

ODVA 24th Annual Meeting & General Session

October 22, 2026

Agenda

- Call to Order
- 24th Term in Review (Al Beydoun, Joakim Wiberg)
- EtherNet/IP over Ethernet-APL Plastics Plant Case Study
  - Pat Koenig, Product Manager, VEGA Americas, Inc.
- Introduction to Candidates for Election by the Regular Membership
- Election and Break
- EtherNet/IP Salmon Farm and Wastewater Treatment Plant Case Study
  - Christian Seiler, Product Manager, Digital Communication, AUMA
- A Data Center's Motivation for IPv6
  - Joe LeBeau – Lead Controls Engineer, Data Center Infrastructure, Meta
- Looking Ahead to the 25th Term
- Adjourn

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24Th Term in Review

- Organizational Leadership
- Membership and Licensed Vendors Growth & Engagement
- Technology and Specification Development
- Conformance and Certification
- Brand Strategy and Communications
- Industry Engagement and Events

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2026 ODVA Industry Conference and Annual Meeting

Organizational Leadership

Our People. Our Strength

- Board of Directors
- Technical Review Board
- Market Advisory Committee
- TAGs/SIGs
- Vendor Community /Volunteers
- ODVA staff

ODVA's strength lies in the people who lead, contribute, and collaborate to advance our technologies and strengthen our ecosystem.

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Board of Directors in the 24th Term



Mr. Jon DeSouza
HARTING



Mr. Franz Durmeier
Endress+Hauser



Mr. Davis Mathews
Phoenix Contact



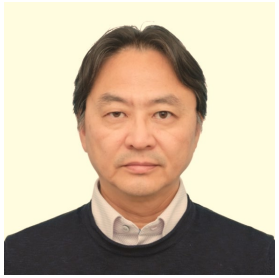
Mr. Scott Miller
Rockwell Automation



Mr. Thomas Petersen
Danfoss



Mr. Brian Reynolds
Honeywell



Mr. Toshiyuki Shigehisa
OMRON



Mr. André Uhl
Schneider Electric

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Technical Review Board in the 24th Term

- Mr. Joakim Wiberg, Chair, ODVA (ex-officio)
- Mr. Raj Bandekar, Honeywell
- Mr. Torben Bertelsen, Danfoss
- Mr. Lucas Knapp, HARTING
- Mr. Arulkumar Karuppanagounder, Schneider Electric
- Mr. Gregory Majcher, Rockwell Automation
- Mr. Kai Michel, Hilscher
- Mr. Toshiyuki Ozaki, OMRON
- Mr. Jörg Reinkensmeier, Endress+Hauser
- Dr. Al Beydoun, ODVA (ex-officio)

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Market Advisory Committee in the 24th Term

- Dr. Vivek Hajarnavis, Chair, Rockwell Automation
- Mr. Magnus Jansson, HMS Networks
- Mr. Asahi Matsui, OMRON
- Mr. Arnold Offner, Phoenix Contact
- Ms. Adriana Vargas, Honeywell
- Ms. Tonya Wyatt, Micro Motion (Emerson)
- Ms. Feiyan Zhao, Schneider Electric
- Ms. Nadja Rauscher, Endress+Hauser
- Dr. Al Beydoun, ODVA (ex-officio)
- Mr. Steve Fales, ODVA (ex-officio)

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Membership and Licensed Vendors Growth & Engagement

Goal: To make it easier for vendors to participate in the ODVA Community / EtherNet/IP ecosystem and to develop EtherNet/IP Products

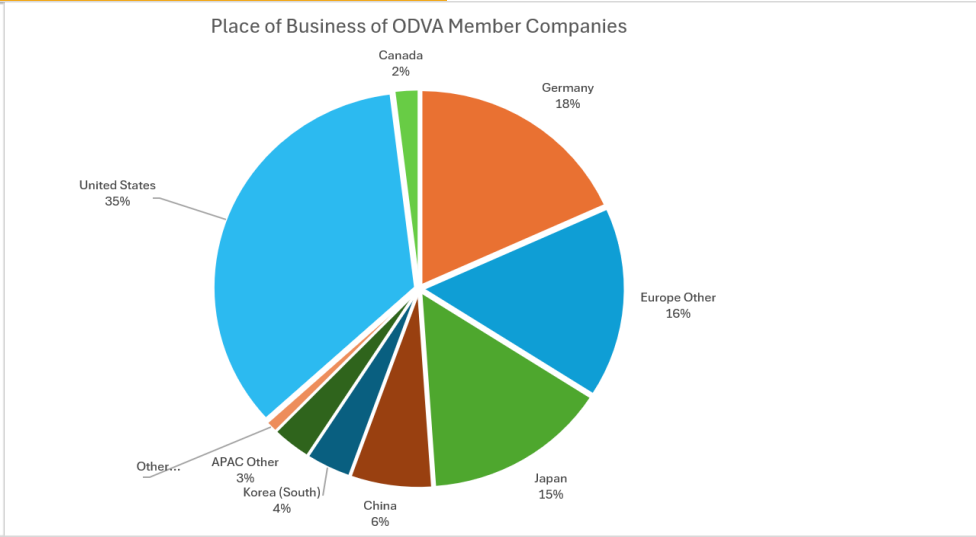
- A look at Membership and Licensed Vendors Growth
- Global footprint for conformance testing
- Providing education and support to vendors
- PlugFest events to ensure that products implementing EtherNet/IP work together as intended in a multi-vendor environment
- Marketplace to showcase vendor products
- EtherNet/IP Open Source Stack Initiative: Re-stablish OpENer as a community-supported EtherNet/IP stack for developer education and prototyping
  - Engaging with 4 key stack providers/partners for support: HMS, Hilscher, Pyramid Solutions, and RTA.
- New ODVA Portal to be launched soon

