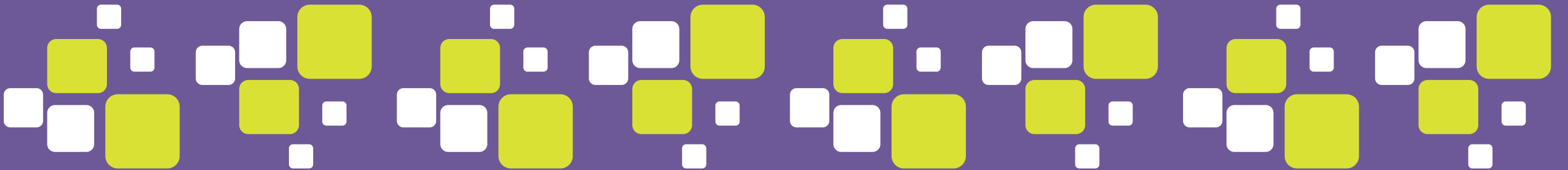




Flexible, Scalable, Secure, Decentralized

a MetaOS spanning IoT - Edge - Cloud Continuum





How is it being used?

Andy Edmonds, CTO Terraview GmbH

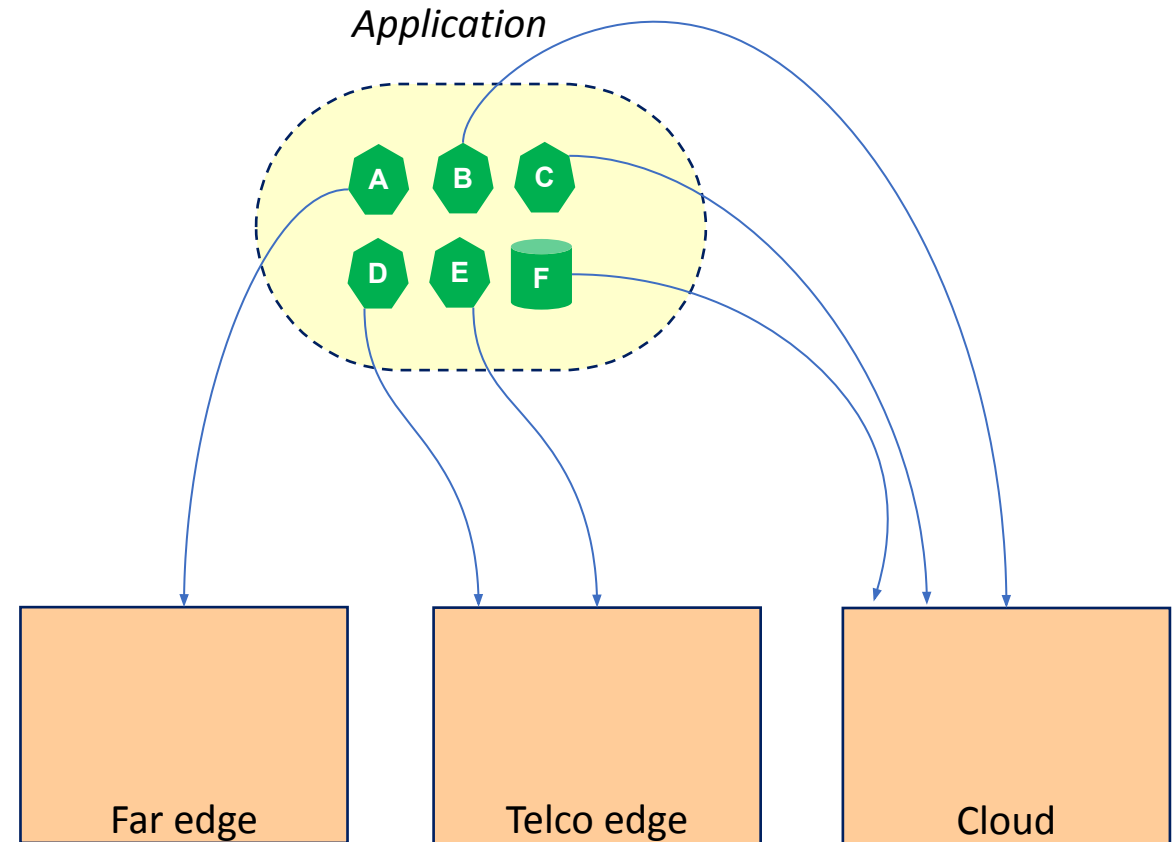


The Computing “Continuum”



Current Silo-based Computing Continuum

Just the capability to deploy services in multiple sites datacenter clusters or devices.



