FERN TECH

# Aggregate. Analyse. Act. for decentralized power systems

Speaker: Patrick Cousins, CEO Ferntech

H MER International MICROGRID Conference | 8th Annual | #HIMC2020



### The Era of Decentralized, Decarbonized Energy

There is a massive, growing opportunity in decentralized, decarbonized energy.

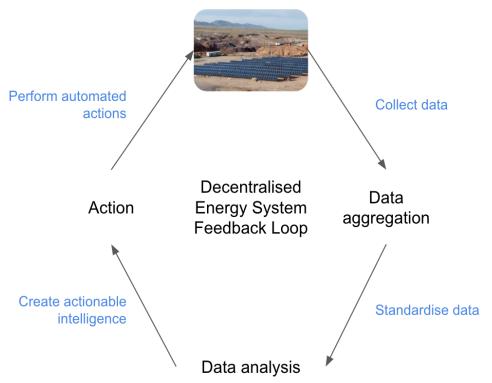
- Climate change is forcing a global shift to decarbonised energy solutions
- Renewable energy costs are falling enabling rapid growth in decentralized energy solutions
- Millions of systems already in operation globally.



### Problem: Decentralised Energy Systems are Hard to Monitor

- Existing monitoring solutions are expensive, designed for large power systems.
- Data collection difficult 100s of components- no real norms
- A lack of standardised data makes it impossible to perform analysis
- Without analysis, companies have no idea how their assets are performing
- Decentralised energy systems are not optimised. These problems are multiplied for customers who own 100s of systems.





### The Solution: Flexible and Functional (mid-size systems: <1 MW)

#### Aggregate

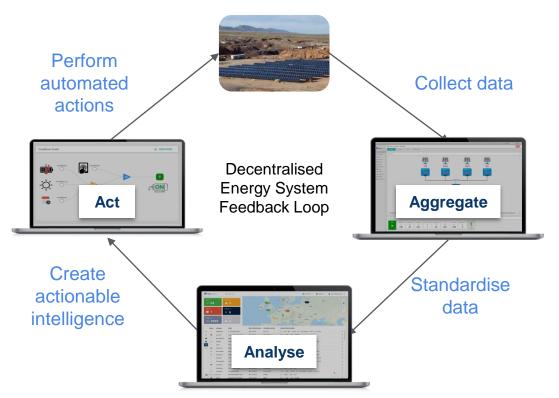
Collects real-time performance data from all components in the system regardless of manufacturer

#### Analyse

Web Portal monitoring and visualizing system data, and generating custom reports for entire fleets of systems.

#### Act

Continuously improve system performance through remote control functions and a growing library of custom control loops



### **Our Customer Benefits**

#### Aggregate

Freedom to select the most optimal components





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#### Analyse

Remotely located a system failure and avoided a trip to site (30 hours one way)





#### Act

Reduce system diesel consumption by an estimated 40%





### The Ferntech Global Market



#### NIGERIA'S FIRST COMMERCIAL UNDERGRID MINIGRID

Ogun State, Nigeria – July 2020



The solar hybrid project in Mokoloki community is Nigeria's first rural commercial undergrid minigrid, coming online in February 2020. Through an innovative partnership between Ibadan Electricity Distribution Company (IBEDC), Nayo Tropical Technology (Nayo Tech), and Mokoloki community—with advisory support from Rocky Mountain Institute (RMI)—this project demonstrates a path to collaboration. Early evidence suggests the project improves electricity service, support community development, and reduce utility losses.







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# Mini-grid Remote Monitoring and Control Delivers Cost-Saving Improvements in O&M

By Lili Francklyn on August 18, 2020

Remote monitoring and control systems can offer cost savings for the operation and maintenance of mini-grids. Equatorial Power is developing a mini-grid that will power a new industrial park in addition to powering the communities on the Ugandan island of Lolwe in Lake Victoria.



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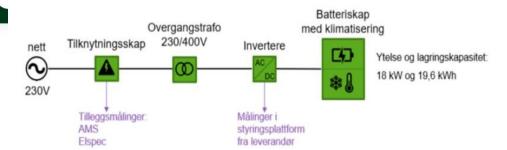
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#### **Battery in the mains**

For the first time, Lyse Elnett has connected a battery as a voltage support in the mains. This is a pilot project where a battery has been installed in a distribution network at lms in Sandnes.

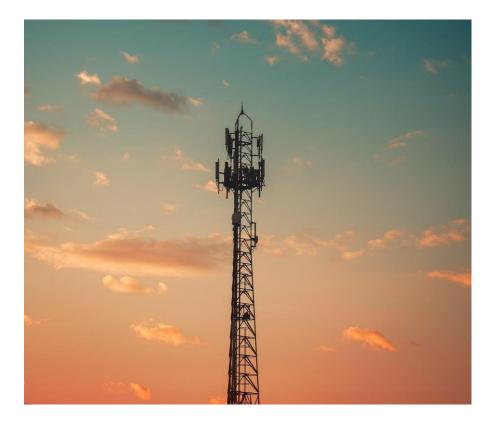




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### Customer story

Location: United Kingdom Industry: C&I Use case: Telecommunication Towers Highlight: 50+ telecom towers actively monitored



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