Cold Chain Live (Week 4)
Innovation Zone: Ethos

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STAR DATA ANALYTICS

Focus of Presentation

“ETHOS as a tool to help improve decision making and operations in your business”

1. Where does Ethos fit in the life cycle of equipment
2. Practically, how does Ethos go about finding energy opportunities
3. Some examples of opportunities and their savings

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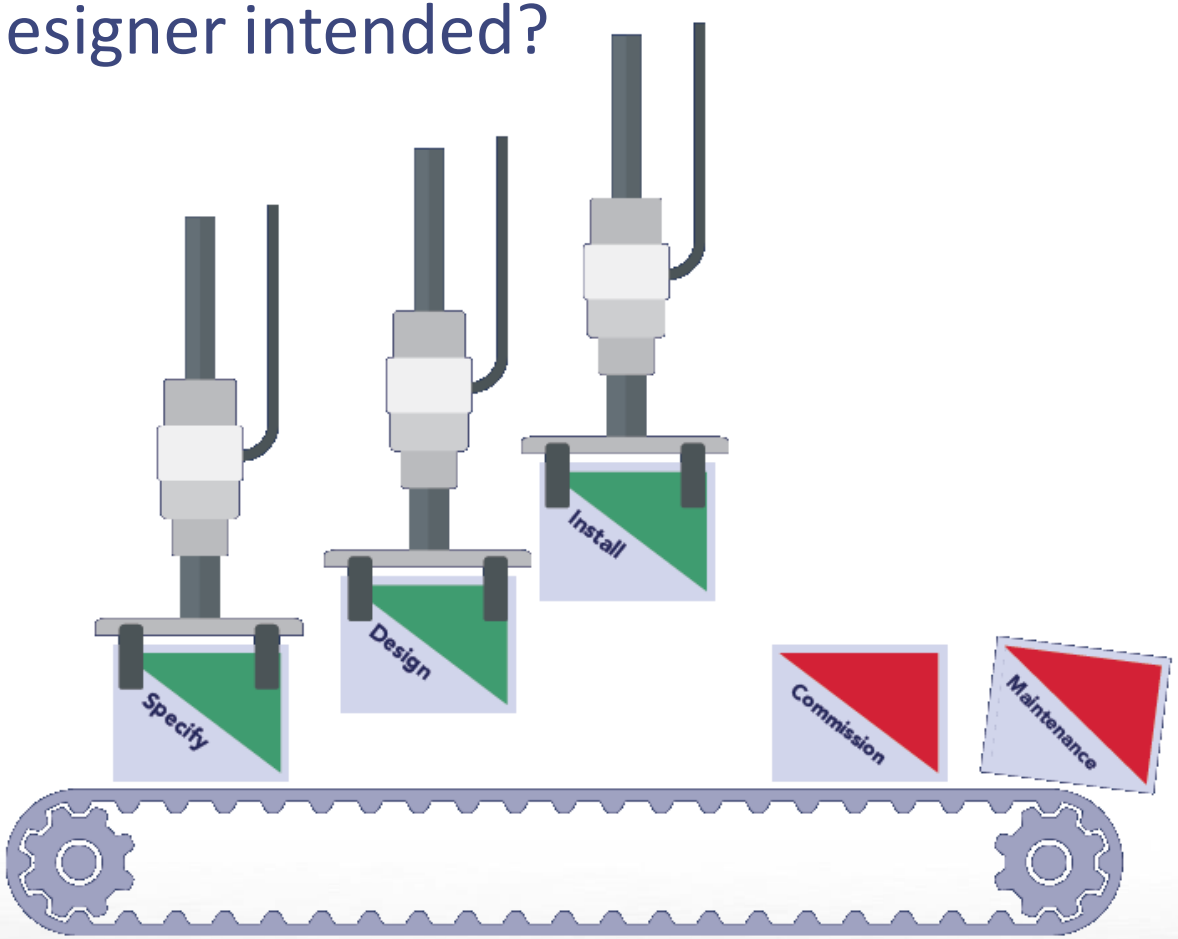
Consider Life Cycle Cost

- Consider visibility of energy performance across a contract
- Is the focus too much on the specification? After installation is it running as the designer intended?



