THE HELM AND THE LENS · VOLUME 4b

The Thirty Concept Cards

The Lens · ISO 50001

Each subchapter of the volume ends with a concept card that gathers its subject into a single image. All thirty are collected here with title, image and text.

Francesco Dore · Edizioni Effedore

CONCEPT CARD 3.1

Auditing a Standard That Measures

Subchapter 3.1 · Helsinki, Finland



An internal auditor at a desk holds up a single chart: a line falling steadily from left to right, the kind of figure a management review is glad to receive. The coordinator who calculated it leans over the table beside her, and between them lie four ruled sheets, laid out side by side. The chart is the claim and the four sheets are the question, and the card is built on the distance between them.

The first label gives the figure as it was reported: nine point four per cent, checked by the financial controller, presented to the review and repeated in a letter to the owners. The next two name what else happened in the same twelve months. A mild winter, with heating degree days eleven per cent below the mean in a building that takes more than half its energy from the district network. A laundry that left, taking its consumption out of the building and into a service invoice. Occupancy growth and an old baseline adjustment fill the remaining sheets. The fourth label is what was left once all of it had been taken out: under one point managed, inside the uncertainty of the instruments.

Nobody in the picture has done anything wrong, and the card is careful not to suggest it. The arithmetic was correct and the data came from meters that existed. What was missing was not honesty but a method, and specifically the one this standard asks for and no other in the series does: a way of telling the property’s own work apart from what simply happened to it.

The cost of that absence is the part the figure hides. In the same year the chief engineer had rescheduled the conference air handling, relamped six floors and won an argument with the heat supplier over the heating curve. That work was real, and the property’s own reporting could not tell it whether the work had worked.

CONCEPT CARD 3.2

Planning an Audit Around Hours, Not Departments

Subchapter 3.2 · Marrakech, Morocco



The auditor stands in a service corridor between two open doors. On the left the laundry is loading its machines; on the right the kitchen is plating for a banquet, a long pass of identical plates under the heat lamps. She holds a single curve with one sharp peak, and the chief engineer beside her studies it as though he had never seen it drawn, which is true: nobody had ever drawn it.

The two doors are the argument. Each department behind them had been audited within the year and found compliant, correctly: the laundry in May with two of its four machines running, the kitchen in January serving eighty covers. What no audit had ever seen was the forty-three minutes on a July Saturday afternoon when both doors were open at once, with both chillers at full load, the spa cooling a booked-out treatment room, the pool on high flow and the irrigation pumps starting on a timer set by a gardener who had left in 2019.

Read in pairs, the labels state the whole problem. Audited at nine; consumed at two. Every department compliant; hours never visited. None of the four describes a fault. The first pair is a scheduling habit and the second is its consequence, and together they describe a programme that was sound in every line and blind in exactly one dimension, which was time.

The card does not argue for abandoning departmental audits. Competence, records and responsibilities belong to departments and are audited there. It argues that a hotel’s consumption is organised by the clock, and that the audit which finally found the peak had a single criterion belonging to no department at all: what is running now, and who decided that it would be running now.

CONCEPT CARD 3.3

The Checklist That Goes to the Plant Room

Subchapter 3.3 · Kraków, Poland



Two people stand before a controller in a vaulted brick cellar. The auditor holds a thick grey binder against her chest; the maintenance supervisor, nineteen years in the building, has his hand on the panel and is showing her the screen, where a single compensation curve is drawn. The binder is the sixty-two page checklist. The screen is the building.

The labels are arranged as two opposing pairs, and the card reads across rather than down. On the left, written from the clauses; on the right, audits the paper. Below, written from the uses; audits the building. A checklist built in the order of the standard sends the auditor to the filing cabinet, because that is where the evidence for each clause is kept. A checklist built around the significant energy uses sends him to the equipment, because the answer to its questions exists nowhere else.

What the screen shows is the gap between the two. The documented criterion said that the flow temperature follows the manufacturer’s curve, and it had been ticked that morning. The curve in the controller had been lifted in the winter of 2017 to cure eleven cold rooms under a protected roof that cannot be insulated, and it had carried the whole building at that temperature through nine winters. The file was accurate. It described a curve that had not been in the controller since 2017.

The linen trolley at the foot of the stairs keeps the scene in a hotel, and it matters that it does: the change was made for guests, for good reasons, by a competent man who told his general manager at the time. Nothing was hidden. It simply lived in a place no clause-by-clause checklist would ever visit, and the new checklist, nine pages long, begins by opening the panel.

CONCEPT CARD 3.4

Auditing the Process That Finds the Obligations

Subchapter 3.4 · Rotterdam, Netherlands



Across a table in a waterfront conference hotel, the internal auditor has the register of legal and other requirements open in front of him and has laid four blank cards beside it. The coordinator opposite waits for the question. Behind her, through the glass, a function room is set for coffee: the conference business whose recovery, together with a row of charging points in the car park, quietly moved this property into a different legal regime.

The four cards are the four entries out of twenty-three that recorded a trigger, the condition that makes an obligation apply to this property rather than to some other. The first two labels make the count: twenty-three entries, four with a trigger. The third gives the register’s history, unchanged in four years, which had been presented as evidence of control. The fourth names the defect underneath all of them: no way in, no way out.

A register that lists what is required, and not why it applies, can be reviewed faithfully every year and never find anything, because the reviewer is looking for changes in the obligation and the obligation has not changed. What changed was the property. It crossed a consumption threshold and spent two reporting cycles in a regime nobody in the building had heard of. It signed a client contract with a disclosure clause the energy coordinator never saw. And it evaluated its compliance each year by asking the contractors who were complying.

The auditor in the picture is not reading the law, and he is not qualified to. His report contained no legal opinion of any kind. It was about process: how an obligation enters the register, how it leaves or changes inside it, and who, other than the party complying, ever evaluates whether it has been met.

CONCEPT CARD 3.5

The Energy Near-Miss

Subchapter 3.5 · Busan, South Korea



In the engineering office the auditor has turned from her screen to listen. On the monitors behind her are the plant schematics of the building management system; on the screen in front of her, a long log. The duty engineer at her shoulder is explaining one line of it with an open hand. Through the window, the service corridor is lined with linen trolleys: the ordinary night traffic of a large hotel that had recorded no significant deviation in two years.

The labels tell the story of a single entry and then multiply it. Left open: a chilled water set point lowered for a full ballroom on a hot night, correctly. Closed by chance: returned at two in the morning because the man who changed it happened to remember. Never recorded: nothing in the energy management system knew it had happened. And the multiplier, forty-seven times in twelve months, of which forty-one were reversed within three days and two were never reversed at all.

