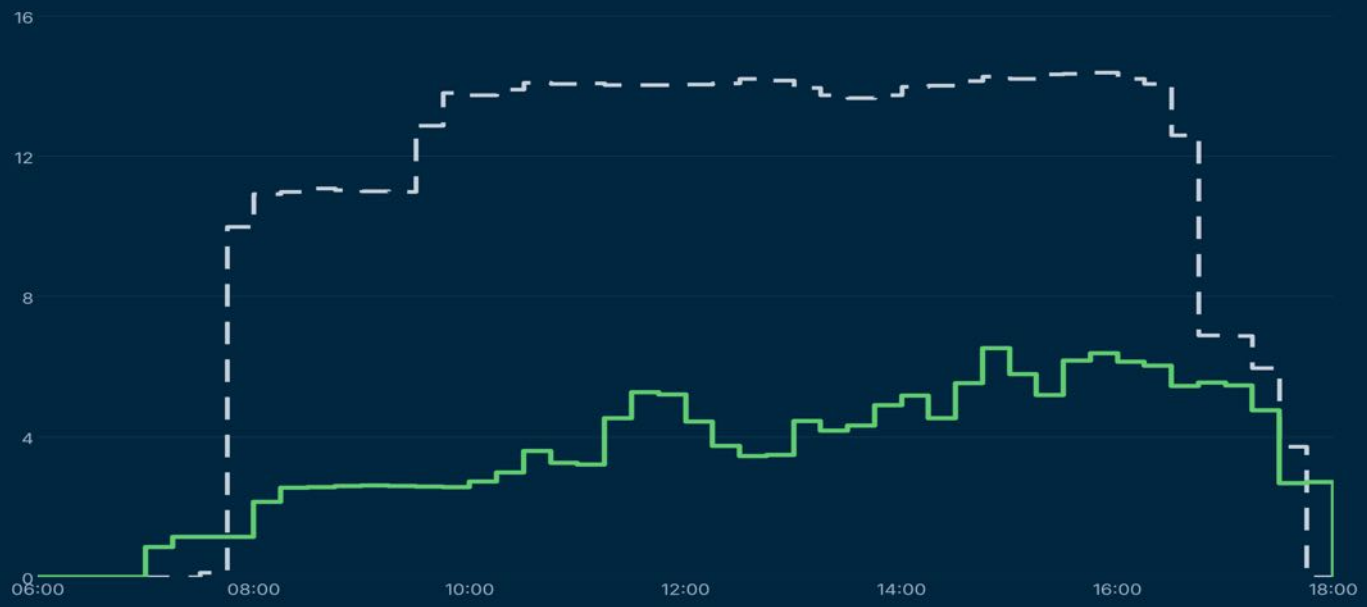
Turning Data into Action

Making one of London's smartest buildings smarter

Steve Burch, Envelo · Robert Ferriday, Alliot
Smart Buildings Show, 14 October 2026