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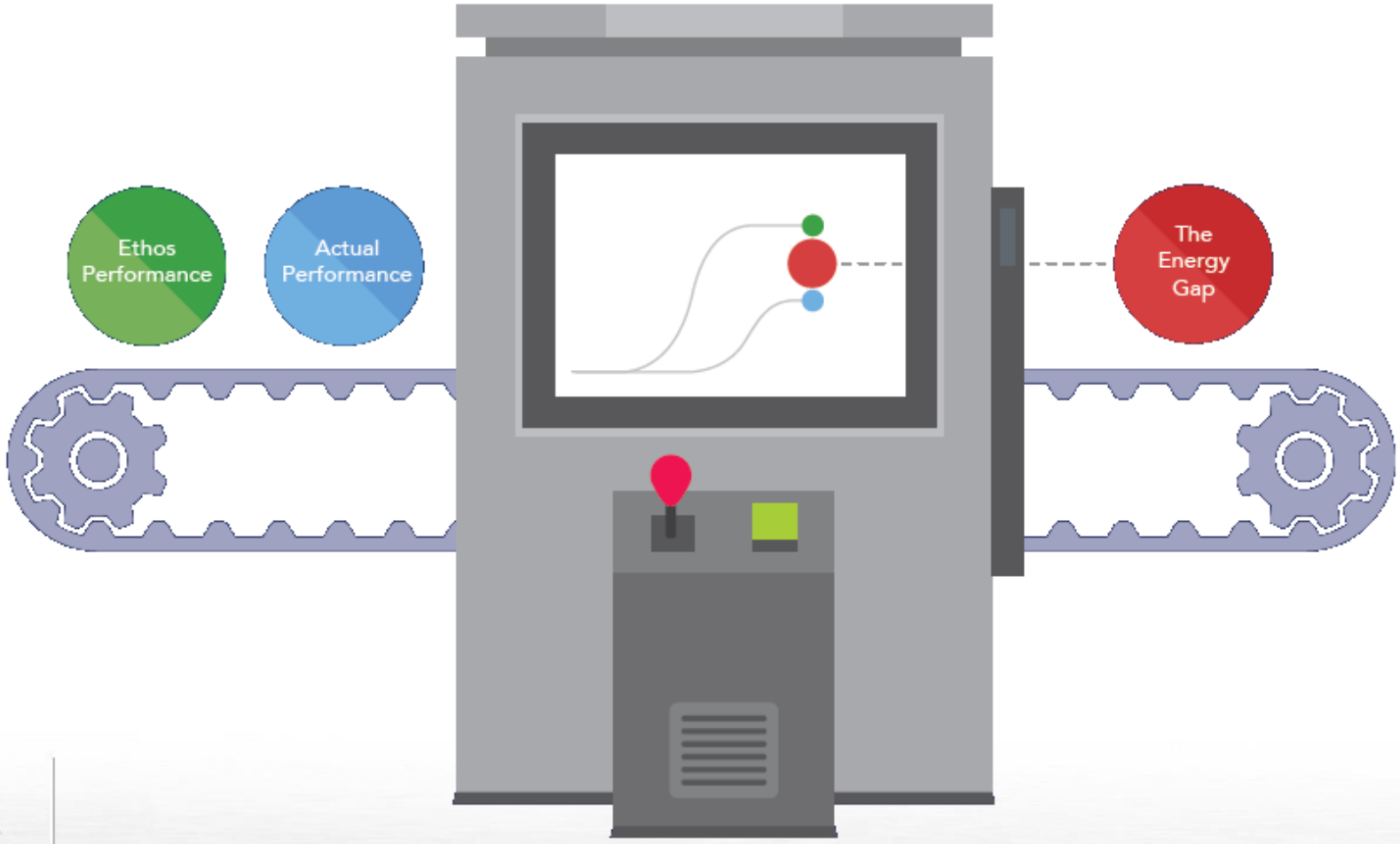
Keeping the focus on energy through Commissioning and Maintenance

