THE MECHANISM SERIES

Operatorship: What Ate Technopreneurship, and What Replaced It

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Front matter

About this book

This book began as an argument with a syllabus. I was taught *technopreneurship* in a first degree in entrepreneurship — the module in which online business was made to sound like a serious subject — and for twenty years the word was accurate. Then, over about four years, it stopped being accurate, and almost nobody in the classroom where I learned it has said so out loud. Students are still being taught a description of a world in which building was hard. It is not hard any more. It is a subscription.

So this book does two things. The first is an autopsy: an account of what actually died, why, and in what order. The second is a naming: a term for the form of business that replaced it, defined closely enough to be argued with, tested, and — in the last part — falsified.

How to read it

If you want the answer first, read chapter 13, then come back to the beginning. The name is *operatorship*, and the definition is one sentence long. The fifteen chapters before it are why the sentence is not a slogan.

If you are teaching, Part Four is the syllabus, and chapter 18 is the exam. It is designed to be stolen.

If you are sceptical — and you should be, because this is an argument about your livelihood written by one person with one estate — start at chapter 22, where the book states the three ways it could be wrong and the five observations that would finish it.

What this book is not

It is not a forecast that anyone will succeed. It is not investment advice, and it is not a claim that the collapse of one word's usefulness implies anything about the fortunes of any particular business. It is not a technology review: the specific models, prices and products are incidental, and they will be stale within a year, which is precisely the argument.

Nor is it a lament. The technopreneurs had a real advantage for a real period and many of them built real things. The book is grateful for that and moves on, because a word that names the abundant input cannot describe the scarce one, and the vocabulary has to follow the scarcity.

A note on the specimen

The estate described in these pages is the author's own: seven ventures, twenty-four works including this one, five publishing rails, an hourly monitor, a three-touch outreach sequence, and roughly three hours twenty minutes a week of human attention. One estate is a case, not a study. It is reported because the *shape* of the labour in it is a prediction — almost none of the week is building, almost all of

it is deciding — and a prediction can be checked. Chapter 21 says what would show it to be wrong.

Part One — The word

What this part is for: to establish what technopreneurship actually claimed, and to show that the claim was an arbitrage rather than a theory. By the end you should be able to state, in one sentence, what a technopreneur was selling and to whom.

1. What the word was doing

Technopreneurship. It is a compound, and the seam shows: technology plus entrepreneurship, welded together in a classroom and never quite smoothed out. The term is commonly traced to 1987, it gained currency when the first internet boom made the compound feel like a future, and it has been carried since by a specific institution — the university course. In South-East Asia, in India, in Nigeria, in Zimbabwe, *technopreneurship* became the module in which a business student was taught that the internet was not a channel but a place where a different kind of company could be built. It is still, in most places that teach it, not in the dictionary.

I was taught it in a first degree in entrepreneurship, where it served as the respectable name for "businesses on the internet". That is how it was used: a container for online ventures, a way of saying *this is real business, not a hobby with a website*. The word was doing honest work. It was telling a generation of students that the skills of a technologist and the skills of a founder could be held by the same person, and that holding both was a position of advantage.

The advantage was real. That is the part that matters, and it is the part that has ended.

Activity 1.1 — Recover your own curriculum. Write down the modules of any business or entrepreneurship course you have taken, in the order they were taught, and beside each one write what it assumed was scarce. Most people find that the list describes a world of expensive building: plans, projections, market research,

protection. Keep the list; chapter 19 returns to it, and the comparison is the argument. *(15 minutes.)*

2. A word from a classroom, not from a market

There is a signal in where a word lives. Words that come from markets are short, ugly, and used by people who need them to sell something: *startup, SaaS, hustle, fintech*. Words that come from classrooms are longer, more dignified, and appear in module handbooks: *technopreneurship, intrapreneurship, entrepreneurial orientation*.

The syllabus tells you what the institution believed was scarce. A typical technopreneurship course — the kind taught across the Philippines, Malaysia, India, Nigeria and Zimbabwe — ran through a familiar sequence: introduction to entrepreneurship; then business management; the business plan; intellectual property; marketing; operations management; the financial plan; legal aspects and ethics; and networking. Add to that a module on technology, and the fusion is complete.

Read that syllabus as an economist and it says something specific: **the scarce acts were building and reaching.** The course taught you how to construct a plan, protect a product, find a market, run operations, and count the money, because each of those was a skill that took years to acquire and separated the person who could do it from the person who could not. The technology module sat inside that structure as an amplifier: the same entrepreneurial acts, executed faster and further.

This is worth stating plainly because it is the premise that has to be tested. Technopreneurship was never a theory of value. It was a description of an arbitrage: *the things required to start a technology business are hard, and I have learned them.*

Activity 2.1 — The scarcity reading. Take any syllabus or course outline you can find — yours, a university's, an online bootcamp's — and mark every module `B` (building), `R` (reaching) or `C` (counting). If the page is mostly B and R, it is a

course about a world where those were hard. Then ask the only question that matters: which of these modules still describes something the average motivated person cannot do unaided in a week? *(20 minutes.)*

3. The three scarcities it arbitraged

Strip the word down and what a technopreneur actually owned was scarcity in three places.

Capability. You could build the thing. Not everyone could. A website in 1999, a payment integration in 2008, a mobile app in 2013, a recommendation engine in 2018 — each of these was a moat measured in years of learning. The technical founder's advantage was not intelligence; it was the fact that the intelligence had been converted into an ability that the market could not rent.

Distribution. You could reach beyond your street. The local trader was bounded by foot traffic; the technopreneur was not. A shop in Harare could sell to a thousand people within walking distance; an online shop could sell to anyone, and the marginal cost of the ten-thousandth customer was close to zero.

Coordination. You could run a business without staff. Email, spreadsheets, the cloud, and later SaaS meant that one person could perform the work of a department. Hiring was the constraint that killed small ambitions, and software removed a large part of it.

Every one of those three was a moat. Every one of them was priced in years and in wages. A person who held all three could enter a market that others could not enter, and that entry premium is what the word technopreneurship described.

The word is now a monument to a closed arbitrage. What follows is the autopsy.

Activity 3.1 — Price your own moat. Write the three headings: capability, distribution, coordination. Under each, write what you personally can do that a competent stranger could not do a week from now with a laptop and a card. This is uncomfortable, and it is the most useful exercise in the book. Most readers find one

real entry and two blanks, and the blank ones are where the business actually is. *(20 minutes.)*

Part Two — The breakfast

What this part is for: to show the mechanism by which each moat was repriced, and to establish what became scarce in its place. By the end you should be able to name the four things that are now expensive, and say which of them you are actually accumulating.

4. What superintelligence actually removed

The phrase *superintelligence* usually starts an argument about philosophy. This book needs something narrower and more useful: a model, or a stack of models, at or beyond broadly competent human level across most cognitive work, available as a metered utility. Not a demigod. A utility: something you rent by the token, that is better than most people at most deskwork, and that does not get tired, does not need a contract, and does not require you to be in the room.

Under that definition the thing that arrived is not a better tool. A better tool makes a skilled person faster. A utility at expert level makes the skill *optional*. The difference is the whole argument.