The FLUIDOS computing continuum

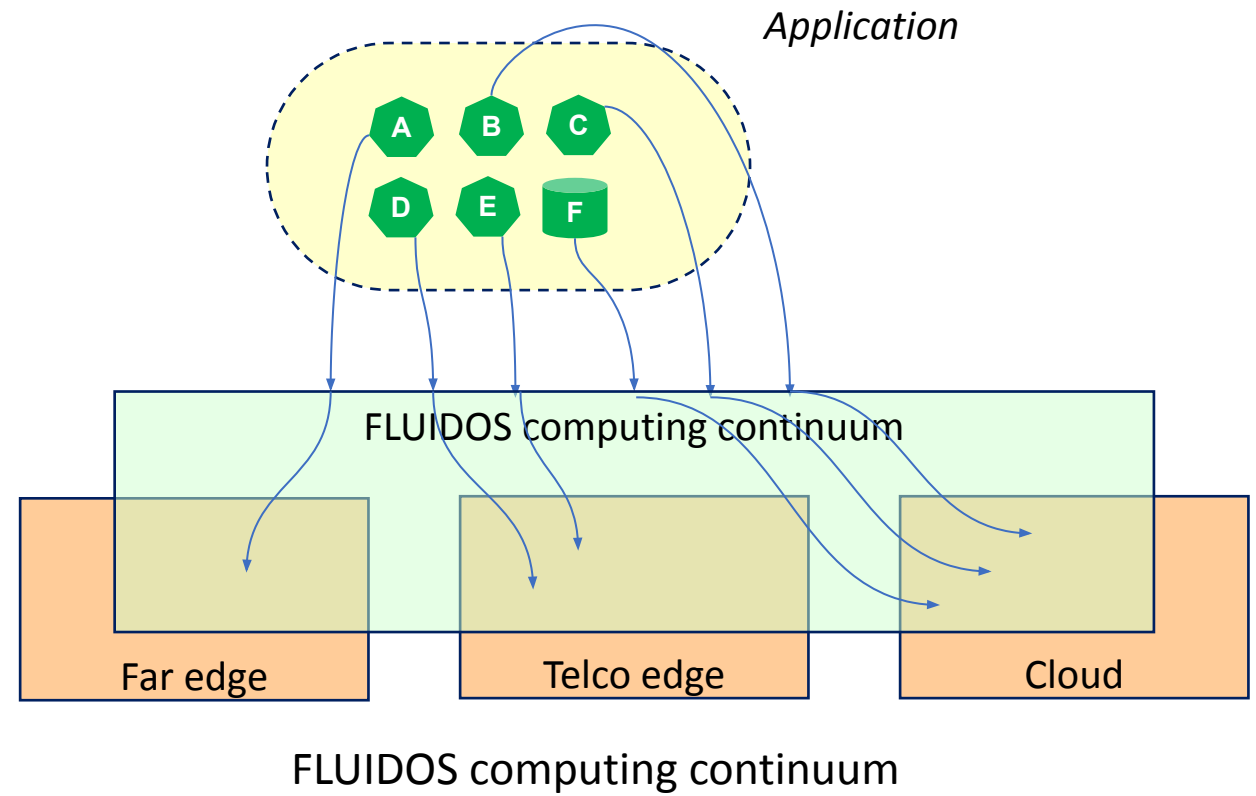


multiple technological, administrative domains
and boundaries,
transparent

*Deployment, Communication, & Resource
availability*

As you intended it to be

FLUIDOS Platform

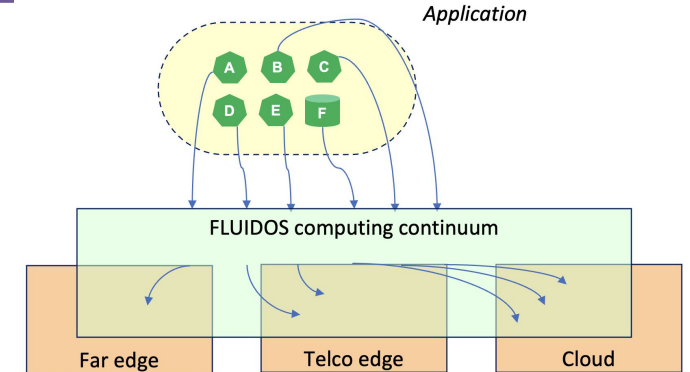


FLUIDOS Platform

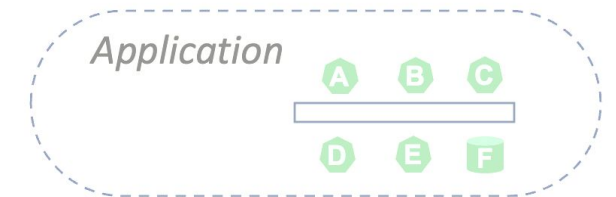
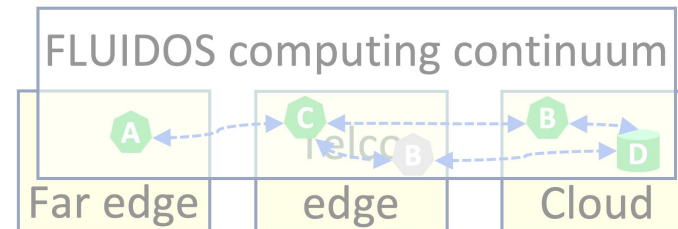


Solves the continuum and adds...

- Unified and simplified deployment to the fluid continuum
- Intent-based orchestration
- Resource recruitment (REAR)



