and it follows formatting instructions reliably, which means the report it gives you needs editing rather than rewriting.

Third, the workspace features built for projects make a real difference. The ability to create a dedicated Project, give it persistent knowledge, set custom instructions, and let it remember context across conversations is what lets you move from one-off questions to a standing system. We use all of these in Chapter 2.

EXPERT TIP

Do not get stuck choosing the "perfect" tool. The method matters far more than the brand. Build the system once, and it will move with you if your tooling changes. Everything in this book is a transferable skill, not a vendor lock-in.

AI vs the Human Project Manager

It helps to be precise about where AI is strong and where it is not, because that boundary determines how you should use it. The table below is the mental model I keep in my head whenever I decide whether to hand something to Claude or do it myself.

Dimension	Human Project Manager	AI (Claude)
Speed of drafting	Slow; limited by fatigue	Very fast; consistent
Memory of detail	Imperfect; forgets	Near-perfect with good setup
Judgement & accountability	Essential; cannot delegate	None; advisory only

Dimension	Human Project Manager	AI (Claude)
Relationships & trust	Core human strength	Cannot replace
Consistency of format	Variable under pressure	Highly consistent
Reading large documents	Tiring; error-prone	Fast and tireless
Reading the room	Strong	Absent
Working out of hours	Limited	Always available

Figure 1.1 — Where humans and AI each have the advantage. The skill is matching the task to the right one.

Read down that table and a strategy emerges almost by itself. Give the AI the drafting, the reading, the formatting, the remembering, and the first-pass analysis. Keep for yourself the judgement, the decisions, the relationships, and the accountability. The best project professionals I know are not the ones who resist AI or the ones who hand everything to it. They are the ones who have learned exactly where this line sits.

What AI Can and Cannot Replace

Let me say the uncomfortable part plainly, because the marketing around AI rarely does. Claude will sometimes be confidently wrong. It can misread a figure, invent a plausible-sounding detail that is not in your data, or carry an assumption forward that you never intended. On a project where money and reputation are at stake, you cannot treat its output as fact. You treat it as an exceptionally fast, exceptionally well-read junior who produces excellent first drafts that you, the experienced professional, review and own.

That is not a weakness of the method; it is the method. Every output in this book is a draft for your review, not a decision made on your behalf. Used that way, the risk is small and the reward is enormous. Used the wrong way — pasting outputs into a board paper without reading them — it will eventually embarrass you.

COMMON MISTAKES

- Treating AI output as verified fact. Always check the numbers against your source data.
- Pasting sensitive contract or party detail into any tool before checking your data policy.
- Expecting it to know your project. It knows only what you give it — which is why Chapter 2 matters.
- Asking vague questions and blaming the tool for vague answers.

Building Your AI Team

The most useful way to think about what you are building is not “a chatbot” but “a team.” Inside one well-configured Claude Project, you can summon several specialists,

each with a clear role, simply by the way you brief it. Over this book you will effectively recruit:

- **The Planning Engineer** — reads your programme, flags slippage, analyses the critical path and float (Chapter 10).
- **The Reporting Lead** — turns raw inputs into weekly and monthly reports and executive dashboards (Chapters 4 and 5).
- **The Risk Manager** — builds and maintains your risk register, prioritises threats, and drafts mitigation (Chapter 8).
- **The Commercial & Claims Specialist** — structures delay analysis, cause-and-effect, and EOT narratives (Chapter 11).
- **The Executive Assistant** — captures meetings, tracks actions and decisions, and never lets a follow-up slip (Chapter 6).

