

THE LONG CLOCK · CHAPTER TEN

How to Know It Worked

Chapter Ten of The Long Clock

Ammanuel Santa Anna

Santa Anna, A. (2026). How to Know It Worked. In The Long Clock (ch. 10). Luminous Prosperity Inc. https://doi.org/10.5281/zenodo.23989092
Luminous Library Licence 1.0 · business.hautelumiere.life/library/the-long-clock

THE LICENCE

How to Know It Worked
Chapter Ten of The Long Clock

The Long Clock · Chapter Ten. The Haute Lumière edition, 2026. © 2026 Ammanuel Santa Anna.

Released under the Luminous Library Licence 1.0 (hautelumiere.life/library-licence): free to read, share, quote, translate and teach, non-commercially, for ever. The Author keeps every other right, including every commercial right.

Published by Luminous Prosperity Inc. for Haute Lumière. Author ORCID 0009-0008-3244-0306.

DOI 10.5281/zenodo.23989092 · this record's page: business.hautelumiere.life/library/the-long-clock/10-how-to-know-it-worked/

Please cite as: Santa Anna, A. (2026). How to Know It Worked. In The Long Clock (ch. 10). Luminous Prosperity Inc. https://doi.org/10.5281/zenodo.23989092

Chapter Ten of The Long Clock. The whole book, with every chapter, is at business.hautelumiere.life/library/the-long-clock (DOI https://doi.org/10.5281/zenodo.23989072).

A NOTE BEFORE YOU READ

This work is offered for education and leadership development. It is not legal, financial, accounting, investment, medical or psychological advice; take the advice of a qualified professional who knows your circumstances. Companies and events are described from the public record as the author understands it; characterisations are the author's analysis. Examples are illustrative, and no particular outcome is promised to any reader.

ABSTRACT

A ship's navigator in the age before satellites kept a log by dead reckoning. Each watch she wrote down where she expected the ship to be: the heading, the speed, the hours run. When the coast came into view she compared the log with the land. The point of the log was not that it was right. It was that it had been written before the coast appeared, so that the difference between expectation and fact could teach her something about the currents. Most organisations measure a change the other way round. They make it, wait, look at the results, and then explain them. Whatever happened, a story fits. If margins rose, the long-clock work was paying off; if they fell, it was an investment in the future. A board that measures this way cannot be wrong, and so it cannot learn.

CHAPTER TEN

How to Know It Worked



How to Know It Worked

HAUTE LUMIÈRE · THE LONG CLOCK · CHAPTER TEN

A ledger opened before the year

A ship's navigator in the age before satellites kept a log by dead reckoning. Each watch she wrote down where she expected the ship to be: the heading, the speed, the hours run. When the coast came into view she compared the log with the land. The point of the log was not that it was right. It was that it had been

written before the coast appeared, so that the difference between expectation and fact could teach her something about the currents.

Most organisations measure a change the other way round. They make it, wait, look at the results, and then explain them. Whatever happened, a story fits. If margins rose, the long-clock work was paying off; if they fell, it was an investment in the future. A board that measures this way cannot be wrong, and so it cannot learn.

This chapter is about measuring the changes the rest of the book recommends: a purpose written where it binds, a clock lengthened, a long-clock party given a voice. Its claim is that a change to a company's time horizon can only be judged honestly if the prediction is written down before the result arrives, if what is counted is the renewal of long-clock assets rather than this year's profit, and if the reader is candid about how little one company's experience can prove. Chapter 9 sets the field manual's twelve weeks; this chapter is the instrument that tells a leader, a year or three later, whether those weeks did anything.

Ammanuel Santa Anna's *Ecstatic Economics* is unsparing about what a single measure does to an economy. Of gross domestic product he writes that the measure "literally cannot distinguish between activity that generates genuine prosperity and activity that destroys it."[69] A company's quarterly earnings have the same blindness at smaller scale. The composite manufacturer of chapter 5 raised its profit by six hundred and fifty thousand dollars in a year by stopping the two things that would have kept it alive. No line of the income statement marked the difference.