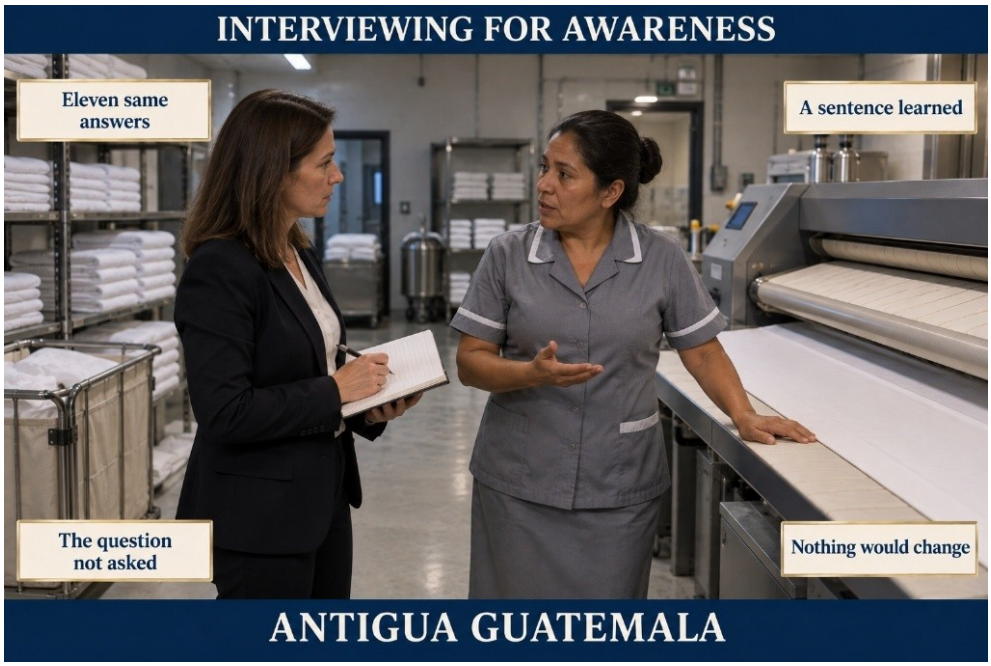
The two that stayed had already surfaced as rises in the monthly figures and had been explained, by a warm month and a fuller house, both of which were true. The forty-one are the card’s subject. Each contained the same cause as the two, and each was cancelled by chance before it could cost anything, which is precisely what the disciplines that learned long ago to collect such events call a near-miss.

The engineer’s gesture is the part of the image to hold on to. He had asked whether the forty-one would get him into trouble. The answer that closes the card is that they were the reason there had only been two, and that a register which is ever used against a person will, within a month, have the same overrides and no log.

CONCEPT CARD 3.6

Interviewing for Awareness

Subchapter 3.6 · Antigua Guatemala, Guatemala



In the laundry of a restored colonial house, beside a flatwork ironer, a laundry attendant answers the auditor’s question with a gesture while the auditor writes. The training file for this property is exemplary: annual sessions, full attendance for four years, a written quiz with the scores retained. The card is set at the machine rather than in the training room because the question that finally mattered could only be asked here.

The first two labels concern the file and what it actually proves. Eleven same answers: ten people out of eleven, two of them word for word, saying that the hotel wants to save energy and that they should switch off what is not being used. A sentence learned. Concordance of that kind looks like a system, and it is evidence only that everybody was shown the same sentence.

The third label is the question the programme had never asked: what happens if this machine runs through the afternoon break? Not whether it is allowed. What happens, in any unit at all. Nobody could say, except the laundry supervisor, who answered at once in quetzales per hour for three machines, because he had once run a tortillería and paid its electricity bill himself. The property’s one genuinely aware employee had acquired his awareness somewhere else.

The fourth label belongs to the night porter and is the most honest line on the card. Nothing would change: he knew roughly what the boiler cost to keep hot overnight and kept it hot anyway, because a cold shower at one in the morning produces a complaint with his name on it and the gas carries nobody’s. That is not an awareness problem, and no course will touch it. What the audit proposed was a number on the laundry wall, in the currency the people in that room actually use.

CONCEPT CARD 3.7

Second-Party Audit: Suppliers, Contracts and Guarantees of Origin

Subchapter 3.7 · Leipzig, Germany



The auditor stands in the plant room with the supply file open in her hands, while the engineer beside her checks something on a clipboard against the plant around them. Stacked banqueting chairs wait along the corridor behind: the furniture of a trade-fair hotel that fills in bursts. Everything in the file is genuine. The card is about what it is genuine evidence of.

The labels run as a short syllogism. Every certificate genuine: the renewable attribute certificates existed, matched the property’s volumes and had been properly retired. The supply changed. The building did not. And then the conclusion the property had drawn from those premises, which does not follow from them: reported as improvement.

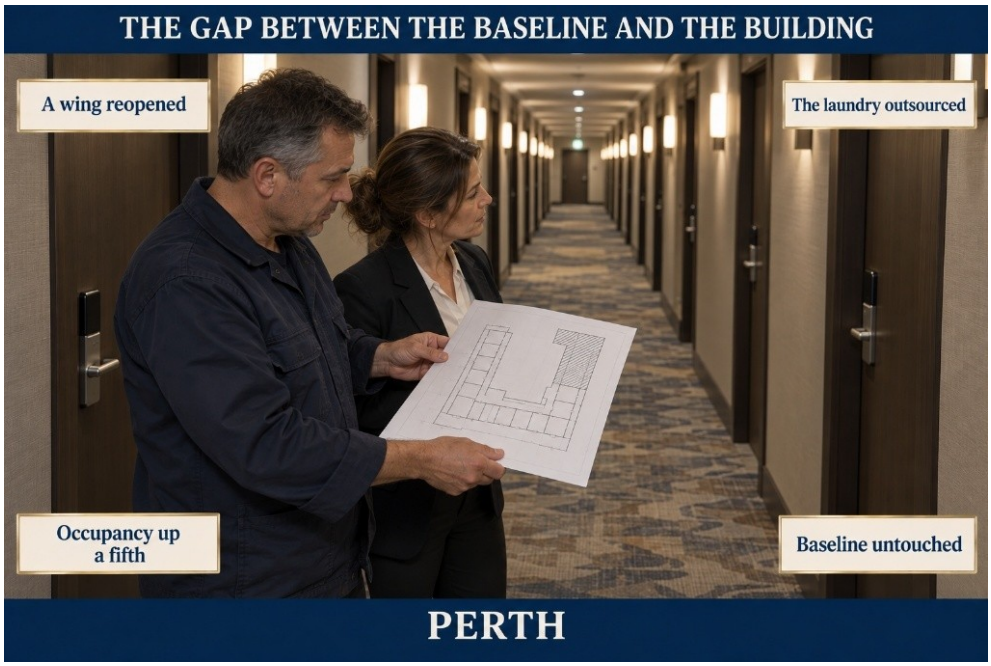
The category error is the whole subchapter, and the card makes it visible by carrying the documents into the plant room. An attribute product makes a statement about how a quantity of electricity was generated somewhere on a network. It does not reduce the quantity the building draws, and it does not change how efficiently the building turns that quantity into rooms sold. Over the same period consumption had risen by six per cent on comparable occupancy, and the two facts sat three pages apart in one report without ever meeting in a sentence.