- With the actual current performance, figure out the “What If” scenario of the equipment running at its best performance



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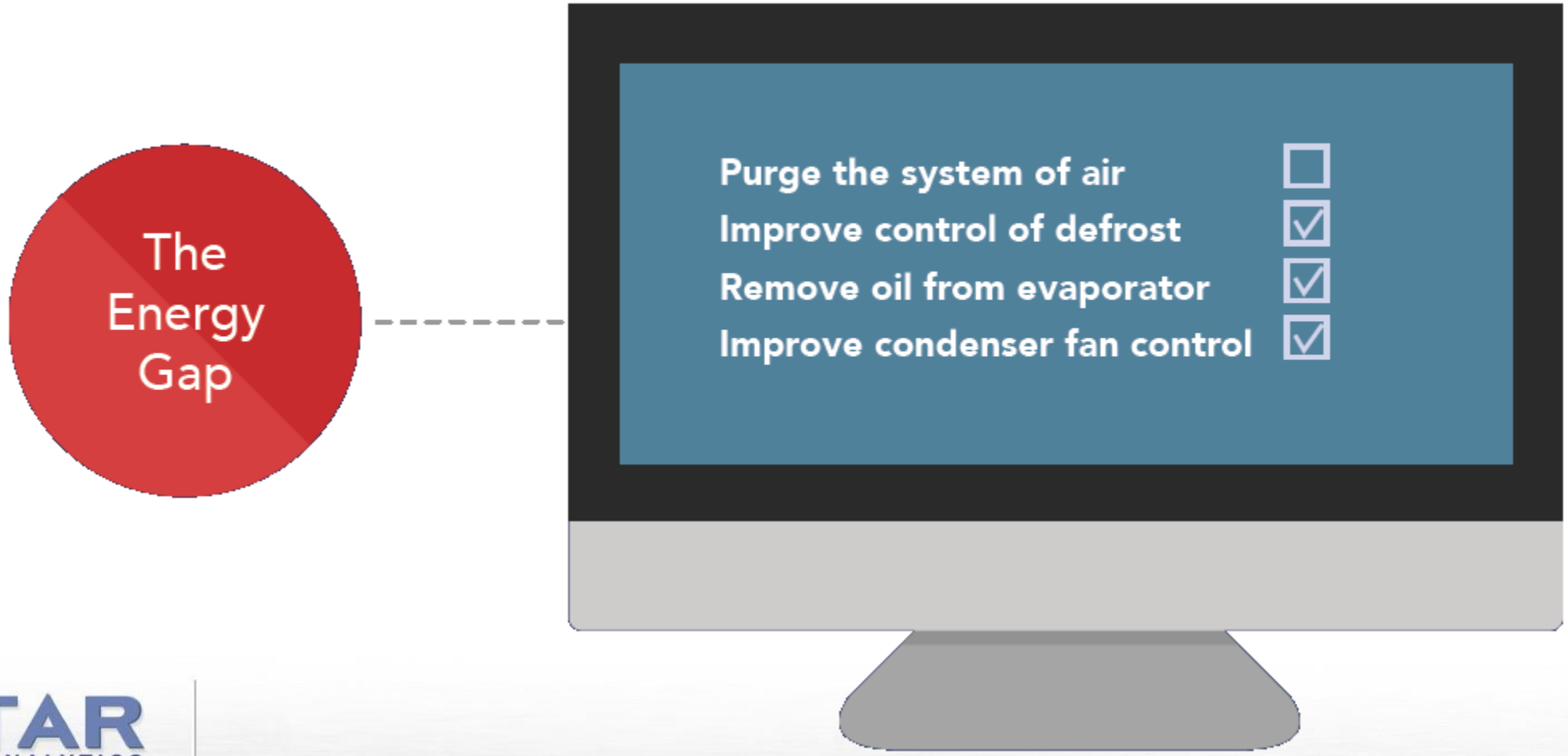
What to do once the energy gap is identified

- Take action to minimise or eliminate this gap so your equipment is using the least energy it needs to for the load place on it.



