

What is Project Alvarium?



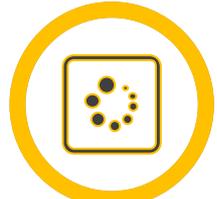
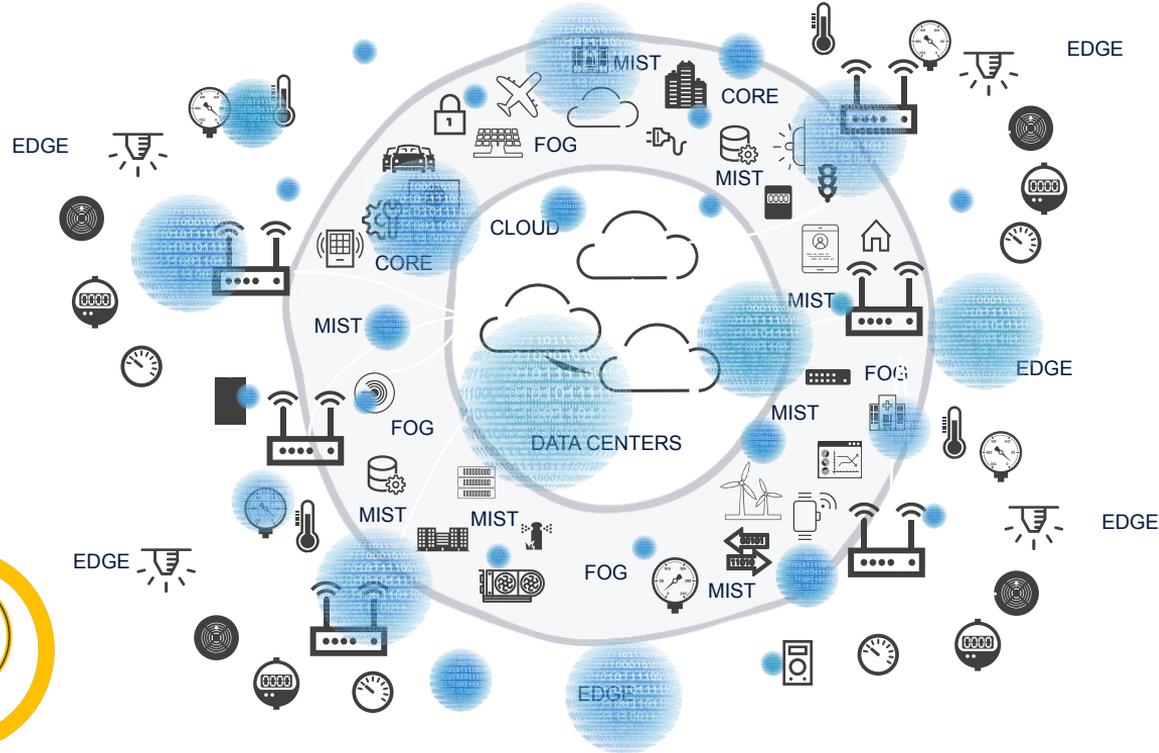
Life on the Edge: We have a trust problem

Plumbing Problem

How are data and applications brought together across heterogeneous networks and infrastructure?



