

The Economics of Autonomous HVAC Optimisation

Increasing engineering capacity without increasing engineering headcount.

What is missing from the optimisation business case?

Energy savings are only half the equation.

Most optimisation propositions focus on the value of the energy saved. Far less attention is given to the cost of the engineering resource required to create, implement and preserve those savings.

1 Identify

Analytics can identify where energy is being wasted and where improvement may be possible.

2 Deliver

An engineer still has to investigate recommendations, change the BMS and check the outcome.

3 Sustain

As weather, occupancy and building behaviour change, optimisation has to continue.

A better commercial equation

Apparent return

Energy savings - software / project cost

This can overlook the internal or external engineering time needed to turn recommendations into sustained performance.

True optimisation economics

Verified energy savings - total cost of delivery

This includes the engineering resource required to implement, monitor and continually sustain the optimisation.

It is not engineering replacement. It is engineering leverage.

What does it cost to deliver and sustain the energy savings?

A predicted energy opportunity is not the same thing as a realised energy saving. Someone still has to deliver and sustain it.

The engineering work behind the headline number

Review the data Understand trends, loads and operating behaviour.	Investigate recommendations Decide what can safely and practically change.
Modify the BMS Adjust strategies, schedules, setpoints or control parameters.	Check the result Confirm that the intervention delivered the expected effect.
Revisit the building Respond as seasons, occupancy and plant conditions change.	Repeat across the estate Scale the same process across multiple buildings and systems.

That time has a cost whether it is provided by an internal estates team, an FM provider, a BMS contractor or an external optimisation consultant.

Autonomous optimisation changes the equation

Analytics / periodic optimisation	Autonomous optimisation
Identifies opportunities and supports the engineer. The ongoing energy saving depends on someone reviewing, implementing and revisiting the optimisation.	myCoreAI continuously analyses live building conditions alongside current and forecast weather, then adjusts selected HVAC setpoints and offsets through the existing BMS every 15 minutes within agreed limits. The BMS remains master.
The optimisation workload is built into the service rather than added to the client's engineering workload.	

Why this matters at estate scale

More buildings normally mean more data to review, more interventions to make and more performance to monitor. Eventually, sustaining optimisation becomes a resource problem as much as an energy problem. Autonomous optimisation allows the optimisation workload to scale without requiring a proportional increase in engineering headcount.

Engineering leverage, not engineering replacement

BMS engineers remain essential. Autonomous optimisation changes how their expertise is used.

Engineers remain essential Faults, diagnostics, commissioning, BMS infrastructure, upgrades, controls strategy and complex engineering decisions still require skilled people.	myCoreAI handles the repetition The system continuously analyses conditions and adjusts selected HVAC parameters every 15 minutes, 24/7, within agreed limits.	The estate gains capacity Existing engineers can focus on work that genuinely needs engineering judgement instead of spending valuable time on continual routine retuning.
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Evidence in operation: University of St Andrews

At the Scottish Oceans Institute, myCoreAI was introduced through the existing BMS while the university retained its own BMS engineering capability. Over the first 12 months, the project delivered measured energy reductions while the engineering team remained responsible for the building systems and work requiring human expertise.

158 MWh energy reduction	21% HVAC electricity	9% heat reduction	29.3 tCO₂e carbon reduction
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The university still needs BMS engineers. That is precisely the point.

Autonomous optimisation does not remove engineering expertise; it means that expertise does not have to be consumed by continuous routine optimisation.

How optimisation should now be evaluated

1. How much energy can the solution demonstrably save?
2. How much ongoing engineering input is required to deliver those energy savings?
3. Does optimisation continue automatically as conditions change?
4. Can the approach scale across an estate without proportionally scaling headcount?
5. Are the energy savings evaluated after the full cost of delivery is considered?

The cost of continuous optimisation is built into the solution rather than hidden in engineering resource.