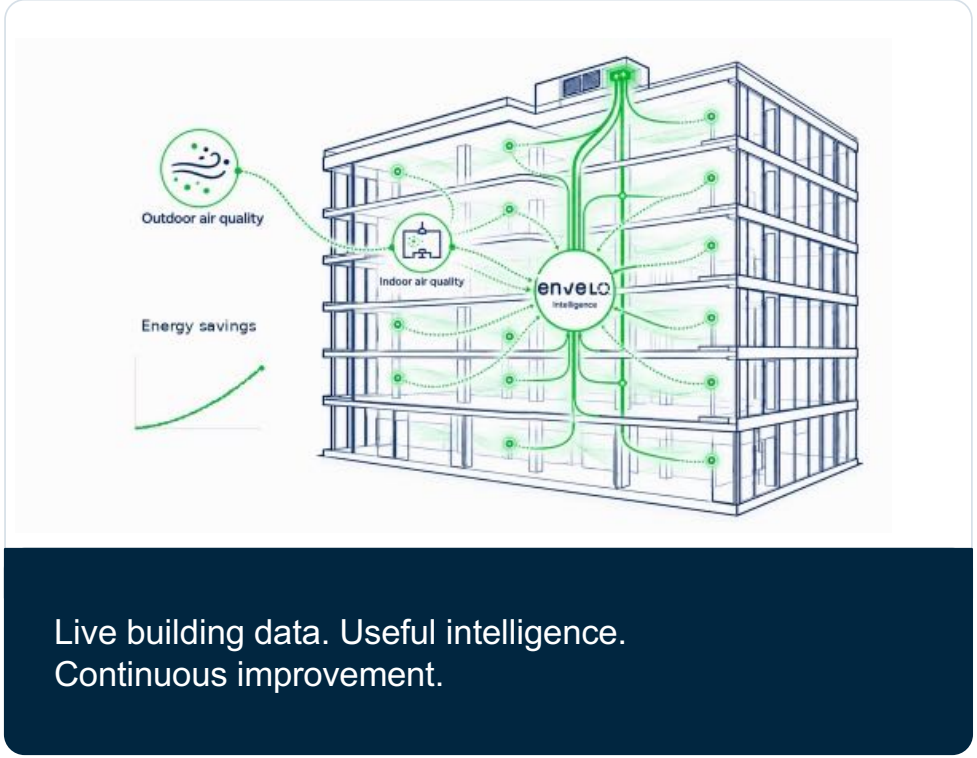
When does your building wake up…
…how does it breathe…
…and when does it go to sleep?



What is Envelo?

Intelligent buildings.
Lower energy.
Healthier people.

Envelo is a software-led optimisation layer for existing buildings. It helps teams reduce energy use and improve indoor conditions without replacing the systems they already have.



Live building data. Useful intelligence.
Continuous improvement.

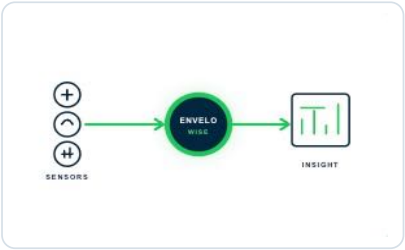
What does Envelo offer?

01

UNDERSTAND

WISE

A clear view of building performance, with alerts and actionable insight.



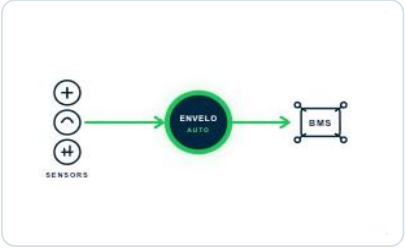
- → Dashboards & reporting
- → Alerts & validation
- → Recommendations & performance diagnosis

02

OPTIMISE

AUTO

Continuous automated optimisation through the BMS, without manual intervention.



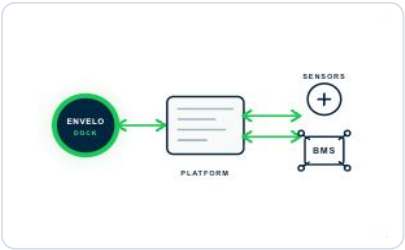
- → Fresh-air optimisation
- → HVAC optimisation
- → Respond to changing occupancy

03

CONNECT

DOCK

A simple way to connect Envelo data and automations into a wider ecosystem.



- → Data, ratings & metrics
- → Third-party data integration
- → Platform and BMS integration

Producing the right data sets to drive action

It's not about collecting more data. It's about collecting the right data to make better decisions.

- Alliot's initial discussions with Envelo were to understand the data requirements needed to enable their unique solution to yield the highest impact.
- Envelo uses building data to identify inefficiencies, inform operational decisions and support targeted improvements.
- Alliot's hardware and connectivity solutions enable the collection of relevant, reliable data, including occupancy patterns, temperature, humidity and environmental conditions.
- Alliot's expertise in wireless IoT technologies enables us to work with partners to offer hardware and connectivity ideally suited to both retrofit installs and new-build projects.
- By combining accurate data collection with actionable insights, building operators can make evidence-based decisions that improve efficiency, reduce unnecessary energy consumption and optimise building performance.