Devices



Applications

Trust Problem

How can applications trust data and data computational integrity

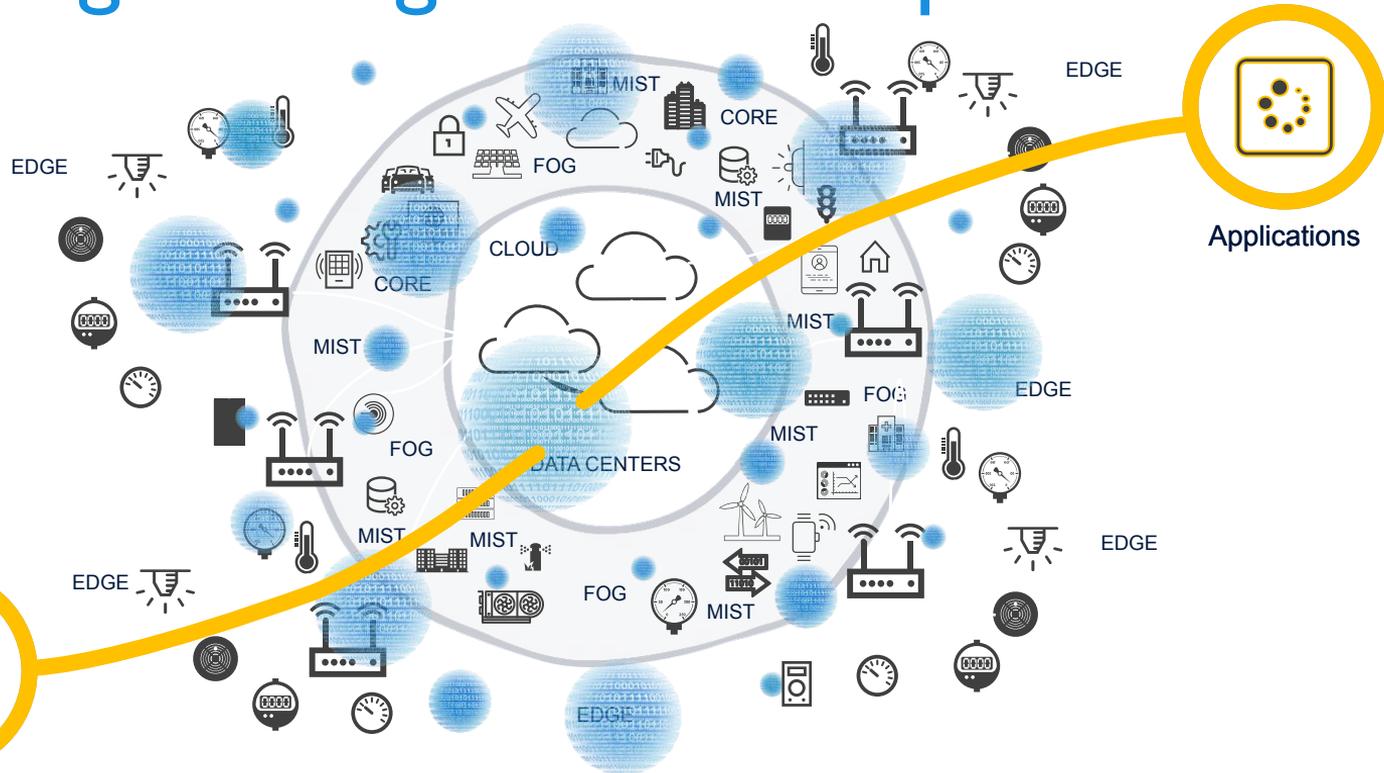
Addressing the edge data trust problem

DCF

Data delivery over a trusted fabric with tamper proof data, **measurable confidence**, stemming from the root of trust.