Why profit cannot be the test

It is tempting to judge a longer horizon by the thing the shorter horizon was protecting. If the company lengthened its clock and profit held, the change was safe; if profit fell, it was a mistake. That test fails for three reasons, and each one is worth stating because each is a common mistake in a boardroom.

Profit moves for many reasons. A change in prices, a currency, a customer's own fortunes or a competitor's error will swamp the effect of a pay plan or a purpose clause in any single year. A test that the weather can pass or fail is not a test of the change.

Profit rewards draw-down. As chapter 4 set out, the clearest sign of an aquifer problem is a result that improves while the asset behind it is not renewed. A company that stops drawing down will often see profit fall first, because it is now paying for renewal that it had been skipping. Judged on profit, the most successful lengthening of a clock will look, for a year or two, like a failure.

Profit arrives on the short clock. The point of the whole exercise is to protect assets whose renewal takes years. A measure read every quarter cannot report on something that changes every five years. The measure has to run on the asset's clock, not the accountant's.

None of this means profit stops mattering. A company that does not earn cannot renew anything, and the evidence in chapter 5 suggests that longer horizons are associated with value rather than against it. It means profit is one line on the page, read beside the lines that say what it cost.

Write the prediction first

The single most useful habit in this chapter costs nothing. Before a change takes effect, write down what you expect it to do, by when, and what you would see if you were wrong.

A useful prediction has four parts.

The change. Stated as a fact about a document or a decision: *the managers' bonus period was lengthened from one year to five on 1 March*; *the apprenticeship budget was written into the shareholders' agreement as a protected line*.

The expected movement. In a named measure, in a named direction, by a rough amount, by a date: *apprentices completing their qualification rise from four a year to six within three years*; *voluntary turnover among skilled staff falls below ten per cent within two years*.

The mechanism. One sentence on why: *because managers are no longer paid to cut the programme in a hard year*. A prediction without a mechanism cannot be learned from even when it comes true.

The disconfirming sign. What you would see if the change did nothing or did harm: *the programme is cut anyway, by a different route*; *turnover rises because the deferred pay is resented*.

Written this way, a prediction turns every change into a small experiment. When the date arrives the board reads the page, compares it with the facts, and writes one line on the difference. Over five or ten such pages a company learns something no study can tell it: how its own clocks respond to its own levers.

The house holds itself to the same discipline. The claims in this book are offered as a lens, and chapter 13 lists what the book does not show. A reader who keeps a prediction register will be in a position, within a few years, to say whether the lens was useful in her company. That is a better test than any argument in these pages.

What to count

The measures below are drawn from the tools in earlier chapters. None is perfect and several are rough. Together they give a board a reading of the second clock, and the reading improves each year it is kept.

The draw-down pairs. From the Two Clocks Register in chapter 4: each result that improved while a long-clock asset was not renewed. Count the pairs each year. A falling count is the plainest sign that the clocks are coming back into line. A rising count, in a year of good profit, is the sign to look for first.

The long-clock spend share. For each long-clock line, apprenticeships, research, maintenance capital, customer service, training, write its spending as a share of revenue, each year, on one row. Share is better than the raw figure because it does not flatter a growing company or punish a shrinking one. The trend matters more than the level, and a sharp fall in a year before a sale, a refinancing or a leadership change is the pattern chapter 5 warned about.

The regeneration-time estimates. Each year, ask the people who would have to rebuild each asset how long it would take. Write down their answers. The figures are judgements, not measurements, and that is acceptable so long as the same question is put to the same kind of person each year. A rising estimate means the asset has grown more fragile: the team is thinner, the knowledge sits with fewer people, the customers are newer.

Turnover where the tacit skill sits. Voluntary departures among the people who hold the hardest-to-replace skill, measured separately from turnover overall. A company can hold total turnover steady while losing its most experienced people. The second number is the one that renews on the long clock.

