

Linux Foundation Edge Ecosystem and Practice

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March 29, 2023

 **THE LINUX FOUNDATION**

 **LF EDGE**

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New Premier Member

- › Welcome, Flexnode, joins LF Edge as new premier member!

Administrative

- › LF Edge Website
 - › <https://www.lfedge.org/>
- › LF Edge Slack
 - › <https://slack.lfedge.org>
- › LF Edge Wiki
 - › <https://wiki.lfedge.org/>
- › LF Edge Email lists
 - › <https://wiki.lfedge.org/>
- › LF Edge Calendar
 - › <https://lists.lfedge.org/calendar>

Amplifying Value of LF Edge: LF Edge Use Cases Progress Report

Published use cases

Using EdgeX Foundry, Open Horizon and SDO to Scale Retail Applications at Edge Locations



Build Edge Solutions with LF Edge Akraino blueprints & ETSI Multi-access Edge Computing APIs



Project Alvarium and EVE help to securely and accurately monitor the Carbon Footprint in the world's first BioGas Plant

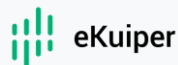


Work in progress

How Eaton uses EdgeX Foundry in its edge platform



eKuiper adoption in Industrial Edge scenarios in China



Using Open Horizon in Resilient Edge Computing - Smart agriculture in Rhineland-Palatinate



In the pipeline

Application of Fledge at Neuman Aluminium: An Industrial Use Case

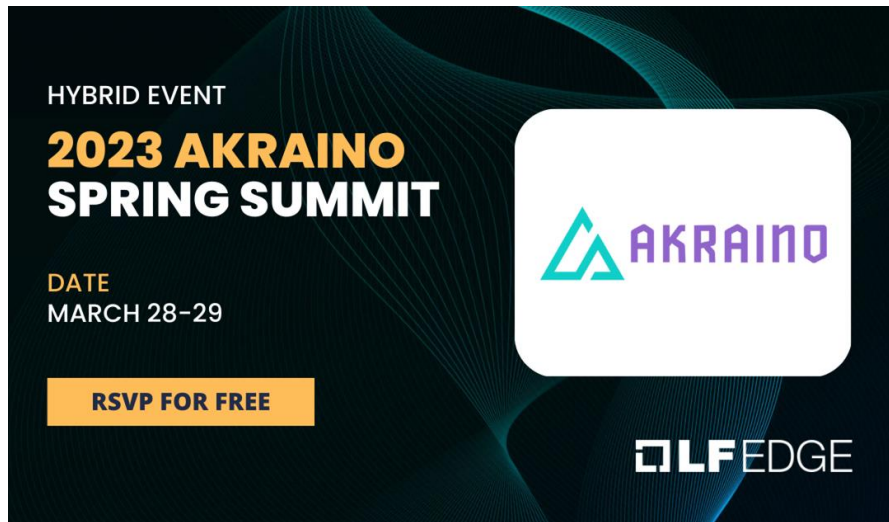


More use cases from:



2023 Akraino Spring Summit

- › Date & time:
 - › March 28-29, 9AM - 3PM PT
- › Topics:
 - › Telco
 - › Oil and gas
 - › Manufacturing
 - › Retail
 - › AI
- › Scan QR code below to register:

A promotional banner for the 2023 Akraino Spring Summit. The background is dark with teal and blue abstract wave patterns. Text on the left includes 'HYBRID EVENT', '2023 AKRAINO SPRING SUMMIT', 'DATE MARCH 28-29', and an orange 'RSVP FOR FREE' button. On the right is a white rounded rectangle containing the Akraino logo (a teal triangle) and the word 'AKRAINO' in purple. In the bottom right corner is the 'LFEDGE' logo in white.

HYBRID EVENT

**2023 AKRAINO
SPRING SUMMIT**

DATE
MARCH 28-29

RSVP FOR FREE

AKRAINO

LFEDGE

Vertical Market Adoption of End to End Open Source Software

OPEN NETWORKING, EDGE AND IOT MARKET ADOPTION



Industrial
Manufacturing



Energy (Oil,
Gas Utilities)



Commerce &
Retail



Home



Automotive



Fleet &
Transportation



Logistics



Building
Automation



Cities &
Government



Healthcare



ENTERPRISE NETWORKING

1. Private Networks 5G/LTE
2. Workloads across Multi-clouds
3. End to end visibility and monitoring



SERVICE PROVIDERS

1. Built on end to end open source 5G & edge
2. Developing countries with 5G and edge
3. Global connectivity



END USERS, GOVERNMENTS

1. Built on Open Source projects
2. Open Solutions and Blueprints
3. Unified Cloud, Enterprise, Telco

5G SUPER BLUEPRINTS BUILT ON END TO END OPEN SOURCE PROJECTS



Edge Computing and IoT in Healthcare

Edge in the early stages, but growth ahead

The healthcare IoT market is expected to reach **\$188.2 billion by 2024** (IoT in Healthcare Market report). A 2020 Dell survey found that health-care and life sciences data **grew almost 900%** over the previous two years.

This growth is driven by the **increasing demand for remote patient monitoring**, the need to **reduce healthcare costs**, and the increasing prevalence of chronic diseases.

Everywhere and anywhere healthcare

IoT is becoming increasingly important in **virtual visits**, **remote-patient monitoring**, and **consumer wearables** which creates more data than ever before.

Why open source in healthcare? Open exchange, decentralized coding collaboration and peer review.

Developers must familiarize themselves with these regulations and **ensure the flexibility** and capability to meet those **compliance requirements** now and in the future.