Devices

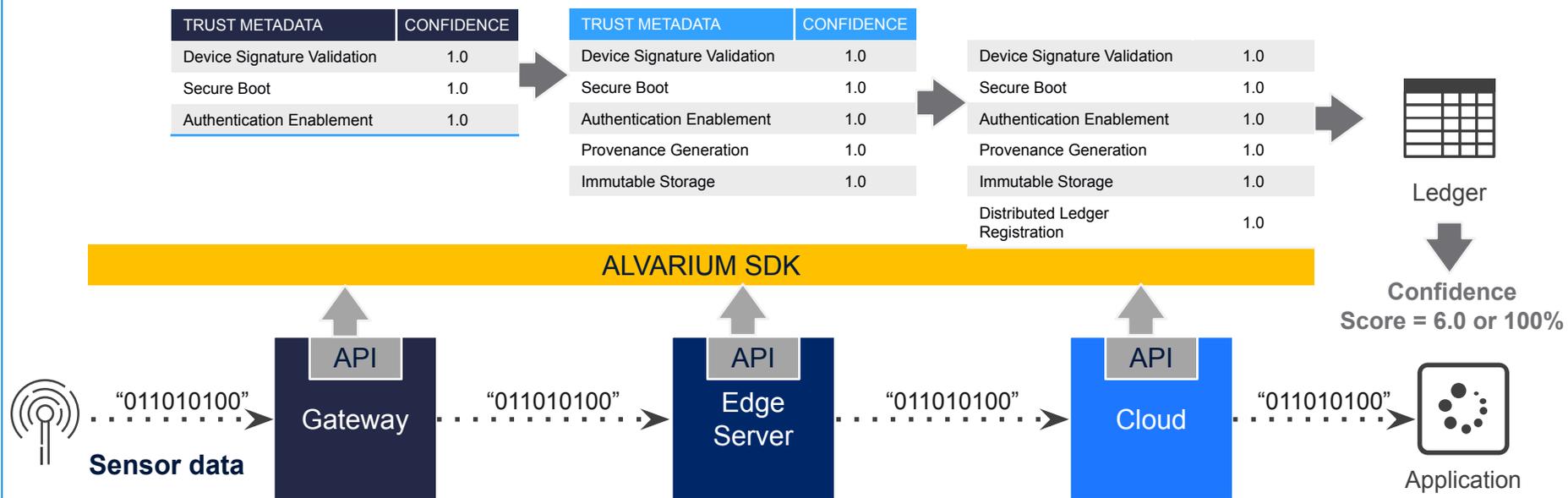


Applications

Project Alvarium



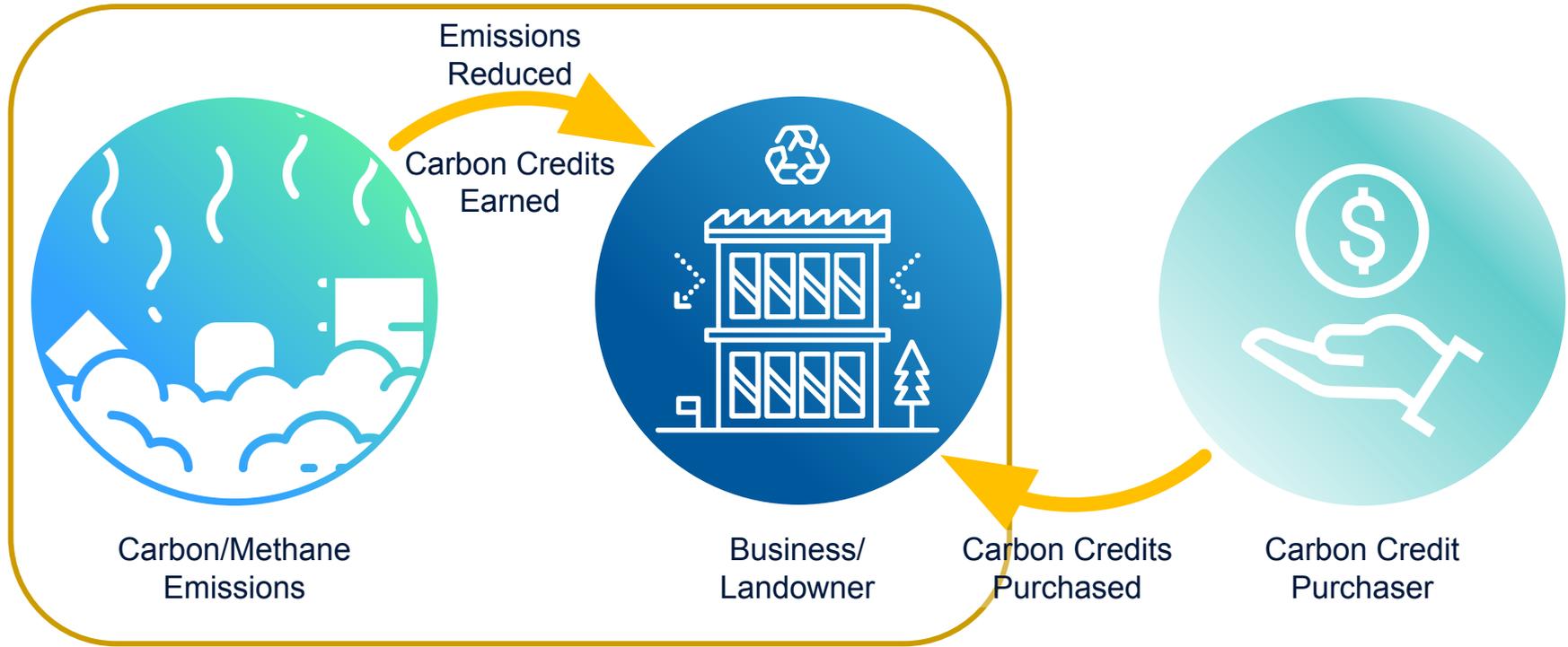
The Alvarium code base is a lightweight SDK that annotates data streams (e.g., sensor data) with trust metadata and confidence scores, forming a Data Confidence Fabric (DCF)



How can Alvarium be utilized?



