

VOLUME THREE · CHAPTER ONE

# ***The Workbench***

*A blueprint for what stays in human hands*



*Before any question of tools, the oldest question in management: what, exactly, is the work?*

DOODLE

DISCOVER

DO

## BEFORE YOU BEGIN

## ***If only managers are in the room, you will draw the work as it is described, not as it is done.***

The blueprint is a craftsman's workbench seen from above. The vice at the left end is the work held firmly in human hands. The jig at the right end is the prescribed work a fixture can hold. The long middle is shared: drafted by the machine, finished by a person. Above it hangs the tool wall; below it sits the offcuts bin. And across the bench runs a dashed line, drawn in pencil: the jagged edge.

### **1 Doodle**

Lay the work out task by task: what goes in the vice, along the middle, at the jig, on the tool wall and in the offcuts bin. Then draw the jagged edge.

### **2 Discover**

Where you are guessing about the edge, what you put at the jig that needs the vice, what sits in the vice from habit — and who learns the trade if this goes to the machine.

### **3 Do**

One task to the jig, one held in the vice, one edge to test, one offcut to bin — and a date to re-open the blueprint.

#### **YOU WILL NEED**

The blueprint, printed A1 if you can, A3 at the least, never A4. Pencils, never pens.  
Two to three hours.

#### **IN THE ROOM**

The people who do the work, their manager, and someone who has used the tools in anger on this kind of work.

***Tasks, not people. Tasks, not tools.***

YOU CAN READ THE LIFE OF THE PERSON WHO USED IT

## ***That is where the hands were.***



At one end there is a vice, and the timber around its jaws is worn pale and smooth, polished by forty years of palms and forearms. That is where the piece was held, turned, looked at against the light, and decided upon. Every important cut was made within reach of that vice, because every important cut needed someone to judge it.

At the other end there is a jig: a block of hardwood with a slot and two stops, screwed down so the same cut comes out the same every time. Nobody admired the jig. It was made once, carefully, by the same hands that worked the vice — so the thought could be saved for the other end of the bench.

*Where our hands really are, most weeks:*

NOT A PHILOSOPHY — SIMPLY HOW A WORKING BENCH IS LAID OUT

## ***The wear on the timber is the proof that the plan was right.***

### **The long middle**

Scarred, stained and covered in pencil marks, where the rough work from the jig was brought over to be finished by hand.

### **The tool wall**

Above it, the tools hang on painted outlines, each in its place, so a glance tells you what you have and what is missing.

### **The offcuts**

Under the bench, in a box: the pieces that did not need to be part of anything.

### **The decision**

The whole arrangement is a decision about what stays in human hands, what can go to a fixture, and what should not be made at all.

***Almost every organisation now has a new tool on the wall. Very few have redrawn the bench.***

*The last time anyone redrew our bench:*

WHY A BOOK ABOUT COMPETENCE WITH AI STARTS HERE

## ***Before any question of tools, the oldest question in management.***

### **1 You cannot delegate work you have not understood.**

Handing a task to a machine is still delegation, and delegation starts with knowing the task.

### **2 You cannot check output from a task you could not describe.**

If nobody can say what good looks like, nobody can say when the draft is wrong.

### **3 You cannot grow people into a craft whose parts you cannot name.**

The parts of the work are also the steps by which people learn it.

*Everything else in this book depends on this one. So we start at the bench.*

*One part of our work we could not describe if asked tomorrow:*

## AUTOMATED TELLER MACHINES, FROM THE 1970S ONWARD

# *The job of a bank teller was never one thing.*

When ATMs spread through American banks, the obvious prediction was that tellers would disappear. The economist James Bessen collected the numbers, and David Autor later made the story famous: across the decades in which ATMs multiplied, the number of tellers in the United States held roughly steady and even rose a little. The machines made each branch cheaper to run, so banks opened more branches. And the teller's job changed underneath its title.

## *To the jig*

The counting. Faster, cheaper and around the clock.

## *In human hands*

The conversation: the customer with a problem, the loan enquiry, the relationship.

## THE QUIETER LESSON

Most people took “don't panic” from that story. The better lesson: the job was a bundle of tasks. The machine took some and left the rest. The banks that did well were the ones that knew which was which.

*Which of our tasks are the counting – and which the conversation?*

## THIRTY YEARS OF COMPETENCY FRAMEWORKS

## ***The line between them was nothing like a straight line.***

I have built competency frameworks for most of a thirty-year career, in mining, casinos, financial services, aerospace and, for the last six years, at an Australian visual effects company that began independent and was later acquired into a global network. A competency framework, done well, is a careful description of the work and of what a person has to be able to do to carry it. Done badly, it is a list of adjectives in a spreadsheet. I have written both kinds.