Medical data growth: A snapshot

10 to 15

connected devices are in use per US hospital bed.

3 million

data points are generated by the average clinical trial.

30%

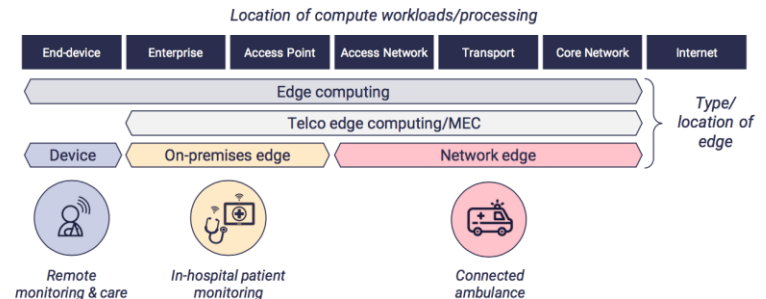
of all global stored data is from health care and life sciences.

75%

of data will be generated at the edge by 2025.

Source: Dell Technologies' Infographic "Edge and IoT Solutions"

Edge use cases in Healthcare



Edge Computing and IoT in Agriculture

Current trend

The global market for **precision farming (which includes IoT and edge computing)** is expected to grow from USD 7.0 billion in 2020 to **USD 12.9 billion by 2025**, at a CAGR of 12.9%. This growth is driven by the **increasing demand for food** and the **need to improve crop productivity and efficiency**.

How LF Edge plays a key role

- › Rhineland-Palatinate in Germany uses **Open Horizon** in Resilient Edge Computing and smart agriculture
- › Project **Alvarium** and **EVE** help to securely and accurately monitor the Carbon Footprint in the world's first BioGas Plant
- › UC Davis and Opus One using **Fledge** to produce world class wine in safer conditions

Importance of Edge Computing in Agriculture

- Why Agriculture as Use Case?
- Importance of Resilience in critical infrastructures means also digital infrastructure
- Agriculture as an innovative sector depends much on centralized digital infrastructure, is therefore strongly dependent
- Resilient Edge Computing (REC) focuses on the resilience and reliability of agricultural production.
- At the operational level, this can be linked with public geographic information and private sector production data using GeoBox tools
- Reduce risks and maximize resilience

Resilience in digital agriculture through resilient smart farming (RSF)

Maintaining resilience of food stocks and supply chains is a growing concern

Digital systems ...

- Use of regional sensor data in Smart Farming improves knowledge base for decision making IoT and local data use will increase

Moments of crisis ...

- Agriculture is a fundamental element of the critical infrastructure (KRITIS)

Therefore

- Decentralized data storage through the "offline-first"-Principle
- Open Source technology is the key

Origin of important data in digital agriculture

2022 Year in Review Highlights

 **70K**
Press Clip Mentions

 **5**
Press Releases

 **215K**
Twitter Impressions


 **2.5B**
Potential Aggregated Reach

 **10**
Media/Analyst Reach

TOP QUOTES

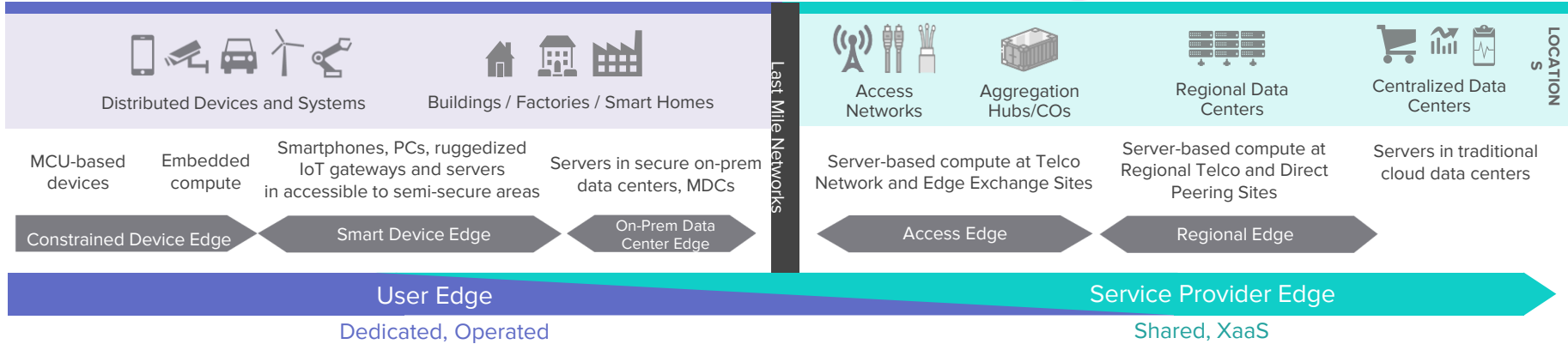
“Edge computing has increasingly become a priority for a growing number of organizations... the LF Edge arm of the Linux Foundation expects edge spending to jump to \$800 billion by 2028.”

— TARYN PLUMB, VENTUREBEAT

	
2022 YEAR IN REVIEW	
Executive Summary.....	
Technical Community Metrics	
Update from the LF Edge Board.....	
LF Edge Governing Board.....	
LF Edge Members.....	
Premier Members	
General Members	
Associate Members.....	
General Manager Update.....	
Technical Advisory Council Updates.....	
LF Edge Project Updates.....	
Update from the LF Edge Outreach Committee	
Major Project Publications	
Industry Impact.....	

Annual report goes **live at the end of January!**

LF Edge Projects



Thank You



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