Behind the certificates lie the audit’s other findings, and they share a shape. The supplier documented a genuine product. The maintenance contractor delivered exactly the availability his contract measured, and in eleven years of service reports never recorded a set point. The laundry moved off-site and its energy moved outside the property’s sight, still reported as a gain. In none of the three contracts was there a clause giving the property the right to ask a question. Everything it had received, promptly, it had received as a courtesy.

CONCEPT CARD 3.8

The Gap Between the Baseline and the Building

Subchapter 3.8 · Perth, Australia



In a guest corridor that runs away to a vanishing point, the chief engineer holds up a floor plan and the auditor studies it with him. One wing on the plan is hatched. The corridor is the building as it is now and the plan is the building in the baseline year, and the card asks the reader to notice that they are not the same building.

Each of the four labels names a change that, taken alone, was defensible as not major. A wing reopened: twenty-four rooms closed for refurbishment in the baseline year were back in service. The laundry outsourced: a significant energy use gone from the boundary. Occupancy up a fifth: from seventy-one per cent to eighty-four, with thirty rooms now let continuously as long-stay apartments, which had changed what occupancy means rather than merely how much of it there was. And the fourth label, which is the finding: baseline untouched.

The reported improvement was eleven per cent, normalised by a method that predated its results and correctly applied in every year. Each reason given for leaving the baseline alone was reasonable on its own terms. The procedure said the baseline would be revised in the event of major changes; it did not define major, and a rule keyed to a single large event cannot respond to four small ones. So it never fired.

The auditor did not say the eleven per cent was wrong. She said nobody could say what it was, because nobody had ever written down the distance between the building on the plan and the building in the corridor. That distance is the gap in the title, and it is the one thing an internal auditor can establish without redoing anybody’s arithmetic.

CONCEPT CARD 3.9

Root Cause, and the Answer That Is Not a Component

Subchapter 3.9 · Thessaloniki, Greece



The auditor holds a chart of daily consumption with one clear feature: a step, a single rise on a single date, after which the line stays level at its new height. The engineer beside her has his hand inside an open control panel for the conference floor's air handling. Through the door behind them lies the refurbished conference room, chairs stacked, which reopened on the Monday of the week the step appears.

Three of the labels are the explanation the management review had accepted. The machine is old: the chillers are fifteen years old. The summer was hot: cooling degree days were up. The house was full: occupancy had risen four points. The auditor checked all three and confirmed them, because an auditor who dismisses accurate information has lost the room. They are conditions (facts about the world the property operates in) and none of them is a cause.

The shape of the line is what separates them. Ageing plant produces a slope; a hot summer produces a curve weighted towards July; neither continues through the winter months when the chillers are off. A step belongs to a date, and a date belongs to a decision. Here it was a project closed in April with the new air handling drives left in fixed mode, awaiting a part that arrived in June for a commissioning engineer who no longer had a contract.

The fourth label names the kind of answer the method is looking for: the schedule had no owner. The same investigation found two more of the species: a service interval lengthened on one set of figures and never checked against the other, and a kitchen extraction running eighteen hours a day on a schedule inherited from a restaurant that used to close at ten. Three causes, and each was a decision that somebody could have taken differently.

CONCEPT CARD 3.10

Calibration, and Whether a Meter Can Be Trusted

Subchapter 3.10 · Ghent, Belgium



A metering cabinet stands open in a guest corridor: two ranks of sub-meters with blank displays. The engineer points to one of them and the auditor beside him writes. A housekeeping trolley waits further down the corridor, because this is where the instruments actually are, not in a laboratory, but on a board behind a panel that guests walk past every day.

The labels give the case in four short lines. Twelve instruments: the sub-meters fitted when the combined heat and power unit arrived, so that the property could report by department. Eleven never checked: only the two supplier meters at the interface had ever been verified, and they belong to the suppliers. The check costs nothing. Never done.

What the auditor did instead of ordering a calibration programme is the heart of the card. She summed the sub-meters month by month for three years and set the total against the supplier’s meter. For two years they accounted for ninety-three per cent of it; in the last eight months, eighty-one. The residual itself was expected. The change in it was the only signal in the building, and within an afternoon it led to a current transformer refitted on the wrong conductor, and to a kitchen that had been praised in a management review for an improvement that was a wiring error.

The card is honest about what that reconciliation cannot find. A meter that has been wrong since the day it was installed produces a stable, plausible number for ever, and the laundry sub-meter had been reading a third of its load since commissioning. Against that only a commissioning record protects a property, or an open statement that a figure is unverified. Against almost everything else, an hour of arithmetic a year is enough.

CONCEPT CARD 3.11

Who Is Allowed to Change a Set Point

Subchapter 3.11 · Doha, Qatar



In the engineering office the auditor, seated at the terminal of the building management system, has turned to the chief engineer, who stands with his arms folded. On the wall behind them hang seven identical lanyards on seven hooks, each with a blank tag. Through the glass, a brass luggage cart stands in the back corridor of a twenty-one floor hotel.

The lanyards are the account structure, and the image makes it literal: seven duty engineers shared a single login called engineer. The first two labels do the arithmetic of the case. Seven could change it; four were on shift in the week the secondary chilled water set point was lowered and two bypasses were opened on the upper floors. All four said it was not them, and there was no reason to disbelieve any of them.

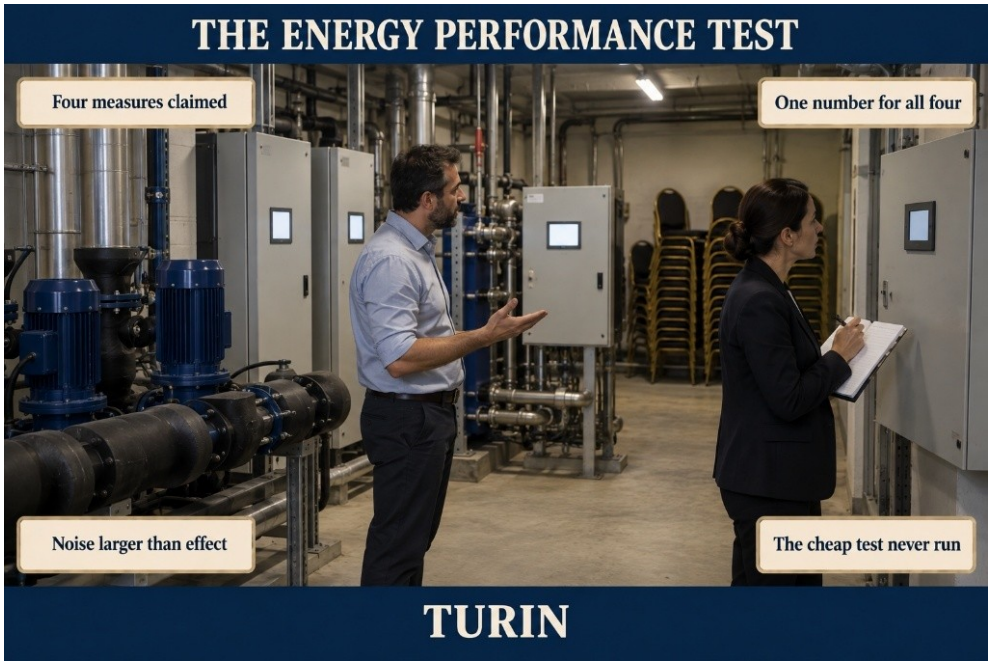
The lower labels state what the property had arranged without intending to. Nobody recorded it: the change log had been enabled since 2013, attributed every one of sixty-one changes to the same account, and forgot everything after ninety days. The system cannot say who made the change, so it cannot say why, so nobody can decide whether it should still be in place. Three weeks later it still was, narrowing the temperature difference returned to the district network and buying the same cooling at a worse rate under a contract term two basements below.