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Membership

ODVA continue to add new members from around the world

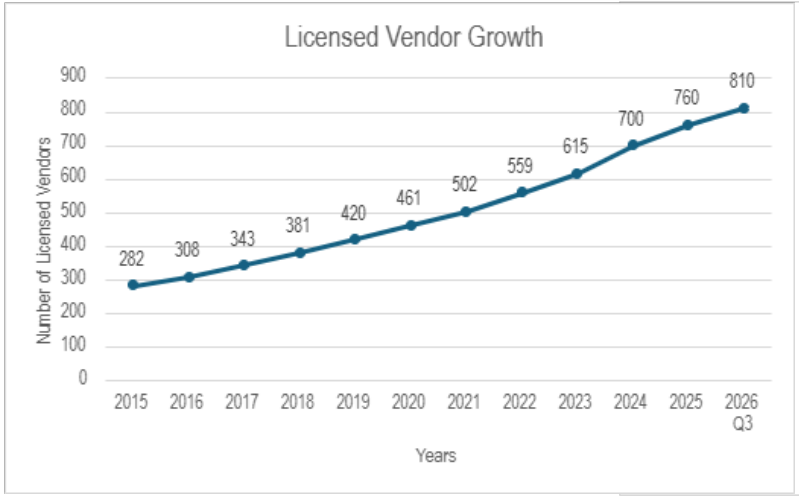


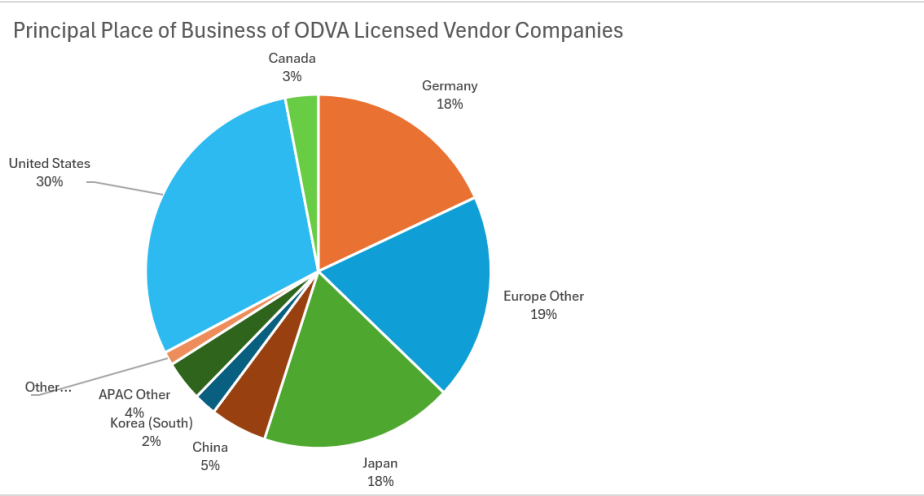


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Licensed Vendors

New Milestone has been reached: 800+ Licensed Vendors





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Training

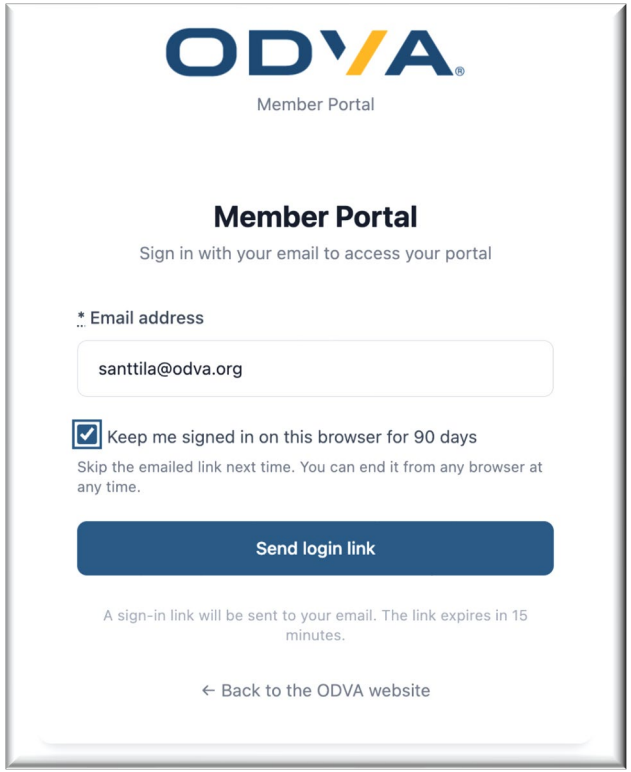
To provide education to vendors around the world, ODVA held several online training courses

Thanks to our ODVA Designated Trainers for their hard work!

Training Registrations	Live Virtual Session 3/1/2026	Live Virtual Session 9/1/2026	On-Demand Training on odva.org	Live In-Person Session 11/1/2026	Total
CIP Security	92	46	5	-	143
CIP Safety	53	35	10	-	98
Quick Start for EtherNet/IP	61	50	3	-	114
NEW EtherNet/IP Hands-On Training	-	-		10	10
Total					365

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New ODVA Member Portal

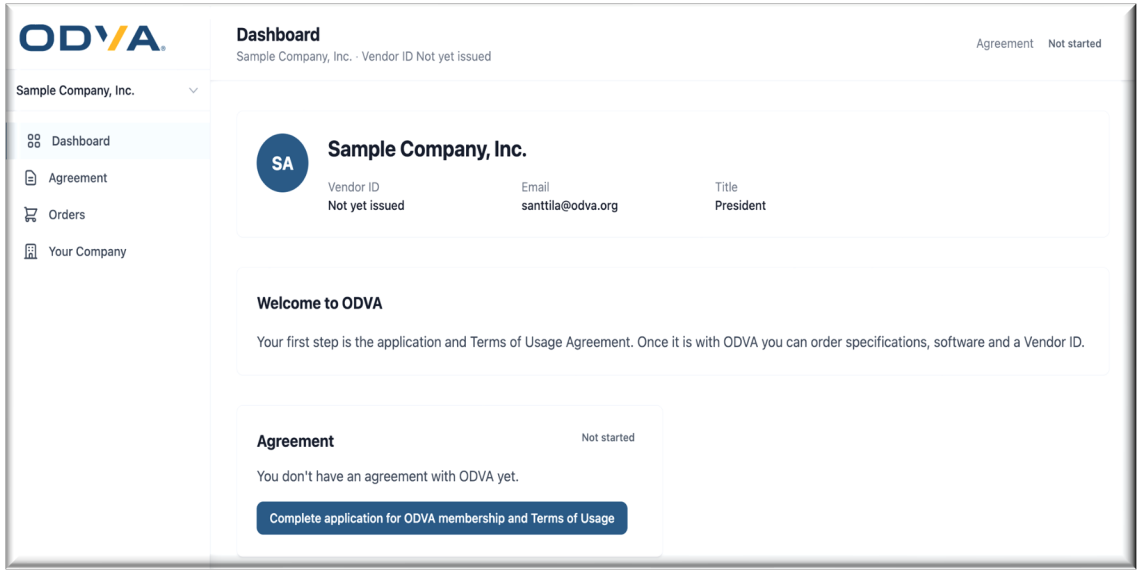


One Connected ODVA Experience

User validation through existing ODVA database information – Not another Login

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Portal directs you to complete the Agreement



Combined Membership and TOU Agreement



ODVA

ODVA APPLICATION AND AGREEMENT FOR MEMBERSHIP AND TERMS OF USAGE

INITIALS OF AUTHORIZED REPRESENTATIVE: SLA DATE: 10/13/2026

ODVA's Application and Agreement for Membership and Terms of Usage, including all Exhibits and Schedules, (collectively, the "Agreement") is a foundational document behind ODVA's large and vibrant community of adopters. It includes a license agreement between ODVA and each entity that is licensed by ODVA to make and sell products using ODVA technologies (an "Entity"). This Agreement defines Entity's responsibilities and rights in connection with use of the licensed ODVA technologies and, if applicable, membership in ODVA. Entity is licensed to use only those ODVA technologies listed and selected by it in Section 3 of this Agreement. Unless otherwise defined herein, capitalized terms used in this Agreement shall have the meanings set forth in Schedule A attached hereto.

1. ENTITY INFORMATION

Entity shall at all times be an entity, (i.e., corporation, limited liability company) and not an individual.
All information must be completed.

A. Company Name (Public-Facing).

Sample Company, Inc.
BUSINESS NAME/TRADENAME OF ENTITY TO BE DISPLAYED AT WWW.ODVA.ORG AND OTHER PUBLIC LISTS OF ODVA

www.samplecompany.com
PRIMARY WEB SITE ADDRESS FOR THIS BUSINESS

www.samplecompany.com/sensors
URL OF BUSINESS MOST CLOSELY RELATED TO ODVA TECHNOLOGIES

B. Corporate Legal Name of Entity.

Sample Company, Inc.
CORPORATE LEGAL NAME, AS FILED WITH ENTITY'S ARTICLES OF INCORPORATION, CERTIFICATE OF FORMATION, OR OTHER GOVERNING CORPORATE DOCUMENTS

Rua da Torre d'Água
STREET ADDRESS

Vilamoura | n/a | 8125-615
CITY | STATE/PROVINCE | ZIP/POST CODE

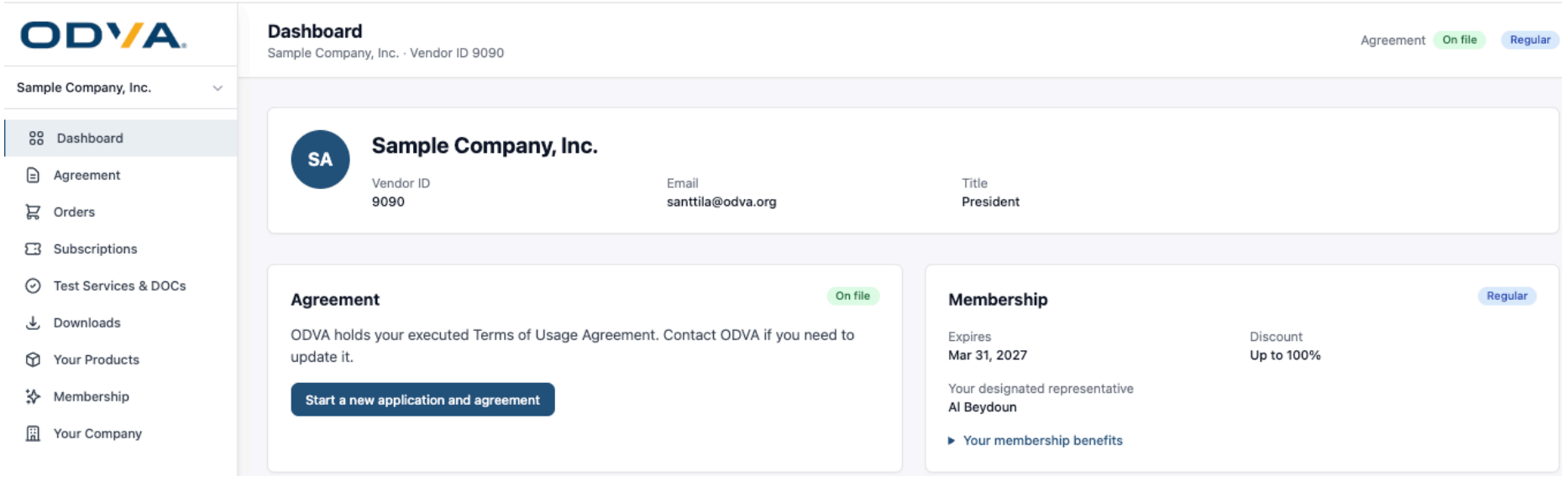
Portugal | 55 555 5555 5555
COUNTRY | TELEPHONE

www.samplecompany.org | Lisbon, Portugal
WEB SITE | LOCATION OF INCORPORATION OR ESTABLISHMENT (CITY, STATE/PROVINCE, COUNTRY)