In the visual effects industry I watched machine learning and then generative tools arrive, the way they have arrived everywhere: not as one event but as a slow tide that got into the corners of the work at uneven speeds.

### **Overnight**

Some tasks changed almost at once.

### **Barely moved**

Others, which everyone assumed would go first, hardly shifted.

***It was coming for some tasks, and leaving others. The hardest thing to see, from inside, was the shape of the change.***

*Where the tide has reached our work – and where it hasn't:*

## 1 The rollout that treated every task the same

# *It read so well that nobody looked.*



The licences arrive on a Monday, for everyone. The message from the top is enthusiastic and simple: use it for everything, find the efficiencies. For a few weeks it is wonderful. Meeting notes write themselves. First drafts appear in minutes. Then a piece of analysis goes to a client, assembled quickly and confidently, and it is wrong in a way a junior would have caught a year ago and a senior would have caught in a glance. Nobody had said which work the tool was good at and which it was not. Nobody knew.

**WHAT THE ORGANISATION DOES** *An AI steering committee is formed.*

*Work we handed over because it read well:*

## 2 The manager who cannot say what her team does

***None of them describe the work as it is done on a Tuesday afternoon.***



She is asked a reasonable question: which parts of your team's work could the new tools help with? She opens the role descriptions, last updated years ago, written in the language of responsibilities and attributes. She knows her people are good. She cannot say, task by task, what they are good at — which parts are routine and which are the reason she hired them. So she cannot say where a tool would help and where it would quietly do damage.

**WHAT THE ORGANISATION DOES** *A prompt library is purchased.*

*A role of ours described on paper, not as done:*

### 3 The report that should have died

***The organisation has automated an offcut, and is proud of the saving.***



Every Friday a team spends half a day producing a summary for a meeting that stopped making decisions some time ago. The new tools arrive and someone, rightly pleased, automates the summary. It now takes ten minutes. It is also longer, more polished and produced twice a week, because it is cheap. Nobody reads it more than they did before, which is to say nobody reads it.

**WHAT THE ORGANISATION DOES** *A productivity dashboard is commissioned.*

*Our report that should have died:*

## A COMMITTEE, A LIBRARY, A DASHBOARD — BOLTED ON

# Having the tool was never the problem. Not knowing the work was.

**Every task the same**

Nobody said which work the tool was good at.

**Bolted on**

An AI steering committee.

**The manager who cannot say**

Nobody had described the work as it is done.

**Bolted on**

A prompt library.

**The report that should have died**

Nobody asked whether the task should exist.

**Bolted on**

A productivity dashboard.

***Nobody had laid out the work, task by task, and decided what belonged in the vice, what could go to the jig, what needed both, and what should go in the bin.***

*Our bolted-on remedy:*

ELLIOTT JAQUES · WHAT IS WORK?

## ***What you are paid for is what you do where the procedure runs out.***

The organisational theorist Elliott Jaques spent most of his career on one question. His answer, refined over decades: work is the exercise of judgement and discretion, within limits that are set for you, to reach a goal. Every role, he argued, has two kinds of content.

### ***Prescribed***

The rules, the standards, the procedures — what you are told to do, and how.

### ***Discretionary***

The choices you have to make yourself, because no rule can make them for you. Where the real work lives.

### **HOLD IT AGAINST THE BENCH**

The jig is pure prescribed content: a rule made out of wood. The vice is where the discretion lives — this piece, this grain, this joint, this decision. A craftsman builds jigs so that the prescribed part stops eating the hours the discretionary part needs.

***The promise of a good tool was never to remove the judgement. It was to clear room for it.***

*Where our procedures run out:*

AUTOR, LEVY AND MURNANE · 2003

## ***Technology does not take jobs whole. It takes tasks, and the bundle reshapes around the gap.***

Instead of asking which jobs computers would replace, three labour economists asked which tasks. They drew a line between routine tasks, which can be written down as explicit steps, and non-routine tasks, which need judgement, adaptability, or physical and social skill nobody can quite describe. Computers were very good at the first and poor at the second.

### **POLANYI'S PARADOX**

*"We can know more than we can tell."*

Autor borrowed the philosopher Michael Polanyi's line: much of what skilled people do, they cannot fully explain, and what cannot be explained cannot easily be programmed. Explicit work went to the machines. Tacit work stayed with people.

