



Using AI and automation to solve the energy efficiency challenge

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Overview

- Introduction to Verco and our mission
- The challenge
- Latest trends and relationship with energy management
- Typical energy management approach
- Data streams
- Challenges and shortcomings of this approach
- Approaching energy management with AI
- How it works
- The result
- Verco project timeline
- How you can get involved

Verco helps companies reduce their environmental impact and save money through data driven analysis, grounded advice and real-world solutions.

The challenge

Climate change

Fuel security

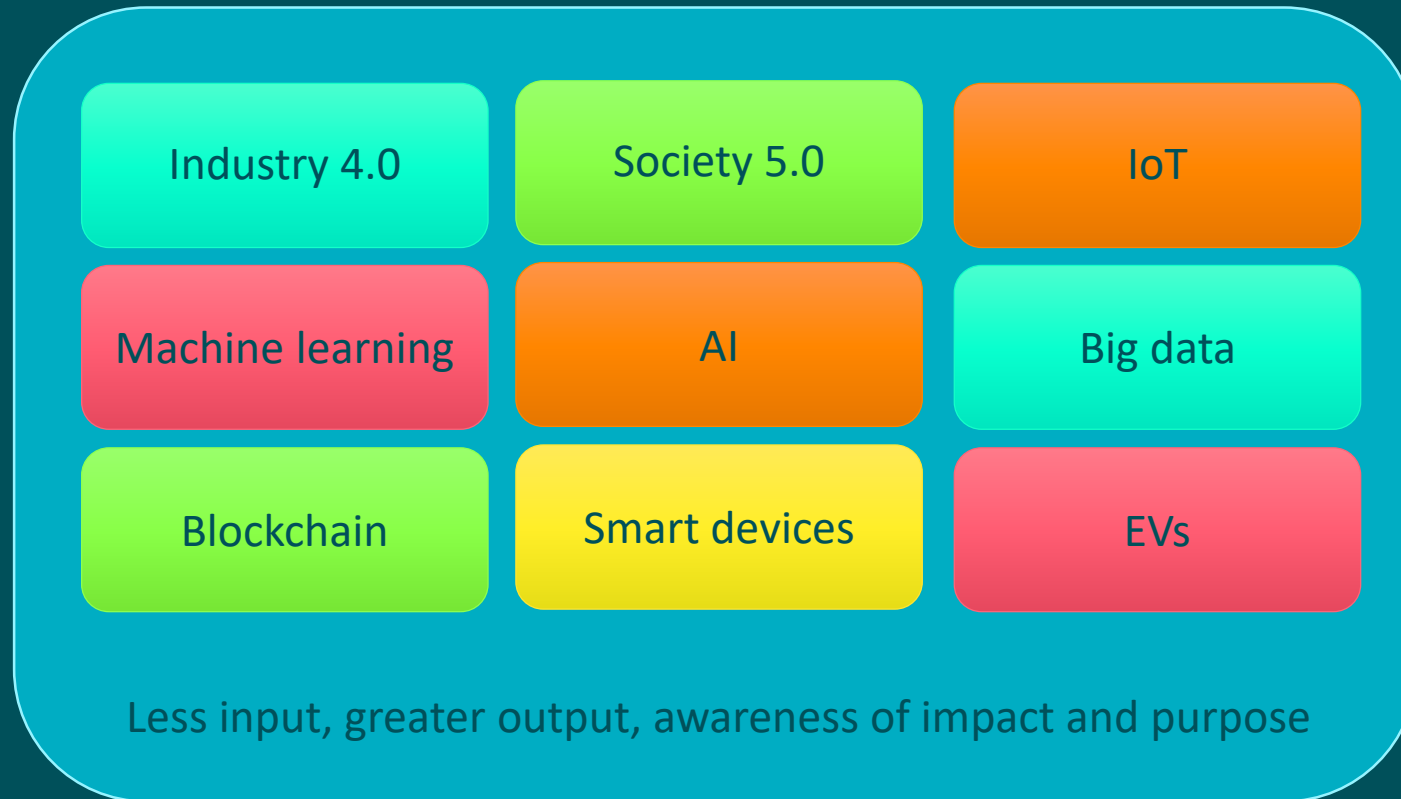