This feature is already in use by ODVA Staff

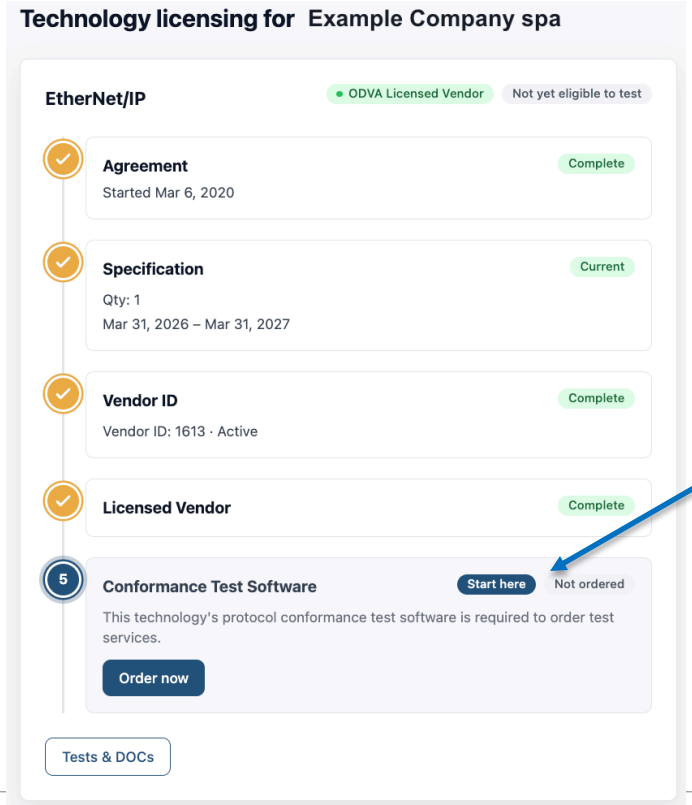
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Your Company's Status with ODVA



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Interactive Workflow That Guides Vendors to Their Next Step

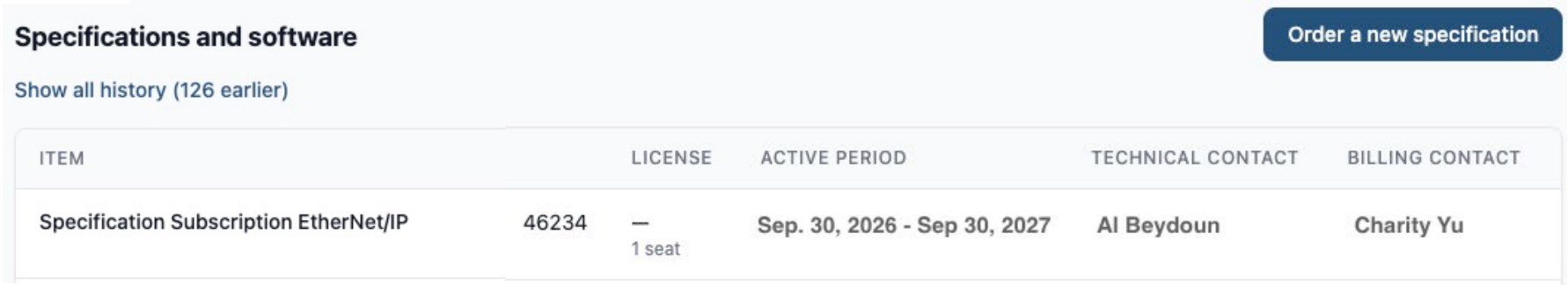


- Portal shows status as a licensed vendor with Agreement, current Spec, and Vendor ID
- In this example, CT Software is the next step for this vendor – required before they can order test services.

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Who Holds which Subscription Licenses?

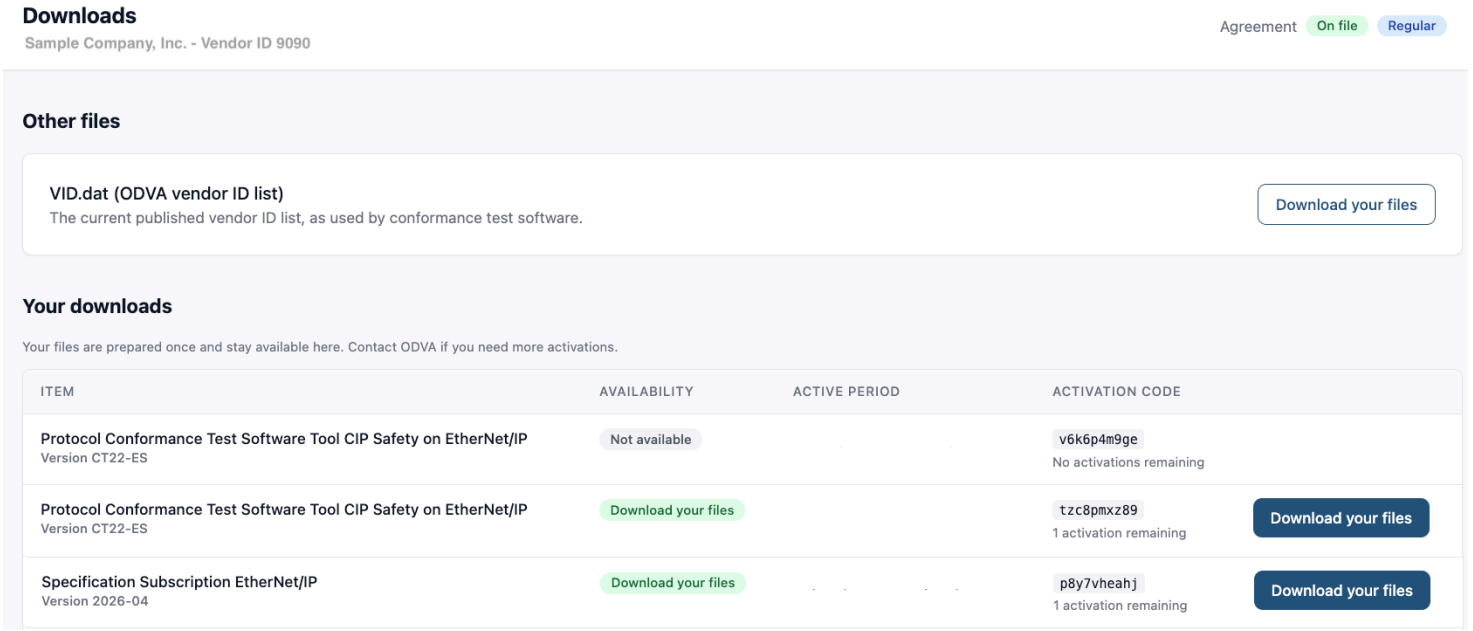
The Member Portal's **Subscriptions** view shows ***all*** current and past license holders