- Dynamic workload distribution
- Seamless communication



Previous

- Security features
- Energy optimisations



1293.259		343.259	855.259	963.259
	1273.17	821.17	433.17	315.17
1783.818	1893.818	1233.818	801.818	361.818
1131.905	183.905	1371.905	157.905	
	253.166	1245.166	2057.166	1339.166

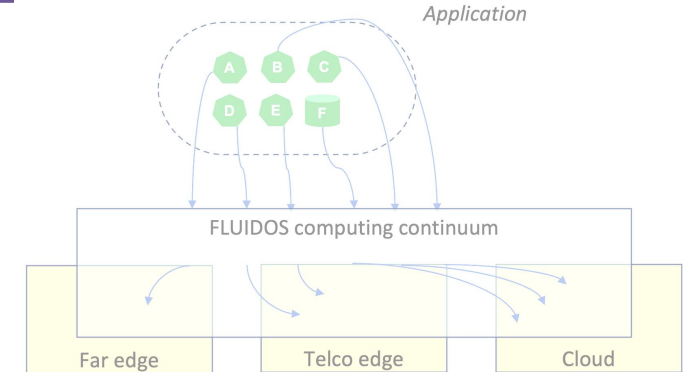


FLUIDOS Platform

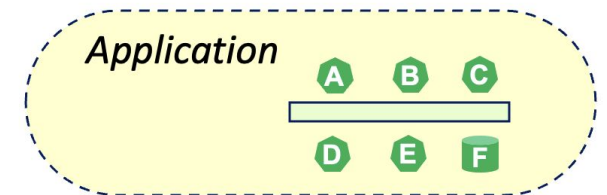
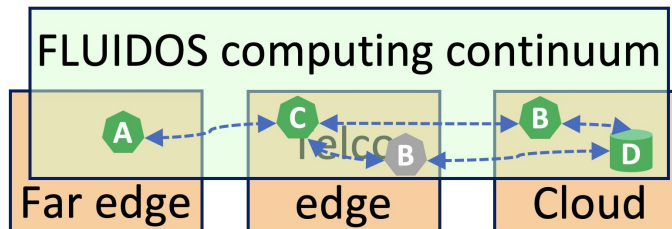


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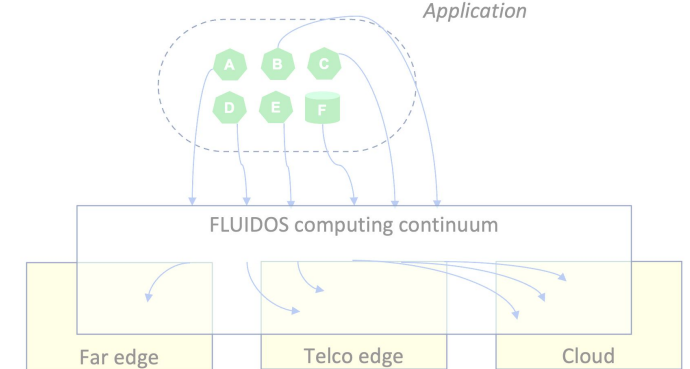