When a capability becomes a utility, three things happen in sequence. First it becomes cheap. Then it becomes ordinary. Then it becomes invisible — nobody lists it as a skill, the way nobody lists "can use a search engine" on a CV.

Technopreneurship's moats were all built out of capability. That is why the utility hit it so hard, and why the damage is not in the pitch or the marketing but in the ground underneath both: **the ability to build stopped being a position and became a subscription.**

5. The three moats, repriced

Moat	What it was	What it costs now
Capability	Years of learning to build software, run infrastructure, write copy, design, analyse	Minutes of prompting and review, at a metered price, with no learning required. A competent non-technical operator can now ship a working product in a week.
Distribution	Reaching past foot traffic; the marginal customer near zero	The marginal post is near zero for *everyone*, so attention is now the bottleneck, not reach. Everyone has infinite distribution and almost nobody has an audience.
Coordination	Software that let one person do the work of a department	Agents that let one person do the work of several departments — but also let a hundred thousand other people do exactly the same thing, on the same day, with the same tools.

Look at the third row carefully, because it is where the trap is. Coordination got so cheap that it stopped being an advantage and became a *baseline*. When everyone can run a one-person company, the one-person company is no longer a position; it is the default unit. The technopreneur's structural advantage — *I can operate at a scale my competitors cannot afford* — is now what every competitor can afford by Tuesday.

This is the mechanism by which a moat becomes a commodity. It is not that the moat was breached; it is that the water was lowered everywhere at once.

Activity 5.1 — The Tuesday test. Take your last three months of delivery and write what you shipped. For each item, ask: could a competitor have shipped this by Tuesday, using the same tools, if they had started on Monday? Everything that

survives is your position; everything that does not is your activity. The ratio is the honest measure of a moat. *(30 minutes, and it will annoy you.)*

6. Three waves, one pattern

Technopreneurship did not die in a single morning. It was eaten over fifteen years, in three waves, and each wave removed one of the three moats — which is why the pattern is worth learning rather than the dates.

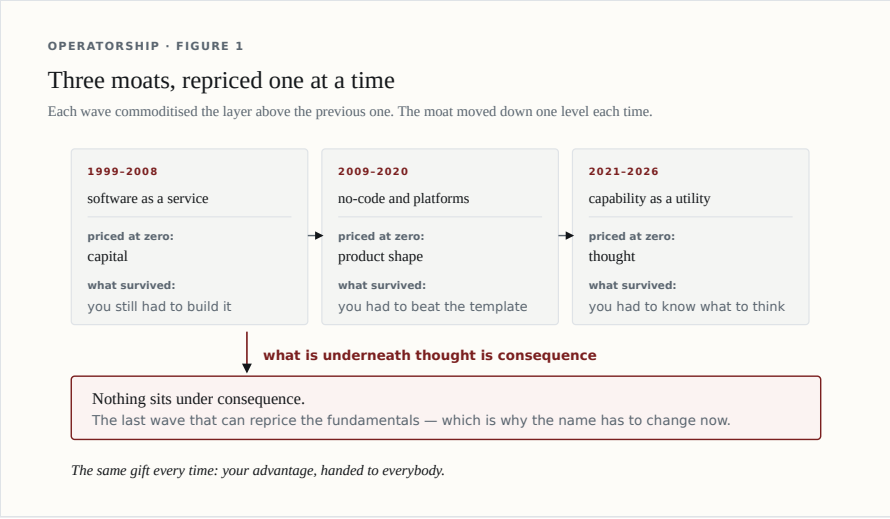


Figure 1 — Three waves, three moats. The moat moves down one level each time, and what sits under thought is consequence.

Wave one: software as a service. Renting the machine instead of buying it removed the capital barrier. A person no longer needed servers, licences or an IT department. What survived: you still had to build the product. Capability was intact, so the technopreneur thrived — this was the era that made the word feel obviously true.

Wave two: no-code, and the platforms. Renting the shape of the product removed part of the capability barrier. Anyone could launch a storefront, a course, a booking system. What survived: differentiation, and the ability to do something the templates could not. The technopreneur became a person who could go slightly beyond the template, which is a thinner moat but still a moat.

Wave three: capability as a utility. Renting the thinking removed the rest. A competent operator can now build the thing the templates could not, in the time it used to take to brief a developer. The moat is gone, and with it the word's premise.

The pattern across the three: **each wave commoditised the layer above the one before, and the moat moved down one level each time** — from capital, to product shape, to thought. What is underneath thought is consequence, and there is nothing under that. Which is why this wave is the last one that can reprice the fundamentals, and why the name has to change now rather than later.

There is a second pattern, in who notices first. In every wave, the people who noticed were the ones whose business depended on the moat, and they noticed late — because the early evidence looked like an improvement. Cheaper hosting felt like a gift. Templates felt like a gift. A model that writes the code feels like the best gift yet. It is the same gift every time: your advantage, handed to everybody.

Activity 6.1 — Find the tell. For any business you believe has a moat, write the sentence that would prove it lost it. "They raised a round" is not a tell. "A stranger reproduced their product in an afternoon and the market did not care" is a tell. Then run the same test on yourself, and keep the sentence somewhere you will see it. *(20 minutes.)*

7. Four things that got more expensive

Here is the part most treatments of this subject miss. The collapse of capability, reach and coordination did not make entrepreneurship easier. It made four other things scarce, and those four are now the whole job.

Being believed. When anyone can produce a plausible product, a plausible deck, a plausible website and a plausible case study, plausibility stops being evidence. The market's response is not to trust more but to trust differently: provenance, track record, a named human, a phone number, evidence that something ran. Trust used to be assumed at the point of first contact and lost later. Now it is withheld until proven, and proving it is expensive.

Attention. Zero-cost production of content means infinite competition for the thing content exists to capture. The technopreneur's dream was *build it and they will come*. The operator's reality is that building it is free and being seen is the entire cost.

Taste. When the cost of making a thing approaches zero, the cost of making the *wrong* thing approaches everything. Choosing what not to build is now the highest-leverage act in the business, because the machine will cheerfully build any of a thousand plausible things and one of them is worth building.

Accountability. This is the one that has no substitute, and it is the foundation of the name I will propose. A machine can produce an output. It cannot be answerable for it. A regulator, a customer, an insurer, a court, and a person who has been wronged all require the same thing: a human who will stand behind the act. As the quantity of machine-made work approaches infinity, the supply of accountable humans does not move at all.

Read those four together and a shape appears. Everything that used to be hard has become cheap. Everything that is now hard was previously free, because it was carried implicitly by the human who did the doing. Remove the doing and the carrying becomes visible, and it is the only thing left that anyone will pay for.

