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A Siemens Company

MANAGING ENERGY WITH AI-BASED OPTIMISATION



Domenico Di Canosa | 2026 | 14:10–14:45

AI support for everyday energy decisions

SUPERPOWERS FOR BUILDING HEROES



- Ask about equipment, alarms and schedules.
- Turn recorded energy histories into charts.
- Check the result. You decide what to do.

The AI Agent supports the work inside the platform. People verify the energy outcome.

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The building-energy villains

FAMILIAR PROBLEMS AI CAN HELP YOU FIND

- A fan keeps running after everyone leaves.
- Heating and cooling work against each other.
- A fault keeps coming back after a repair.



Which of these problems keeps coming back on your site?

Illustrative operating problems

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“Why is this fan still running?”

A CONVERSATION WITH THE AI AGENT



01

- Ask for this fan’s status and recorded history.

02

- Ask which schedule is active for the fan.

03

- Review the cause, then request an agreed schedule.

Actual models can read project data and create schedules. People test the result.

Illustrative use of documented features of actual models, pp. 2–5. Suitable platform data required.

The AI Agent: the assistant inside building platform

THE PLATFORM PROVIDES CONTEXT AND TOOLS FOR THE CONVERSATION

PLATFORM

Holds project records.
Provides apps and histories.
Connects the building data.

THE AI AGENT

Reads platform context and data.
Creates schedules and charts.
Helps build and debug logic.

For on-premises use, confirm where AI processing and data travel.
The documentation for actual models does not specify data residency or model routing.

Documented features of actual models, pp. 1–5. Deployment, privacy and security require separate confirmation.

People stay in charge of the equipment

POINT WRITES NEED CLEAR OPERATING RULES

Existing safety controls keep doing their job.

- Actual models can write to writable points.
- The default write level is manual (8).
- Agree authorisation, testing and release.



Documentation for actual models, p. 5. Site safeguards and approval process must be agreed separately.

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Four stages of a lower-energy building

THE AI AGENT SUPPORTS PLATFORM TASKS WITHIN THE WIDER BUILDING LIFECYCLE

01

Design

Owners, designers:
models and targets.

EN ISO 52120-1
NABERS Design for Performance

02

Construction and commissioning

Installers:
point lists, setup tools.

BCIA BEMS Framework
EN ISO 52120-1

03

Delivery and testing

Handover teams:
test records, sign-off.

BCIA BEMS Framework
BREEAM / LEED

04

Maintenance and continuous improvement

Site and energy teams:
job lists, meter trends.

ISO 50001
NABERS in-use rating

Towards net zero: cut energy demand and carbon across the whole life.
Include clean energy, materials, refurbishment and reuse at end of life.

Illustrative stage mapping. Platform support depends on available project data. Certification does not prove net zero.

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1 DESIGN: AGREE WHAT THE BUILDING NEEDS

Design: help choose sensible running hours



- For an existing site, ask AI to chart the platform energy history.
- The designer compares the chart with planned hours.
- The owner and designer agree the target and test.

Example: does the whole building need heating when only one area is in use?

Illustrative use of history charts from actual models. Design simulation is outside the documented feature set.

Does the fan respond when the room gets busy?

1 DESIGN: A CLEAR JOB FOR THE CONTROLS



- You agree how ventilation should respond.
- AI puts room readings and fan speed together.
- The engineer checks whether the fan responds correctly.

Ask for platform history charts. The engineer checks the response against the agreed test.

Supplied EN ISO 52120-1 overview, pp19–24 | Confirm against the full standard

Which running hours are active in the platform?

1 DESIGN: CHECK THE CONFIGURED SCHEDULE

- Ask AI which schedule is active for the equipment.
- Open the Schedules app through the conversation.
- Compare it with the owner’s agreed hours.



Actual models search platform documentation. Searching project files is not specified.

Supplied documentation for actual models, pp. 2–4. Site instructions remain a team responsibility.