FLUIDOS Platform

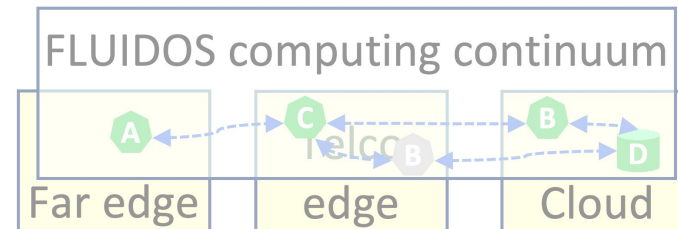


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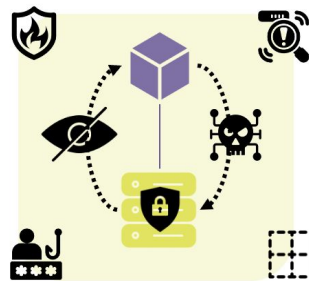


Dynamic workload
distribution
Seamless communication



Previous

- *Security features*
- *Energy optimisations*

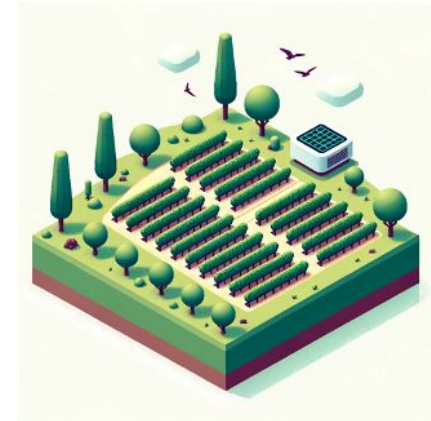
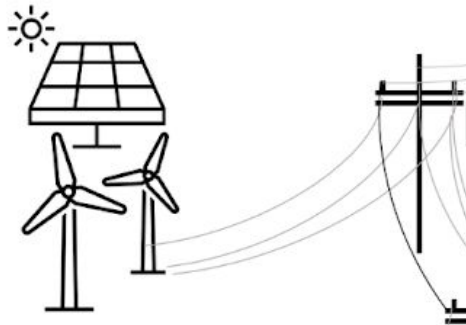


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Exercising the Platform

Use cases driven by 8 real use cases



© FLUIDOS |

<https://www.fluidos.eu/use-cases/>



Ever-growing partners and use cases

Use cases driven by 8 real use cases



DEAS



TARGET



FLUIDOMOS



DIHICLE



PARITY

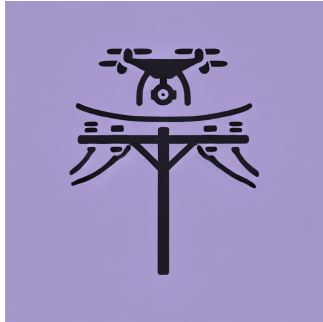
FUSION-CHECK



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New Use Cases



DIHICLE (Uni of Patras)

- ML-based Drone power line inspection via Hierarchical Inference (HI).
- Orchestration, Adaptive workload placement



DEAS (Smartly)

- Distributed Edge Analytics Service within the FLUIDOS framework using 5G small cells
- Dynamic workload distribution, Resource recruitment

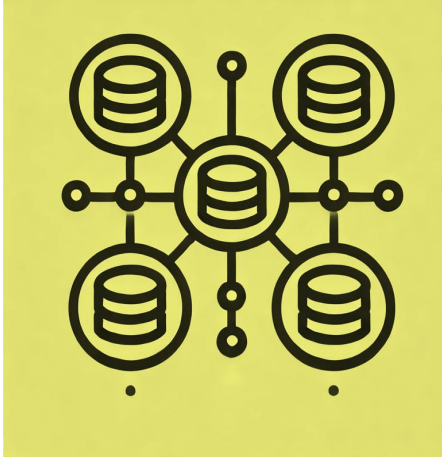


Fusion Check (Uni Patras, Texnomat & Parity)