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How Ethos captures data

PLC Based Data Logger

"separate set of sensors"

Web API

API Connection

"already have the data, just send it over"

Network Edge Device

"ask the existing control system its sensor data"

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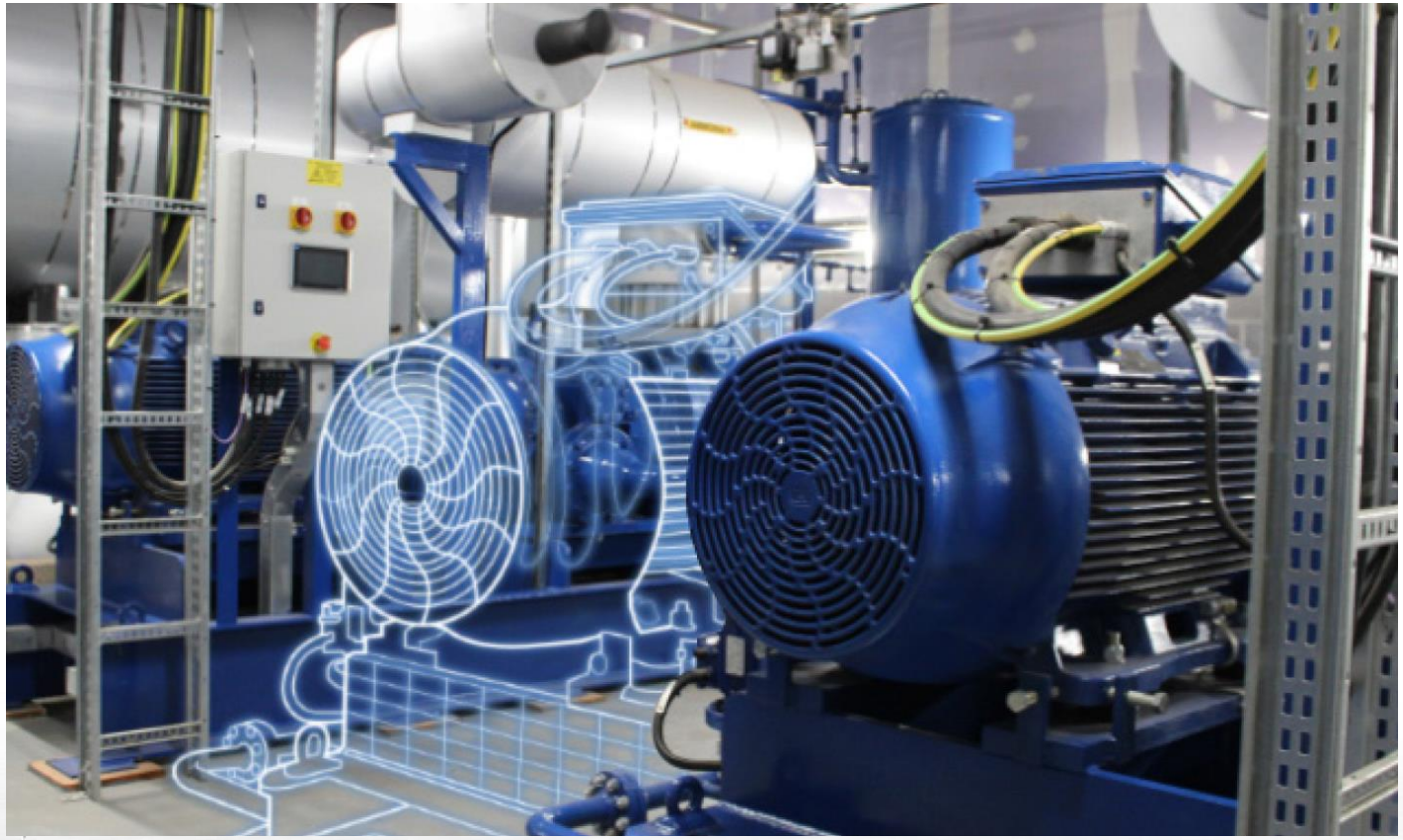
How Ethos determines how the system should work