The platform tools behind a simple question

1 DESIGN: THE AI AGENT WORKS WITH PLATFORM APPLICATIONS

“Show me this unit’s graphic.”
“Chart its energy use.”



- Open apps and equipment graphics.
- Read project records, alarms and schedules.
- Create charts or dashboards from the platform data.

Supplied documentation for actual models, pp. 2–5. Data and graphics must exist in the project.

2 CONSTRUCTION AND COMMISSIONING:
CHECK NAMES AND CONNECTIONS

Installation: clearer names for the readings



- Ask the AI Agent to help tag the equipment points using standard open formats.
- It proposes tags from names, units and existing data.
- You check the proposal. Accepted tags are applied.

Consistent tags help identify data. The installer still confirms the physical sensor.

Actual models auto-tagging, p. 4. BCIA Framework v1, §§8.1 and 8.6.

Handover: evidence that energy controls work

3 DELIVERY AND TESTING:
SUPPORT FOR THE BCIA FRAMEWORK



- Manual: assemble records and test checklists.
- With AI: retrieve platform data and history charts.
- You: witness tests and sign off the results.

Platform evidence supports handover. Automated test-sheet checking is not documented in actual models.

BCIA BEMS Delivery Framework v1 (07-26), §§1.1, 2.1, 2.9, 4.1–4.3 and 10

The timer says off. The fan is still on.

3 DELIVERY AND TESTING:
HELP FOR THE CONTROLS TEAM

- Ask AI to check the logic programs.
- It can flag broken links or two programs writing one point.
- The engineer checks the cause and tests the fix.



Logic checks can help the investigation. They do not prove the physical fan response.

Illustrative diagnosis. Actual models logic debugging, p. 4. BCIA Framework v1, §§4.1–4.3 and 8.6.

A named owner follows the problem to a fix

3 DELIVERY AND TESTING:
FOLLOW UP RECOMMENDATIONS

PROBLEM	Fan keeps running after the agreed finish time.
WHO	The controls engineer checks the cause.
DONE?	Ask for later platform histories. The engineer confirms the fix.

The team owns the job list. Job-system links and reminders need confirmation for actual models.

Proposed workflow | DfP Guide v3.0, §§3.2.7–3.2.8, 6.2 and Appendix B.3

Energy evidence ready for handover

3 DELIVERY AND TESTING: BREEAM AND LEED RECORDS



- AI charts the histories recorded in the platform.
- The team adds test sheets and service records.
- People check completeness and scheme requirements.

Actual models support platform data work. Certification evidence and sign-off remain with the team.

Sources: BREEAM Man 05, KBCN0818; USGBC BD+C Enhanced Commissioning guide

4 MAINTENANCE AND CONTINUOUS IMPROVEMENT:
DOES THE BUILDING STILL RUN AS AGREED?

A temporary setting can become lasting waste



- Ask AI which schedule is active for this unit.
- Check its calendar and exceptions in the platform.
- You check whether it is still needed before changing it.

Example: event hours remain active. Repeat checks need a team routine or tested logic.

Illustrative workflow | BCIA Framework v1, §§2.9, 3.2–3.3, 4.1–4.3 and 8.6

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Is the building using more energy than planned?

4 MAINTENANCE AND CONTINUOUS IMPROVEMENT: NABERS DESIGN FOR PERFORMANCE

- Ask AI to chart recorded energy use by month.
- Ask AI to compare it with the design estimate.
- Investigate changed hours and missing data.



Platform charts support the review. An independent assessor decides the NABERS rating.

NABERS UK DfP Guide v3.0 (2024), §§7.1–7.3 and 8.1

Fan optimisation: Plan, Do, Check, Act



4 MAINTENANCE AND CONTINUOUS IMPROVEMENT: A PROPOSED AI-ASSISTED WORKFLOW

PLAN	Review platform histories. Agree the target and trial.
DO	Ask AI to create the agreed schedule. The engineer tests it.
CHECK	Ask AI for later charts and to check energy and room conditions.
ACT	Adopt or revise the plan. Set up the next review.