The tenure of long relationships. The share of revenue from customers of more than five years' standing; the share of critical supplies from suppliers of more than five years. These are slow measures, and slow is the point.

The patient party's activity. Chapter 13 makes the holder of the long clock the book's closing question. Count what that holder actually does: meetings attended, visits made, questions asked in writing, decisions it reviewed. Hansmann and Thomsen's work on foundations, discussed in chapters 3 and 6, found foundation-owned companies performing better where the foundation's board stood at a distance from management, which chapter 3 read as a sign that the best long-horizon owners are present and demanding. A long clock held by a party that never acts on it is an absence, and an activity count shows it.

The purpose in decisions. The number of significant board decisions in the year whose minutes record which long-clock asset the decision drew on, as chapter 4 recommended. The measure is crude. It also changes behaviour, which brings the chapter to its main hazard.

Goodhart's warning

In 1975 the economist Charles Goodhart observed, about monetary policy, that a statistical regularity tends to collapse once pressure is placed on it for purposes of control. The anthropologist Marilyn Strathern, writing about the audit of British universities in 1997, gave the idea the form in which it is now usually quoted: when a measure becomes a target, it ceases to be a good measure.[70]

Every measure in the list above can be gamed. A training budget can be spent on courses nobody needs. A turnover figure can be held down by making it hard to leave. A board's minutes can name a long-clock as-

set in every decision while changing none of them. The patient party can attend every meeting and ask nothing.

Three habits keep the measures honest.

Read the measures, do not pay on them, at first. Chapter 5 described how pay plans can include a long-clock measure, and they can. But a measure that is new, rough and unfamiliar should be read for at least a year before anyone's pay depends on it. A measure people are paid on stops being information.

Read them in pairs. Each measure is harder to game when it is read beside another that would move the other way if gamed. Training spend beside the share of trainees who qualify. Turnover beside the number of internal complaints. Long-clock spend beside the regeneration-time estimate. Chapter 4's draw-down pairs are already built this way.

Ask the people closest to the asset. The apprentices know whether the programme is real. The long customers know whether they are being looked after. A short annual conversation with each, recorded in a few lines, is the check that no figure can provide. Santa Anna's book argues that information arriving on the asset's own clock changes decisions; the conversation is the cheapest way to receive it.

Baselines

A measure without a baseline is a number without a meaning. Before any change takes effect, the board should record where each measure stands, and where it has stood for the previous three years if the records exist.

Three cautions apply.

The baseline year may itself be a draw-down year. A company that turns to this book is often one that has been drawing down. Its baseline will make the first years of renewal look expensive. Record that, so that nobody later mistakes the cost of renewal for a decline.

Change one clock at a time where you can. Chapter 13 repeats the rule from the field manual: a system can absorb one lengthened clock in a quarter. It is also easier to read. Five changes made at once produce one tangle of results and no learning.

Keep the old measures. Do not stop reporting profit, cash or the usual operating figures. The new measures sit beside them. A board that sees both on one page can judge the trade; a board that sees only one cannot.

Small numbers, said honestly

The research in chapter 5 drew on samples ranging from the companies on one list of a hundred employers to more than four hundred thousand firm-years. A single company has a sample of one, observed for a handful of years. That has consequences that a careful reader should say aloud.

One company cannot prove a mechanism. If turnover falls after the bonus period is lengthened, the change may have caused it, or the labour market may have cooled, or a difficult manager may have left. The prediction register helps, because it states the mechanism in advance and names the disconfirming sign, but it cannot settle the question. Say *consistent with*, not *caused by*.

Long clocks need long records. An asset that renews over six years cannot be judged in two. The first readings will be noise. A board should agree, in advance, the earliest date at which it will draw any conclusion, and keep to it.

Small numbers swing. A company that qualifies four apprentices a year will see that figure move by twenty-five per cent if one person leaves. Read small counts over several years, not one.

