The Measurement Plan, and the Data You Chose Not to Collect

GUIDING QUESTION *Pick any month in the last two years when your consumption moved and you did not know why. Now ask a different question about it: could you find out, today, what the set points and schedules were during that month? If your control system shows you what they are and not what they were, you can measure a deviation to the minute and you can never explain one, because the number is recorded and the reason for it is not.*

Property: _____ Completed by: _____ Date: _____

How to use this sheet: work through the five parts with the people who own the process. The text in the left-hand columns comes from the book; the empty columns are for what is true in your property.

1. Verification Pact: what is commonly believed, what actually holds, and your property

What is commonly believed	What actually holds	In our property
«Our data collection plan covers consumption and variables.»	Those are two of five required categories. The third, operating criteria, is the one that answers why.	
«The control system records everything.»	It records measurements. Set points and schedules are fields that get overwritten, and have no history unless somebody configures one.	
«With enough metering we can explain any deviation.»	Metering locates a deviation. Only the operating criteria tell you what the building was being asked to do at the time.	
«We compare each month to the same month last year.»	That is a comparison. The requirement names actual consumption against expected, and expected has to be derived, not remembered.	
«The plan is reviewed annually.»	Reviewed against its own specification it can never find a missing category. Review it against the questions you could not answer.	
«More data is better.»	The plan must be appropriate to your size, complexity and resources. That test cuts against over-collection as well as under.	

2. What the standard requires, and what demonstrates it

From Table 2.2.a. The third column of the book (what is method, not requirement) is left out here: write what your property actually holds as evidence.

What is required	What demonstrates it in a hotel	In our property
Key characteristics identified and measured at planned intervals	A short list of what is actually watched, and how often	
A plan appropriate to size, complexity and resources	A frequency chosen from the question, not from the instrument	
Plan specifies what, how and how frequently	One table; three columns	
Relevant variables collected	Degree days, occupancy, covers (with their source)	
Consumption by significant use and for the organisation	Sub-metering where it answers something	
Operating criteria collected and retained	A log of set points and schedules, with dates and who changed them	
Static factors, where applicable	Floor area and room count with the year each was recorded	

What is required	What demonstrates it in a hotel	In our property
Actual consumption compared to expected	An expected figure derived before the month, not after	
Equipment accurate and repeatable, with evidence	A note of when each instrument was last verified	

3. The instrument: Table 2.2.b, The five required categories, and two checks that go with them

The instrument of this subchapter. Expect the third row to be the empty one.

Category	What it is in a hotel	How often	Collected
Relevant variables for the significant uses	Degree days, occupied rooms, covers, conference hours	Monthly	
Consumption by significant use and overall	Sub-meters where they answer a question; the fiscal meter	Monthly, plus interval data	
Operating criteria for the significant uses	Set points, schedules, modes (with dates and who changed them)	On change	
Static factors, if applicable	Floor area, room count, installed plant, glazing	On change	
Data specified in the action plans	Whatever each plan said would be measured	As the plan states	
Expected consumption	Derived from baseline, variables and criteria	Before each month, not after	
Instrument verification	When each meter was last checked, and by whom	At a stated interval	

The rows above are the book's; the empty rows are for lines your property needs to add.

4. Common mistakes: self-check

Common mistake	Present here? (Yes / Partly / No)	Where we see it
Building a data collection plan without the operating criteria category.		
Assuming the control system keeps a history of settings as well as of measurements.		
Comparing to the same month last year instead of to a derived expectation.		
Reviewing the plan against its own specification rather than against unanswered questions.		
Owning eleven meters and no record of when any of them was verified.		
Collecting at the finest interval the equipment permits, in the absence of a question.		

5. Action plan

Step from the book / gap found	Action in our property	Owner	Deadline
Check the plan against the five required categories. Expect operating criteria to be missing.			
Start a settings log: date, what, from and to, who, why, when restored.			

Step from the book / gap found	Action in our property	Owner	Deadline
Find out today whether your control system can record parameter changes.			
Derive an expected consumption each month instead of comparing to last year.			
Choose each frequency from the question it answers, not from what the instrument allows.			
Review the plan against the questions you could not answer last year.			
Verify the instruments you already own, and record when.			
Put a restoration date in the log line at the moment the change is made.			
Try to explain last year’s two unexplained deviations with what you hold now.			

In brief

A data collection plan has five required categories and hotels build four. Consumption, relevant variables, static factors and action plan data describe what happened and under what external conditions. The fifth, the operating criteria for the significant uses, describes what the building was being asked to do at the time, and it is the only one of the five that answers why.

Source: The Helm and the Lens, Volume 4a: The Helm, subchapter 2.2. This sheet does not reproduce the text of the standard; work with your own copy of ISO 50001:2018 from an authorised source.