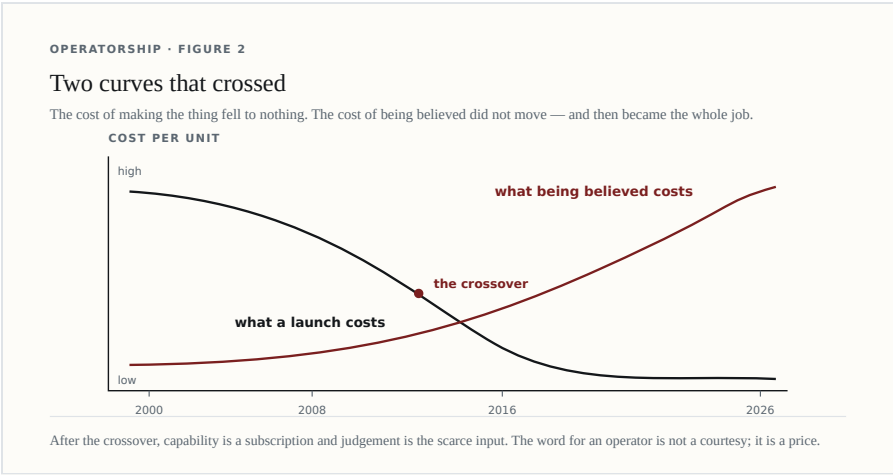


Figure 2 — Two curves that crossed. The cost of making the thing fell to nothing; the cost of being believed did not move, and then became the whole job.

The tell. You can watch the transition in a single artefact: the pitch deck.

For twenty years the deck was a credible signal because it was expensive to make and hard to fake. Market sizing required research. Financial models required arithmetic and assumptions you could be questioned on. Competitive analysis required reading. A good deck was evidence of work done, which is why investors read them at all.

Now a deck is generated in ninety seconds, and everyone's is good. The artefact has not become worthless because it is bad; it has become worthless because it is *uniformly excellent and uninformative*. The signal did not degrade. It inverted: a polished deck now tells you almost nothing about whether anything exists.

The same inversion has hit the product, the website, the case study, the testimonial, and the essay. Everything that could be produced by competence has been repriced at zero, and the market is in the middle of discovering that the things it used to read as evidence were, in fact, evidence of competence. With competence universal, they are evidence of nothing.

So what still reads as evidence? Only this: something running, with a record of having run, whose failures are known to the person presenting it. Not a proposal. Operation.

Which is a name, of sorts, before we have one.

Activity 7.1 — The evidence swap. Take the one artefact you would send to a stranger to prove your business exists — a deck, a one-pager, a site. Delete every claim a generator could have made in ninety seconds. Whatever is left is your real evidence. Then write the single thing you could add this month that would survive the deletion test: a running thing, a record, a name, a phone number that answers. *(30 minutes, then a decision.)*

8. The economics: what a decision costs

Here is the shift stated as arithmetic rather than as narrative.

In 2015, launching a software venture with a real product, a real site, real payments and a real support inbox cost roughly three to nine months of one competent person's time, plus a few thousand dollars. That cost was the barrier, and the technopreneur's edge was being able to pay it.

In 2026 the same launch costs days of attention and tens of dollars of metered compute. The barrier is gone. What is now scarce and priced accordingly is *the decision to launch at all, and the willingness to be answerable afterwards*. Call it a unit of judgement: one consequential choice, well made, with the evidence to support it and a person to carry it.

A technopreneur was paid for capability, priced by the market's ignorance of how the thing was made. An operator is paid for judgement, priced by the market's awareness that anybody could have made the thing and almost nobody will stand behind it.

That is a better business, and a harder one. It pays less for enthusiasm and more for being right, and it pays nothing at all for effort.

Part Three — The name

What this part is for: to name the successor, define it in one sentence, and show what it owns that a machine cannot. By the end you should be able to say the definition from memory and name the five burdens it implies.

9. What a name has to do

A name for a form of business is not decoration. It is a compressed claim, and a good one does four jobs.

It names the scarce input, not the tool. *Technopreneurship* named technology, which was the scarce input of its era and is now the abundant one. That is exactly why the word has stopped working: it names the thing everybody has.

It survives being said in one sentence by someone who has not read the book.

It carries an owner-noun that a person can use about themselves without embarrassment at a dinner table.

It predicts behaviour. If you hear the word, you should be able to guess what the person does on a Monday.

Tested against those four, the obvious candidates fail, and it is worth being explicit about why — because the rejected names tell you what the concept actually is.

Candidate	Why it fails
Post-technopreneurship	Defines itself by what it follows. Names an aftermath, not a practice.
Agentpreneurship / Autopreneurship	Names the tool again. "Agent" is this decade's "internet"; the word will date like a fonts CD.

Candidate	Why it fails
AI founder	Names a technology and an org chart. Says nothing about what the person is answerable for.
Solopreneur	Names a headcount. A headcount is not a business model, and the word has a beard.
Indie hacker	Names a channel and a subculture. Charming, unbounded, and impossible to say in a bank.
Promptpreneur	Names a keystroke.
Custodianship	Right about accountability, wrong about agency. A custodian keeps; an operator runs.

Activity 9.1 — Name it yourself first. Before reading chapter 10, spend fifteen minutes writing your own candidate, with the four tests applied. Then read the next chapter and see whether the book's name beats yours. This is not a rhetorical device: if your name is better, the rest of the book still holds, because the concept is the argument and the word is a convenience. *(15 minutes.)*

10. Operatorship

Operatorship is the practice of owning the consequences of machine work you did not perform.

That is the whole definition, and every word in it is load-bearing.

Owning — the operator holds the liability, the reputation, and the obligation to fix what breaks. Not the credit only. The consequence.

Consequences — not outputs. The operator is paid for what actually happened in the world, which is why the evidence trail matters more than the effort.

Machine work — the doing is not the operator's any more, not mostly, and increasingly not at all. The operator is not a craftsperson with a fast tool; they are the hu-

man end of a system that acts.

You did not perform — the sentence that would have been an insult in 2010 and is a description in 2026. The operator's credibility now depends on being honest about this rather than pretending otherwise.

I did not invent the word; I am reclaiming it, and the reclamation is the argument. *Operator* already exists in the physical world with exactly the right meaning: the person who runs the plant, the rig, the port, the exchange floor. They did not build the machinery. They are not the engineer and not the owner in the shareholder sense. They are the human who keeps the system running, who knows what normal looks like, and who is called when it is not normal. Nobody in a control room thinks the operator is a lesser role than the designer, because everyone in the building understands that the system only becomes real when someone is answerable for it minute to minute.

That is the job now. The software is a utility. The ventures are hypotheses. The operator is the one who runs the machinery, reads the instruments, says what is true about the numbers, and answers for the outcome.

Activity 10.1 — The operator's sentence. Write the definition in your own words, then write the version you would say out loud when someone asks what you do. The second one is the one that has to work at a dinner table, in a bank, and in a message to a stranger. If it comes out as "I run a few small software businesses", that is fine — the point is that the sentence says what you are answerable for, not what you use. *(10 minutes.)*

11. What the operator actually owns

Five things, none of which the machine can hold.