Survivors tell the story. The firms whose stories reach a book, including the three in chapter 6, are the ones that lasted. A reader should not compare her company with them as though they were a fair sample. They are the ones that made it.

Santa Anna's book carries the same humility into its own field. It warns readers against treating its alternative models as perfect and names "measurement issues" among the problems such enterprises must face.[69] A measurement chapter that claimed precision it did not have would be at odds with the book it comes from.

Reading the register at the end of a year

Once a year, ideally in a calm week rather than in the days after a hard result, the board or the household reads the register in one sitting. The reading has a fixed order.

First, the predictions due this year: what was expected, what happened, and one line on the difference. Second, the draw-down pairs: how many, and whether any are new. Third, the long-clock spend share and the regeneration-time estimates, each beside last year's. Fourth, the patient party: what it did, and whether it was enough. Fifth, the conversations with the people closest to the assets, read aloud.

Then three questions, answered in writing. Which long-clock asset is in the best health, and why? Which is in the worst? What is the one change for next year, with its prediction?

The reading takes an hour. Kept for five years, it gives a company something its accounts never will: a record, in its own words, of what it expected of its future and what its future did.

A worked reading: the manufacturer, three years on

The family manufacturer of chapter 5 is a composite built for teaching, and its figures below were set by the writer, not observed. It serves here to show what a register looks like when it is read.

When the family decided not to sell, they made three changes and wrote a page for each. The first moved control into a trust whose deed protected the apprenticeship and development lines. The second lengthened the managers' bonus period from one year to five. The third put a purpose clause into the articles. Each page carried a prediction. For the apprenticeship, the family expected completions to rise from four a year to six within three years, because managers would no longer be paid to cut the programme in a hard year. The disconfirming sign they wrote was that the programme would be hollowed out by a different route: fewer instructors, shorter placements, the same headline budget.

Three years later the reading went like this. Completions had risen to five a year, not six. The long-clock spend share for the programme had held at just under one per cent of revenue, which was the protected floor. The regeneration-time estimate, asked of the senior machinists each year, had fallen from six years to five, because two of the newly qualified machinists could now train others. Turnover among the most skilled staff had fallen from three departures a year to one. Operating profit had fallen in the first year, as the renewal costs that a sale would have skipped were paid, and recovered in the third, for reasons the board could not separate from a strong order book.

The disconfirming sign had nearly appeared. In the second year a production manager, short of floor space, had shortened the apprentices' placements on the newest machines. The trustees, reading the register, noticed the placement length beside the completion count and asked why. The placements were restored. Without the pair, the cut would have shown up two years later as a group of apprentices who had qualified without the skill the qualification named.

The board's verdict, written in three lines, was modest. The change was consistent with the mechanism; the prediction was too optimistic by one apprentice a year; the lesson was that a protected budget is not a protected programme unless what it buys is also read. The next year's page predicted completions of six by year five, with placement length as its pair.

Nothing in that reading proves the trust deed caused the improvement. The labour market may have helped; so may a good instructor who happened to stay. What the register did was let the family see, in their own figures, whether what they had hoped for was happening, and catch the one quiet draw-down before it became a gap.

The household reading

The same reasoning works at a kitchen table, scaled down. Chapter 12 follows a household through a year with chapter 4's Two Clocks Register and a one-page Household Horizon Page, not with this register. In brief: the household's long-clock lines, health, a qualification, a child's schooling, the care of a parent, each get a line. A household that wants this chapter's test can add one prediction a year, for example that a protected monthly sum for a course will produce the qualification by a named date. It counts its own draw-

down pairs: months in which the accounts improved while sleep, a friendship or a course was given up. It names its patient party and notes whether that party was called on.

Nothing in this is financial advice, and the house gives none. The point is the same at both scales. A household that writes its expectations down before the year begins can learn from the year. One that does not can only explain it.