The change was correct when it was made; there had been real complaints on a night that never dropped below thirty-eight degrees. The card is not about who made it, and the auditor rightly did not pursue that. It is about the two copies of the property’s operating criteria: one in a document with an author, an approver and a date, which governs nothing, and one in a controller with no author and a ninety-day memory, which governs the building.

CONCEPT CARD 3.12

The Energy Performance Test

Subchapter 3.12 · Turin, Italy



In a plant room the coordinator is explaining and the auditor is taking notes beside a control panel. Around them stand the things the owner paid for over two years: variable speed pump sets, a heat interface running a new control strategy, the panels of a revised air handling schedule. Stacked banqueting chairs in the background carry the conference season that moves this property’s figures from one year to the next.

The first two labels state the claim and its method. Four measures claimed: a lighting replacement, a heat interface control, pump drives and a night setback, each with an expected saving, together about six per cent. One number for all four: the property’s normalised total had fallen, and all four had been credited from it.

The third label is why that number cannot bear the weight: noise larger than effect. In each of the four previous years this property’s normalised total had moved by more than six per cent for reasons unrelated to any measure: the conference calendar, a banqueting season that moves, a degree-day correction that is itself approximate. A method that cannot resolve the effect it is looking for will still produce a result every time, and the result is an artefact whichever way it falls.

The fourth label is the one that stings: the cheap test never run. The lighting sat on its own sub-meter with a near-constant load, and four comparable weeks before and after would have settled it. The pump drives and the control change were commissioned in the same fortnight on the same circuit and can now never be separated. The night setback was overridden before almost every event and worked on perhaps a third of the nights it was designed for. The remedy fits on a page: design the test, and date it, before the work is ordered.

CONCEPT CARD 3.13

The Report That Ownership Will Actually Read

Subchapter 3.13 · Luxembourg, Luxembourg



Across a boardroom table the internal auditor hands a single sheet to the asset manager, who holds a thick bound report in his other hand. Through the glass behind them, a coffee break is laid for the conference suite that pays for much of the building. The bound report and the single sheet contain the same findings. Only one of them was read.

The top labels describe the first report. Accurate in every line: twenty-six pages, fourteen findings, each correctly referenced, and every sentence still defensible today. Changed nothing: two quarters later three findings had been closed, all of them the ones that cost nothing and belonged to the coordinator. The asset manager, with eleven properties and a quarterly meeting, had read the summary paragraph, learned that the system conformed with no major nonconformity, and drawn the conclusion any reasonable reader would draw.

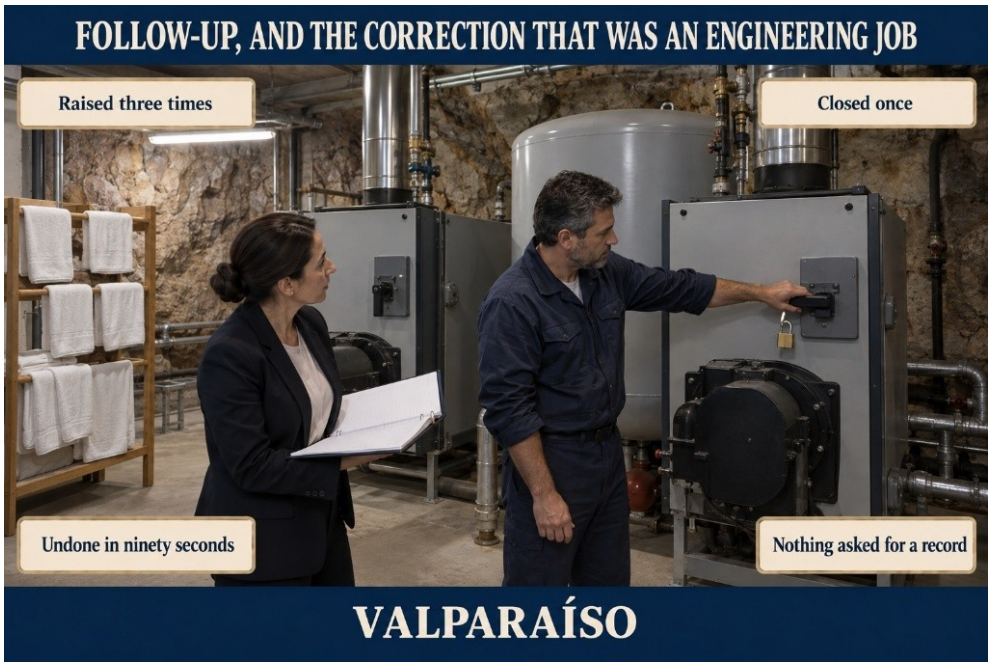
On page nineteen, under a clause heading about resources, finding eleven recorded that the property had no schedule for renewing its significant energy-using equipment. Behind that sentence was a window that would not open again for a decade: two chillers approaching the end of their working lives, and a conference refurbishment the following year with the plant rooms accessible and a contractor on site for four months. Nobody had ever put the two dates on the same page.

The lower labels describe the second report. Fourteen became one: nothing was removed, and the only change was a single page at the front listing what decision was required, by when, by whom, and roughly what it was worth. One page was read, in about four minutes, and a paper on the chillers was requested for the next meeting. The card does not say detail is worthless. It says a report is finished only when the person it is addressed to knows what he is being asked to do.

CONCEPT CARD 3.14

Follow-up, and the Correction That Was an Engineering Job

Subchapter 3.14 · Valparaíso, Chile



In a plant room cut into the hillside rock, the engineer has his hand on the lockout of one of two boilers, a padlock hanging from the switch. The auditor watches with the register of findings open. On the rack beside her hang the towels whose hot water this plant exists to deliver, and whose shortage, one full winter morning, is the reason the lock did not hold.

The labels are a history in four lines. Raised three times: the same finding, an oversized plant cycling through the night, in three consecutive years. Closed once: in the first year the chief engineer locked one boiler out of the sequence, consumption fell within a fortnight, and the closure was recorded with its date and a month of confirming data, which is better practice than most properties manage. Undone in ninety seconds: on a full Saturday in June, with the upper floor short of hot water at half past six, the duty engineer unlocked it. He was right to.

Nothing asked for a record, and so the reversal left no trace except in trend data nobody read. The circuit was back where it had started a hundred and seventeen days after the correction, less than the interval between audits, and each later audit found the condition and recorded it as new. Meanwhile the real answer, a smaller boiler with a buffer, lost the capital plan twice: once to a heritage façade, once to a street consent the scaffolding had already used.