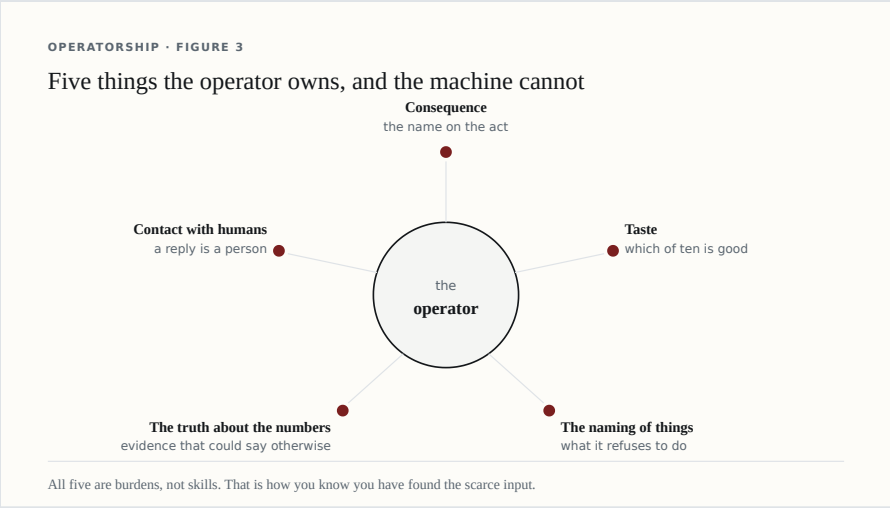


Figure 3 — The operator at the centre, and the five things that do not delegate.

Consequence. When the rail posts something wrong, the operator's name is on it. When a checkout charges someone twice, the operator refunds. When the product does not do what the page said, the operator is who was lying. There is no version of this work where consequence can be delegated to a model, because a model cannot be sued, shamed, or trusted again.

Taste. The machine generates ten plausible options and cannot tell you which one is good. It has no skin in the question and no standard to apply except the average of what it has seen. Choosing is the operator's, and choosing badly is the most expensive thing an operator does.

The naming of things. What the venture is called, what it is for, what it refuses to do. Names are compressions of claims, and a machine can generate a thousand and validate none.

The truth about the numbers. Every system reports its own success. The operator is the one who insists on evidence that could have said otherwise — the differ-

ence between a green tick and a thing that happened in the world. This is a moral posture as much as a technical one: the willingness to look for the failure.

Contact with other humans. A reply is a person. A customer is a person. The machine can draft the sentence and cannot be the one who meant it. Every business that has ever mattered was, at the bottom, a relationship with a human who chose you.

Notice that all five are *burdens*, not skills. That is the sign you are looking at the scarce input. Scarce inputs in a mature market are always the things nobody wants to do.

Activity 11.1 — The five-column audit. Five columns: consequence, taste, naming, truth-about-the-numbers, contact. For each, write the last time you personally exercised it, with a date. Any column where the answer is "the system does it" is a column where you have stopped operating, and it is where the next failure will come from. *(25 minutes, quarterly.)*

12. The five impostors

Any name that catches on attracts things that are not it. These are the five to watch for, including in the mirror.

The tool-user. Has every model, every agent framework, every new release by day three. Ships nothing, or ships a different thing each week. Confuses fluency with operating. The tell: they can describe the stack and cannot describe a customer.

The reseller. Sells the machine's output as though it were their judgement — the agency that forwards generated copy, the consultant who forwards generated analysis. Works until the client notices that the thing could be bought directly, which takes about two invoices.

The ghostwriter founder. Builds a public persona of operating while the actual operation is elsewhere or absent. The pitch has never been cheaper to fake, which

is why this one is now the most common.

The agent-hobbyist. Runs forty agents and no business. Automation as a hobby is fine — but it is not operatorship, because nothing is at risk. The distinguishing question is not "what did you automate" but "what would it cost you if it broke".

The absentee. The inverse failure. Interprets *the machine runs without me* as *I need not understand it*. This works until the day it does not, and that day arrives with a specific date and an invoice. An operator who cannot read the instruments is not operating; they are gambling with a very good excuse.

Activity 12.1 — The mirror. Score yourself 0–3 on each impostor, honestly, for the last month. Then do the same for the most visible operator in your feed, and notice which of the two scores was easier to be honest about. That is the point of the exercise. *(15 minutes.)*

13. The unit is the estate, not the venture

This is the structural difference between technopreneurship and operatorship, and it is the part most people get wrong.

A technopreneur's unit was the venture: one company, one product, one market, one trajectory. The whole identity was attached to a single bet, which is why a failed venture felt like a failed person.

The operator's unit is the **estate**: a shared set of machinery — publishing, payment, verification, monitoring, records — running a portfolio of ventures, each of which is a hypothesis with a price attached. The ventures are cheap and disposable. The estate is expensive and durable. A venture that fails costs a test; the estate learns the mechanism.

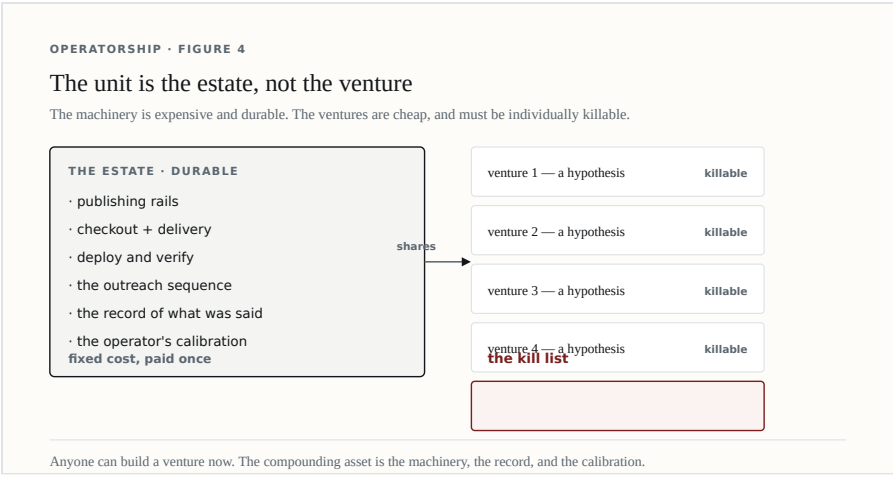


Figure 4 — The estate is durable and the ventures are cheap. Every venture must be individually killable, or it is not a venture; it is a dependency.

Three consequences follow, and each is a practical rule.

The marginal venture is nearly free. Publishing, checkout, deployment, monitoring and the record of what was said to whom are shared. Launching hypothesis number eight costs a page, a price, and a fortnight. This is why an estate can hold seven ventures where a company would hold one — not because the operator is seven times more capable, but because the fixed cost is paid once.

Every venture must be individually killable. A venture that cannot be closed without damaging the estate is not a venture; it is a dependency. The kill list is part of the architecture, and a month with nothing on it is a month in which nothing was tested.

The estate is the thing that has value. Not the ventures. Anyone can build a venture now. The compounding asset is the machinery, the record, and the operator's calibration — knowing which signals mean something, which failures are cosmetic, and when a number is lying.

This is also why a solo estate can genuinely support a life. Seven ventures do not require seven people if the estate does the operating; they require one person who decides, plus the machinery. The arithmetic that made technopreneurship attractive — small team, large reach — is still true, but the reason has inverted. It used to be *because I can build*; it is now *because I do not need to build.*

Activity 13.1 — Draw your own estate. One box for the shared machinery, one box per venture, one arrow from the machinery to each venture. Then mark, on each venture, whether you could kill it this month without breaking anything else. Anything that cannot be killed is a dependency, and the diagram is now a to-do list. *(30 minutes.)*

14. The five failure modes of operatorship

Naming a practice honestly means naming how it breaks. These five are the ones I have hit, in the order I hit them.