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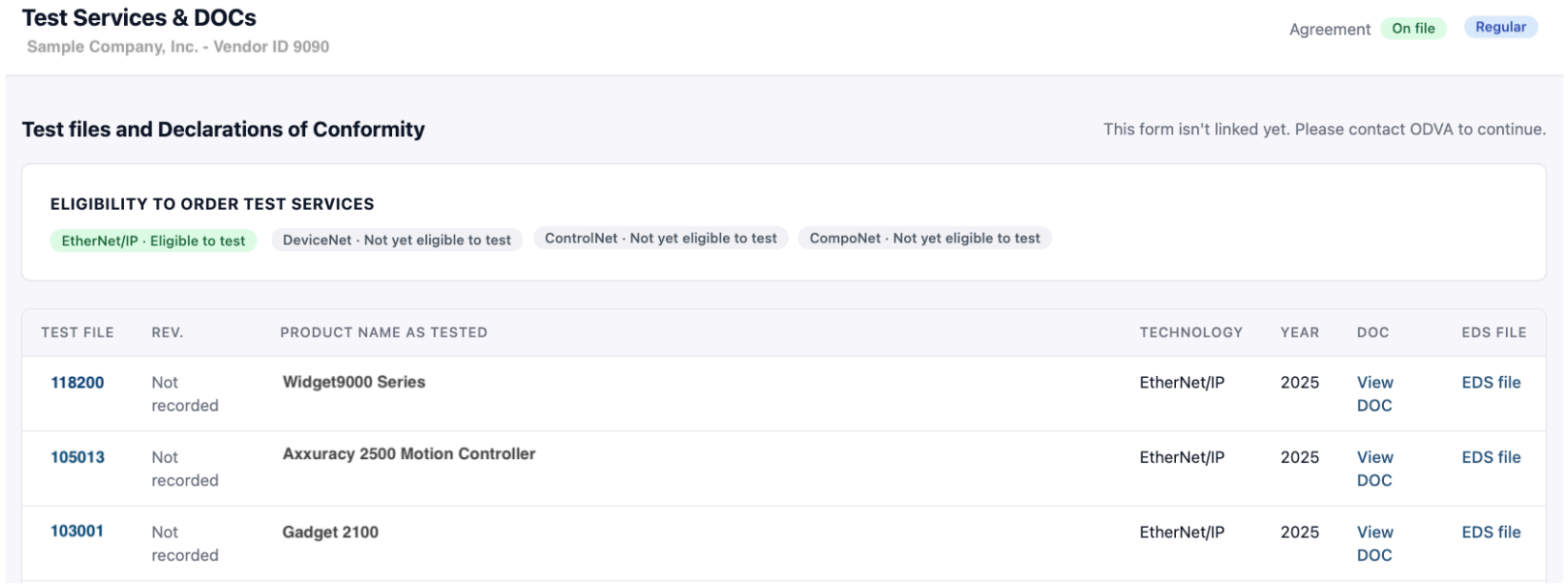
Can I Access My Downloads?

The Member Portal's **Downloads** page shows ***all*** versions licensed to your company - download the licenses ***you*** hold.



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Manage Conformance test services directly from the Portal



Test Services & DOCs

Sample Company, Inc. - Vendor ID 9090

Agreement On file Regular

Test files and Declarations of Conformity

This form isn't linked yet. Please contact ODVA to continue.

ELIGIBILITY TO ORDER TEST SERVICES

EtherNet/IP · Eligible to test | DeviceNet · Not yet eligible to test | ControlNet · Not yet eligible to test | CompoNet · Not yet eligible to test

TEST FILE	REV.	PRODUCT NAME AS TESTED	TECHNOLOGY	YEAR	DOC	EDS FILE
118200	Not recorded	Widget9000 Series	EtherNet/IP	2025	View DOC	EDS file
105013	Not recorded	Axxuracy 2500 Motion Controller	EtherNet/IP	2025	View DOC	EDS file
103001	Not recorded	Gadget 2100	EtherNet/IP	2025	View DOC	EDS file

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Industry Conference and Annual Meeting

Technology and Specification Development

CIP SECURITY EARNS IEC 62443-4-2 CERTIFICATION (TÜV Rheinland)

- CIP Security meets the requirements of IEC 62443-4-2 at Security Level Capability 3 (SL-C 3)
- Simplifies the process for product manufacturers to achieve their own IEC 62443-4-2 certification
- Satisfies core technical and secure-by-design EU CRA requirements related to confidentiality, integrity, and authentication



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GB/T Standard Completed and Published in China

- GB/T project to translate IEC 61158 is completed
- It is approved and published as a Group Standard by China Machinery Industry Standardization Technology Association (CMIA)
- It is approved and published by National Standardization Administration Committee (SAC)



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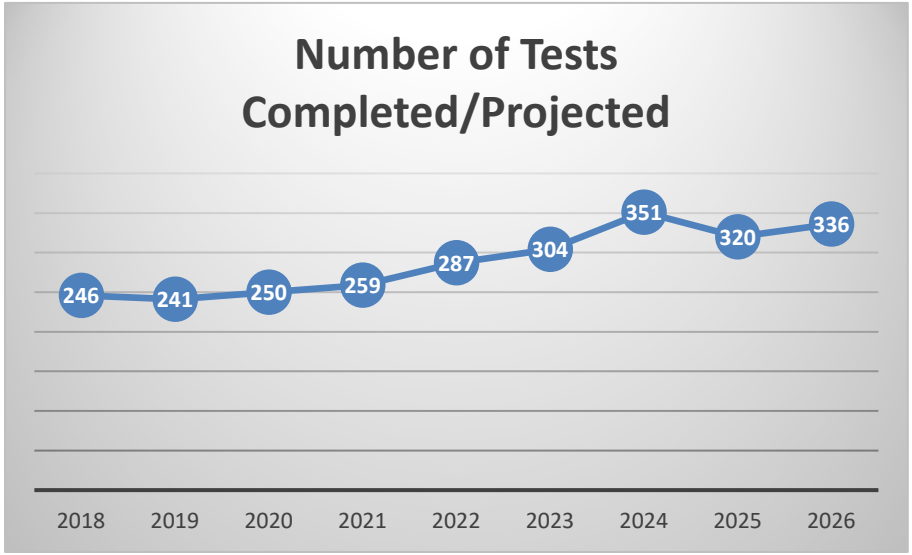
Conformance and Certifications

Conformance and Certification

Standards are only valuable when products actually work together

ODVA's conformance program is what turns specifications into an interoperable ecosystem:

- Industry-Recognized Conformance Testing and Quality Assurance
- Conformance testing suite that is updated for the latest specifications
- Expanded Test Automation
- CT23 was just released!!!



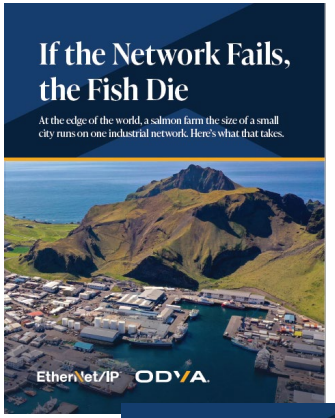
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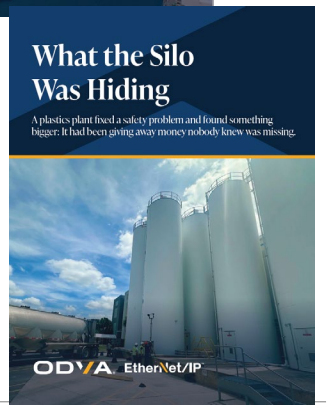
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Brand Strategy and Communications

We have excellent technology, and we need to communicate its value clearly to the market.

- Elevate the EtherNet/IP Brand: Increase the prominence of EtherNet/IP relative to the ODVA brand in external marketing and communications
- Strengthen Messaging & Positioning: Deploy the EtherNet/IP / ODVA Brand Communication Guide to establish consistent messaging, terminology, and visual identity
- Demonstrate Real-World Value: Develop and promote case studies and end-user success stories showing EtherNet/IP applications and benefits
- Amplify the Reach: Improve website searchability and Search Engine Optimization (SEO) so EtherNet/IP content, applications, and technical resources are easier to find





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Industry Engagement and Events

Industry Engagement and Events

- Participation in trade shows globally supported by the regional TAG activities in Japan, China, and Korea.
- Collaboration with relevant industry organizations
  - Security
  - Device Integration
  - Information Models
  - APL/SPE
  - Energy Consumption
- Media events and publications of technical papers
- Social media - LinkedIn

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HANNOVER MESSE 2026

- Live EtherNet/IP In-Cabinet, Ethernet-APL, CIP Security, and 5G demonstrations
- Showcased CIP Security readiness for CRA with new white paper
- Joint ISHG press briefing highlighting:
  - “Secure Deployment of Industrial Communication Protocols: A Risk-Based Approach."