What nobody proposed in three years was the answer that costs nothing: lock the second boiler out for the low season only, with a date on which it comes back. The card is about the life of a correction. A finding is closed when the number it concerns stays where it was put, and a follow-up that never looks at the number again has closed only a record.

CONCEPT CARD 3.15

What the Internal Audit Owes the Management Review

Subchapter 3.15 · Quebec City, Canada



The management review is in session. The general manager chairs from the head of the table, the coordinator presents, and the internal auditor sits to one side with her chin in her hand. On the table in front of them lies the audit report, closed. It had been circulated in December and presented in March, as item eight of ten, in four minutes.

The first label is what the review decided: baseline confirmed. The second is what the audit had known since its visit: evidence since November. The auditor’s working papers held a condition statement listing four changes to the building: the older wing out of service for eleven weeks, the restaurant let to an operator, thirty rooms sold on a long-stay contract through the quiet months, the heat pumps extended to another floor. The minute that noted the audit also recorded that no major changes had occurred, in the same words, for the third year running.

The third label names what the audit had been contributing: findings, not decisions. A review with ten items and a fixed length does not go looking inside an attached report for a sentence that bears on a different agenda item. The fourth label is the image of it: the door stayed closed. Nothing was concealed. The information was in the building, in a document, in a form that required somebody to go and fetch it.

The remedy took an afternoon. Instead of a report, the auditor brought three papers, each shaped as a decision the review was obliged to take, one of them containing the condition statement and nothing else. The following year the energy item took forty minutes and produced three dated decisions. The general manager, chairing for the sixth year, said it was the first time he had understood what an internal audit was for.

CONCEPT CARD 4.1

The Chain That Makes a Certificate Mean Something

Subchapter 4.1 · Geneva, Switzerland



A quality manager sits at a desk in a lakeside conference hotel with her framed certificate in one hand and, on the laptop in front of her, a public register with a single row highlighted. Behind her, on a table set for a delegation, hang rows of blank name badges. The guests this property sells to are booked by procurement departments, and procurement departments ask for documents.

The top two labels are both true, and the card needs the reader to accept them before going on. The certificate is genuine: an audit took place, over three days, led by an auditor she still considers better than the one who came after him. The body exists: a real company, and an accredited one. The lower labels are the questions that turned out to matter (accredited by whom, and for what) and the answer to both was waiting in the register.

The body’s accreditation covered energy supply and several categories of manufacturing. It did not cover services, and nothing in it touched the operation of a hotel. What the client asked for, in the fourth label, was accredited certification in a scope covering accommodation, and that is what the certificate could not show. Nothing unlawful had occurred; an unaccredited certificate is a legitimate commercial product. It was simply unconstrained, and the absence of constraint explained two things the property had never questioned: why the offer had proposed fewer days, and why the same firm had been free to advise before it judged.

The card’s instrument is the one on the screen. Three questions (is it accredited, by whom, and in what scope) and a public register anybody can read. Twenty minutes, and in most certified properties it has never been done once in the life of the certificate.

CONCEPT CARD 4.2

Choosing a Certification Body That Has Seen a Hotel

Subchapter 4.2 · Milan, Italy



In a plant room, a certification auditor with a clipboard studies a drawing that the group’s quality manager holds out to him. It is a floor plan, because that is what a hotel has; he had asked for a process flow diagram. Through the open door behind them the kitchen line is at work, steam rising from the stoves. In three days he did not go through that door once.

Three of the labels are compliments, and they are sincere. Competent: eleven energy management systems audited in food processing, two in logistics, and precise questions. Courteous. Thorough: two days in the plant room and the document room, with boilers, chillers, maintenance records and meter calibration all properly examined. The fourth label says what all of that competence was pointed at: looking for a factory.

A factory has a process, an output and a specific consumption per unit. A hotel has a guest night, which in a fair week means a full house, two banquets and the air handling on all day, and in the second week of January (when the audit took place) means almost nothing. The auditor never asked who sets the kitchen’s switch-on time, and never asked about the laundry, because it had left the building and nothing in his method prompted the question.

Fourteen months later a client’s auditor asked all three questions in half a day, and the property could answer none of them. The card’s lesson sits in the tender file. The rejected offer, nine days and more than twice the price of the offer chosen, had counted the July staffing, proposed part of the visit inside a fair week and explained why in a covering letter. It had read the hotel correctly and lost on price to people who had never been told what they were comparing.

CONCEPT CARD 4.3

Stage 1: Readiness, and the Data That Does Not Yet Exist

Subchapter 4.3 · Auckland, New Zealand



At a desk in a back office the stage one auditor has her hand flat on a single chart: a line of measured consumption that runs across part of the sheet and stops, leaving the rest of the grid empty. The general manager stands opposite, folder closed. On the shelves behind them, rows of identical binders; on the wall, the plan of the building. Everything that can be written down is here.

The first label is the compliment, and it was deserved: documents complete. The energy review was thorough, relevant variables and static factors were properly distinguished, and operating criteria were stated as values. The second label is the problem, and it is on the chart: eight months of data, June to January. One winter, one spring and the first two months of summer. Not February, this property's heaviest week, and not one complete cruise season.

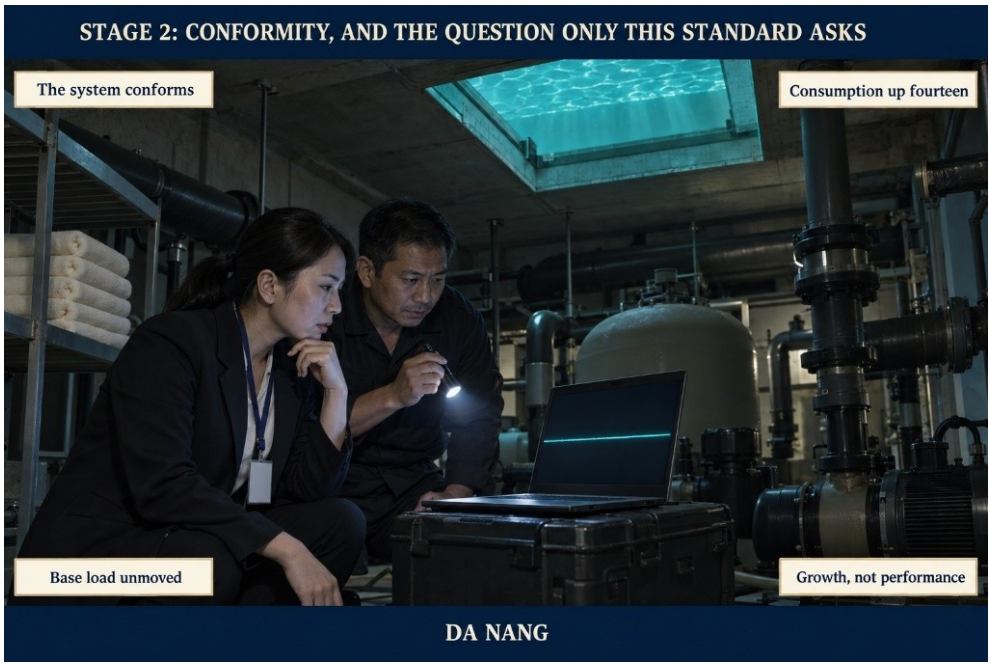
The third label follows: nothing to compare. A standard that asks a property to demonstrate improvement in energy performance first asks it to have something to improve against, and a baseline describing two-thirds of a year will compare every future year with a building that does not exist. Two of the three indicators rested on sub-meters with three months of readings, and the internal audit had been carried out by the consultant who built the system.