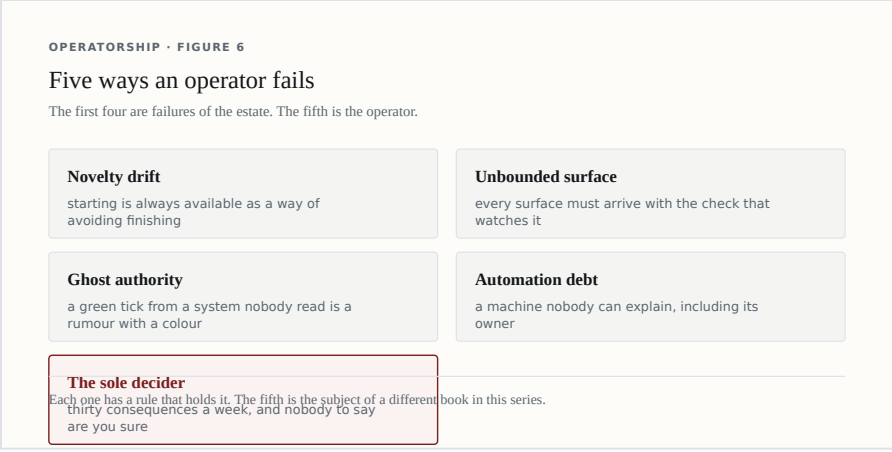


Figure 6 — Five failure modes. The first four are failures of the estate; the fifth is the operator.

Novelty drift. Building is now so cheap that *starting* is always available as a way of avoiding *finishing*. The estate fills with half-tested hypotheses, each of which looked obvious at midnight. The rule that holds: no new venture while two are unresolved.

Unbounded surface. Every rail, page, venture and channel adds a place where something can be wrong. An estate's surface grows faster than its operator, and unbounded surface is what turns a business into a job. The rule: every new surface must arrive with the check that watches it, or it does not arrive.

Ghost authority. The most dangerous one, because it is invisible. A green tick from a system nobody read is not evidence; it is a rumour with a colour. Outputs accumulate that no human has ever verified, and the operator's confidence rises while their knowledge falls. The rule: every automated act must leave a trail a human could audit, and periodically one is.

Automation debt. Every automation is a thing that must be maintained, monitored, and eventually explained. Automating an unexamined process makes it harder to change later, and the estate gradually becomes a machine nobody fully understands — including its owner. The rule: automate the boring, keep the judgement manual, and delete an automation at the first month in which nobody can say what it is for.

The loneliness of the sole decider. Thirty consequential decisions a week, made alone, with nobody in the building to say *are you sure*. This is the failure mode that eats the operator rather than the estate, and it has its own book in this series. The rule is not professional, it is human: one non-business conversation a day, and one person told the truth about how it is going.

Activity 14.1 — The ghost-authority hunt. Pick the three automated things in your business that you trust most. For each, ask: when did a human last look at the output and check it against the world? If the answer is "never" or "I do not know", you have found ghost authority. Pick one and audit it today. *(45 minutes, and it is the highest-value 45 minutes in the book.)*

15. Operatorship where the constraint is not capital

There is a version of this argument that only works in San Francisco, and it is worth saying which parts survive the trip to Harare.

In a market with cheap capital, fast payments, reliable bandwidth and a hundred million addressable customers, the technopreneur's collapse looks like a story about competition. In Zimbabwe it looks different, because the binding constraints were never the ones the word described. Capital has always been scarce; card acceptance has been scarce; foreign currency has been scarce; bandwidth has been expensive; and a customer's willingness to trust an unknown website is lower for reasons that have nothing to do with the website.

Superintelligence does not fix any of those. It makes the software cheap, which was rarely the expensive part. What it does do, in a constrained economy, is change the *kind* of business that becomes possible with very little: not a company that needs a payroll, a premises and a merchant account, but an estate that can sell a digital product through a link, publish to free rails, and be run in three hours a week.

Which means operatorship travels better than technopreneurship did, for one reason: **its scarce inputs are local.** Consequence is local — the name behind the thing is known in the market where it operates. Taste is local — knowing what a Harare customer will pay for is not a thing a model in another country knows. Trust is local, and it is the entire currency of a market where nobody believes a website by default. And contact with other humans is unavoidably local, because it is the one input that cannot be shipped.

The technopreneur's advantage was imported: a skill learned from the same tutorials as everyone else, sold into a market that could not tell the difference. The operator's advantage is situated: this market, these customers, this name, this record of having shown up. That is a weaker position globally and a stronger one locally, and for anyone building from Harare it is the more useful of the two.

One more thing that travels badly: the assumption that failure is cheap. In a market with a social safety net, a failed venture is a semester. Without one, it is a year, and the operator's arithmetic has to include the cost of the years. That is an argument for smaller tests, shorter cycles, and a stricter rule about how many unresolved ventures may exist at once — not because discipline is virtuous, but because the downside is priced differently here.

Activity 15.1 — Price your constraints. List the five things that make building a business where you are harder than it is in a rich market. For each, write either "the machine removed this" or "the machine ignored this". The second list is your real strategy: it is where local knowledge is worth more than capability, and where an imported playbook will reliably fail. *(20 minutes.)*

Part Four — The curriculum

What this part is for: to say what should be taught instead, and to give a teacher something they can use on Monday. By the end you should have a nine-module outline and an assessment that cannot be faked with a generated document.

16. What to stop teaching

If operatorship is the successor, the syllabus has to change, and the changes are not cosmetic. Each item below is a module from the technopreneurship course, with what has happened to it.

Module	Status
The business plan	Generated in ninety seconds and worth what it cost. What cannot be generated: a record of something that already ran.
Marketing plan	Same. Distribution is now an attention problem, not a copy problem.
Financial plan / projections	Templates are free. The scarce skill is knowing which assumption is load-bearing.
Intellectual property basics	Still worth an hour, now mostly an advisory question rather than a founder's craft.
Operations management	Survives, transformed: operations is now the supervision of machine work, not the management of people.
Legal and ethics	More important, not less — accountability is the product now.
Networking	Survives, and matters more than the course ever admitted.

Module	Status
"Technology" as a module	Obsolete as a separate subject. It is the medium now, like electricity. Nobody teaches a module in electricity.

The general shape: everything that was *produced* has been commoditised, and everything that was *carried* has become the curriculum.

17. What to teach instead

Nine modules. Each one is checkable, each one produces an artefact, and none of them can be completed by a model on the student's behalf without the student being present.