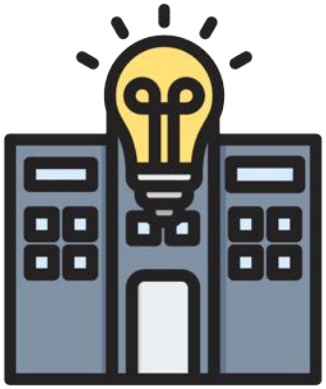


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Retrofitting smart buildings: unlocking greater efficiency

Making existing smart buildings smarter through targeted IoT solutions.





- A building can already be considered ‘smart’ without necessarily operating at its full potential.
- Retrofitting existing buildings with IoT sensors provides greater visibility into building performance without requiring a complete infrastructure overhaul.
- Wireless IoT solutions, including LoRaWAN®, enable building owners and facilities managers to monitor critical parameters such as occupancy, temperature, humidity and environmental conditions.
- Alliot provides the IoT hardware and connectivity solutions needed to capture valuable building data, while Envelo helps translate these insights into meaningful operational improvements.
- The 3 Pancras Square project demonstrates how existing smart-building infrastructure can be enhanced to identify further opportunities for efficiency and optimisation.

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Introducing 3 Pancras Square… which was already optimised

70%

heat recovery already designed in

CO_2

ventilation control already in place

4.0

NABERS stars



Our thanks to…





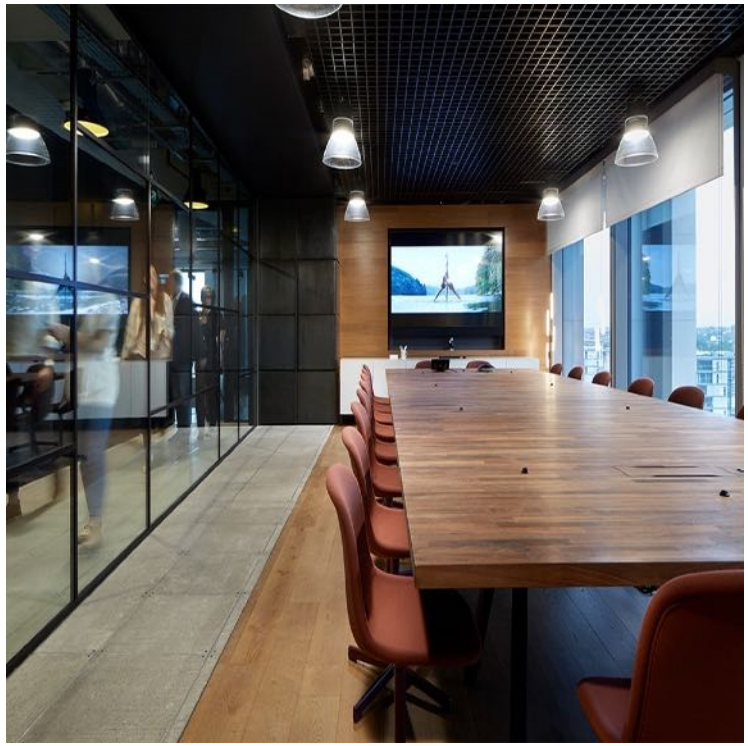


Early 2025 - savings were limited

90-100%

the only airflow range available while the system was running

Two floors. The air in the meeting rooms got better. The energy saving was marginal.