JOINT ETHERNET-APL ROADSHOW



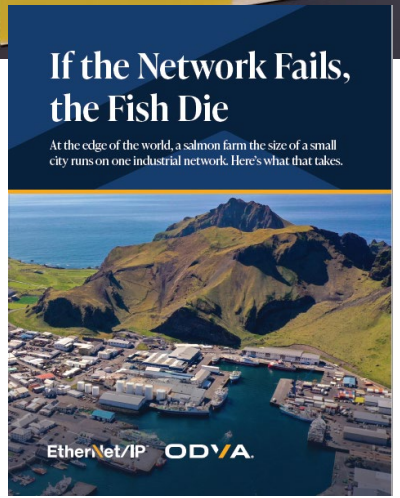
- August 25th in Raleigh, North Carolina, USA
  - 50 Attendees; 15 End Users
  - Life Science Focus
- September 24th in Calgary, Alberta, Canada
  - 67 Attendees; 23 End Users
  - Heavy Industry Focus
- Consistent question themes:
  - Implementation (topology, wiring, speed, data, and cost)
  - Security & safety

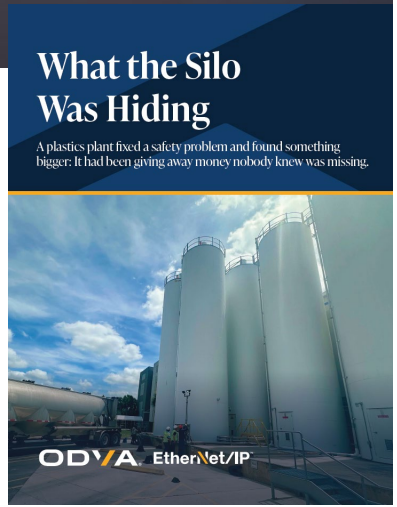
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AUTOMATION FAIR 2026 – Booth 1715

- CIP Security 62443-4-2 SL-C 3 Certification will be promoted including new technical paper
- NEW Live 10BASE-T1L, PoDL SPE Demonstration with Rockwell, Weidmueller, and Endress+Hauser
- Introducing Salmon Fish Farm & Wastewater + Ethernet-APL Plastics Plant Case Studies







SPS 2026 – Hall 5 Booth 128

- Demonstrating EtherNet/IP In-Cabinet, Ethernet-APL, CIP Security, and 5G
  - NEW Live 10BASE-T1L, PoDL SPE Demonstration with Rockwell, Weidmueller, and Endress+Hauser
- Member Panels from Rockwell Automation, Schneider Electric, & Endress+Hauser
- Sharing Case Studies & CIP Security 62443-4-2 SL-C 3 Certification Technical Paper



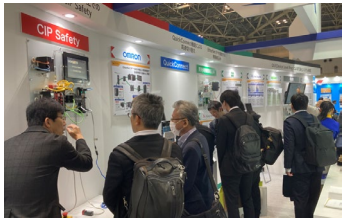
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TAG Japan Activities During Past Term

We reached approximately 2,000 people in several ways

Exhibition

IIFES2025(Dec 2025)







Joint booth with APL

Industrial open network exhibition



Tokyo, Osaka, Nagoya



CIP technology is introduced at several booth

Seminar

6 seminars(for user and vendor)

Seminar



ODVA Demo



Mini Exhibition



Added
CIP Safety lecture
CIP Security lecture

Other Activity

Publishing Email newsletter every month
Mailing list reached 5,436 accounts

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China Activities During Past Term



May 2025
NanJin City

June 2025
ChongQin





July 2025
Xi'An City

Nov 2025
HangZhou





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TAG China Activities During Past Term







September 2025

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Participation at AWMS 2026-Korea



AMWS 2026
Autonomous Manufacturing World Show

- Co-orgnazion: Korea Institute for Robot Industry Advancement, Korea Autonomous Manufacturing Platform Association, Seoul Technopark, Busan Technopark, Daejeon Technopark, Gyeongnam Technopark, Jeonnam Technopark, Chungbuk Technopark, FA Journal Autonomous Manufacturing, Industry News, InTV
- Sponsor: Ministry of SMEs and Startups, Korea Smart Manufacturing Office
- Date: April 27(Mon), 2026 | 09:00 - 17:30
- Place: Grand Ballroom (1F), COEX, Samseong-dong, Seoul
- Admission Fee: Free
- Event Features
  - ▷ Hosting of 20+ specialized conferences with 6 topics and 50+ domestic and international companies/Institutions
  - ▷ Exhibition and demonstration of excellent 2026 Smart Factory and Autonomous Manufacturing Solutions/Products
  - ▷ Introduction of verified case studies for building autonomous manufacturing systems and solutions, and hosting of buyer consultation meetings
  - ▷ Operation of a consultation desk for information sharing and financial support for autonomous manufacturing suppliers and demand enterprises
  - ▷ Over 3,000 estimated attendees from personnel related to manufacturing and production facilities

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Update on ODVA Technical Activities

Joakim Wiberg, Director of Technology

Technical Review Board (TRB)

- CTO/Chair, Joakim Wiberg, ODVA (ex-officio)
- Raj Bandekar, Honeywell (Replaced with Rizwan Mohammed in 25th Term)
- Jörg Reinkensmeier, Endress+Hauser
- Arulkumar Karuppanagounder, Schneider Electric
- Gregory Majcher, Rockwell Automation
- Toshiyuki Ozaki, OMRON Corporation
- Lucas Knapp, HARTING
- Torben Bertelsen, Danfoss Drives (Regular Member Elected)
- Kai Michel, Hilscher (Regular Member Elected)
- Al Beydoun, ODVA (ex-officio)

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Active Special Interest Groups

SIG	Chair(s)
CIP System Architecture	Darren Klug, Rockwell Automation
EtherNet/IP System Architecture	Brian Batke & Jack Visoky, Rockwell Automation
EtherNet/IP Physical Layer	David Brandt, Rockwell Automation
CIP Safety	Arun Guru, Rockwell Automation
Distributed Motion & Time Synchronization	Todd Wiese, Rockwell Automation
Common Industrial Cloud Interface	Gregory Majcher, Rockwell Automation
EtherNet/IP in Process Industries	Marc Baret, ODVA
Conformance	Cory Conger, ODVA

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SIG/TRB Work Summary

- 60 Specification Enhancements (SEs) and TDEs approved (up from 53 in 2025)
- Publication cycles: 1 completed in April and 1 planned for November

- 17 specification volume revisions (up from 12 in 2025)

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EDS Enhancements

- Why it matters
  - Faster, more reliable commissioning of EtherNet/IP systems
  - Fewer EDS issues reaching customers, so lower support cost for vendors
  - Maintain EtherNet/IP device integration competitive with other networks

- Accomplished
  - Defined minimum EDS requirements for devices and configuration tools
  - Added conformance testing of EDS files

- Next
  - Strengthen EDS security
  - Define metadata for modern engineering workflows
  - Add conformance testing for configuration tools
  - Phase 2 Initiatives
    - Identify and prioritise remaining EDS gaps
    - Make EDS files easier to access – EDS repository for conformant devices
    - Participation to the FDI/FDT unified integration effort so it meets EtherNet/IP needs

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Cybersecurity

- Why it matters
  - Ensures EtherNet/IP remains a leading choice for secure industrial networking
  - Supports member compliance with the EU Cyber Resilience Act (CRA)
  - Vendors can build on ODVA's certification for their own IEC 62443 product certification
  - Secure by design: minimizes the need for compensating security measures

- Accomplished
  - CIP Security certified to IEC 62443-4-2, Security Level 3
  - Established ODVA vulnerability handling process

- Next
  - Add TLS 1.3 support to CIP Security (current industry best practice)
  - Secure time synchronisation (IEEE 1588), which protects motion and time-critical applications

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SRCI

- Why it matters
  - A standard approach for PLCs to program and control robots from any manufacturer
  - Less robot-specific programming and training for end users
  - Ensures EtherNet/IP users have the same robot integration as PROFINET users
  - Lower cost for robot manufacturers to support one interface across networks

- Accomplished
  - Agreement signed with PROFIBUS & PROFINET International (PI) to use SRCI with EtherNet/IP

- Next
  - Technical paper on mapping SRCI to EtherNet/IP to be presented at the 2026 Industry Conference
  - Engage more robot manufacturers
  - Begin specification development

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IPv6

- Why it matters
  - Prepares EtherNet/IP for IT/OT convergence as enterprise and government networks move to IPv6
  - Aligns with IPv6 mandates, e.g. the US federal government's move to IPv6-only networks
  - Keeps EtherNet/IP future-proof and competitive
  - Native fit with cellular/5G and cloud networks, which are IPv6-first

- Accomplished
  - First specification enhancements submitted to the TRB
  - Initial prototyping with two active members and several observers, which has built confidence in the concepts
  - Paper presented at the 2026 Industry Conference: progress, remaining work, and impact on CIP Safety

- Next
  - Develop the remaining specification enhancements
  - Second prototyping round in early 2027 with more participants

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EtherNet/IP over Ethernet-APL Plastics Plant Case Study

Pat Koenig, Product Manager, VEGA Americas, Inc.



What the Silo Was Hiding

A plastics plant fixed a safety problem and found something bigger: It had been giving away money nobody knew was missing.

VEGA | ODVA EtherNet/IP



Orlando, Florida

Six silos. 55 feet tall. Hundreds of thousands of pounds of plastic resin.



50 rungs, straight up.

One question the gauge couldn’t answer:

How full is the silo, really?

VEGA | ODVA EtherNet/IP



Fast to fill. Hard to stop.

Trucks blow pellets in under pressure.

The gauge that said when to stop was the one nobody trusted.

VEGA | ODVA EtherNet/IP


EtherNet/IP everywhere.
Except the silos.
4–20 mA : a two-wire analog signal that carried almost no usable information.