Operational cost
management

CSR profile

Business resilience

Supply chain
environmental impact

Disruptive technologies and the next revolution



Energy management work streams

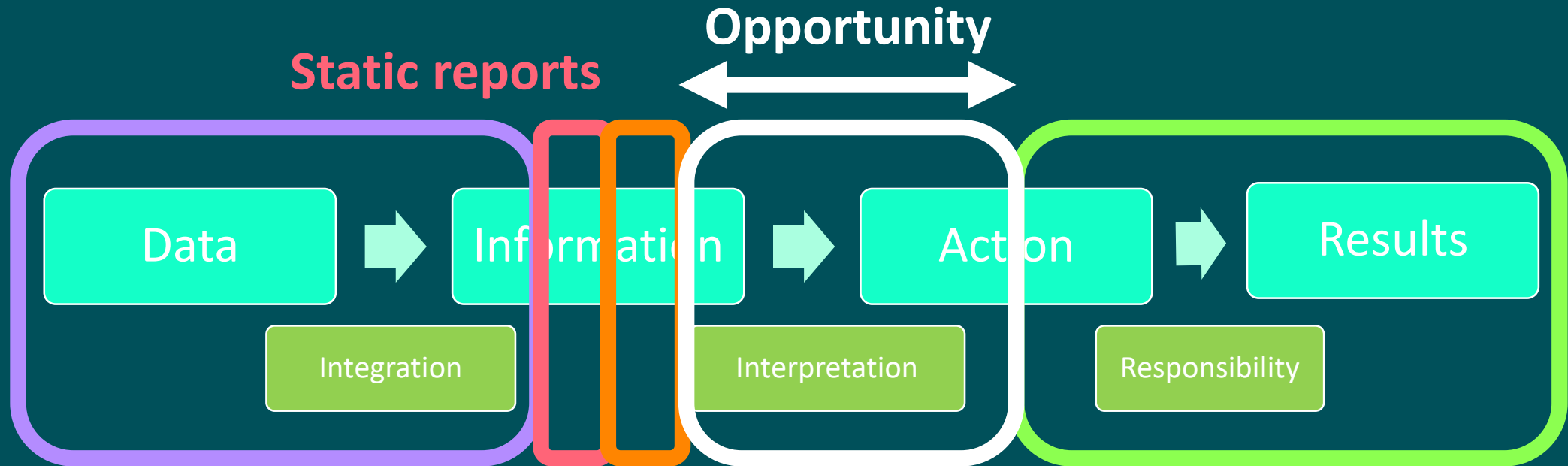
Maturity
5 = Leadership
1 = Emergent

- 5
- 4
- 3
- 2
- 1

	Policy and strategy	Roles and responsibility	Data and reporting	Identification and delivery	Engagement and training	Investment and finance
5	Leadership – Tailored service focused on driving industry agenda and embracing innovation					
4						
3	Reduce – Delivering commercially-viable					
2						
1	Comply – Satisfying all relevant EU and UK environmental regulation					