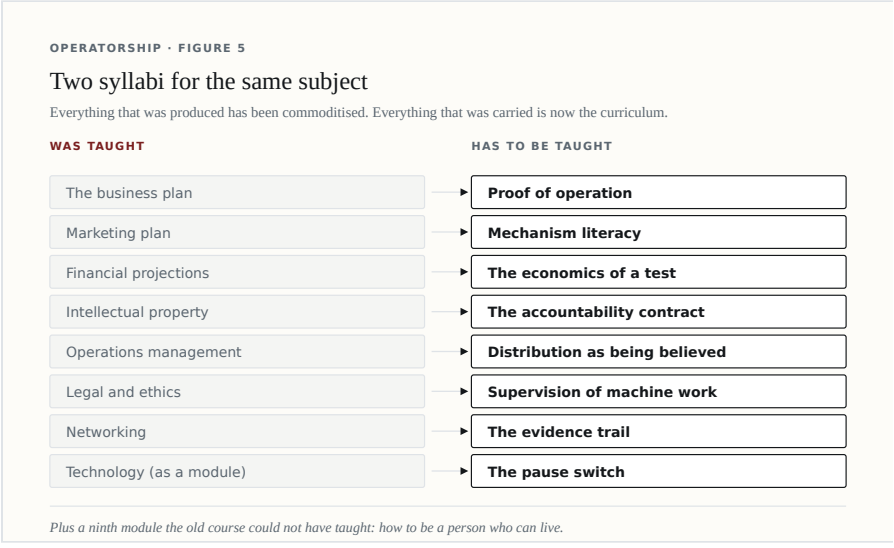


Figure 5 — The two syllabi side by side. The right-hand column is a proposal, not a standard; steal and amend it.

1. Proof of operation. By the end of the term, one thing must be running in the world and taking money or users. Not planned. Running. The grade is the record, not the intention.

2. Mechanism literacy. Reading a system's own claim about itself and finding the gap. Logs, CI output, analytics, dashboards, "deployment complete" messages — every one of them is a story, and the skill is asking what would have to be true for it to be lying.

3. The economics of a test. What does it cost to find out whether a hypothesis is wrong? This is the only number that matters in a portfolio of ventures, and it is the one no business plan ever contained.

4. The accountability contract. Written, in the first person: what I will do when this breaks, who I will tell, how fast, and what I will not blame. Signed by the student. Revisited when it is tested by an actual failure.

5. Distribution in an attention-scarce market. Not reach — there is infinite reach. The module is about being believed: specificity, evidence, provenance, a named human, a way to check.

6. Supervision of machine work. Rails, schedules, caps, stop conditions, jitter, escalation. The technical content is shallow; the discipline is deep. The core question of the module: *how do I design an act that happens without me, so that I would be comfortable defending it afterwards?*

7. The evidence trail. Every automated act leaves a record a stranger could audit. Students build the trail before they build the product, because a product whose actions cannot be audited is a liability with a logo.

8. The pause switch. Demonstrate, in under a minute, that the whole operation can be stopped without loss. Anything that cannot be paused is a thing that owns you.

9. How to be a person who can live. Not a wellness module. An operational one: fixed hours, a shutdown, sleep as an input, one day off, one conversation. Assessed

by a written record kept for the term, not by an essay about balance.

Activity 17.1 — Teach it once. Pick the module you would be worst at teaching, and write its first session: the question it opens with, the artefact the students leave with, and the one thing you would refuse to let them delegate to a model. If you cannot name that last item, the module is not yet teachable. *(45 minutes.)*

18. The exam question that replaces the business plan

If I could change one thing about how this is taught, it would be the final assessment. Not a plan. A defence.

> Show me something running. Show me the evidence that it ran. Show me one thing that broke, what you found out, and what you changed. Then tell me who is accountable when it breaks again — by name.

The marking scheme, roughly:

Weight	Criterion
30%	It exists and is reachable by a stranger
25%	The evidence would have been capable of showing failure
20%	The failure is described with its mechanism, not its feelings
15%	The change made afterwards is specific and dated
10%	The accountable human is named and has agreed

A student who can pass that has an operator's first credential, and it cannot be faked with a generated document, because the subject of the document is a thing that either runs or does not.

Activity 18.1 — Sit the exam on yourself. Run the five criteria against your own business this term, and score out of 100. Most operators score well on the first and

badly on the second and fifth. The fifth — a named human who has agreed to be accountable — is the one that reveals whether there is a business or a performance. *(30 minutes.)*

19. What to do with the word technopreneur now

Retire it, with honour.

It described a genuine arbitrage for roughly thirty-five years: scarce capability plus cheap distribution plus one-person coordination. That arbitrage produced a generation of businesses and a great many livelihoods, and the word carried it into classrooms on three continents where the phrase "online business" would have sounded unserious. That is not nothing.

But a word that names the abundant input cannot describe the scarce one. *Technopreneur* now tells you what tools someone has access to, which is the same thing it tells you about everyone. The useful question has moved, and the vocabulary has to move with it.

There is a precedent, and it is encouraging. *E-commerce* was once a thrilling word — a whole conference, a whole department, a whole degree. Then buying things online stopped being a category, and the word quietly died of success. Nobody is an e-commerce entrepreneur now; they are a retailer, a shop, a business. The technology disappeared into the noun.

Technopreneurship is going the same way, and for the same reason, but the successor is not a disappearance. It is a promotion. The technology dissolved into the medium, and what is left standing — visible now, because the machinery is gone from view — is the person who runs it and answers for it.

Part Five — The evidence and the risk

What this part is for: to submit the argument to the specimen, to state what would prove it wrong, and to name where the book itself is weakest.

20. The estate as specimen

I should be explicit about the sample, because the argument is strong and the evidence is one person.

I run seven small software businesses from one desk in Harare. Twenty-four works in the catalogue including this book, thirty-six editions across them, five publishing rails that post to six platforms, an hourly front-door monitor with seventeen checks, a three-touch outreach sequence that drafts for every channel it holds a contact for and sends on the two rails that can send, and a daily screen that tells me in four lines what the estate needs from me. Human attention required: roughly three hours twenty minutes a week, of which about seventeen minutes is genuinely manual.

What that specimen shows: an estate of this size is now operable by one person with a life. What it does not show: that it is profitable, that it generalises, or that the same shape works in a domain with physical inventory, regulation, or staff. One estate is a case, not a study.

What makes it worth reporting anyway is the *shape* of the labour, because that shape is a prediction. Almost none of my week is building. Almost all of it is deciding what not to build, checking that what was built actually happened, refusing the third good idea of the month, and talking to humans. If you asked me in 2015 what a technopreneur did all day, I would have described a builder. In 2026 I describe an operator, and the description is not a preference. It is what is left when the building is a subscription.

Activity 20.1 — Time your own week. For one week, keep a two-column log: *doing* and *deciding*. Not minutes — events. At the end, count them. The ratio is your position on the curve between the two forms of business, and it will tell you which book you actually needed. *(1 week, 2 minutes a day.)*

21. Falsifiable predictions

An argument that cannot lose is not an argument. Five claims, each with the observation that would prove it wrong.

1. By 2030, "can you build it" will not appear in a serious pitch. Disconfirmed if technical capability returns as a durable moat — for instance if model capability plateaus and hand-built systems again command a premium.

2. The premium will move to accountability products: insurance, guarantees, audits, named-human attestations, warranties on machine work. Disconfirmed if buyers keep accepting unattributed machine output at the same price.

3. Operator-run estates will outnumber venture-shaped startups in software. Disconfirmed if the median new software business still has more than three people by 2030.

4. Business education will drop the technopreneurship module and add supervision, evidence and accountancy-of-judgement modules. Disconfirmed if the course catalogue in 2030 looks like 2019's.

5. The distinguishing failure of the decade will be ghost authority — systems reporting success that nobody verified, at scale, in regulated domains. Disconfirmed if the notable failures of the next five years are all ordinary fraud and ordinary bugs.