“Without a reliable way to know what a silo actually held, or how much room was really left in it, mistakes multiplied downstream.”



“All of the above.”

Pat Koenig, Product Manager,
VEGA Americas, Inc.

Engineer of Technical Solutions

At VEGA since 2006.

VEGA | ODVA EtherNet/IP



Read the pile without touching it.

A non-contact radar sensor on top of each silo.

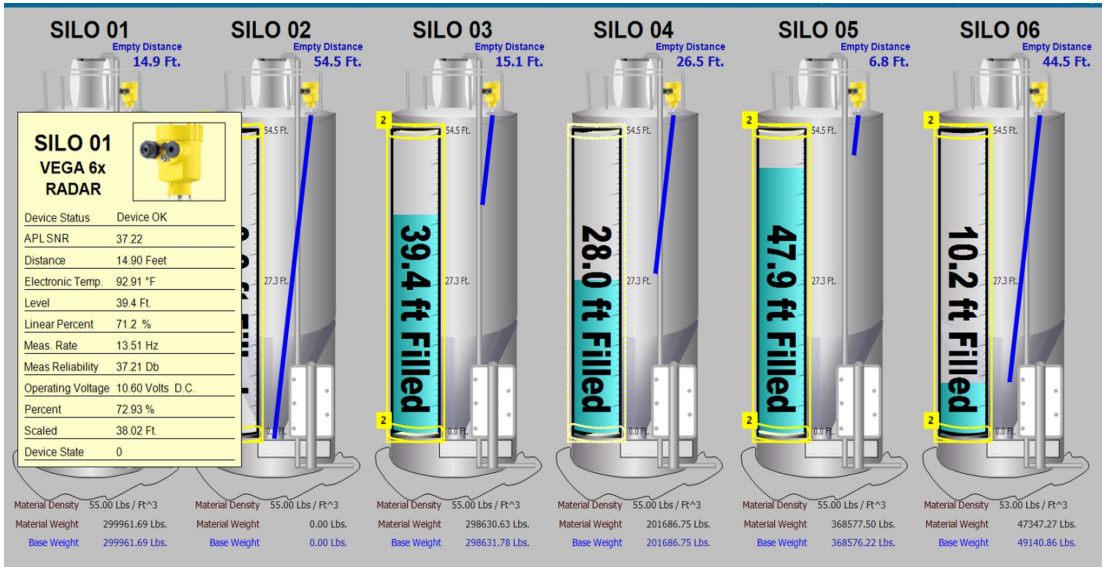
From one signal to dozens.

BEFORE

A single current, translated into an inaccurate fill percentage.

AFTER

Fill level, device temperature, measurement reliability, operating voltage, diagnostic health, and much more.



VEGA | ODVA EtherNet/IP

One cable, two jobs.

1

EtherNet/IP Controller

Runs the plant's automation logic and receives sensor data



2

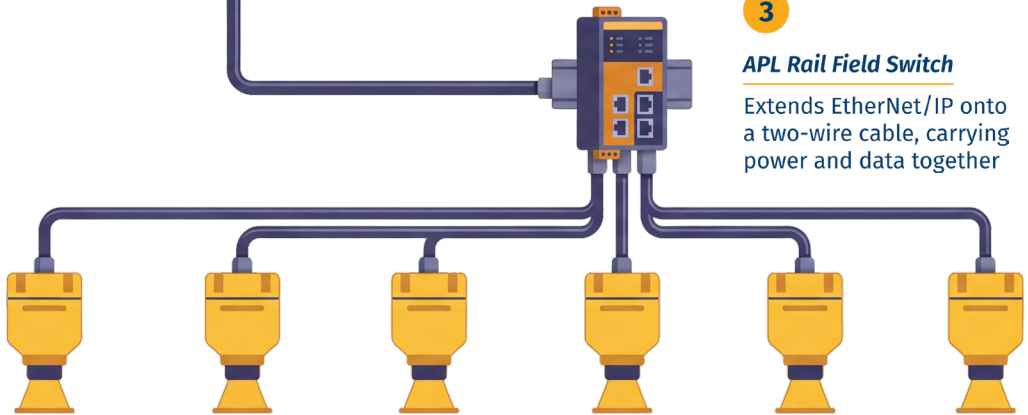
Switch

Carries EtherNet/IP data on the standard network

3

APL Rail Field Switch

Extends EtherNet/IP onto a two-wire cable, carrying power and data together



4

Ethernet-APL Sensors (6 units)

Read silo fill level and send full EtherNet/IP data back over the two-wire cable (no gateway required)

Ethernet-APL: Advanced Physical Layer. EtherNet/IP data and power on two wires. VEGA | ODVA EtherNet/IP

“Now we bring in Ethernet-APL with EtherNet/IP on it, suddenly it’s a four-lane highway in each direction. It could be six lanes or eight!”

Pat Koenig, VEGA

VEGA | ODVA EtherNet/IP


$90,000
Paid back in three months.
No translator boxes. No extra hardware.

The technology found something nobody had budgeted for.

VEGA | ODVA EtherNet/IP

5,000 lbs. vs. 6,000 lbs.

Reported resin usage vs. actual resin usage

Run after run. Never on a ledger.

VEGA | ODVA EtherNet/IP

“You can obviously see the spills and the safety things. The reconciliation, they didn’t expect.”

Pat Koenig, Product Manager, VEGA Americas, Inc.

VEGA | ODVA EtherNet/IP

“They’re like, ‘Well, what am I gonna do with it? How’s this gonna prove ROI?’”

Steve Fales, Director of Marketing, ODVA

At this plant, the answer arrived on its own.

VEGA | ODVA EtherNet/IP

“Can’t use that. It doesn’t help me.”

The plant’s contact

“As soon as we said we had EtherNet/IP, they’re like, thank goodness.”

Pat Koenig, VEGA

VEGA | ODVA EtherNet/IP

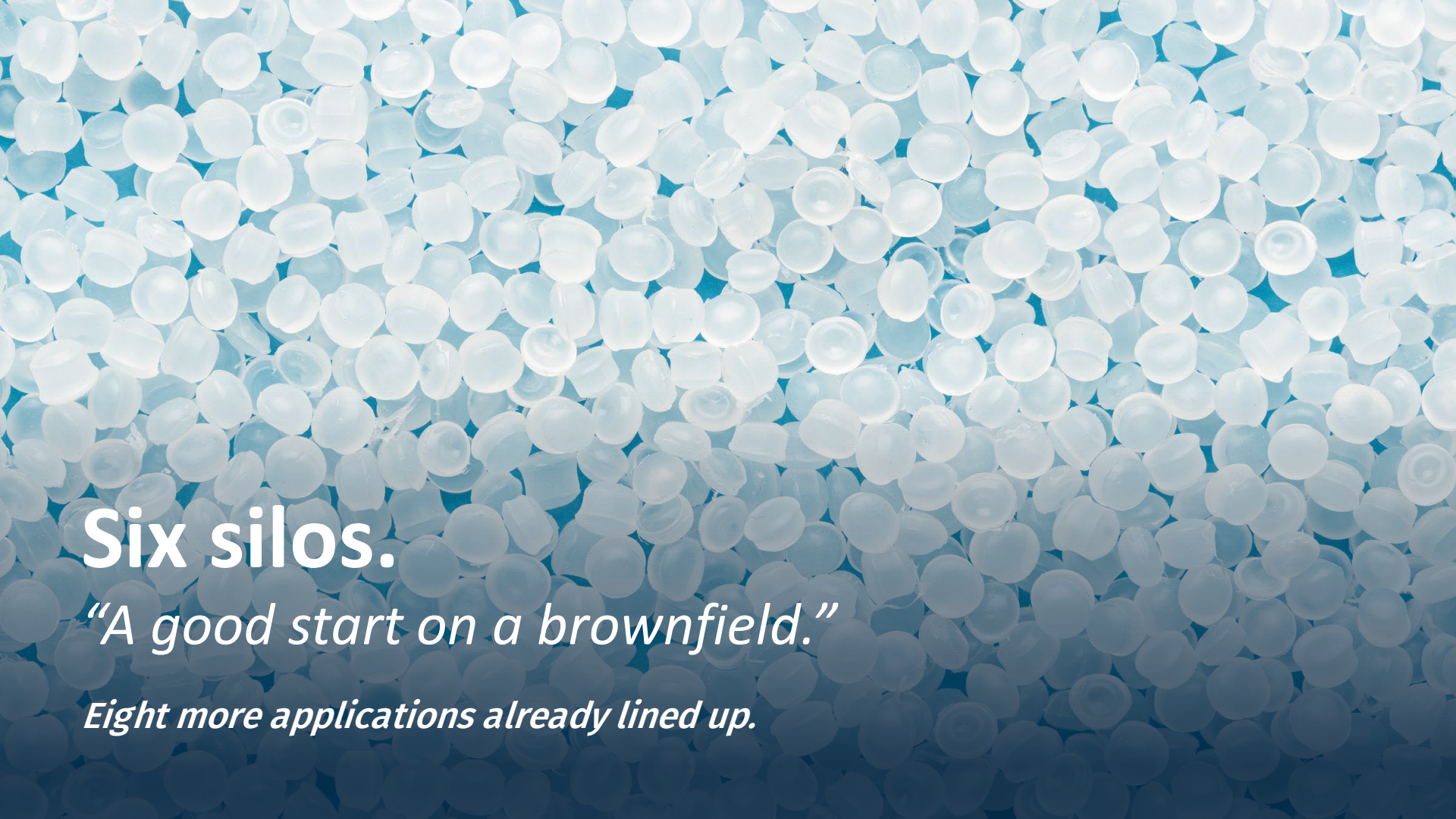
ODVA CONFORMANT

“It’s a stamp of approval. You feel safe buying it.”