### **THEN THE BOUNDARY MOVED**

Generative tools learned from an enormous quantity of human output, not explicit rules. They can now draft a persuasive letter or summarise a tangled meeting. The old line between routine and non-routine no longer predicts very well what a machine can do.

*One of our jobs, broken into its tasks:*

DELL'ACQUA AND COLLEAGUES · 758 BCG CONSULTANTS · 2023

## ***It did not just fail to help. It made good professionals worse.***



Researchers from Harvard Business School, MIT, Wharton, Warwick and the Boston Consulting Group gave consultants realistic consulting work, some with GPT-4 and some without. On eighteen tasks inside the frontier of AI capability:

**12%**

more tasks  
completed

**25%**

faster

**40%+**

higher quality

**19 pts**

less likely to be  
right, on a task  
just outside the  
frontier

Those who had started below average gained most. But on the task outside the frontier — one that looked like the kind of thing AI should handle, where the answer depended on details the tool tended to miss — its answer was plausible, and they believed it.

*Two tasks of ours that look alike — but may not be:*

## CENTAURS AND CYBORGS

***Two tasks that look alike can sit on opposite sides of the line.***

The frontier is not a straight line, with easy tasks on one side and hard tasks on the other. Tasks that seem equally difficult to a person can fall on opposite sides of it, and from the outside you cannot tell which is which. The study noticed how the consultants who did well worked: some as **centaurs**, dividing the work cleanly — this part to me, that part to the machine; others as **cyborgs**, weaving the tool through their work, handing back and forth. Both could work. In both, the person made the division deliberately, task by task.

**Jaques**

## THE VICE

Tells you where the  
judgement lives.

### Autor

### THE LENGTH OF THE BENCH

Stop thinking in jobs; lay  
the work out, piece by  
piece.

**Dell'Acqua**

## THE JAGGED EDGE

The line runs unevenly across the timber. Look closely, and look again later — it moves.

*Are we centaurs or cyborgs – and do we choose deliberately?*

## ONE MORE PIECE — THE ONE MOST OFTEN LEFT OUT

## ***A craftsman also decides whether the task should be done.***

A craftsman does not only decide who or what should do each task. The offcuts bin is not waste in the bad sense. It is the evidence of good cutting.

**THE WARNING**

An organisation that hands its work to a machine without first asking which work should simply stop will produce, very efficiently, a great deal of what nobody needed.

**ASK FIRST**

Should this be done at all?

**THEN ASK**

Who or what should do it — and who finishes it?

*What belongs in our offcuts bin:*

## THE SLOW, PRESCRIBED, DRAINING PARTS OF KNOWLEDGE WORK

***The jig was always meant to free the hands, not replace them.***



For the first time, the first draft that took a morning, the summary of a hundred pages, the tidy table built out of a messy one, can be carried by a tool that costs very little and does not tire. Inside the frontier the gain was not marginal; it was large, and largest among the people who had been struggling.

Done well, this is the chance to give people back the part of their work that brought them to it: the judgement, the craft, the conversation, the decisions only they can make. There is a version of this decade in which that changes for the better.

*The part of our work we would most like back:*

## NOT THAT THE MACHINE TAKES THE WHOLE BENCH

## ***Faster, more polished and more wrong – with no way of knowing it.***

### **1 The line drawn carelessly, or not at all**

Judgement work handed to a fixture because it looks routine; routine work left in expensive hands because nobody looked; and the task just past the jagged edge handed over with confidence. That is the 19 points: capable people, a strong tool, made worse.

### **2 The frontier moves**

A task outside it a year ago may sit comfortably inside now, and the reverse can happen when a tool changes. The craftsman's bench changed over a working life. This one needs redrawing every few months.

### **3 The apprenticeship goes with the jig**

The junior at the jig end was quietly being taught where the judgement lived at the vice end. Move it all without thought and you may keep the efficiency and lose the apprenticeship. The Missing Rung takes this up in full.

***The machine can carry the task. Only a person can carry the accountability, the judgement and the meaning.***

*Where we are drawing the line by default:*

## A WORKED EXAMPLE · ONE CLAIMS TEAM, LAID OUT

# The Workbench Blueprint

## 4 THE TOOL WALL · WHAT WE ACTUALLY USE

Chat assistant

GOOD AT first-draft lettersPOOR AT policy exclusions

Meeting notes tool

GOOD AT summariesPOOR AT who agreed what

THE EMPTY OUTLINE · NOBODY HAS SAID

translation app, own phones

good: quick replies · poor: ?