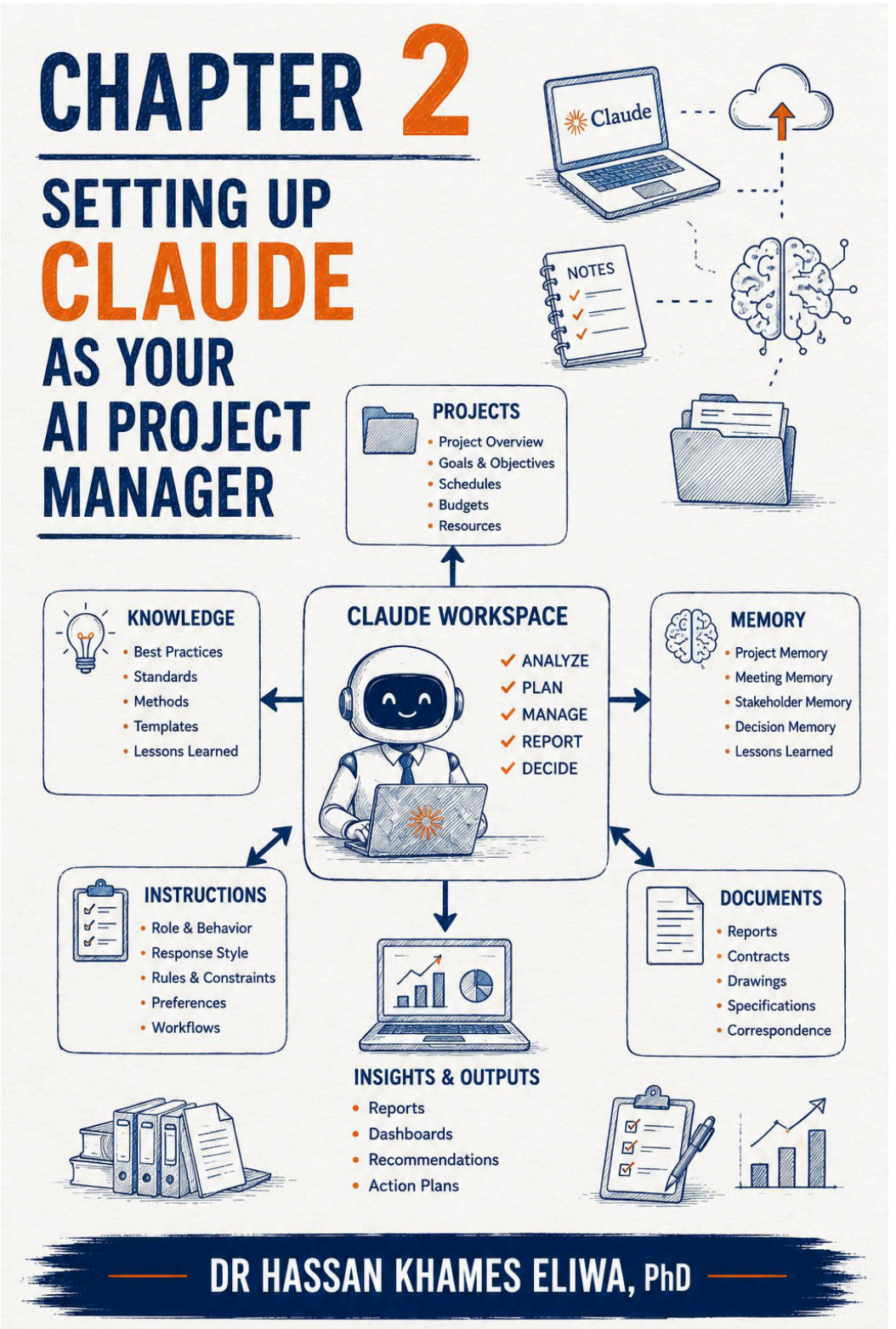
You are the project manager of this team. Your job is to brief them well, check their work, and make the calls. The rest of this book teaches you how to recruit and direct each one. We begin, in the next chapter, by giving the whole team a home and a memory.

KEY TAKEAWAYS

- Think “team,” not “chatbot.” One Project can host many specialists.
- You remain the manager: brief well, review always, decide yourself.
- The setup in Chapter 2 is what turns scattered questions into a real system.

CHAPTER 2

SETTING UP CLAUDE AS YOUR AI PROJECT MANAGER



DR HASSAN KHAMES ELIWA, PhD

Chapter 2 — Setting Up Claude as Your AI Project Manager

The difference between people who find AI "quite useful" and people who find it transformative almost always comes down to setup. Twenty minutes here pays you back every week for the life of the project.

When I run this with a new team, the first instinct is always to open a blank chat and start asking questions. It works, in the way that asking a brilliant stranger for help works — they are clever, but they know nothing about your project, your standards, or how you like things done, so every conversation starts from zero. The whole point of this chapter is to stop starting from zero.

We are going to give Claude a permanent home for your project (a Project), a body of knowledge it can always draw on, a set of standing instructions about how to behave, and an organised structure for your files. Once this is in place, every conversation begins with Claude already knowing your project as well as a well-briefed new team member.

Projects: Give Each Project Its Own Home

A Project in Claude is a dedicated workspace. Everything inside it — conversations, uploaded files, custom instructions — stays together and stays separate from your other work. The single most important habit in this entire book is this: create one Project per real project, and do all that project's work inside it.

Why does this matter so much? Because context is everything. When the Riverside Bridge works are in their own Project, Claude never confuses them with the Eastgate Tower job. The schedules don't bleed into each other, the stakeholders stay distinct, and the memory you build is clean. I have watched people get frustrated with AI because they ran six projects through one messy chat thread; the tool was not the problem, the lack of separation was.