Pat Koenig, VEGA

Every product carrying the EtherNet/IP mark passes independent conformance testing, administered by ODVA, before it reaches a customer.

VEGA | ODVA EtherNet/IP



Six silos.

“A good start on a brownfield.”

Eight more applications already lined up.



By the Numbers

VEGA | ODVA EtherNet/IP

6

55-foot resin silos at the Orlando plant

50

Rungs climbed to check a silo by hand

$90,000

Total project cost

3 months

To pay back the project

1,000 lbs.

Gap between reported and actual resin use on a run

Dozens

Of real-time readings per sensor, up from one signal

8

More applications lined up at the plant

400+

Locations the company runs in 40+ countries


How full is this silo, really?
Now answered before anyone has the chance to ask.
VEGA | ODVA EtherNet/IP


Thank you.
Questions?
VEGA | ODVA EtherNet/IP

2026 ODVA
Industry Conference and Annual Meeting

Introduction to Candidates for Election by the Regular Membership

Candidates for Election

- Director Candidates
  - Mr. Davis Mathews
  - Mr. Thomas Petersen
- TRB Candidates
  - Mr. Torben Bertelsen
  - Mr. Kai Michel
- MAC Candidates
  - Mr. Magnus Jansson
  - Mr. Arnold Offner
  - Ms. Megan Wiens

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Nominee Biographies and Statements of Candidacy

Directors

Mr. Davis Mathews is the North America Regional Manager, President & Chief Executive Officer of Phoenix Contact US Operations and seeks re-election to the Board of Directors. Mr. Mathews has over 30 years of experience in industrial automation industries and has held positions of increasing responsibility in engineering, product management and general management. Phoenix Contact is a regular and sustaining member of ODVA, having been a member since 1995. Mr. Mathews seeks election to the Board of Directors so that he may work collaboratively with the Board, officers, and membership to navigate and aid in the awareness of ODVA and EtherNet/IP within process automation with special attention to the user experience.

Mr. Thomas Petersen is Senior Director of Fieldbus & System Integration for Danfoss Drives A/S and seeks re-election to the Board of Directors. Mr. Petersen has more than 20 years of experience in industrial automation industries and has held positions of increasing responsibility in engineering and general management. Mr. Petersen brings to the board extensive knowledge of functional safety and security and an interest in ensuring standards meet the needs of end customers. Danfoss is a regular and sustaining member of ODVA, having been a member since 1996. Mr. Petersen seeks re-election to the Board of Directors so that he may work collaboratively with the Board, officers, and membership to continue driving the adoption of ODVA technologies, the influence of the ODVA community, and sustainability of the organization.

TRB

Mr. Torben Bertelsen is Chief Specialist for Fieldbus Communication for Danfoss Drives A/S. He has been with Danfoss for over 20 years and has been the software and hardware architect of several of Danfoss Drives Ethernet platforms, bringing experience from a broad variety of other fieldbuses based on CAN, RS485, and Ethernet. Danfoss Drives is a drive manufacturer providing system independent drives, and is a regular and sustaining member of ODVA, having been a member since 1996. Mr. Bertelsen wishes to help to advance ODVA's standards development activity as an active and committed representative to the Technical Review Board by bringing a holistic view on systems to ensure device interoperability across vendors.

Mr. Kai Michel is the Team Leader of EtherNet/IP Firmware Development for Hilscher GmbH. He has been with Hilscher for 16 years with a focus on EtherNet/IP development for his entire tenure. This also included the development and design of EtherNet/IP based products with a focus on making them CIP compliant as well as easy to integrate in multi-vendor environments. Hilscher is a regular and sustaining member of ODVA, having been a member since 1997. Mr. Michel wishes to help to advance ODVA's standards development activity as an active and committed representative to the Technical Review Board.

MAC

Mr. Magnus Jansson is the VP of Marketing for the Industrial Network Technology division at HMS Industrial Networks. He joined the company in 2021 and has over 20 years of marketing experience, including 16 years promoting industrial automation technology and services. HMS Industrial Networks has been a member of the ODVA since 1996, playing an active role in technical working groups and review boards. As a committed representative on the Market Advisory Committee, Mr. Jansson aims to provide increased insight and understanding of the challenges faced by users of networking technology, the critical drivers for implementing specific automation solutions and the demands on industrial networks as companies digitally transform their operations.

Mr. Arnold Offner is Strategic Marketing Manager of Automation Infrastructure for Phoenix Contact. Mr. Offner has over 30 years of experience in industrial automation industries and has held positions in sales, product development, marketing, and standardization roles across three continents. Phoenix Contact is a regular and sustaining member of ODVA, having been a member since 1995. Mr. Offner is a passionate marketer and is keen to drive more successful partnerships between ODVA Members, System Integrators, and the End-User market as the digital transformation unfolds globally.

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2026 ODVA
Industry Conference and Annual Meeting