THE JAGGED EDGE · IN PENCIL tested March · retest June

## 1 THE VICE · HUMAN HANDS

THE TASK

declined-claim callspayouts over limitsuspected fraud

WHY

careaccountabilityjudgement

## 2 THE SHARED MIDDLE

MACHINE DRAFTS

summary letterspolicy replies

WHO FINISHES · HOW

officer: facts, tonesenior: exclusions

## 3 THE JIG · PRESCRIBED

logging new claimsSLIPPED IF sample check failsaddress checksSLIPPED IF errors over 2%

DOODLE · DISCOVER · DO

THE BENCH · ONE TEAM'S WORK  
TASKS, NOT PEOPLE · READ RIGHT TO LEFT

## 5 THE OFFCUTS BIN · STOP

Friday status report — nobody reads itsecond sign-off on claims under \$500

### 1 Vice

Held firmly in human hands.

### 2 Shared middle

Drafted by the machine, finished by a person.

### 3 Jig

Prescribed, repeatable work a fixture can hold.

### 4 Tool wall

The tools you actually have — good at, poor at.

### 5 Offcuts bin

Work that should stop, not be automated.

## The edge log — tested, not assumed

THE TASK

Claim summary lettersPolicy exclusion queries

TESTED ON REAL WORK? HOW, WHEN

20 real claims, checked by a senior · Marchnot yet — we are guessing

WHICH SIDE?

insideguessing

DOODLE · DISCOVER · DO

## A JOINER'S SET-OUT DRAWING, NOT A STILL LIFE

# Three rules for the bench.

## 1 Read it task by task, never job by job

A job title does not go in the vice or on the jig. Tasks do. The moment someone says “that role could be automated”, stop, break the role into its tasks, and place each one. The role almost always spreads along the whole bench.

## 2 Read the jagged edge as provisional – test it, don't assume it

You cannot tell from a task's description which side of the edge it falls on. Try the tool on real examples of the work, check the results against someone who knows the work, and mark the line where it actually falls. Then date it, because it will move.

## 3 Read from right to left before left to right

Start at the offcuts bin and the jig: what should stop, and what is genuinely prescribed? Then move left. Most organisations start with what the tool can do and work back toward the people. Start with the work. The tool is answered by the bench, not the other way around.

*The role someone in our place says “could be automated”:*

## A GUIDED SESSION · TWO TO THREE HOURS

# ***This blueprint plots tasks, not people.***

- 1** Print the blueprint large — A1 if you can, A3 at the least, never A4. Pencils, never pens: the jagged edge in particular will be rubbed out and redrawn before the session ends.
- 2** One team or one role family at a time, not the whole organisation.
- 3** The people who actually do the work must be in the room, alongside their manager, and at least one person who has used the tools in anger on this kind of work.
- 4** Hold one discipline for the first hour: talk about tasks, not tools. The moment it becomes “which product is better”, you have left the bench and gone shopping.

## **SAY IT OUT LOUD, AND MEAN IT**

This blueprint plots roles, tasks, qualities and relationships — never a person's worth. Nothing drawn today will be used to rank or judge an individual, or to decide whom to replace. A task at the jig end says nothing about the worth of the person who used to do it. If the room does not believe that, it will hide the real work from you, and the bench will be wrong.

*Who does the work — and are they invited?*

## DOODLE

## LAY OUT THE BENCH

# ***“Reviewed” is not enough.***

## **1 At the vice, write what must stay in human hands**

Be specific: not “client management” but “telling the client the project is late”. For each, one word for why: judgement, relationship, accountability, discretion, care. If you cannot give a reason, it may not belong in the vice.

## **2 Along the shared middle, write what a machine drafts and a person finishes**

Next to each, write who finishes it and what finishing means: what the person checks, changes or decides.

## **3 At the jig, write the genuinely prescribed tasks**

Same inputs, same rules, same output every time. For each, write how you would know if the jig had slipped.

*At the vice – and why:*

**DOODLE** THEN DRAW THE LINE

# Mark every place where you are guessing.

**1 On the tool wall, an outline for each tool the team actually uses**

Sanctioned or not. Under each, GOOD AT and POOR AT — from your own experience on your own work, not the vendor's brochure. Leave an empty outline for the tool someone is using that nobody has mentioned yet. There usually is one.

**2 In the offcuts bin, the tasks that should simply stop**

The report nobody reads. The approval that never says no. The meeting that stopped deciding.