Activity 21.1 — Make your own bet. Write one prediction of your own, in the same form: the claim, the date, and the observation that would prove it wrong. Put it in a sealed envelope, physical or digital, with a calendar reminder for the date.

Operators who cannot be wrong are indistinguishable from salesmen, and the exercise is the difference. *(15 minutes, once.)*

22. Where this book is wrong

Three ways it could be wrong, stated plainly, because a mechanism audit that does not include itself is a brochure.

Capability may not stay a utility. The whole argument rests on capability being metered, available and good enough. If model progress plateaus, or if the frontier concentrates behind prices most people cannot pay, then building gets expensive again and the technopreneur returns with a smaller moat. This is not a small risk. It is the main one.

Legal personhood for machine actors would end operatorship. The operator's value is that the human is the only thing that can hold consequence. Give agents the ability to contract, be insured, or be liable, and the scarce input moves again — to whoever writes the insurance. I do not think this happens by 2030. I would not bet a decade on it.

The market may name it something else. Names are chosen by use, not by argument. Some phrase I find clumsy — *AI-native founder*, *estate builder*, something with a hyphen invented by a consultancy — may win. If it does, the concept survives and the word in this book becomes a footnote, which is the correct fate for a name and an incorrect fate for an argument.

Part Six — The activities

What this part is for: to collect the nineteen exercises in one place, in the order the book uses them, with a note on which to do first.

23. How to use the activities

The argument set (do these three, in this order, before anything else). 1.1 (recover your curriculum), 3.1 (price your own moat), 7.1 (the evidence swap). Together they take two hours and they will change the argument from something you are reading into something about you.

The practice set (do these when you are running something). 5.1 (the Tuesday test), 11.1 (the five-column audit), 12.1 (the mirror), 13.1 (draw your own estate), 14.1 (the ghost-authority hunt), 20.1 (time your own week). This is the operating kit.

The teaching set (if you teach or mentor). 2.1 (the scarcity reading), 17.1 (teach it once), 18.1 (sit the exam on yourself). These turn the book into a course.

The honesty set (do these alone, once a year). 9.1 (name it yourself first), 10.1 (the operator's sentence), 15.1 (price your constraints), 21.1 (make your own bet), 22 (read the chapter where the book is wrong, again).

24. The activity index

#	Activity	Time	Group
1.1	Recover your own curriculum	15 min	argument
2.1	The scarcity reading	20 min	teaching

#	Activity	Time	Group
3.1	Price your own moat	20 min	argument
5.1	The Tuesday test	30 min	practice
6.1	Find the tell	20 min	practice
7.1	The evidence swap	30 min	argument
9.1	Name it yourself first	15 min	honesty
10.1	The operator's sentence	10 min	honesty
11.1	The five-column audit	25 min	practice
12.1	The mirror	15 min	practice
13.1	Draw your own estate	30 min	practice
14.1	The ghost-authority hunt	45 min	practice
15.1	Price your constraints	20 min	honesty
17.1	Teach it once	45 min	teaching
18.1	Sit the exam on yourself	30 min	teaching
20.1	Time your own week	1 week	practice
21.1	Make your own bet	15 min	honesty

25. One worked example, start to finish

A reader — call her a final-year student with a small printing business — works through the argument set in an afternoon.

1.1, her curriculum. Her course ran: entrepreneurship, business management, business plan, intellectual property, marketing, operations, financial plan, legal and

ethics, networking, plus a technology module. Marked, it is nine B/R modules and one C. She writes at the bottom: *"All of this assumes the hard part is making and reaching. Making is now a week."*

3.1, her moat. Capability: she can use design tools and a model, which is not a moat; she writes "nothing". Distribution: she has four hundred followers and a campus, which she writes as "an audience for one thing". Coordination: she can run orders, a printer and a courier, which she writes as "a real one, for now". The uncomfortable finding is that two of three are blank, and the one that is not is operational rather than technical.

7.1, her evidence swap. Her one-pager claimed quality, speed and price. Deleted, all three could have been generated in ninety seconds by anyone. What survived: a photograph of the actual press, a delivery log with dates, and a phone number she answers. She decides to add one thing this month: every order photo, dated, in one public page. That is an evidence trail, and it is worth more than the copy it replaced.

She has now done, in two hours, what the rest of this book formalises: she has found that her position is not capability, that her evidence needed to become operational, and that the thing she owns is the name on the delivery. That is operatorship, before she has read the chapter that names it.

Appendices

Appendix A — The definition, on one page

Technopreneurship was entrepreneurship with scarce capability, cheap distribution and one-person coordination. It arbitraged a world in which building was hard.

Superintelligence — capability at expert breadth, rented by the token — made building easy, distribution infinite, and coordination free. All three moats became the baseline. What became scarce is trust, attention, taste and accountability.

Operatorship is the practice of owning the consequences of machine work you did not perform. Its unit is the estate, not the venture. Its scarce input is judgement. Its product is a thing that ran, with a record, and a name attached.

An operator owns five things a machine cannot: consequence, taste, the naming of things, the truth about the numbers, and contact with other humans.

Four failures to watch, in yourself: novelty drift, unbounded surface, ghost authority, automation debt. And the fifth, which is not about the estate at all: deciding alone, for too long, without telling anyone.

The five sentences. The machine builds; I decide what is worth building. · The machine acts; I answer for what it did. · The estate is the asset; the ventures are hypotheses. · If it cannot be paused, it owns me. · Build the thing, then be the person who stands behind it.

Appendix B — Readings, in the order they are useful

If you read one thing before this book

- Sarasvathy, S. (2001). "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency." *Academy of Management Review* 26(2). The formal account of what a resource-constrained founder actually does — and the reason the technopreneurship syllabus was always a bit of a fiction.

On the technology economics

- Agrawal, A., Gans, J. & Goldfarb, A. *Prediction Machines* and *Power and Prediction* — the clearest account of what happens when prediction becomes cheap, which is the mechanism under chapter 5.
- Rifkin, J. *The Zero Marginal Cost Society* — over-argued, but the marginal-cost intuition is the same one that repriced distribution.
- Christensen, C. *The Innovator's Dilemma* — for the older, slower version of "the moat moved and nobody noticed".
- Christensen, C., Raynor, M. & McDonald, R. "What Is Disruptive Innovation?" *HBR*, 2015 — worth reading as a corrective to how the word is used in pitch decks, which is itself an example of chapter 7.

On accountability and consequence

- Perrow, C. *Normal Accidents* — why systems fail in ways nobody planned, and why the person in the control room is a structural role rather than a personality.
- Reason, J. *Human Error* — the taxonomy that makes "who is accountable" a design question.
- Vaughan, D. *The Challenger Launch Decision* — the definitive study of how an organisation loses the ability to see its own evidence. The closest thing to a book-length treatment of ghost authority.

On the word itself

- The technopreneurship course literature — the standard module sequence described in chapter 2 is drawn from widely circulated course notes used in the

Philippines, Malaysia, India and Nigeria, which trace the term to 1987. It is cited here as a specimen of a curriculum, not as a scholarly source.
- Gibbons, R. & Henderson, R. "Relational Contracts and the Theory of the Firm" — useful on why accountability cannot be fully contracted away, which is chapter 11 in economic language.