- Digital Twin is built from the design point
  - The system performance the designer intended (and the supplier promised!)
  - “Dynamic” because it re-calculates from the design point to actual conditions



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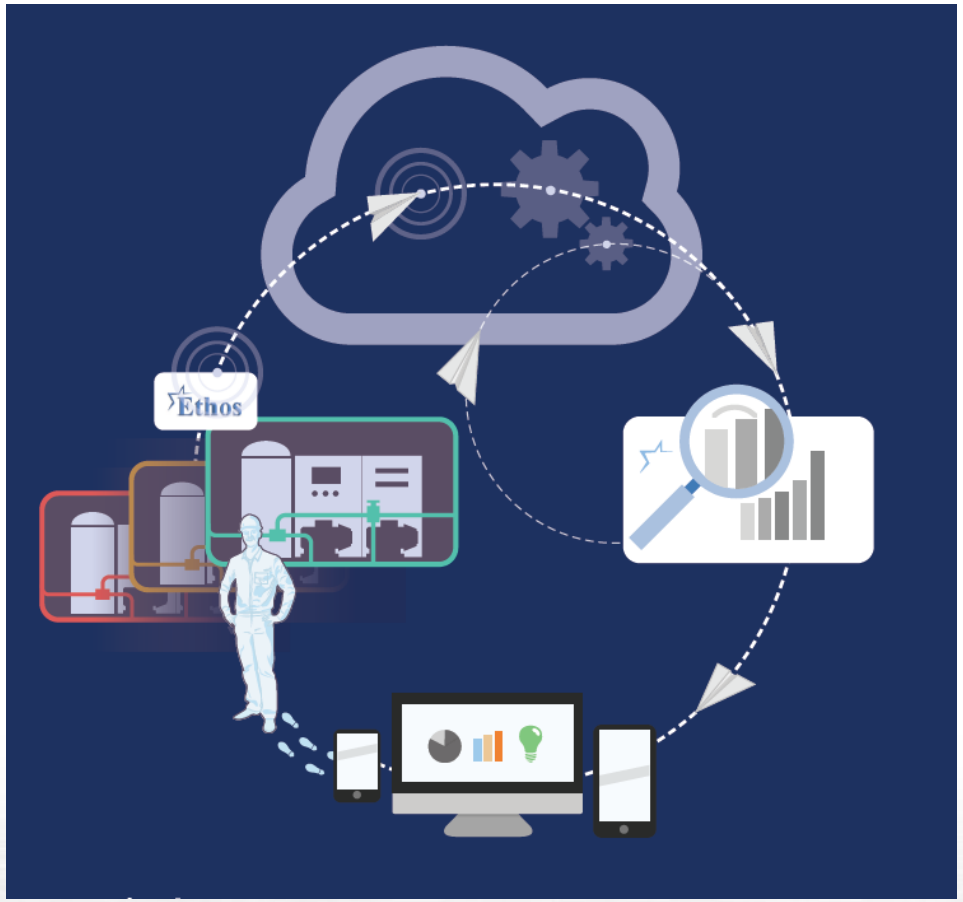
“Closing the Loop”

- Unless action is taken it’s all pointless!
- The data needs to be presented in an easy to access format (people are simply too busy otherwise)