A Pilot: Carbon tracking for Carbon Credits



What is Digital MRV?

DCF applies to “verification” (can I trust the carbon footprint reporting?)

Measurement:

Obtaining the data necessary to quantify anything, but in this use case the carbon footprint.

Reporting:

Sharing the results of the measurements in a standardized fashion

Verification:

- (1st party) Quality Assurance/Control
- (3rd party) assurance of “truthfulness” of carbon footprint reporting

Digital MRV is a joint 50/50 software solution from ClimateCHECK and IOTA



DIGITAL MRV



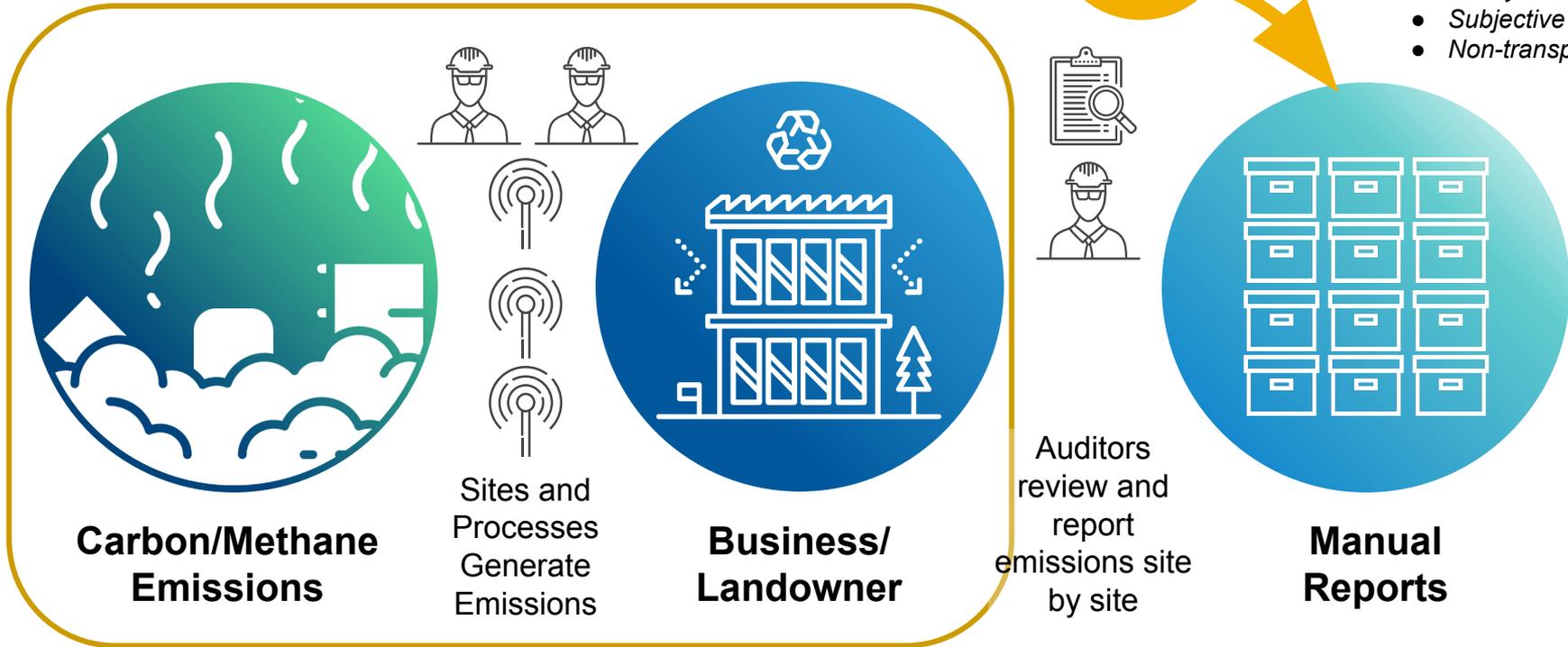
ClimateCHECK



IOTA

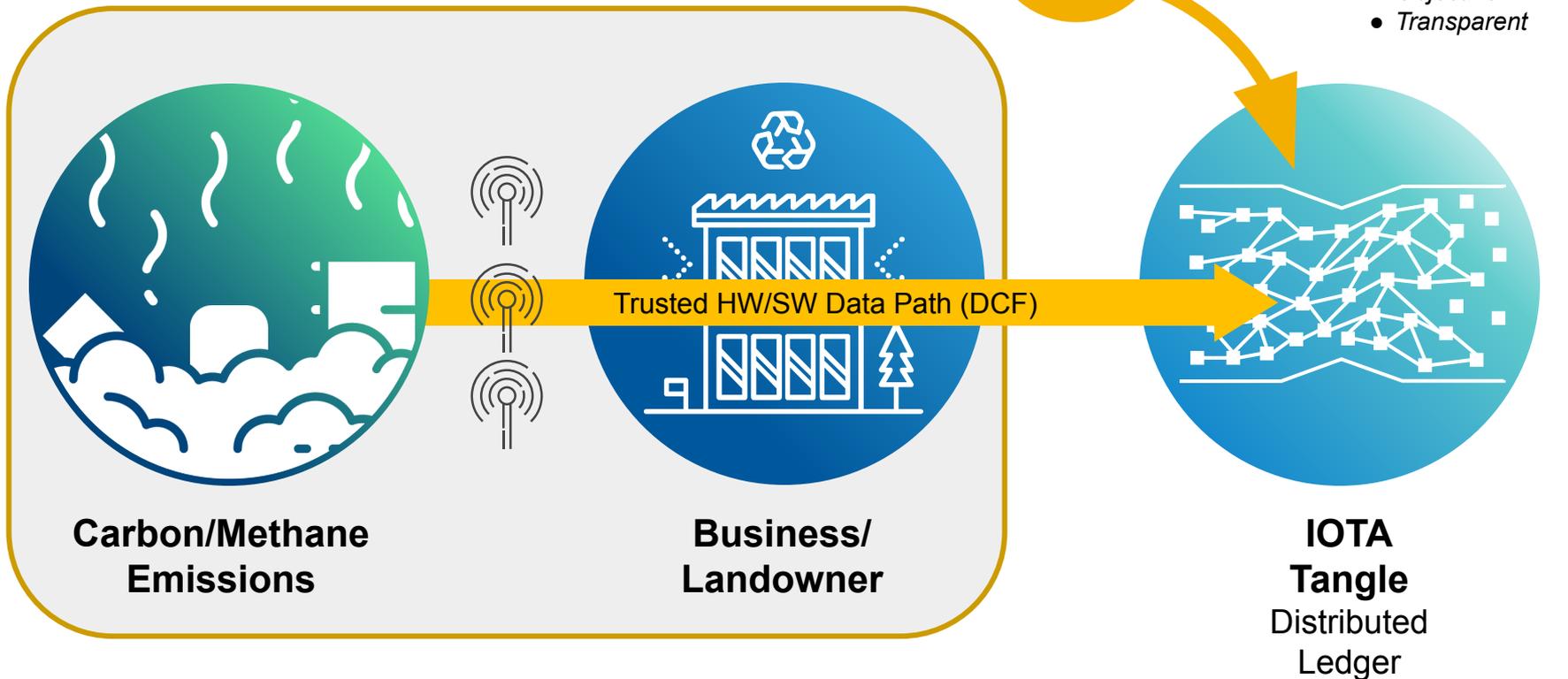
Opportunities for Misrepresentation

With **Manual MRV**, it's difficult to know if the reductions **actually** occurred



Security + Transparency

With **Digital MRV**, the granular nature provides trust in the reporting and real time insights **proving** what happened



Biodigester pilot project (Molina, Chile)