May 2025 - the new idea

Off before 10am

the Havas team asked whether we could

~10 hours

a week of ventilation off - unless floors needed it earlier

Autumn 2025 - turning it off whenever it could

21 hours

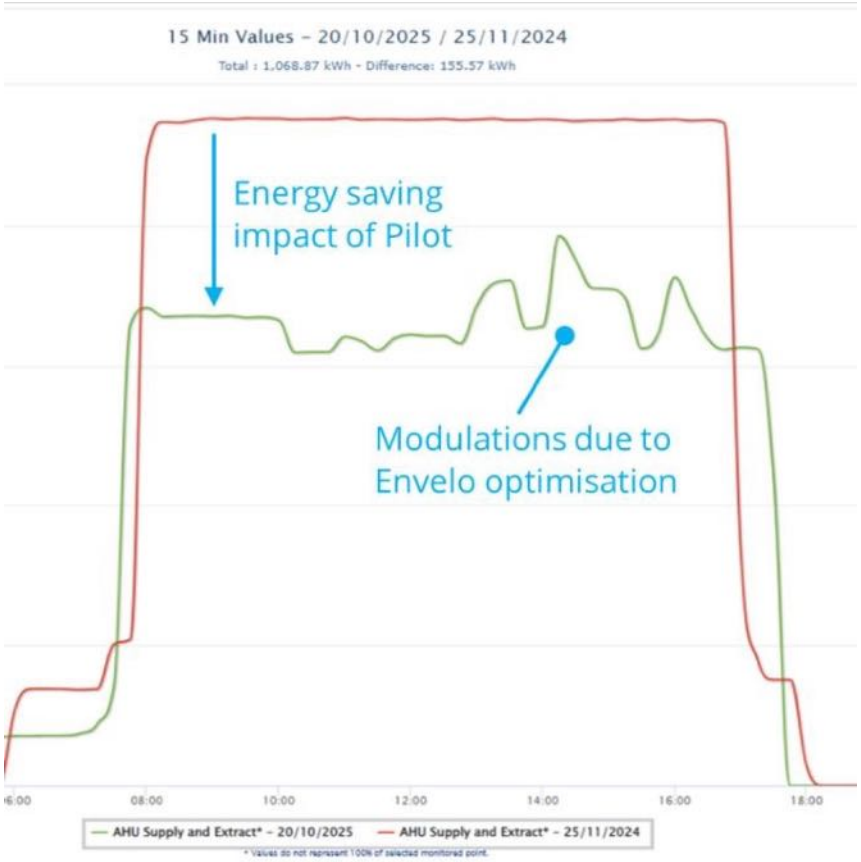
a week with ventilation off, per floor

42%

of operating hours

Back on before thresholds were reached, not after. Mondays and Fridays longest; Tuesday to Thursday busier. No complaints about the air.

The picture that told the story



Whole-building AHU fan power.

Two Mondays with similar weather.

Envelo deployed on two floors out of ten.

Red: Monday 25 November 2024, without Envelo.

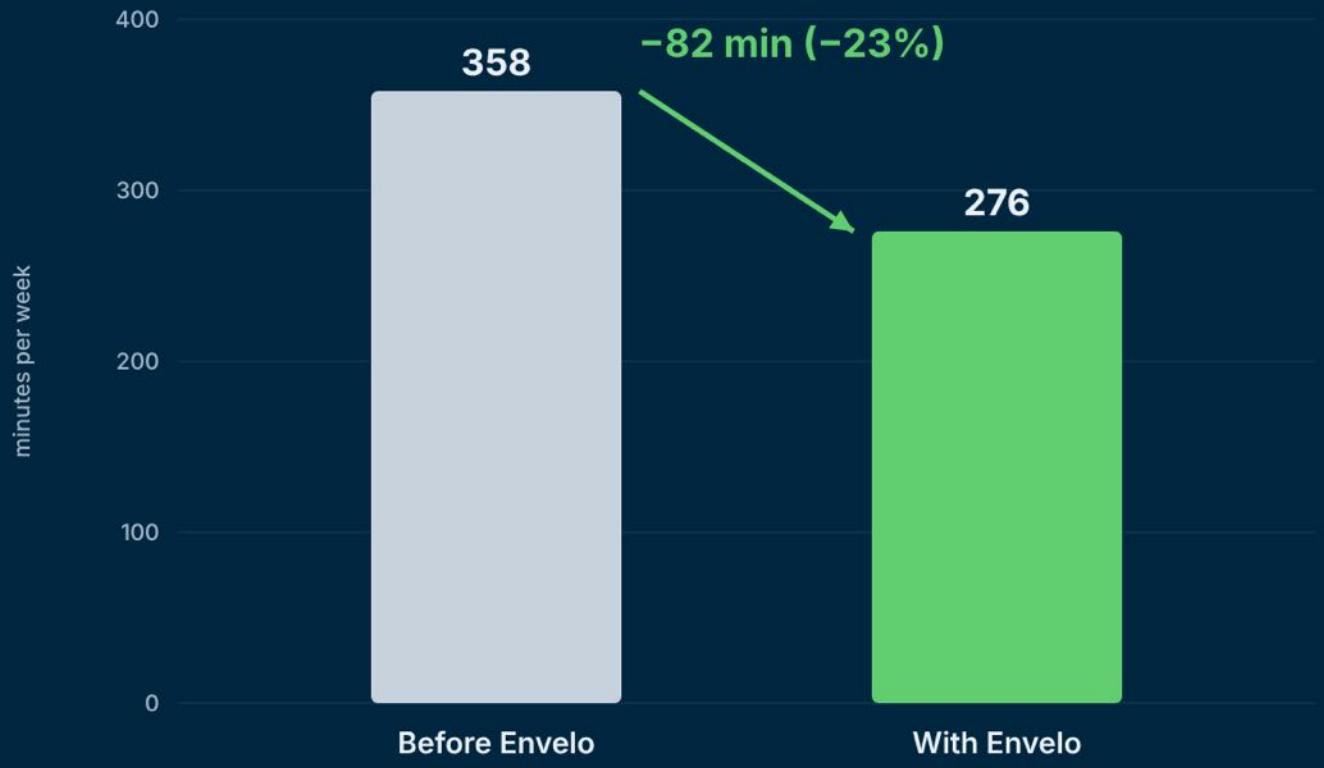
Green: Monday 20 October 2025, with Envelo on two floors.