The finer points

Date every prediction. A prediction with no date can never be wrong.

Name who reads the register. If nobody owns the reading, it will not happen. The holder of the long clock is the natural owner; the field manual in chapter 9 assigns it.

Prefer a rough measure of the right thing. A precise measure of the wrong thing, quarterly profit, is the reason this book exists. An honest estimate of how long it would take to rebuild a team is worth more.

Keep the register where the accounts are kept. A register filed with the strategy papers is read once a year at an away day. A register that sits in the same pack as the monthly figures is seen every month, even when it is not read in full, and its trend column becomes as familiar to the board as the cash line.

Do not let the reader be the author. Where it is possible, the person who reads the register at the end of the year should not be the person who wrote the predictions. The author of a prediction is the one person least able to see that it failed. A trustee, a non-executive director, a partner at the kitchen table: anyone who did not write the page will read it more honestly.

Write down surprises. The line in the register that teaches most is the one that says *we did not expect this*. Make room for it.

The house's book on complexity, *The Economy That Keeps Becoming*, gives a fuller account of why prediction in an evolving system is humble work. *Ecstatic Economics* is kept at .

The Tool: The Prediction Register

Keep it as one document, opened before the year and read at its end. Use one page per change.

1 · The change

- What changed, as a fact about a document or decision: _____
- Date it took effect: _____
- Who made it: _____

2 · The prediction

MEASURE	BASELINE (AND THE THREE YEARS BEFORE, IF KNOWN)	EXPECTED MOVEMENT	BY WHEN

- The mechanism, in one sentence: _____
- The disconfirming sign: _____
- The earliest date we will draw any conclusion: _____

3 · The pairs

MEASURE	READ BESIDE	WHAT GAMING WOULD LOOK LIKE

4 · The annual reading

ITEM	LAST YEAR	THIS YEAR	NOTE
Draw-down pairs (count)			
Long-clock spend share, by line			
Regeneration-time estimates, by asset			
Turnover where the tacit skill sits			
Revenue from customers of five years or more (share)			
The patient party's activity (visits, questions, reviews)			
Decisions whose minutes name the long-clock asset drawn on			

5 · The verdict

- What happened against the prediction: _____
- Consistent with the mechanism? yes / no / unclear · why: _____
- What surprised us: _____
- The one change for next year, with its prediction on a new page: _____
- Read by __ on ____

The coast in view

The navigator's log was never meant to be right. It was meant to be written before the land appeared. When the coast rose out of the haze two miles south of where she had expected it, the log told her something about the current that no chart had shown. She wrote it down, and the next voyage was shorter.

References

1. Santa Anna, A. *Ecstatic Economics*. The Luminous Developmental Canon, 2026. Chapter on the measurement of prosperity (GDP) and the section on common misconceptions and pitfalls.
2. Strathern, M. (1997). 'Improving ratings': Audit in the British university system. *European Review*, 5(3), 305–321. https://doi.org/10.1002/(SICI)1234-981X(199707)5:3<305::AID-EURO184>3.0.CO;2-4 (resolved by Crossref, 19 October 2026). Goodhart's original observation is in Goodhart, C. A. E. (1975), "Problems of monetary management: the U.K. experience," *Papers in Monetary Economics*, Reserve Bank of Australia; it was not re-read for this book. The common phrasing of the law is a paraphrase associated with Strathern's essay and is given here as a paraphrase, not a quotation. Strathern's essay concerns university audit, not firms.

How to Know It Worked

Ammanuel Santa Anna · Luminous Prosperity Inc. · Haute Lumière

Set in Cormorant Garamond and Manrope.

Read the Business Library at business.hautelumiere.life/library.

Luminous Library Licence 1.0 · hautelumiere.life/library-licence

REQUEST A CONVERSATION

business.hautelumiere.life/book/?kind=gainshare

The Business Library

business.hautelumiere.life/library/

The packages

hautelumiere.life/pricing/