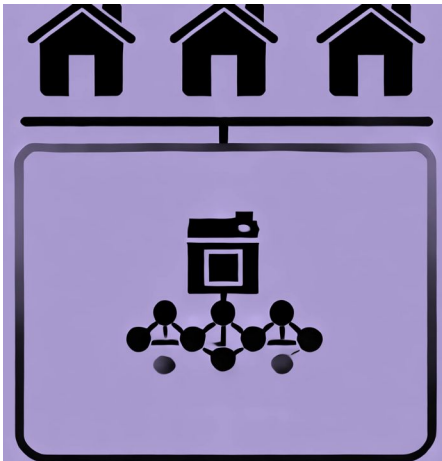
- Dashboard and FD components to manage devices (IoT, edge, Cloud) in the FLUIDOS continuum
- Seamless comms, unified & simplified deployment.



New Use Cases



- **TARGET** (datonix)
 - Federated dataspaces & FLUIDOS. Bring the compute to the data. Manage all this computation in the FLUIDOS continuum
 - Dynamic workload distribution - Data computation on the edge



- **FLUIDOMOS** (Vemar)
 - Move from a home automation siloed stack (DELIS) to a fluid continuum based one
 - Unified and simplified intent-based deployment



Open Call 2

- Do you want to solve your problem?
- Do you want to gain more value?
- Over to James and OC2...

FLUIDOS 2ND OPEN CALL IS NOW OPEN

€120.000

5 USE CASE GRANTS

The FLUIDOS project is now accepting applications for financial support to develop new Use Cases of the FLUIDOS system.

Deadline: 4 October 2024



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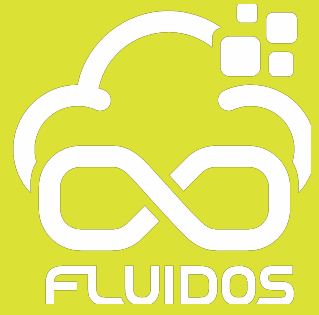




Thank you



The FLUIDOS project has received funding from the European Union's Horizon Europe Research and Innovation Programme under Grant Agreement No 101070473