SETTING UP A NEW PROJECT

- Create a new Project and name it clearly — e.g. "Riverside Bridge — Project Controls."
- Write a one-paragraph project overview as the first thing it sees (scope, value, duration, key dates).
- Add custom instructions defining Claude's role (covered below).
- Upload your foundation documents (programme, scope, key registers).
- Run one test request and refine the instructions based on the result.

Project Knowledge: What Claude Always Knows

Project Knowledge is the persistent reference material attached to your Project. Unlike a single message, this stays available across every conversation. Think of it as the induction pack you would hand a new project controls engineer on day one. The richer and cleaner it is, the better every answer becomes.

You do not need to load everything. You need to load the things Claude must always have to be useful. Here is the knowledge set I attach to almost every project:

Knowledge item	Why it matters
Project overview & scope	Anchors every answer in the right context
Current baseline programme	Lets it reason about dates, sequence, critical path
Key contract dates & milestones	Drives reporting and delay analysis
Risk register (latest)	Keeps risk advice grounded in your real threats
Reporting templates / formats	Makes drafts match your house style
Organisation chart / key parties	Lets it write to the right audience

EXPERT TIP

Keep a short, plain-text “Project Brief” as the very first knowledge item. Two hundred words covering scope, value, duration, contract type, current phase, and top three concerns. This single page does more to improve answers than any other file you load.

Custom Instructions: How Claude Behaves

Custom instructions are the standing brief that shapes every response. This is where you turn a general assistant into your project controls specialist. Spend real time here; it is the highest-leverage text you will write in the whole setup.

Here is a custom-instruction block I use as a starting point. Adapt the bracketed parts to your project and tighten it over time.

⌨ CUSTOM INSTRUCTIONS (PASTE INTO PROJECT SETTINGS)

```
You are my AI Project Controls Manager for [PROJECT NAME], a
[type, e.g. NZD 53M building] project currently in [phase].

Act with the judgement of a senior project controls professional
with 15+ years in construction and infrastructure.

RULES:
- Be concise, professional, and defensible in tone.
- Use British/NZ English spelling.
- When you make an assumption, state it clearly.
- If data is missing, ask one focused question rather than guessing.
```

```
- Never invent figures. If a number is not in the data I gave you,
  say so.
- Default outputs to clear headings, short paragraphs, and tables
  where they aid clarity.

When I ask for a report, structure it for a busy executive:
headline first, detail second.
```

REAL EXAMPLE

On a recent infrastructure programme, simply adding the line “When you make an assumption, state it clearly” changed everything. Instead of confidently filling gaps, Claude began flagging them: “I have assumed the steel delivery date is unchanged from the June programme — please confirm.” That one habit caught two reporting errors before they reached the client.

Memory: Continuity Across Conversations

Memory is what lets Claude carry useful context forward so you are not re-explaining your project every time. Combined with Project Knowledge, it means your assistant gets better the longer you work together — it remembers the decisions you made, the preferences you expressed, and the way your project is shaped.

The practical discipline is simple: when something important is decided or established, tell Claude to remember it, and be explicit. “Remember that our reporting week ends on Friday and the client meeting is every second Tuesday.” “Remember that the Façade subcontractor is our highest delivery risk this quarter.” Chapter 3 is devoted entirely to building this memory deliberately, because it is the foundation everything else stands on.

Project Files & Folder Structure

Files are how you bring real data into a conversation — this week’s progress update, the latest cost report, the marked-up programme. You will upload these constantly. To keep it manageable, mirror your project’s real folder logic and name files so their content is obvious.

The structure below is the one I recommend. It is not about being tidy for its own sake; it is about being able to say “update the weekly report from the latest progress file” and have everyone — you and the AI — know exactly which file that is.

Folder	Typical contents
01_Project_Brief	Scope, overview, contract summary
02_Schedule	Baseline, monthly updates, look-aheads
03_Reports	Weekly, monthly, executive dashboards

Folder	Typical contents
04_Cost	Cost reports, EVM data, forecasts
05_Risk	Risk register, mitigation logs
06_Meetings	Minutes, action registers, decisions
07_Claims_Evidence	Delay records, correspondence, photos

EXPERT TIP

Name files with dates in ISO format: “2026-03-13_Progress-Update.xlsx” sorts correctly and removes all ambiguity about which version is current. Future-you, racing to finish a report at 7pm, will be grateful.

Best Practices for Setup

1. **One project, one workspace.** Never mix two live projects in one Project.
2. **Lead with a tight brief.** The 200-word Project Brief is your highest-value asset.
3. **Define the role explicitly.** Tell Claude who it is before you tell it what to do.
4. **Forbid invention.** “Never invent figures” belongs in every project’s instructions.
5. **Refresh knowledge monthly.** Replace the old programme and registers when they change.
6. **Review, then refine.** When an answer disappoints, fix the instructions — not just the question.