On Harare, and the constraint-native view

- Garikai, C. *The Ledger and the Shopkeeper* — commerce for the markets the platforms forgot.
- Garikai, C. *The Mechanism Audit* (working paper 2026-04) and *The Mechanism Auditor* — the evidence-first review method this book's chapter 14 borrows the vocabulary of.
- Garikai, C. *The Point of Failure* — the companion volume, on the operator rather than the form of business.

Appendix C — A syllabus pack, for teachers

A nine-week version of Part Four, with an artefact due each week. It assumes three hours of contact time and six hours of work outside, and it assumes every student has a laptop and a way to take money or get users.

Week	Session	Artefact due
1	What was scarce in 1999, and what is scarce now	a marked-up syllabus (Activity 2.1)
2	Reading a system's claim about itself	three log or dashboard readings, one lie found
3	The economics of a test	a test designed to cost under a day and under $20
4	The accountability contract	the contract, signed, with a named second party

Week	Session	Artefact due
5	Being believed	the evidence swap (Activity 7.1) applied to their own venture
6	Supervising machine work	one automated act, designed with caps, stop condition and trail
7	The evidence trail	an audit a stranger could run
8	The pause switch	a timed demonstration
9	The defence	the exam in chapter 18, sat in front of the room

Assessment. 30% artefact portfolio, 25% the defence, 20% one written failure analysis with mechanism, 15% the accountability contract being honoured (checked by the named second party), 10% participation. There is no exam paper, because the subject of the exam is whether something runs.

Appendix D — Glossary

Accountability — the willingness to be answerable for an act, including one a machine performed. The scarce input of the successor form.

Agent — a system that acts rather than answers. Named here only to be warned about: a word for a tool dates faster than a word for a role.

Arbitrage — the gap between what something costs to do and what the market pays for it. Technopreneurship was an arbitrage in capability, distribution and coordination.

Automation debt — the accumulated cost of automations nobody can fully explain. The estate's version of technical debt.

Capability — the ability to build the thing. Was a moat; is now a subscription.

Coordination — running a business without staff. Was a moat; is now a baseline.

Distribution — reaching past foot traffic. Was a moat; is now infinite and therefore worthless as a position.

Estate — shared machinery plus a portfolio of killable ventures. The unit of operatorship.

Evidence trail — a record of an automated act that a stranger could audit. The opposite of a green tick.

Ghost authority — confidence in machine work nobody has verified. The characteristic failure of the decade.

Judgement — one consequential choice, well made, with evidence and a person to carry it. The priced unit of the successor form.

Kill list — the ventures closed this month, on purpose. A month with an empty one is a month in which nothing was tested.

Mechanism — the decision or absence that produced an outcome. The only description of a failure that can be acted on.

Operatorship — the practice of owning the consequences of machine work you did not perform.

Proof of operation — a thing running in the world, with a record. The replacement for the business plan.

Provenance — where a thing came from, and who is behind it. The currency of a market that no longer believes plausibility.

Superintelligence — used here narrowly: capability at expert breadth, rented as a metered utility.

Taste — the ability to choose among plausible options. Not a luxury; the highest-leverage act in a business where making things is free.

Technopreneurship — entrepreneurship in technology, coined 1987, taught in classrooms, accurate for about thirty-five years, now a word that names the abundant input.

Appendix E — Methodology and limitations

This is a conceptual and historical argument supported by a single specimen, not an empirical study. Three things follow, and a reader is entitled to weigh them.

The sample is one. The estate reported in chapter 20 is the author's, and it is not independent of the argument. Where a number is given, it is a real count taken from the system on the date of writing; where a claim is a judgement, it is marked as one in the text. No claim in this book rests on a statistic drawn from a population.

The history is narrative, not econometric. The three waves in chapter 6 are a periodisation, not a regression. Reasonable people could date the waves differently, and a scholar would want to measure input costs rather than assert their direction. The direction is not seriously in dispute; the dating is.

The predictions are dated and falsifiable, which is the only protection on offer. Chapter 21 states five claims and the observation that would finish each. Appendix C of the companion volume is the same discipline applied to the operator. A reader who wants to check the argument should check it there, in their own business, over a quarter.

What would change the argument most. If capability stops being a utility — because progress plateaus or the frontier concentrates behind prices most people cannot pay — then the technopreneur returns, smaller, and operatorship becomes a niche rather than a successor. That is stated in chapter 22 and it is not a rhetorical concession; it is the main risk.

Appendix F — Acknowledgements

To the classroom that gave me the word. The entrepreneurship faculty that taught *technopreneurship* taught it honestly, and everything in this book's first chapter is a description of what they were up against, not a criticism of them. They were teaching the scarcities of their moment, and they were right about them for a long time. The argument here is that the moment moved.

To the estate, which is the specimen. Seven ventures, five rails, a monitor, a sequence, and a daily screen that has told me unpleasant things in four lines for months. The failures in chapter 14 are the estate's, and several of them were mine twice before they became rules.

To the trades that named it first. Operators in control rooms, on rigs, at ports and on exchange floors have used this word with exactly this meaning for a century. Reclaiming it is not invention, and the debt should be acknowledged: the word was right before the software arrived.

To the readers of the working papers. The Mechanism Audit and The Mechanism Auditor were read by people who asked *what would prove this wrong* rather than *is this interesting*, which is why chapters 21 and 22 exist in the form they do.

To Harare. A market that does not believe a website by default is an excellent place to learn what accountability is worth, and a hard place to learn it comfortably. Both facts are in chapter 15.

Appendix G — About the author

Courage Garikai runs Jacaranda Labs, a one-person software estate in Harare, Zimbabwe: seven ventures, a press (which published this book), five publishing rails, and roughly three hours twenty minutes a week of human attention. He holds a first degree in entrepreneurship, in which he was taught the subject this book retires. He writes about what happens when the machinery that makes a small busi-

ness possible also makes the person who runs it the only thing in it that cannot be replaced.

His other books in this series are *The Point of Failure* (the operator's manual) and *The Mechanism Auditor* (how to review a product that runs without you). The working paper *The Mechanism Audit* sets out the formal method those books use.

Appendix H — Colophon and rights

Type. Iowan Old Style, Palatino and Georgia for text; the system sans-serif for labels, tables and glossary; a monospace for code. No web fonts, no external assets: the edition is designed to render identically on a phone, a laptop and in print.

Figures. Six figures, hand-drawn as SVG by `tools/make_figures.py` — coordinates, rules and type, no charting library — in the same cream-and-black idiom as the covers, so that the diagrams survive A5 print and a small screen.

Edition. First edition, November 2026. HTML and Markdown published; the Markdown is the source.

Licence. Text and figures: CC BY 4.0, attribution to Courage Garikai, Jacaranda Labs, Harare. The syllabus pack in Appendix C and the definition in Appendix A may be reproduced, modified and taught without attribution — a syllabus that cannot be copied is not a syllabus.

Canonical location. `https://jacaranda-labs.pages.dev/read/operatorship.html`

A note on the timing. The specific tools named in this book will be out of date before the second edition. That is not an apology; it is the thesis. The words that last are the ones that name what does not change — and if this one is wrong, the appendix that says how to prove it wrong is the part worth keeping.

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