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25 years of cooperation

...CONNECTING THE DOTS

PROJECT SESSION

#InterregNPA25



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IoT Meets AI: Transforming Energy Data into Actionable Insights

Bodo, 1st October 2025



Nordland
COUNTY COUNCIL

Sustainable SMEs

Arctic Edge



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Speaker

Julie Dowling

CEO, AIM Center

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What is Sustainability Reporting?

- Annual disclosure of ESG responsibilities
- Build trust, transparency, and accountability
- Show long-term commitment to responsible growth
- Strengthen reputation, manage risk, stay competitive

Why It Matters?

- Transparency & accountability
- Regulatory compliance
- Investor confidence
- Operational performance
- Reputation & brand value
- Competitive advantage

Key Facts

- 59% prefer buying from socially responsible companies
- 89% of investors consider ESG and sustainability factors
- 77% of companies say sustainability is a top procurement driver

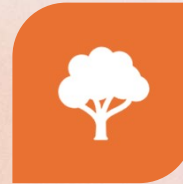
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Building Trust Through Reporting



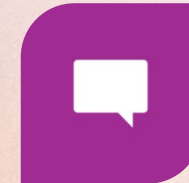
DEMONSTRATE
ENVIRONMENTAL
COMMITMENT



IMPLEMENT
RESPONSIBLE
PROCESSES AND
PRACTICES



MEASURE, MONITOR,
AND REPORT ESG
ACTIVITY

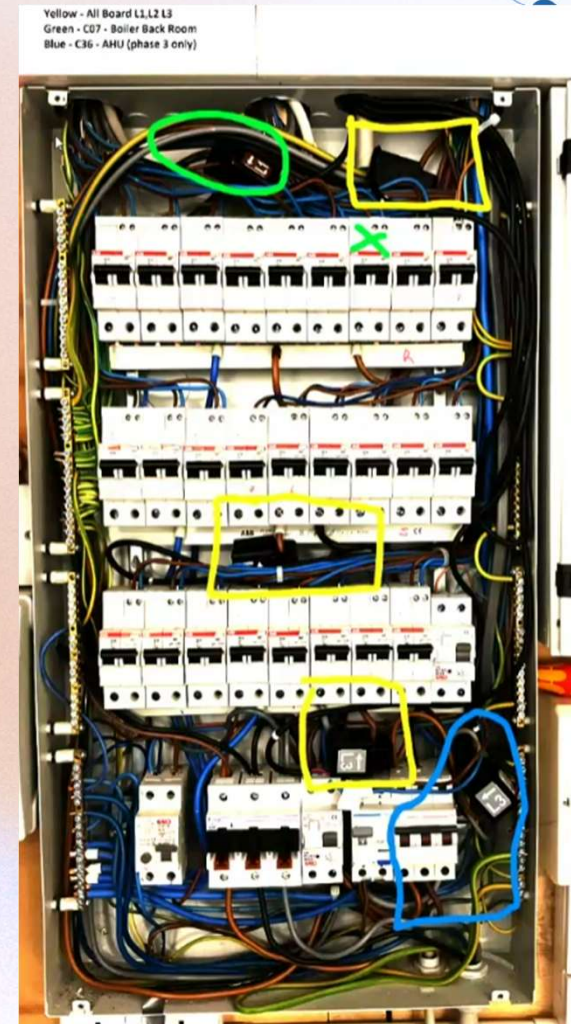


ALIGN MESSAGING WITH
PERFORMANCE (AVOID
GREENWASHING)



Current Challenges

- Data fragmented across offices, sites, and systems
- Manual spreadsheets cause inaccuracies
- Missing/inaccurate data risks scrutiny
- Retrospective collection misses insights



What Technology Can Achieve

- Automates data collection
- Standardises reporting for accuracy
- Provides access to business-critical insights
- Cuts reporting time to days/hours
- Supports forecasting and optimisation

AIM Example

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Technology stack: IoT, Grafana, InfluxDB



Data: total consumption, per area, GHG, energy intensity



Targets: GHG reduction, energy efficiency



Forecasts: demand based on weather indicators (API)