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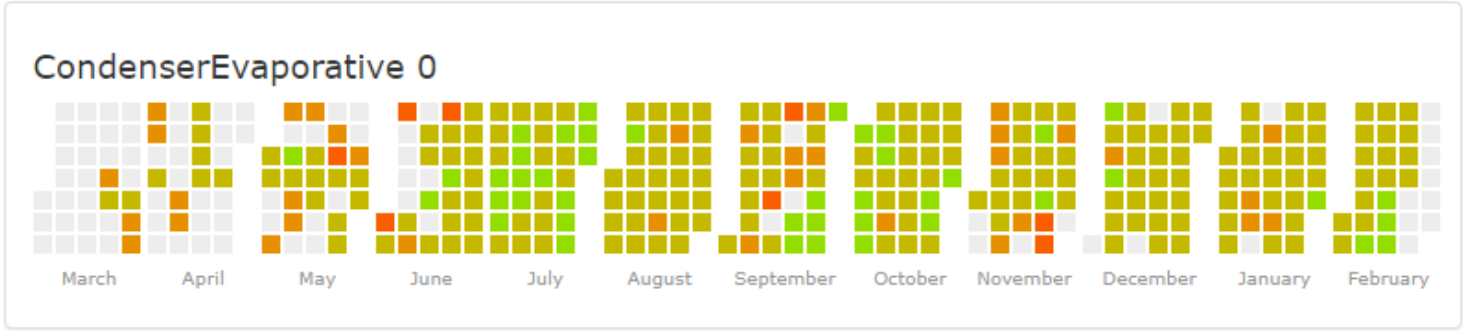
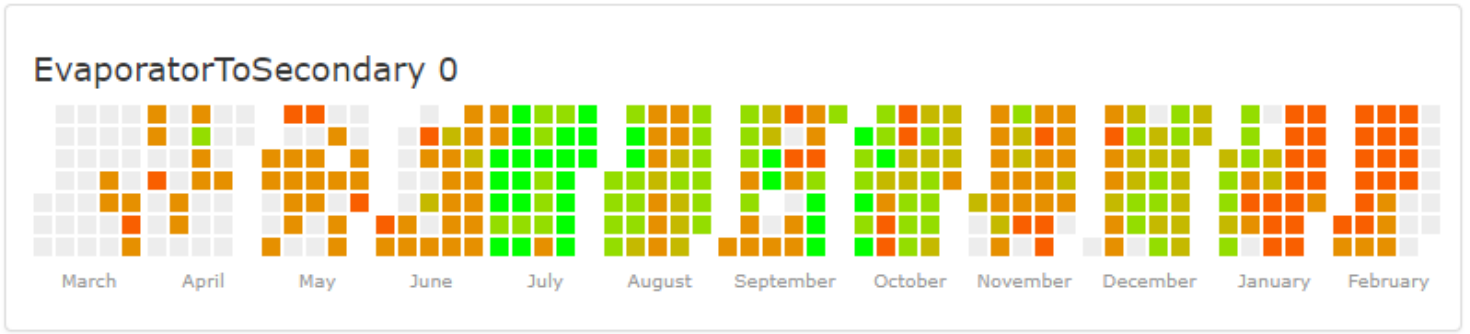
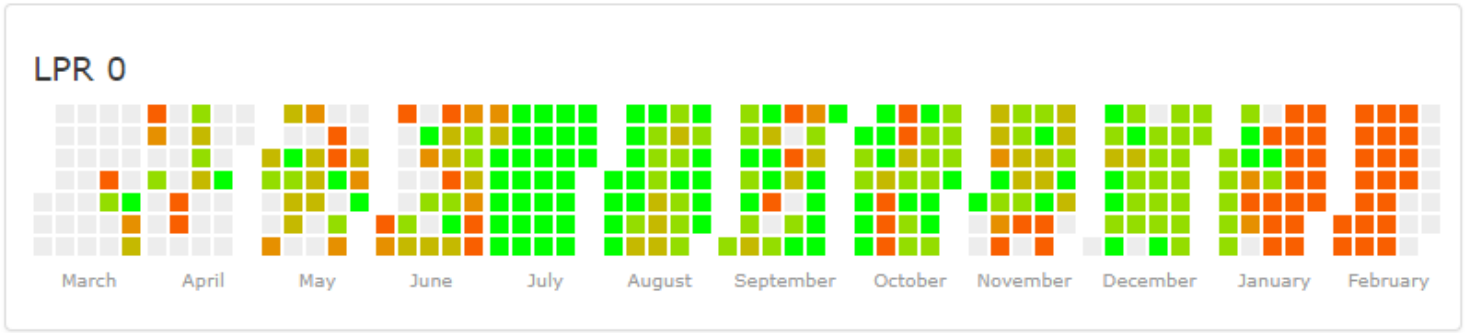
How to present accessible data