Backup

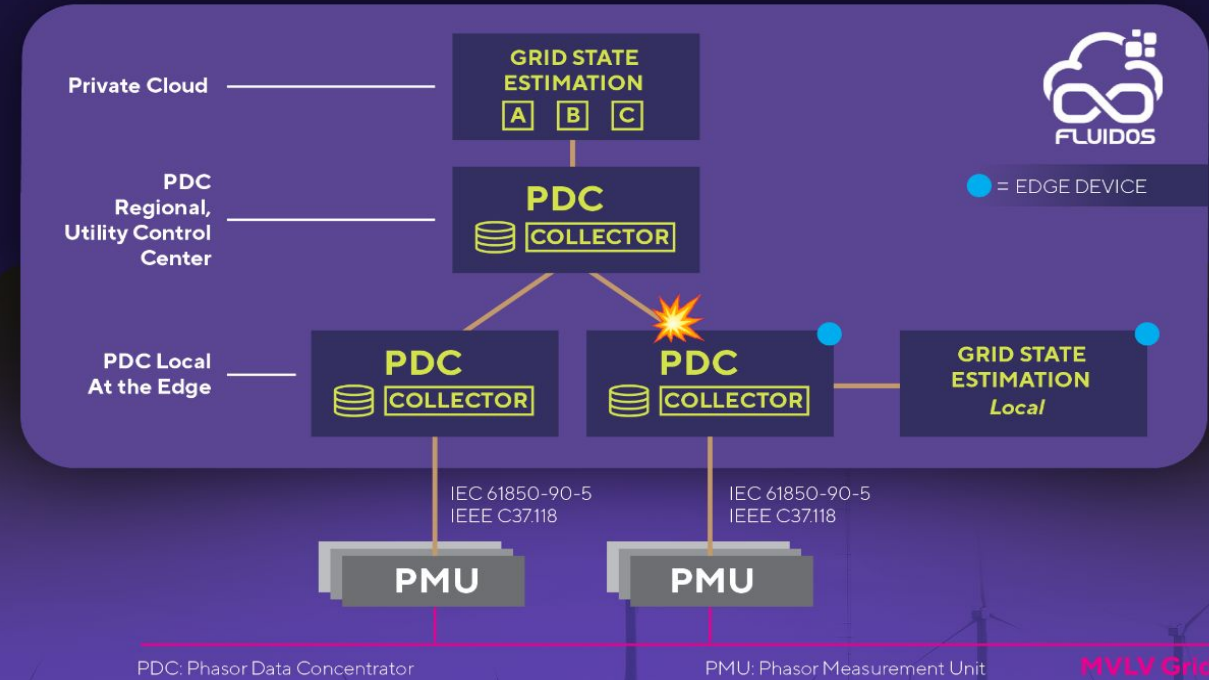


Intelligent Power Grid, RSE

EXPECTED ADVANTAGES

- **Distributed workloads in a computing continuum from cloud to edge that enhance scalability and application performance**
- **Secure migration of workload, ensuring isolation and anomaly detection capabilities**
- **Disaster recovery functionality**

ARCHITECTURE



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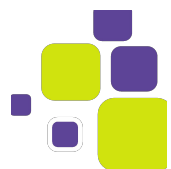
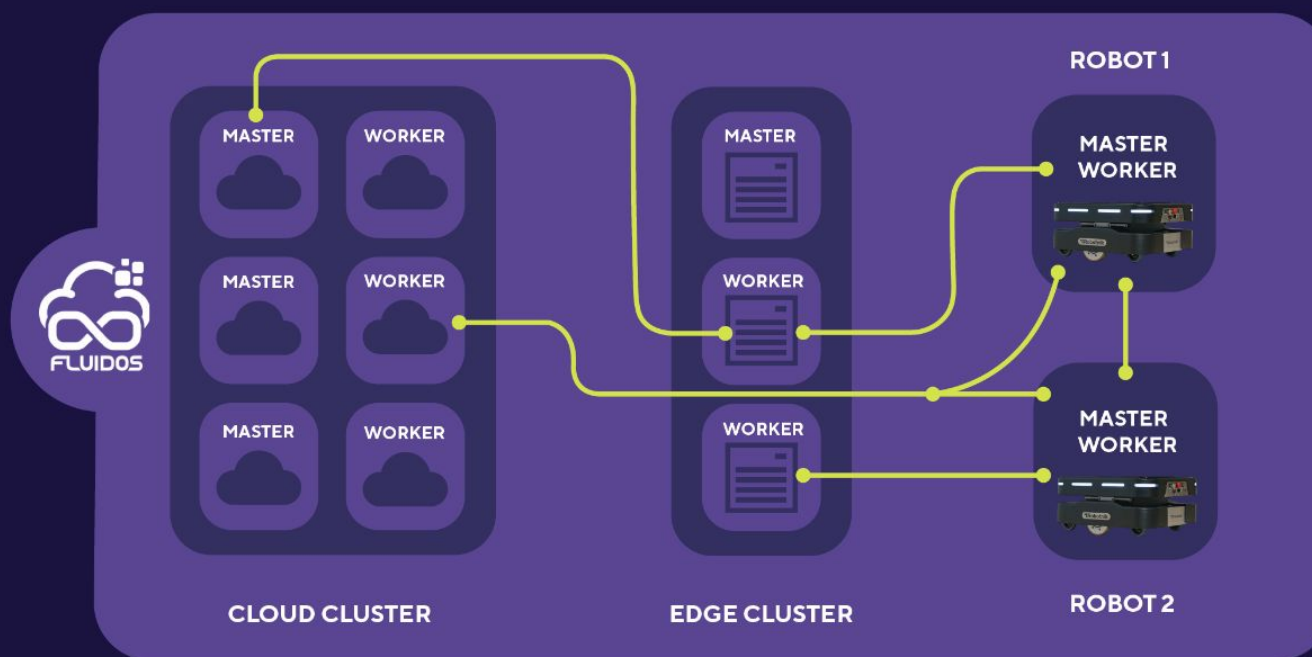


Robotic Logistics, Robotnik

EXPECTED ADVANTAGES

- Increase the productivity of robotic fleet by achieving longer runtimes and better robotic performance by offloading to higher power devices
- Homogenous management, faster deployment, better robustness and security, simpler development.
- Possibility to use the idle robot for non robotics task (more enterprise computation with no cost), Possibility to rent the unused resources.