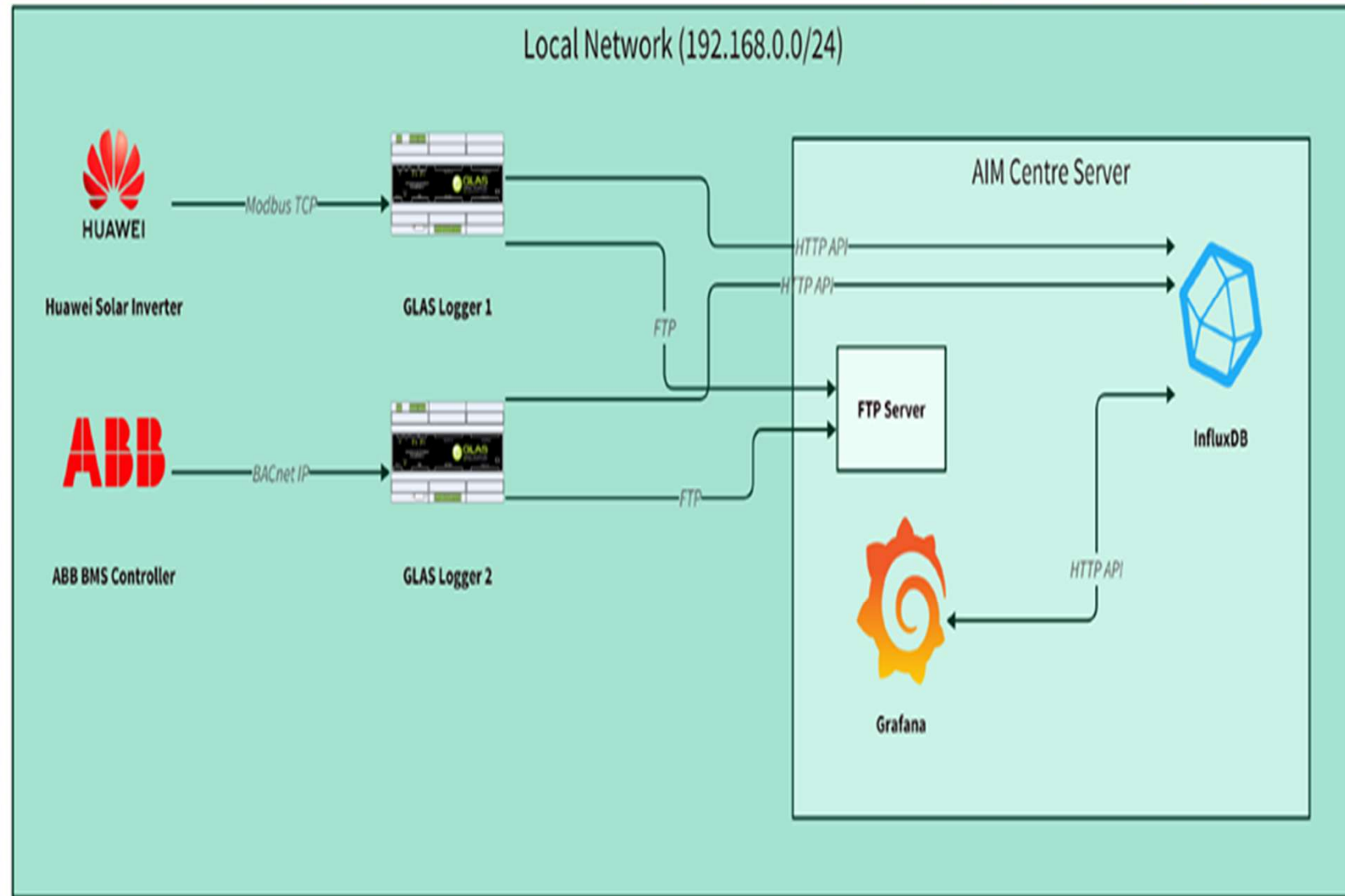
Dashboards & LLM-powered narrative explanations