Organic Feedstock

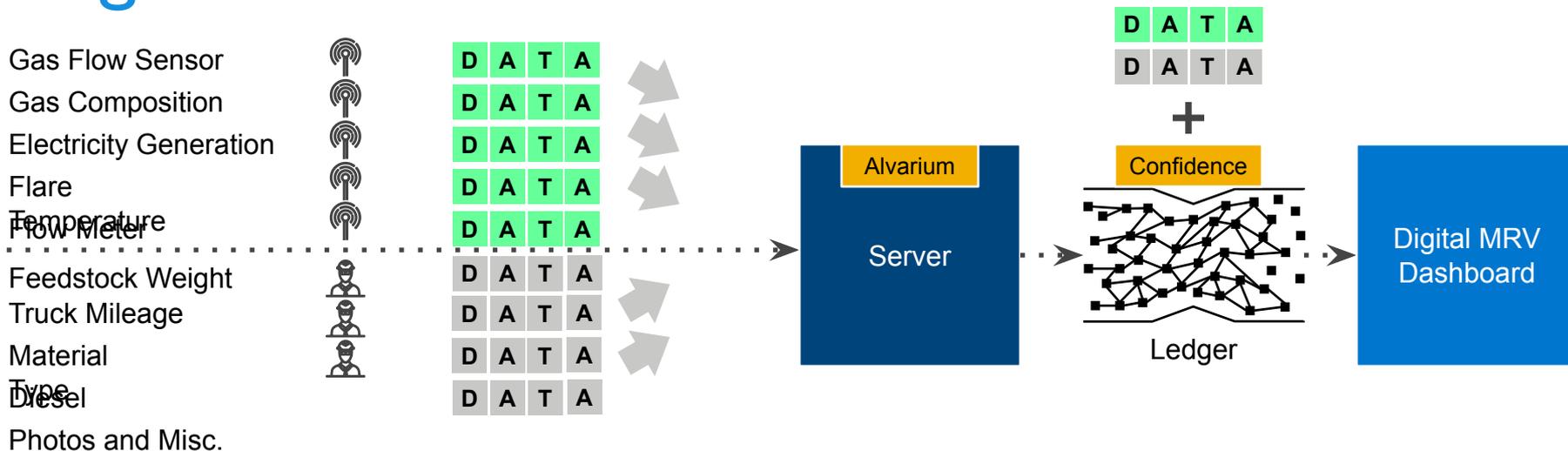
(Used grapes and crop waste, animal waste)
Significant carbon & methane emissions



Fertilizer and Emissions Capture

Liquid and Physical Fertilizer is created and sold. Emissions are captured and use to produce energy for the facility

Digital MRV/DCF solution overview

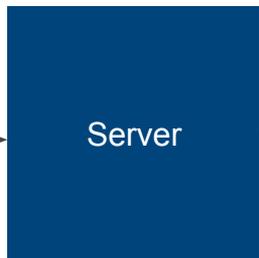


Solution partners

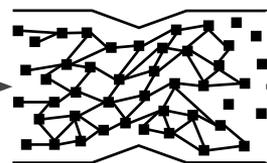


Dell EMC
PowerEdge T140
Tower Server

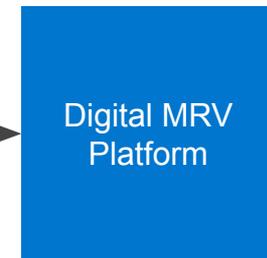
ZEEDA



PROJECT
ALVARIUM



IOTA
Tangle



Data
Confidence
Integrations

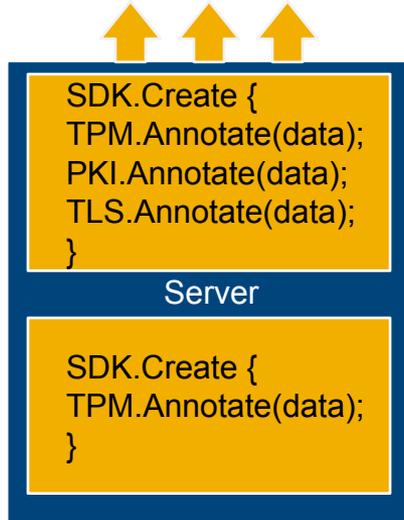
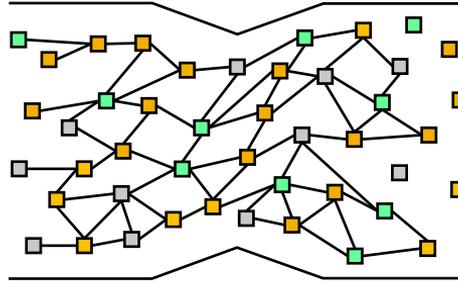
Alvarium SDK operation