Typical energy management approach



Static reports

Opportunity

Data

Information

Action

Results

Integration

Interpretation

Responsibility

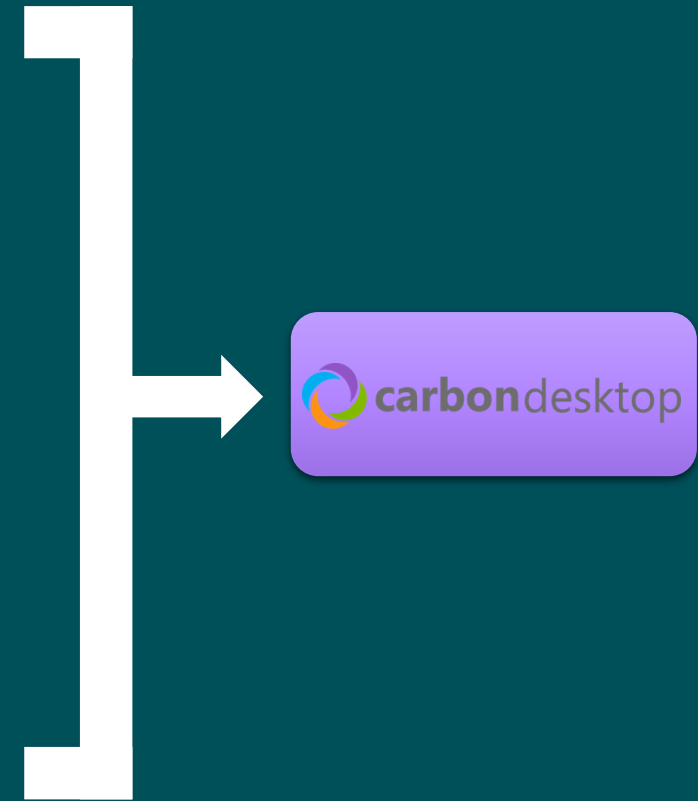
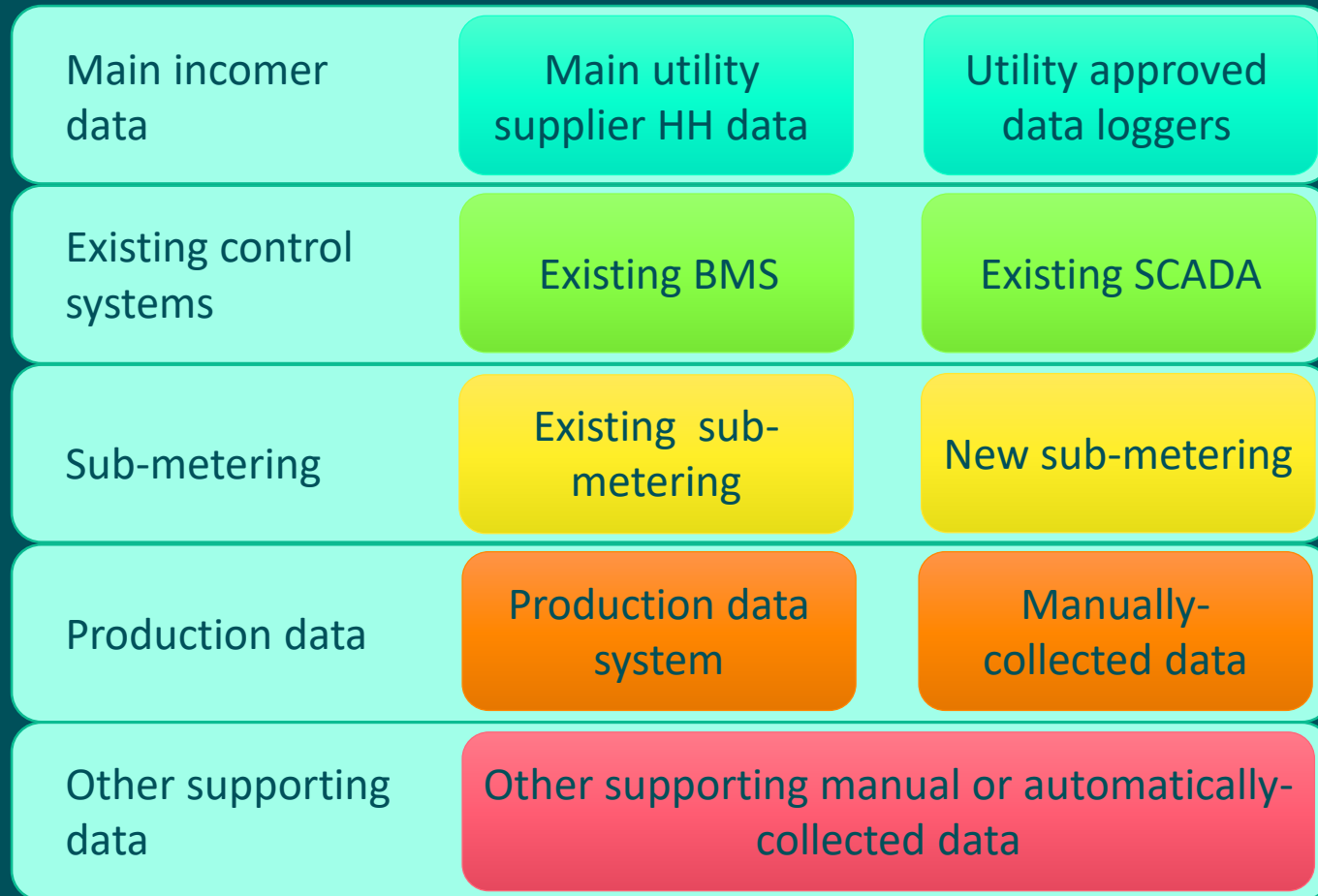
Software