The Process

- Integrate sustainability into strategy
- Define clear objectives
- Identify key indicators
- Install and connect: sensors, Grafana, InfluxDB
- Develop dashboards in Grafana
- Track and demonstrate ESG performance
- Optimise operations with insights

IOT Framework

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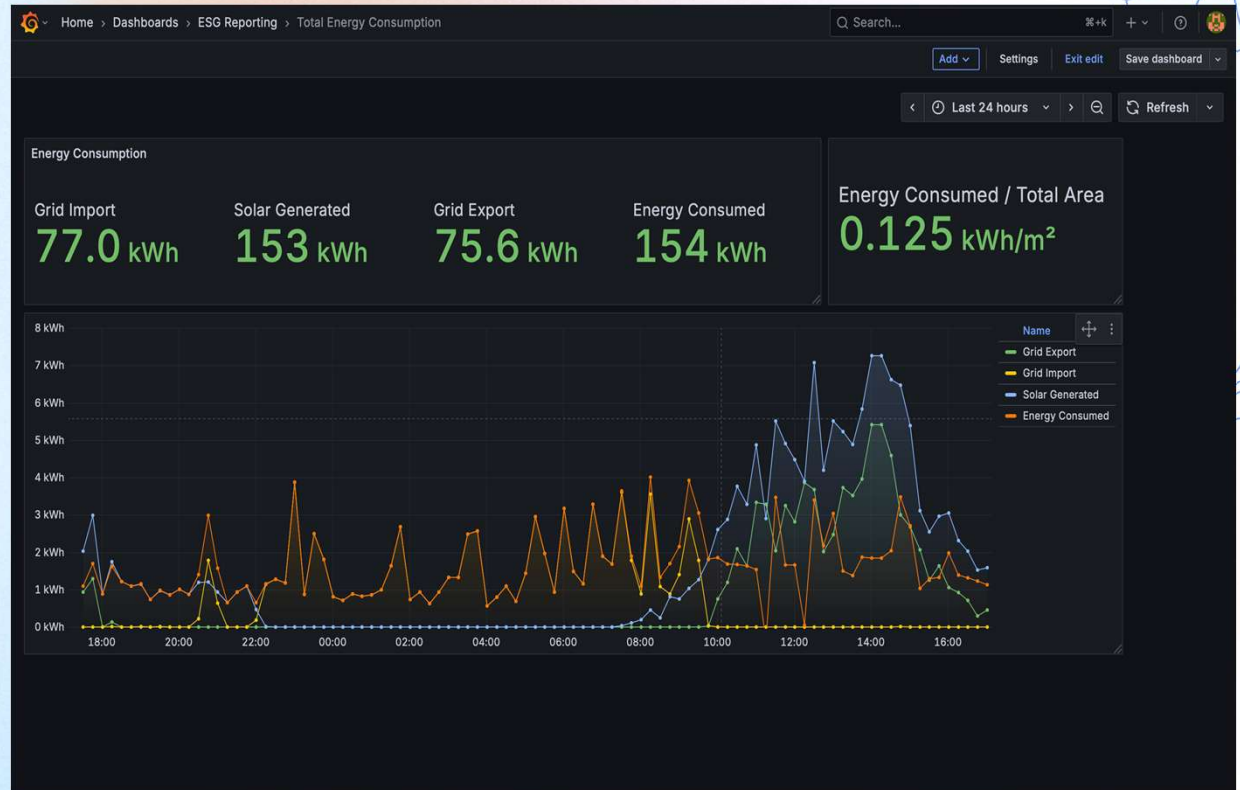
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Energy generation and consumption