Sensor Based Data 

D A T A

Manually Entered Data 

D A T A



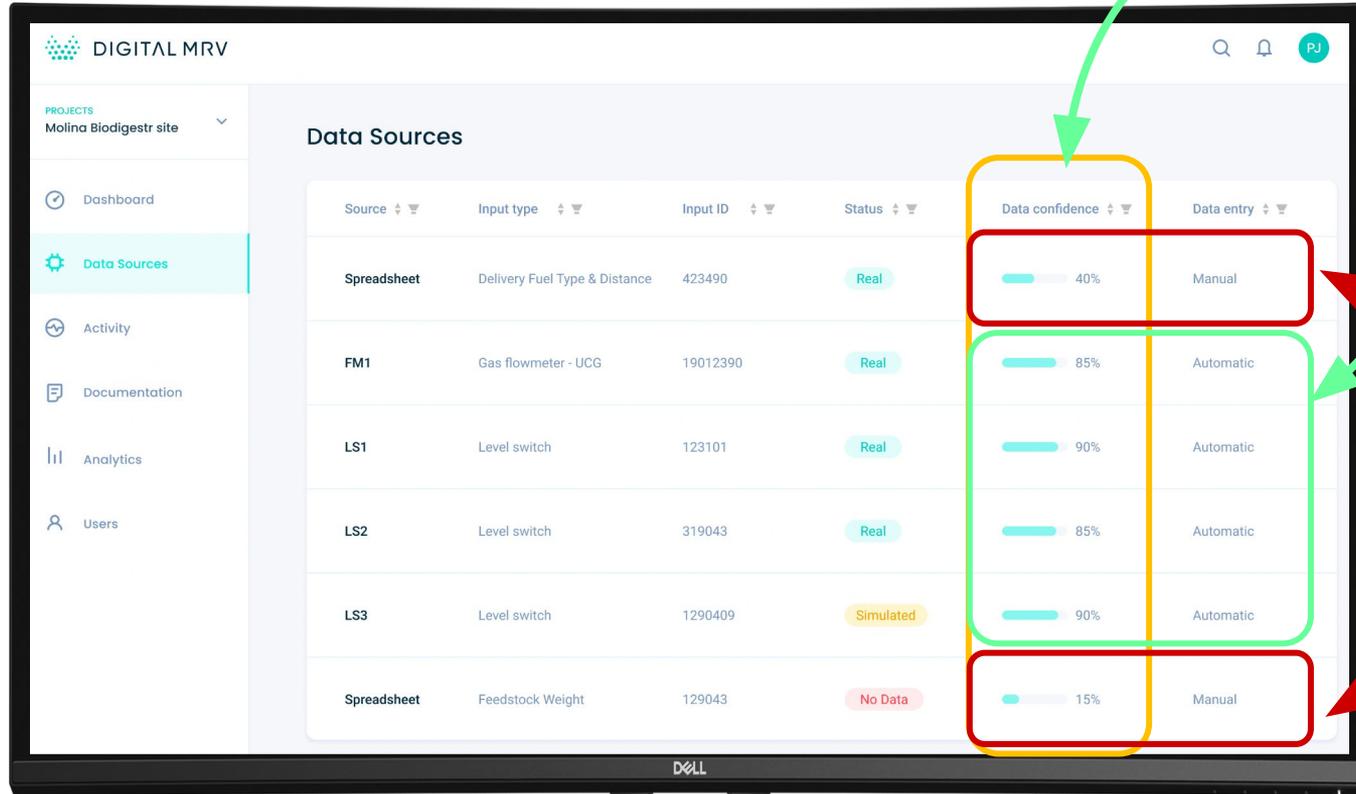
Emissions Data



Confidence Metadata



Digital MRV dashboard



Future DCF environmental use cases



Infrastructure
Carbon Credits



Smart City
Renewable Energy
Certificates



Transportation
SDG Progress
Reporting



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Head of Sustainability

IOTA Foundation

Learn more and get involved!

www.alvarium.org

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