The fourth label is the advice the general manager did not want to hear: postponement is cheaper. Going ahead in March would probably have produced two major nonconformities, a follow-up and a delay that would still have had to be explained to the client. Deferring used a year that was running anyway. The property certified in September, cleanly, with a full cycle in its baseline, because in this standard the calendar is a prerequisite and not a constraint.

CONCEPT CARD 4.4

Stage 2: Conformity, and the Question Only This Standard Asks

Subchapter 4.4 · Da Nang, Vietnam



The plant room lies beneath the pool, and the water glows through a skylight overhead. It is the middle of the night. The lead auditor is crouched beside a laptop set on an equipment case while a technician holds a torch; on the screen, a single flat trace. Folded towels on a rack keep the scene in a hotel. The hour is the method: this is what the building consumes when nobody is using it.

The top labels are the two statements that were going to share one report. The system conforms: documentation sound, criteria matching the controllers, internal audit independent, management review decisive. Consumption up fourteen: gross energy purchase fourteen per cent above the baseline year, in a young resort whose occupancy had climbed from fifty-four per cent to seventy-one. The coordinator had presented the indicator per guest night, down nine per cent, as the demonstration of improvement.

The flat trace on the laptop is the third label: base load unmoved. Between three and five in the morning on a quiet night, three years of growth had changed what the building consumed by nothing the instruments could see. That single fact reframes the nine per cent. A ratio improves automatically when its denominator grows faster than its numerator, and it will go on improving exactly as long as the hotel keeps filling. The fourth label names it plainly: growth, not performance.

The finding was minor and not major, and the card rests on why. The property had verified one measure properly: a chiller sequencing change on a sub-metered circuit, tested over comparable weeks by a method written down in advance. It could separate its own work from its circumstances; it had simply never applied that capability to its headline figure. The certificate was recommended, and the gap was closed with a second indicator that occupancy barely moves.

CONCEPT CARD 4.5

The Audit Team, and Competence in a Performance Standard

Subchapter 4.5 · Bergen, Norway



In a meeting room built into an old harbour warehouse, two auditors sit side by side before a laptop. The younger has his hand on the keyboard and his brow furrowed; the lead auditor beside him leans in with her chin on her hand. Behind them a third person stands with a closed notebook, watching the two of them rather than the screen. Through the doorway, a room-service trolley under a silver cloche waits in the corridor.

The first two labels are the team's honest record. Two good auditors: one with nine years on this standard, one from hotel engineering, covering between them the standard and the sector, which is more than many properties get. Documents examined: they confirmed that normalisation was carried out, that the method was documented, that it predated its results and had been applied consistently. All of it was true, and all of it was checked properly.

What is on the screen is the third label: the regression unread. Almost everything the property reported rested on one model, fitted against heating degree days and occupancy. In this building those two variables are not independent (the cruise season is the summer, and the summer is when the degree days are fewest) so the model could not tell which of them was doing the work. Neither auditor could interrogate it, and neither pretended to. A client's procurement auditor did, fourteen months later, in twenty minutes.

The fourth label is a finding about the team rather than the property: no expert on the team. The framework asks for competence held collectively, and provides a technical expert for exactly this case; it is almost never used. The standing figure is the card's other half. An accreditation assessor watching the audit team, not the hotel, at the one visit in three years when somebody independent checks the auditors, and the coordinator spent the first hour of it being defensive at the wrong person.

CONCEPT CARD 4.6

Objective Evidence of Improvement

Subchapter 4.6 · Mendoza, Argentina



The auditor has her finger on a meter in a plant room, a notebook open in her other hand; the maintenance manager beside her holds out a sheet with six ruled lines on it. Through the open door, a linen trolley stands in the corridor of a vineyard hotel whose climate swings twenty degrees between an afternoon and a night. The card begins at the meter because the question she was asking was what a stranger could verify.

The first two labels are that question put to four claims. Four measures claimed: solar preheating for the spa and laundry, a lighting replacement, a revised irrigation schedule, and improved staff awareness credited with three points. Two supported: the solar loop, confirmed by two independent instruments on either side of the same energy flow, and the lighting, accepted not on the manufacturer’s calculation but on a step in the sub-meter’s daily data in the week of installation.

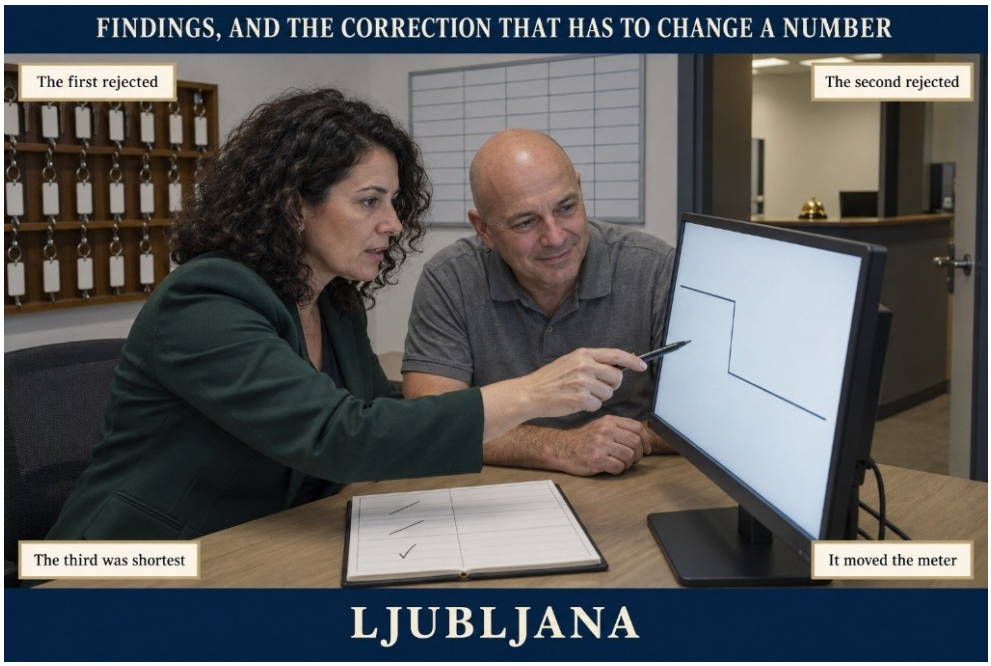
The other two were not rejected as false. The irrigation probably worked, but its evidence was a water bill and its pumps had no meter; the awareness points had been attributed because the remainder was otherwise unexplained. Unsupported is not untrue, and the card holds that distinction carefully. The third label then tests the headline figure itself: twelve became nine, once a properly recorded baseline revision was set aside to see what it had contributed.