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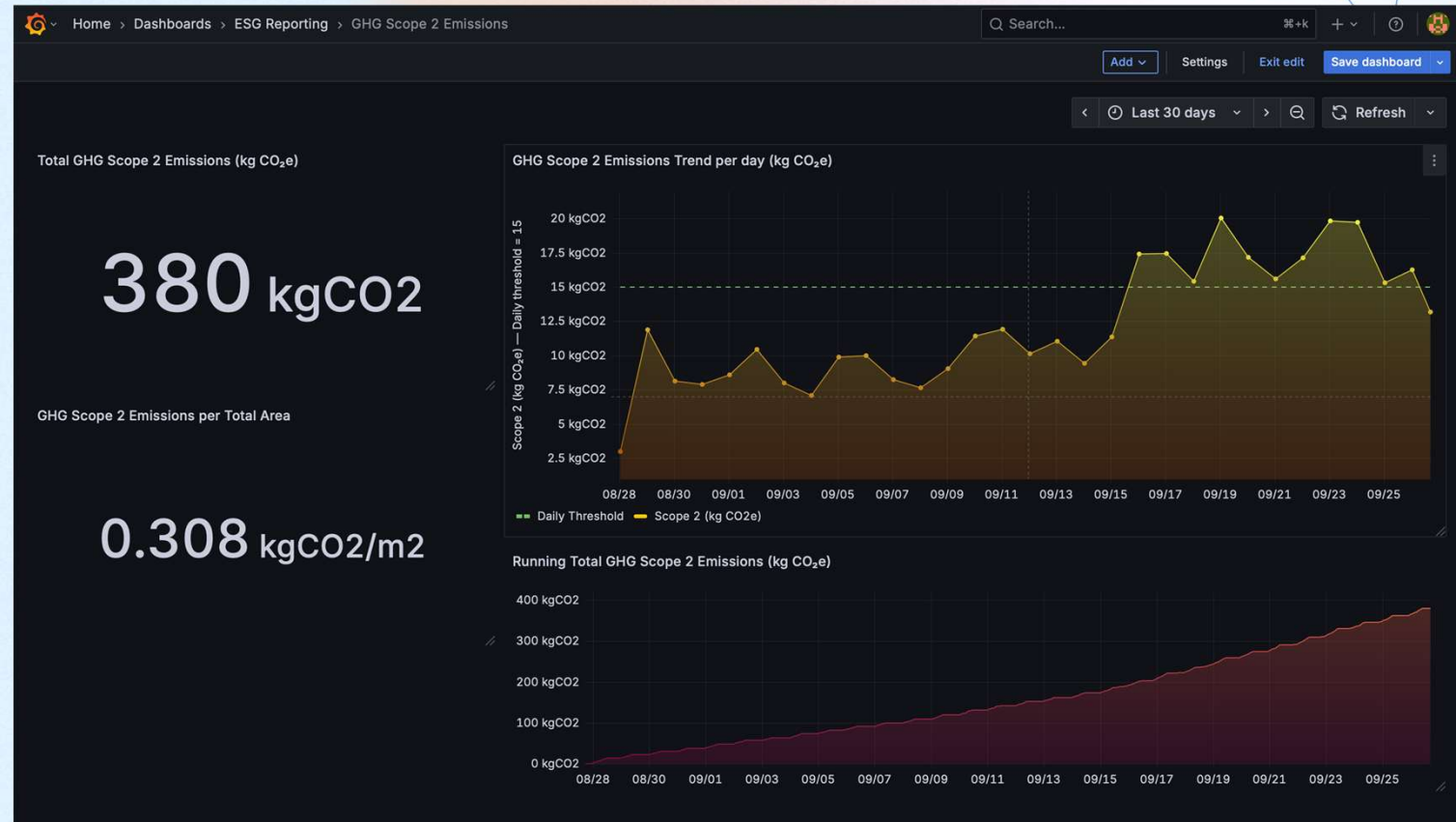
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Energy consumption mix



GHG emission monitoring vs target



Demand-driven Energy Forecast & Use Optimisation

External Data APIs: Integrate weather, market prices, and grid signals to forecast demand in real-time.

Dynamic Forecasting: AI models predict consumption patterns across sites and processes.

Optimisation Engine: Adjusts energy use automatically to reduce costs and emissions.

Business Value: Lower energy bills, improved resilience, and alignment with carbon reduction targets.

LLM powered narrative for ESG reporting

Automated Storytelling: Large Language Models generate clear and compliant reports.

Data-to-Narrative: Translate raw performance data into meaningful sustainability insights.

Consistency & Transparency: Reduces human error and ensures regulatory alignment.

Strategic Impact: Frees up teams to focus on action, not just reporting.