Dynamic reports

Identified action and implementation



Data streams

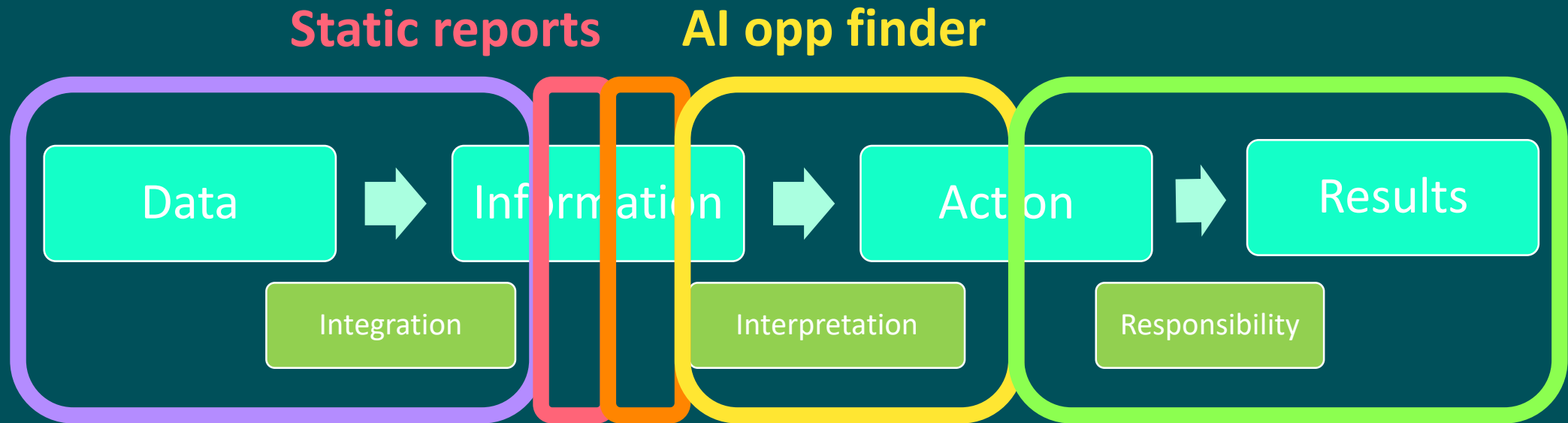


Challenges and shortcomings of this approach

Human intervention carries inherent risks and flaws:

- Slow
- Expensive
- Inconsistent
- Requires specific skillset and experience
- Sat behind other priorities
- Success is often the result of enthusiasm from one key individual
- Activity is often short lived and 'burns out'

Using AI to fill the gap



Static reports

AI opp finder

Data

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Some definitions

- **Artificial Intelligence**
 - The ability for the machine to ‘think’ and adapt to provide an intelligent output
 - AI builds knowledge through vast datasets to increase the chance of finding a successful outcome
 - Carries out work that could not be completed by a human due to vast quantity of data and complexity
 - Uses software to simulate human intelligence to solve the problem
- **Machine learning**
 - The systems ability to learn and evolve as more data and scenarios are encountered
 - Continuous learning and adaptation improves reliability and accuracy of the solution
 - This creates a fast-acting reliable solution to replacing extensive human review and interpretation

Why an AI-based opportunity finder?

- Text

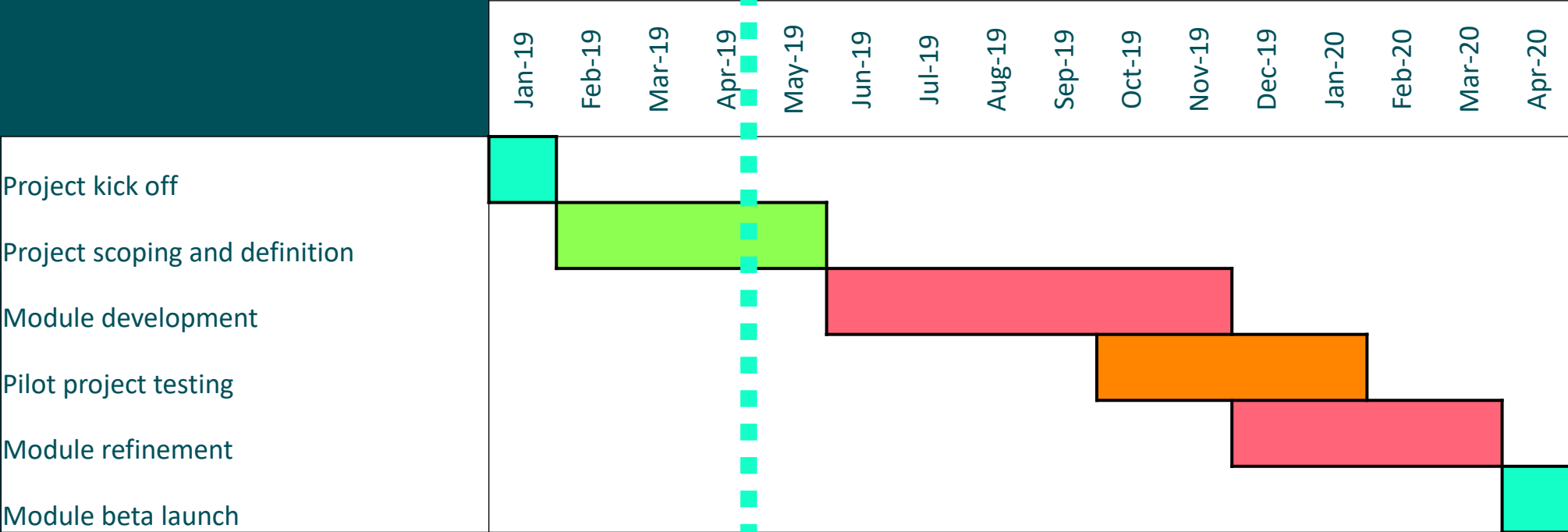
How it works

- Using Azure machine learning

The result

- Strip out operational cost
- Improved competitiveness in against competitors
- See the 'hidden' savings (often most commercially attractive)
- Loss avoidance
- Wider benefits (improved OEE, reduced product loss, etc.)
- Allows site team to focus on action not data

Vercos project timeline



How you can get involved

- Pilot project with focus group



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