CLOUD CONTINUUM



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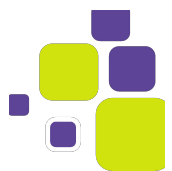
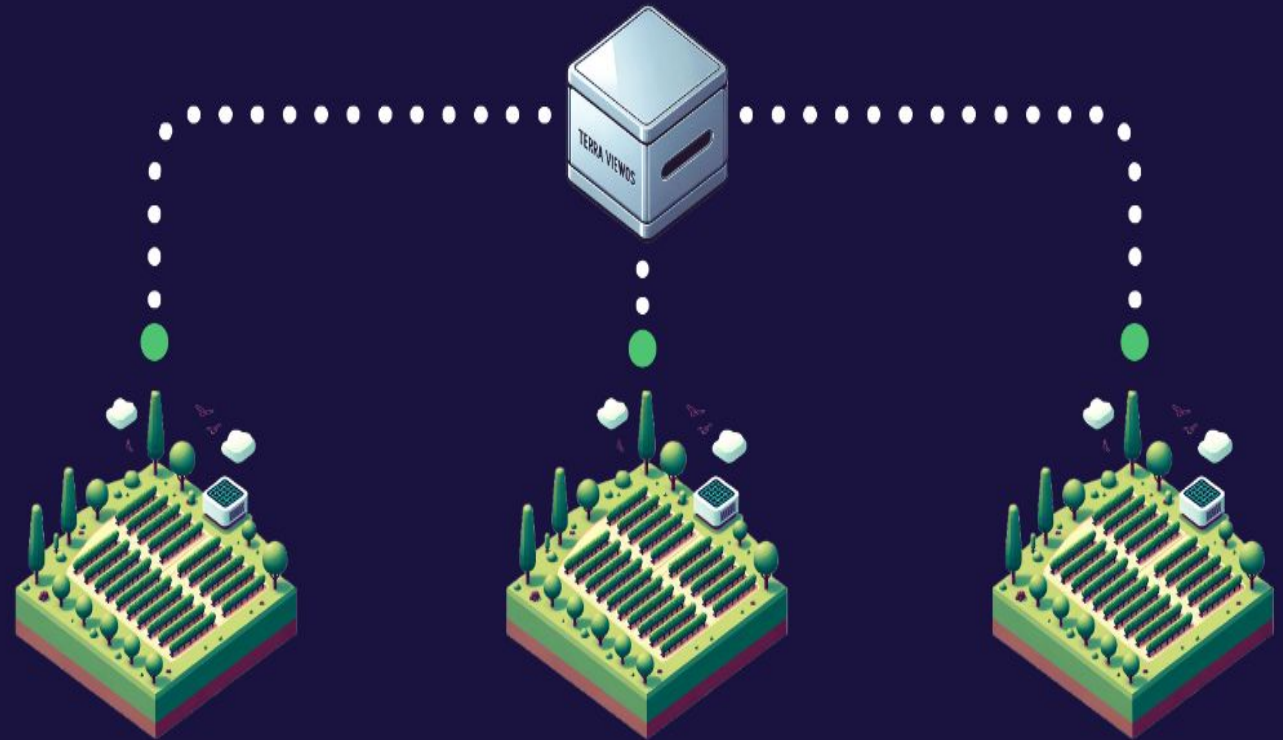
 **Robotnik**



Smart Viticulture, Terraview

EXPECTED ADVANTAGES

- **Business continuity:** adapt to network changes, operate without uplink, and replicate for failover.
- **Security:** raw data stays local, isolation and trusted execution on network.
- **Decentralisation:** local access, no central cloud, reduced network traffic, workloads at edge and core.