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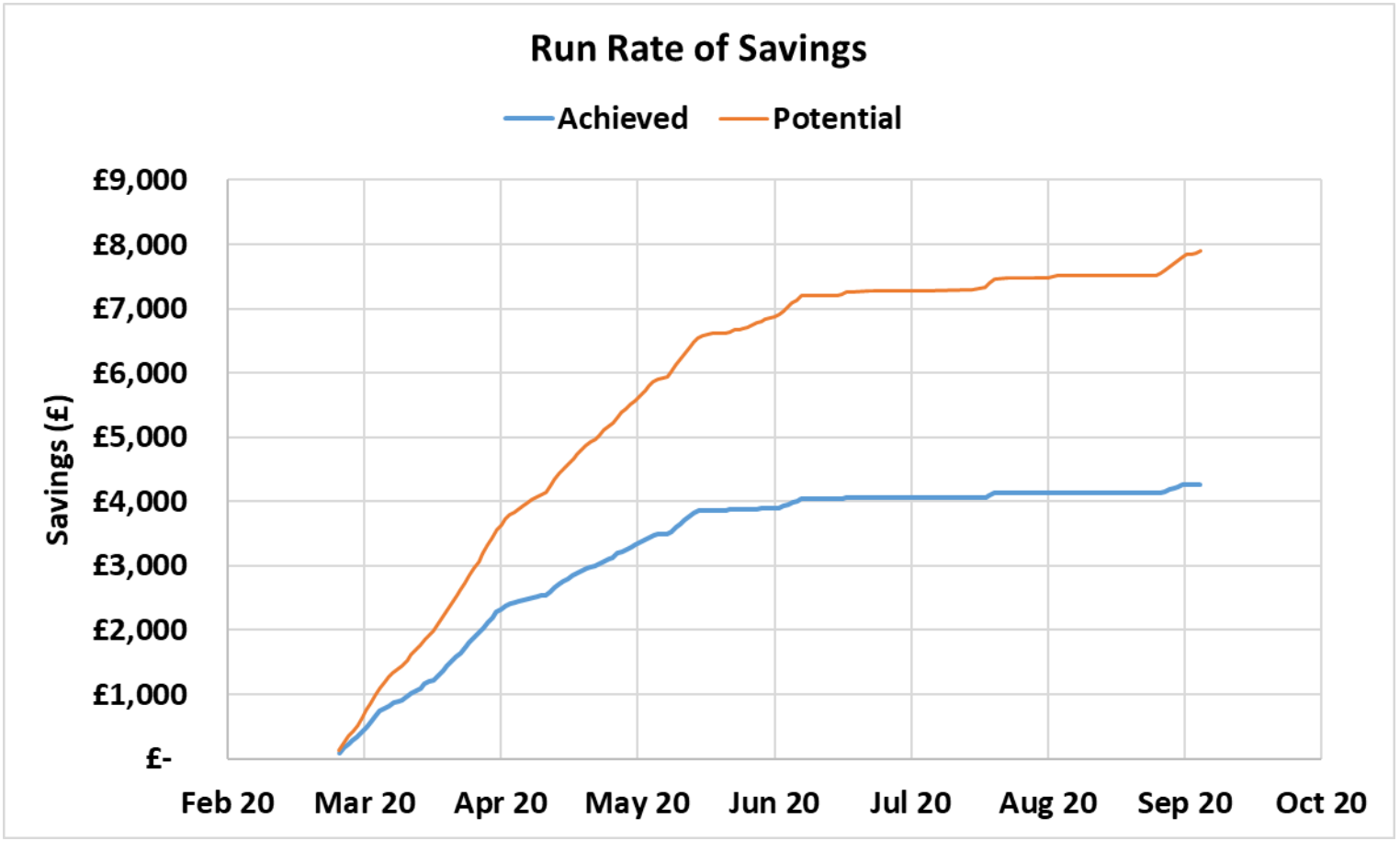
How to cost up opportunities



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Example opportunities

Economisers offline 10% kWhrs	**Condenser air build-up 6% kWhrs**
Condenser VSDs not optimised 6% kWhrs	**Evaporators fouled 10% kWhrs**

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Thank you,
Questions?

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