A day in the life of 3 Pancras Square

The time when CO_2 breached healthy levels fell

All 21 meeting rooms on floors 6 and 10 — average time per room above 1,200 ppm



So what?

Clearer thinking

cognitive performance falls above 1,200 ppm (Harvard COGfx)

Better wellbeing

less stuffiness, fatigue and headache time

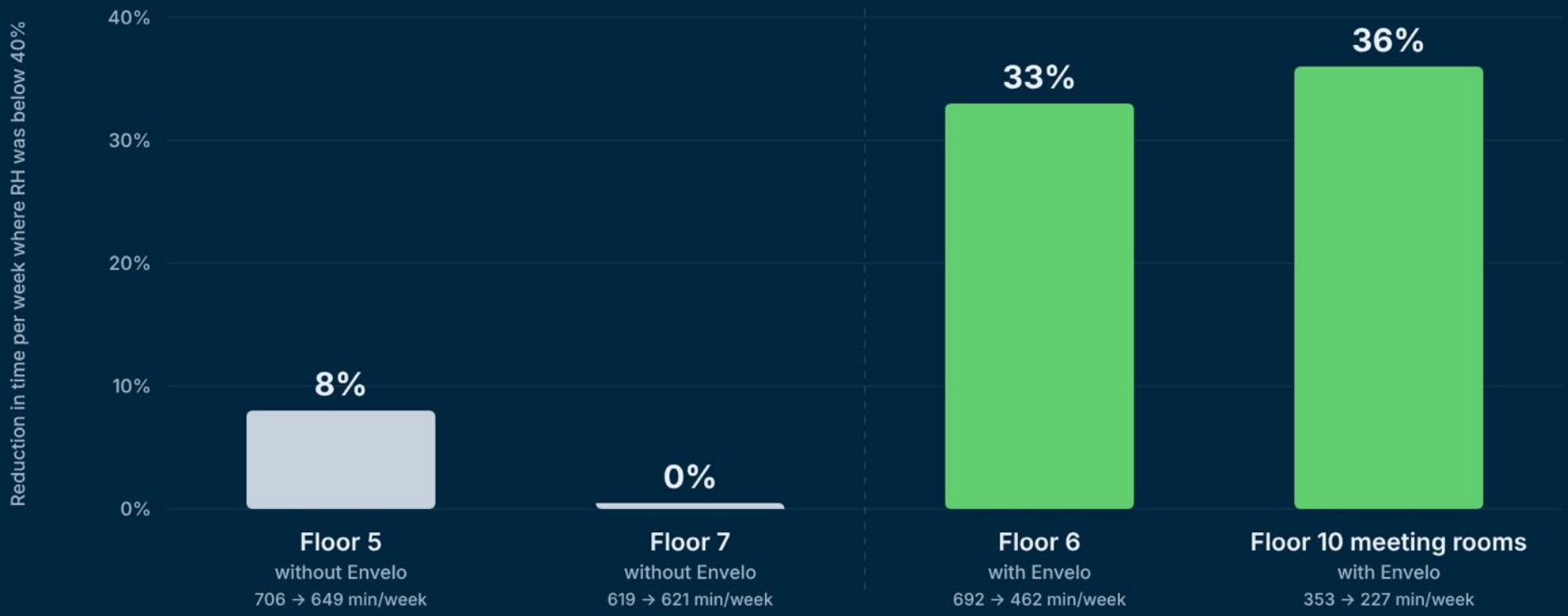
Less sickness

lower airborne transmission risk

3 Pancras Square · CO_2 every 5 minutes from 21 meeting-room air sensors · average per room, operating hours · before the pilot vs. Phase 3 "turnoff anytime"

Dry conditions improved

Autumn 2024 vs. autumn 2025, similar outdoor weather · floors without and with Envelo



3 Pancras Square · RH every 5 minutes from IoT air sensors · average minutes per week in operating hours below 40% RH · 30 Sep–29 Nov 2024 vs. 29 Sep–28 Nov 2025

Independent validation

“At 3 Pancras Square, Envelo delivered energy savings and improved indoor air quality without the need for new HVAC investment. Their collaborative approach and commitment to independent validation helped create a lasting impact, building confidence in the approach and its potential for wider rollout across the Estate.”

KINGS CROSS

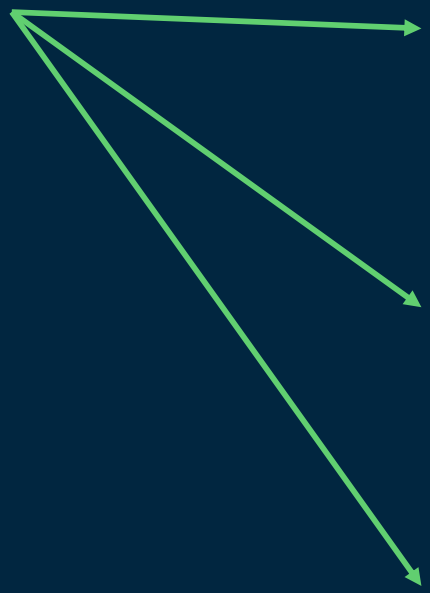
HOARE LEA
A TETRA TECH COMPANY

envelo

What the independent engineers found

31%

less energy for ventilation — independently validated



£46k

a year, whole building, using the validated methodology

~1 year

to pay back everything: sensors, installation, first year's subscription

97% RoI

from year two onwards, whole building

envelo

What it means for Havas

5.8%

sustained annual reduction in Havas UK&I's total location-based Scope 2 carbon emissions (31 tCO_2e a year)

>100%

of the total annual Scope 2 reduction Havas UK&I needs to meet its 2035 net-zero trajectory

0.5 - 0.7

estimated NABERS UK star uplift — from a 7.3% cut in whole-building EUI, subject to assessment

Whole-building, location-based savings vs. Havas UK & Ireland Carbon Reduction Plan. NABERS estimate assumes a 10–12% reduction in base-building energy.

What made the difference?

The technology is here. It’s the people who get it done.



The occupier’s building team

who asked “is there more?”



The landlord

who asked for proof and paid for it.



The BMS engineer

who helped to make it happen.

Five things we learned from 3 Pancras Square

1

Your building already knows

2

You don’t need new plant

3

It won’t fight your systems

4

Energy and health are not a trade-off

5

Proof travels



Want to move away from trying to upgrade your plant?

Interested to see how an intelligence layer could help your existing systems work better?

Come and talk to us at stand A60.

envelo

Thank you for listening.

Envelo + Alliot · Stand A60

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Scan to register interest