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terraviewOS





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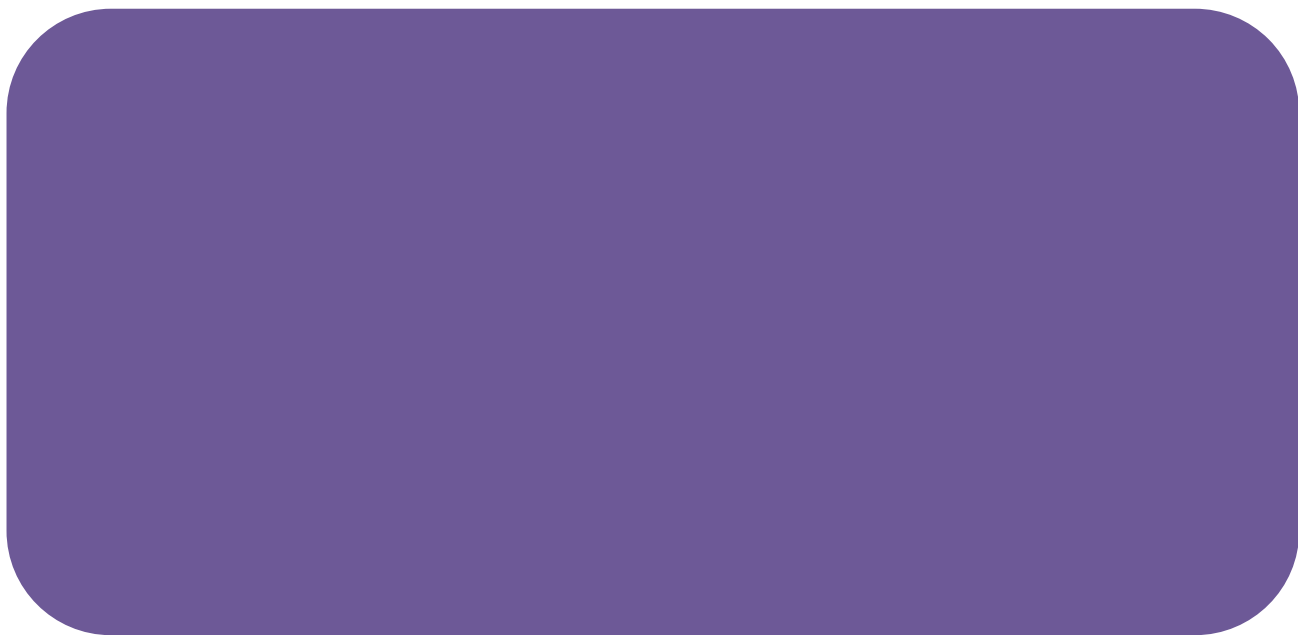






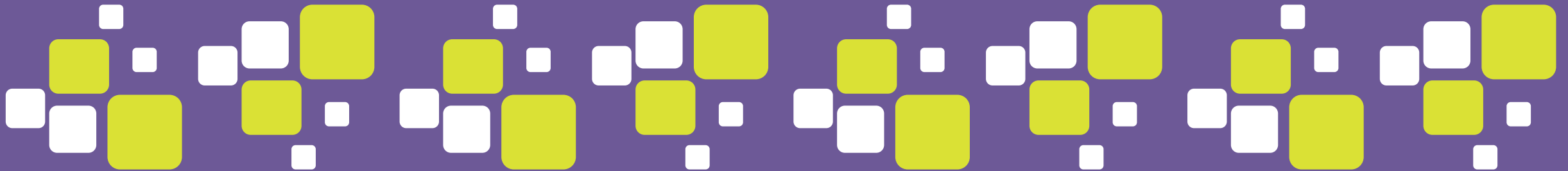


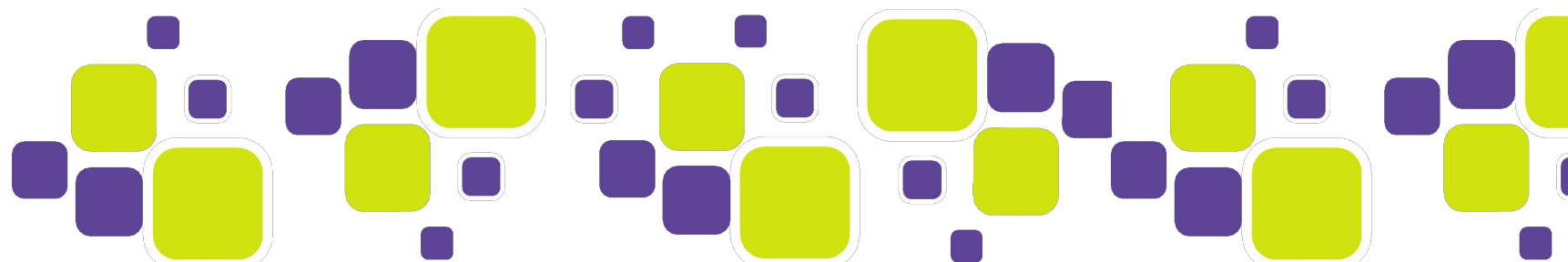














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