**3 Across the whole bench, draw the jagged edge in pencil**

The line between the tasks your tools handle well today and the tasks they do not.

*Our empty outline:*

**DISCOVER** STAND BACK AND ASK

## ***Your guesses are where the expensive mistakes are waiting.***

**1 Where are we guessing about the jagged edge?**

Which parts of the line have you tested on real work, and which are assumptions? Capable people cannot tell from the outside which side a task falls on.

**2 What have we put at the jig that actually needs the vice?**

The standard letter that sometimes goes to someone grieving; the routine reconciliation that is also how anyone spots fraud. Ninety-five per cent prescribed, five per cent judgement — and the five per cent is why it exists.

**3 What is in the vice only out of habit?**

Held in human hands because it always has been, or is comfortable, or someone's sense of their role depends on it. Some of the hardest offcuts are the ones people are attached to.

**4 If we automate this, who learns the trade?**

For every task moved toward the jig, ask who used to learn something by doing it. If it is the juniors, write it down and carry it to The Missing Rung.

*Where we are guessing:*

**DO** AT LEAST ONE OF EACH

# *Make it months, not years.*

**1 One task to hand to the jig**

Genuinely prescribed, with a named person to build and check the fixture, and a plain test for knowing when it has slipped.

**2 One task to hold in the vice**

Agreed explicitly and in writing, with the reason beside it, so the next enthusiastic rollout does not quietly hand it over.

**3 One edge to test**

Where you were guessing: tested on real work, by someone who knows the work, with the result marked on the bench by a set date.

**4 One offcut to bin**

Stopped entirely, not automated — with the name of the person who has the authority to stop it, and has agreed to.

**5 A date to re-open the blueprint**

The edge moves every time the tools do. Set the date before anyone leaves the room.

*Jig · vice · edge · bin · date:*

## WHERE ON THE BENCH DOES THIS HANG?

## ***The edge has been rubbed out and redrawn at least once.***

- 1** Anyone on the team can tell you, without notes, which of their tasks the tools help with and which they do not — and how they know.
- 2** A new tool arrives and the first question is “where on the bench does this hang?” rather than “what can we use this for?”
- 3** When a task goes to the machine, someone can say what finishing it by hand means.
- 4** The offcuts bin has things in it.
- 5** The people at the vice end have more time for the work that brought them there, not less.

*How we would know the bench is working:*

## FOUR WARNINGS · THE FIRST TWO

***If your bench looks tidy, test it.***

## The straight line

The bench where someone has drawn the frontier as a neat divide: drafting on this side, decisions on that; routine here, creative there. It is comfortable and it is wrong. The edge is jagged, and a straight line drawn across it will put some tasks on the wrong side with complete confidence.

## The whole job in the jig

The proposal that treats a role as one thing and hands it to a machine entire. It nearly always means nobody has broken the role into tasks. Somewhere in that bundle is a piece of judgement, a relationship or an accountability that has just been handed to a fixture without anyone noticing.

Where our line is too straight:

## FOUR WARNINGS · THE SECOND TWO

## ***A jig that turns out offcuts quickly is still turning out offcuts.***

### **The automated offcut**

The proudest efficiency gain in the room may be the one that made a pointless task faster. Before you celebrate a saving, ask whether the task should have been done at all. Cheap output breeds more output.

### **The bench used as a scorecard**

The moment anyone uses the blueprint to decide whose role is “mostly jig” and therefore who is expendable, stop. The bench plots tasks. A person whose tasks are moving to the jig end is not worth less; their bench needs redrawing, with new work at the vice end and the time and support to learn it. Use it to rank people and they will hide the real work from you next time — and they will be right to.

*The saving we should question:*

## CLOSING · BACK TO THE OLD BENCH

## ***Knowing what not to make was part of the trade.***



That pale, worn timber around the vice was forty years of a person deciding, again and again, which work needed their hands and which could be given to a fixture they had built for the purpose. The jig was never a threat to the craftsman. It was his. He made it, he set it, he knew exactly what it was good for and what it would ruin if you trusted it with the wrong piece.

The rollout, the manager, the report: none of them lacked tools. What they lacked was the bench — the plain, patient picture of the work, laid out piece by piece, with a line drawn honestly through the middle of it. Having AI is not the same as being competent with it. Competence starts here: knowing the work well enough to say which parts stay in human hands, and why, and drawing the jagged edge in pencil, knowing you will have to draw it again.

***The machine can carry a great deal of the task now. It cannot carry the judgement about which task is which. That stays in the vice. Open the blueprint. Pick up a pencil.***