The fourth label is the part of the audit the coordinator kept: six lines kept. He had expected to be told his twelve per cent was wrong. He was given instead a paragraph of six lines stating exactly what had been accepted and why, and it has been the template for how the property reports ever since. The improvement was demonstrated, it was smaller than the claim, and the certificate was recommended.

CONCEPT CARD 4.7

Findings, and the Correction That Has to Change a Number

Subchapter 4.7 · Ljubljana, Slovenia



In the back office behind reception, beneath the board of room keys, the lead auditor points with a pen at a monitor. On it is a single line that runs flat, drops in one clear step and stays low. The hotel’s maintenance manager leans in beside her with the restrained half-smile of a man who has finally been told yes. On the desk lies a register with three entries: two struck through, one ticked.

The labels are that register read aloud. The first rejected: nineteen days after a major nonconformity on a heating controller left in manual for two seasons, the property sent a toolbox talk, an attendance sheet and a memo. The second rejected: at seven weeks, a revised procedure and a monthly verification form, and a screenshot of the new form showing, in its corner, the controller still in manual. Both responses were true and documented, and neither said anything about what the plant was doing.

The third was shortest. At ten weeks the property sent four headed parts: the curve restored on a named day, with settings exported before and after; a cause in five lines without a euphemism in them (the winter morning peak the criteria had never provided for); criteria rewritten with a storage recharge at five o’clock and a route for requesting a deviation; and six weeks of plant gas against the same weeks of the year before.

It moved the meter, and that is why it was accepted. The step on the screen is the evidence of effectiveness, and somebody who was never in the building can see it. The card’s argument is the sentence the auditor left with the coordinator: whatever you send us, ask who could see the difference, and with what. The third response was not more thorough than the second. It was aimed at something different.

CONCEPT CARD 4.8

The Certificate, and What It Actually Certifies

Subchapter 4.8 · Vilnius, Lithuania



In the lobby, beside a brass luggage cart, a man holds a framed certificate in both hands and presses one finger on a small ruled box near its foot. The woman facing him sweeps an open hand towards the building behind her, as if to say that it covers everything. On the wall behind them, a paler rectangle marks where the frame hung by the lift for four years, until somebody took it down and read the whole of it.

The first two labels are what the certificate actually says. An entity named: the operating company of this one hotel, not the group, and not its three other properties, none of which had ever been audited. A scope limited: accommodation, food and beverage and conference services at a single address. The spa was not in it, because a company the hotel does not control operates it under lease, and neither were the two shops at street level, although all three sit inside the same walls.

The third label settles the website’s claim: no figure anywhere. No percentage, rating or band appears on any certificate issued against this standard, and none may. The group’s site said its hotels were certified with a verified fourteen per cent improvement. The fourteen per cent was real, demonstrated and accepted at recertification; it had simply been attached to the wrong sentence. The fourth label names the assumption that carried it there: four hotels assumed.

The correction was two statements instead of one. The first says what the certificate says, with its number and the public register where anybody can check it in forty seconds. The second says, on the property’s own authority, what the property has demonstrated and where the evidence is. The corporate account accepted it without a further question. The scope sentence, the line almost everybody treats as a formality, decides what may be claimed.

CONCEPT CARD 4.9

Surveillance, and the Year Performance Fell

Subchapter 4.9 · Alicante, Spain



In the restaurant after service, chairs up on the tables, the surveillance auditor reads a chart on which the line has turned down. The maintenance manager who carries the energy coordination sits across from him and explains, one hand open. She had found the fall before he arrived. The closed laptop beside her stands for the change log that nobody had opened for seven months.

The top labels are the two figures of the year. Three and a half down: after a first surveillance visit taken on a seven point four per cent improvement, the year just closed was three and a half per cent worse than the one before it, the first fall since measuring began. Four point two held: against the baseline the property was still better by that much. Much of the fall belonged to a season extended by forty-seven days at thirty-eight per cent occupancy, on a normalisation fitted to main-season data that had never seen a March.

The consultant proposed revising the baseline, and restated that way the year showed a gain. She did not sign it, because the method had been built to meet the result. She separated the fall instead and found three defects that belonged to the property. The third label is the largest: one and a half degrees, the guest-floor corridors running colder since a tour group’s complaint in August. The fourth is how long it had lasted: seven months unread, in a log that took forty minutes to read.

The visit produced one minor nonconformity (for a deviation recorded and never investigated) and the certificate was maintained without qualification. The auditor’s parting sentence is the card’s argument: a performance standard does not require you to have a good year; it requires you to know what kind of year you had. The fall was never the finding. The seven months were.

CONCEPT CARD 4.10

The Mark, and What a Certified Hotel May Claim

Subchapter 4.10 · Edinburgh, United Kingdom



At the street door of a Georgian townhouse hotel, the operations manager photographs a decal on the glass before it comes off. Beside him a colleague holds the inventory on a clipboard and a scraper in her other hand. The reception desk is a few paces away, with its bell and its leather folders: the door is a surface of the service being sold, which is why the group decided the mark should not be on it.

The first two labels hold the central distinction of the subchapter. True in every part: the electricity really was supplied under guarantees of origin, the twenty-three per cent really had been calculated from real meter data, three of the group’s six hotels really were certified. Misleading assembled: set beside the certification body’s mark, those true sentences told a reader that the body had verified the electricity, a carbon position, a percentage and six hotels. It had examined none of those things.

The lower labels are the inventory the complaint forced. Forty-one surfaces: two days, three people, every website, listing, tender answer, signature, room card, poster, decal, wine list and regional director’s post going back eighteen months. Fourteen came off, including both door decals, the head of the wine list, and a post claiming certification across the group that had been shared eleven times.

What replaced them was three sentences and a rule. One says what is certified, with the certificate number and the register reference. One says, in its own paragraph, what the property has demonstrated and by what method. One describes the electricity supply without the word certification anywhere near it. And the rule needs no judgement from anybody: the mark never appears within eye-line of a number, a product or a hotel that does not hold a certificate.

CONCEPT CARD 4.11

Integration with the Environmental Standard

Subchapter 4.11 · Aarhus, Denmark



The breakfast service is over, the cloches on the buffet are closed and the tables are half reset. At one of them the environmental auditor holds up the property's internal audit programme and puts her finger on the lower half of the sheet. The rows above are ticked; the rows under her finger are empty. The energy coordinator leans in to look, and the second auditor, who holds the energy qualification, turns towards the page. Two auditors, one visit, two standards: the card is about what the arrangement can hide.

The first two labels are the headline the property had printed in its sustainability report, and its honest footnote. Thirty-one per cent down: carbon dioxide from heat and power, against an objective of twenty-five. Nothing the hotel did: the district heating utility had spent four years moving off coal, and the emissions factor of every unit of heat on the network had fallen by about forty per cent. Over the same year the building's own energy use per occupied room-night had risen. Emissions describe what a unit of energy cost the atmosphere; energy performance describes how many units the building used. A supplier can change the first and cannot touch the second.