The AI Agent assists each step. Ongoing checks need a routine or separately tested logic.

Illustrative example | DfP Guide v3.0, §§4.15.2, 6.2 and 7.3

Heating and cooling at the same time

4 MAINTENANCE AND CONTINUOUS IMPROVEMENT: HELP FOR MECHANICAL ENGINEERS



- Ask for heating and cooling history charts.
- Ask AI to compare them with room temperatures and settings.
- The engineer decides whether the overlap is wasteful.

Some systems need both at times. History charts help engineers investigate.

Illustrative opportunities | BCIA Framework v1, §§2.3, 8.8, 9.8 and 9.16

Did our change actually save energy?

4 MAINTENANCE AND CONTINUOUS IMPROVEMENT: A FAIR COMPARISON

A warmer week can reduce heating use even when we change nothing.



- Ask AI to chart recorded energy use.
- Allow for weather and opening hours.
- The energy manager verifies the result.

ISO 50001 overview, pp. 2–3 and 6–7. The documentation for actual models does not specify weather-adjusted savings verification.

4 MAINTENANCE AND CONTINUOUS IMPROVEMENT:
HELP FOR THE SITE TEAM

Maintenance: useful clues before the visit



- A user reports a cold room. AI finds its temperature history.
- Ask AI about current alarms and equipment records in the platform.
- The technician adds service notes and chooses the checks.

Platform context supports the visit. External maintenance-system integration is not specified.

Illustrative workflow | BCIA Framework v1, §§8.8 and 9.6–9.9

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After the repair, who checks the result?

4 MAINTENANCE AND CONTINUOUS IMPROVEMENT: A COLD-ROOM EXAMPLE



BEFORE

- Ask AI for platform alarms and temperature histories.

ON SITE

- You test the valve and heat supply, then repair the fault.

AFTER

- Request later charts and check comfort and energy.

For follow-up between visits, agree a review routine or test suitable platform alarm logic.

BCIA Framework v1, §§8.8, 9.1 and 9.6–9.9; EN overview, p19

Nobody uses this room on Fridays now

4 MAINTENANCE AND CONTINUOUS IMPROVEMENT: HELP FROM BUILDING USERS



- A user tells the facilities team that room use has changed.
- Staff ask AI about the schedule in the platform.
- They agree new hours and test a suitable schedule.

Users explain the need. Facilities staff use the AI Agent to help investigate and act.

Illustrative workflow | EN ISO 52120-1 overview, pp11–14

Energy improvement with less manual work



4 MAINTENANCE AND CONTINUOUS IMPROVEMENT: SUPPORT FOR ISO 50001

	MANUAL WORK	WITH THE AI AGENT
PLAN	Collect readings and fill tables	Chart platform histories for the review
DO	Enter settings and record changes	Create schedules or control logic
CHECK	Export readings and compare them	Request later histories and charts
ACT	Chase jobs and update the plan	Help implement the agreed revision

The AI Agent assists platform tasks. People own approvals, physical work and verified savings.

ISO, ISO 50001 overview (2018), pp2–3 and 6–7

One small trial on your own site

THE AI AGENT WITH ACTUAL MODELS: ONE FAN, ONE CONTROLLED TRIAL

PROBLEM	Fan runs after people leave
WHO	Site manager and controls engineer
AI DOES	Read platform data and create charts
YOU SET	Access, data flows and safe limits
CHECK	Energy use and room conditions



Test the actual models and check energy results before extending the trial.

Proposed implementation approach

ASK THE BUILDING

What would you ask your building?

- Bring one real energy question.
- See the AI Agent in action at the J2 Innovations stand.
- Ask what actual models can do with your platform project.



Which platform task would you try first?

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