COMMON MISTAKES

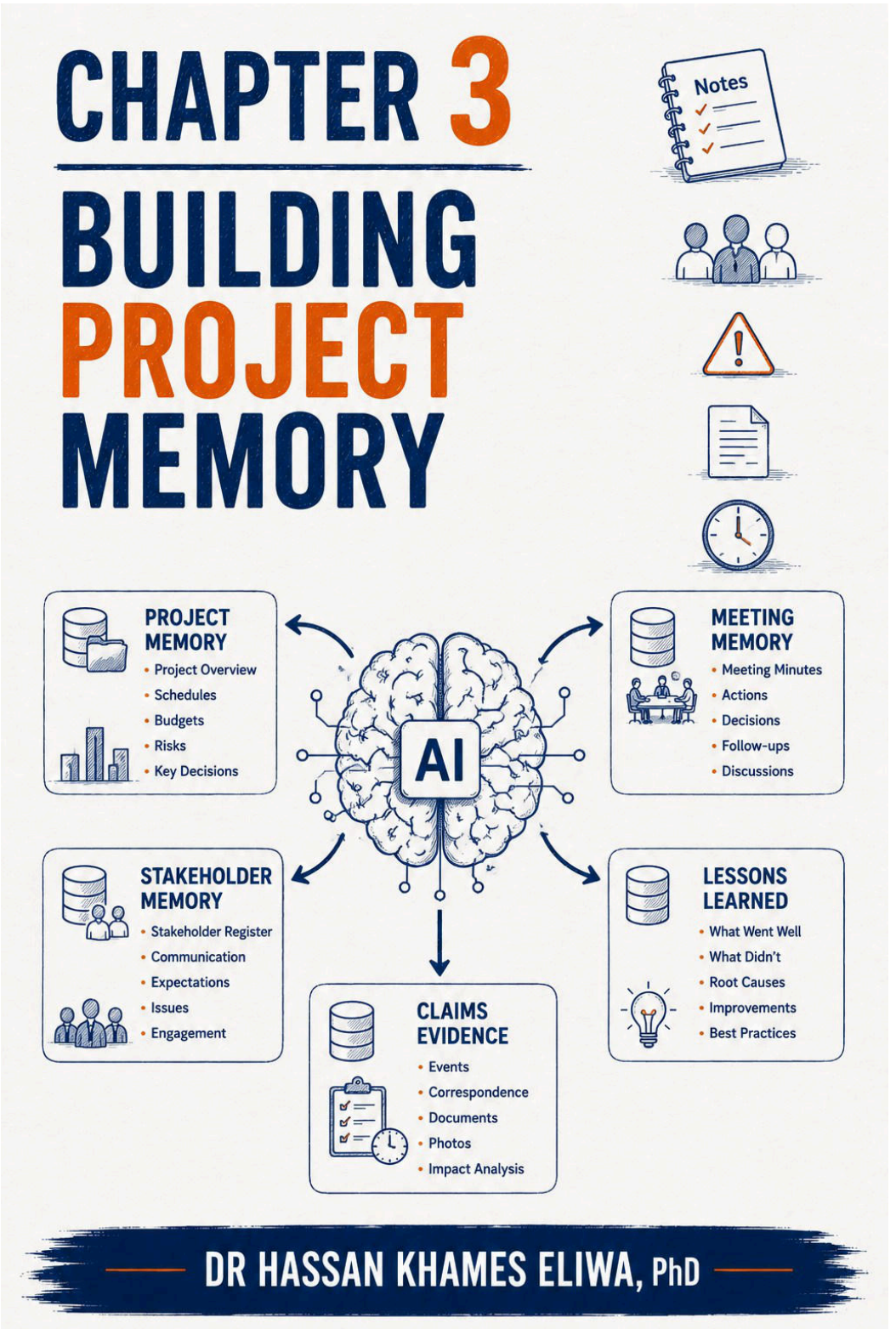
- Skipping setup and wondering why answers feel generic.
- Loading hundreds of pages of knowledge — quality and relevance beat volume.
- Never updating the knowledge, so Claude reasons from a stale programme.
- Leaving the role undefined, so it behaves like a search engine instead of a controls manager.

KEY TAKEAWAYS

- Setup is the multiplier. Everything downstream depends on it.
- Project + Knowledge + Custom Instructions + Memory = a real assistant, not a chatbot.
- Spend twenty minutes here; save hours every week for the rest of the job.

CHAPTER 3

BUILDING PROJECT MEMORY



DR HASSAN KHAMES ELIWA, PhD

END OF FREE SAMPLE

Enjoyed the first 20 pages?

Keep reading Build Your AI Project Manager with Claude by Dr. Hassan Khames Eliwa, PhD — available as an instant PDF download, paperback and hardcover.

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