That distinction was not the finding. The finding is on the sheet. Energy in the title: when the energy system was built, the environmental audit programme was extended by adding one word to its heading and two topics to its plan, both about awareness and policy. The review never audited: fourteen months into certification, nobody inside the organisation had examined the energy review, the significant energy uses and their variables, the baseline, the indicators, or the method by which improvement is verified, the parts of the system that the environmental standard does not contain.

This is the characteristic failure of an integrated system. The shared clauses are satisfied in the shape of whichever standard came first, and the requirements the second standard adds inside those clauses stay invisible, because the clause number already has a tick beside it. It took an auditor working on the other standard to see it. The programme was rebuilt from the energy requirements upward, and its first audit found the conference ventilation running seven days a week for a four-day booking pattern, where it had been running since before the energy system existed.

CONCEPT CARD 4.12

Ratings, Lenders and the Cost of Capital

Subchapter 4.12 · Frankfurt, Germany



In a conference hotel’s meeting room, banqueting chairs stacked in the corridor beyond the door, the technical director makes her case across the table to the bank’s sustainability analyst, who keeps a hand on the documents in front of him. On the floor against the wall, a framed certificate leans where it was put down. It was the reason she had been invited, for twenty minutes. She stayed four hours.

The first label is her own summary afterwards: the certificate opened the door. The refinancing carried a margin that moves with sustainability performance, and the company had expected the certificate to settle the matter. The analyst’s questions showed why it could not. The second label is the first of them: the asset, not the group. The reported nine per cent was a portfolio figure across three hotels, and the loan is secured on one building.

The third label is the question she thought about on the train home: persistence is priced. The improvement had been won in eighteen months, mostly through one plant replacement, and the following two years had given about a fifth of it back. A covenant runs for the term of the facility, so what a lender prices is not the result that was achieved but the result that will still be there at maturity.

The fourth label is what the signed agreement turned on: the definitions decide. On which boundary performance is measured: the operational one of the management system, or the title boundary including a let restaurant and a leased fitness floor she cannot enter. Whether the normalisation is written into a schedule of the agreement or merely referenced. Whose trajectory the margin moves against. A certified system produces none of this; she built it as a file over six weeks. A covenant is a requirement the standard expects to be determined, and it reaches the energy team only if somebody opens the loan file.

CONCEPT CARD 4.13

Multi-Site Certification Across Climates

Subchapter 4.13 · Split, Croatia



In a bare, hot plant room, an auditor crouches at the pump of a reverse osmosis unit with a clamp meter on its cable, reading the current it draws. A colleague stands alongside with the group’s energy review template on a tablet. Against the far wall, beach loungers and furled parasols are stacked for the season. The room is on the island of Vis, in the smallest of nine hotels run from Split, and until that week no auditor had ever stood in it.

The top labels set out the certification. Nine hotels, one figure: a group improvement of four point one per cent, correctly built and weighted by consumption, across coast, interior, mountains and island. Eight sites visited: a sampling rotation across the three-year cycle that had worked exactly as designed, and a better record than most groups manage. The ninth had joined the scope by extension, on the strength of documents.

The lower labels are what the site-by-site decomposition revealed: eleven seconds to ask for, four days to produce. The ninth never seen: Vis, down fourteen point two per cent, invisible in an aggregate it moved by a tenth of a point. Its energy review listed the same three uses in the same order as a coastal hotel on the mainland, because it had been made from the group template, and the template could not know that from May to October the island’s mains pressure fails and the hotel makes its own water.

The fourth label is what the clamp meter showed: a third of its power, in season, going into a unit billed internally as water and absent from every line of the review. The major nonconformity went to the central function rather than to the island, because the method had no step at which a template is tested against the building it describes. The unit now runs against the cistern level on the night tariff, which is what anybody would have done the first time a competent person looked at it.

CONCEPT CARD 4.14

Change During the Cycle: Boundary, Baseline and Major Works

Subchapter 4.14 · Belfast, United Kingdom



In a guest corridor whose doors are still wrapped in protective film, the auditor turns the pages of a refurbishment specification laid on a folding table. The quality and compliance manager stands opposite, a single sheet in her hand, explaining. At the end of the corridor, through an open door, the new heat pump plant stands in its wrapping. The works are finished, the wing has reopened, and everything in the scene is new.

The first label is the compliment, and it was earned: four changes made well. A wing closed and reopened with new plant, the laundry contracted out, the spa let on a ten-year lease, a floor closed for one winter: each handled correctly, including the judgement most properties get wrong, that a floor closed for a season is a relevant variable and not a reason to revise the baseline. The second label is the other half of the same fact: told eleven months late. The certification body heard about all four at the opening meeting.

Told late, a body loses every option it had while a change was in progress and can only verify afterwards. Here it could, because the records were unusually good, and the auditor said so. The certificate was reissued with the laundry and the spa removed from a scope that had been naming them to clients, an insurer and one tender for eleven months.

The lower labels are the finding worth the price of the subchapter. A hundred and forty pages: comfort, acoustic and lighting criteria, a budget and a programme. No energy criterion: not one line, and the energy management system never consulted. A higher-efficiency option had existed, thirty-one thousand pounds dearer and paying for itself in a little over four years, and nobody at the table had been asked to put it there. The duty to notify can be met late. The duty to consider energy performance in design loses most of its value on the day the specification is issued.

CONCEPT CARD 4.15

Recertification, and the Result That Had to Be Held

Subchapter 4.15 · Trondheim, Norway



In the ventilation plant, the technical manager shines a torch at the heat recovery section of the largest air handling unit while the lead auditor follows on the schematic. What the torch lights is a bypass damper standing open. Mattresses wrapped in plastic lean against the wall behind them, the stores of a hotel in which, in that climate, heat recovery is not an efficiency measure but the reason the building is affordable at all.

The top labels are the arithmetic of the cycle. Twelve and a half found: across three years the property had found and implemented measures worth about twelve and a half points against its baseline. Seven point nine held: the figure at recertification. Four and a half points had been given back, and the technical manager had found them one at a time, by walking the building.

The lower labels are the most instructive of them. Serviced, marked complete: fourteen months earlier a technician opened the bypass to work on the wheel, as he was supposed to, and did not close it, as he was supposed to. The unit still stood in the register of significant energy uses with its performance figure beside it and a green mark in the maintenance system, because it had been serviced. The bypass left open. Around it, three ventilation zones reset to factory defaults by a firmware update, and a hot water temperature raised one degree at a time in answer to real complaints.

The pattern the card leaves with the reader is the one she could not unsee. Everything physical and irreversible had held. Everything that lived in a setting, a schedule, a position or a habit had decayed, quietly, inside a system that had marked every measure complete. The auditor’s sentence is now written inside the cover of the system manual: anybody can find a saving in a building nobody has looked at; in the second cycle, holding what you have is half of the work.