If the Network Fails, the Fish Die

Christian Seiler, Product Manager, Digital Communication, AUMA

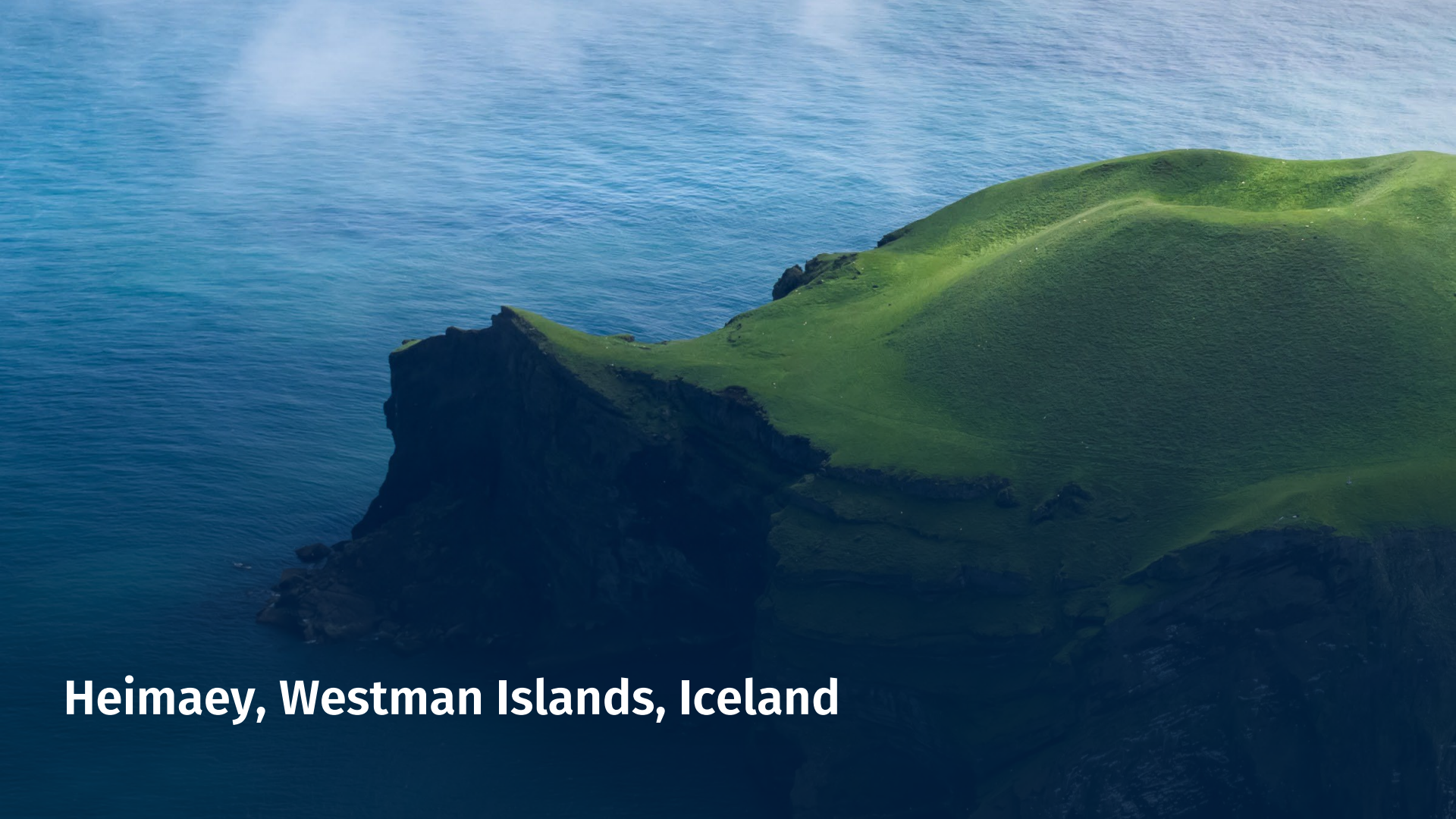


If the Network Fails, the Fish Die

At the edge of the world, a salmon farm the size of a small city runs on one industrial network.

Christian Seiler, Product Manager Digital Communication, AUMA

auma® | EtherNet/IP™ ODVA

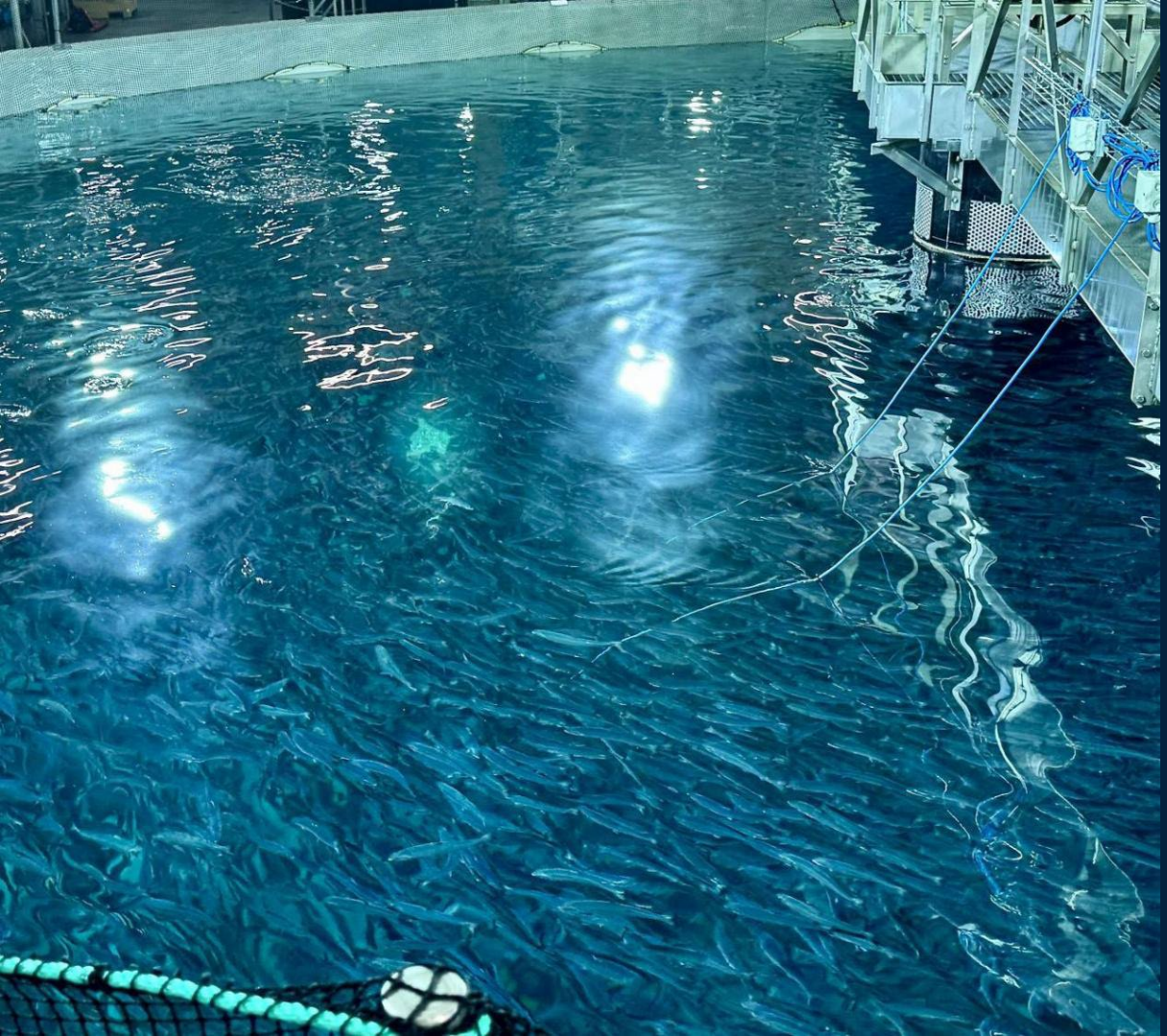


Heimaey, Westman Islands, Iceland



Laxey

Iceland's largest land-based salmon farm.



Egg to market, entirely on land.

Traditional farms: open-water sea cages.

Laxey: a sealed facility on land, with no disease getting in.

- Controlled environment using renewable energy

auma® | EtherNet/IP™ ODVA

10–12 months



“It has to be working perfectly 100% for those 10 to 12 months.”

Jens Ulrik Jensen, AUMA

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Controlled water conditions

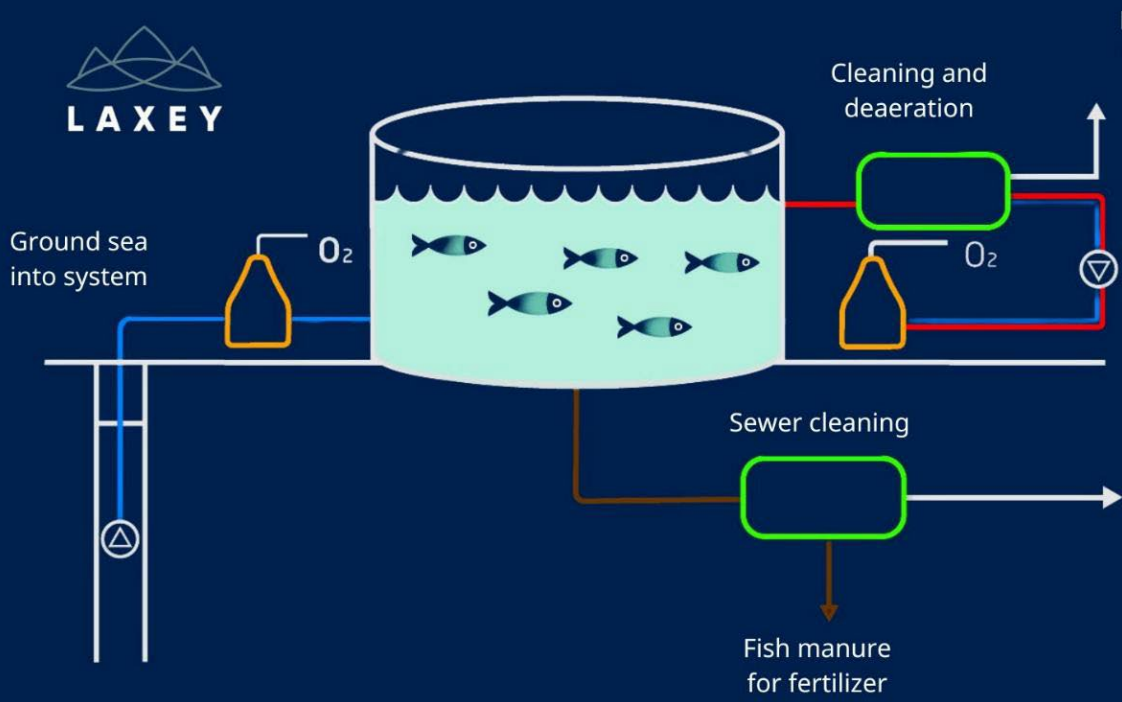
1. **Fresh water**
-> the river birthplace

2. **Brackish water**
-> childhood

3. **Seawater**
-> adults

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Recirculating aquaculture system



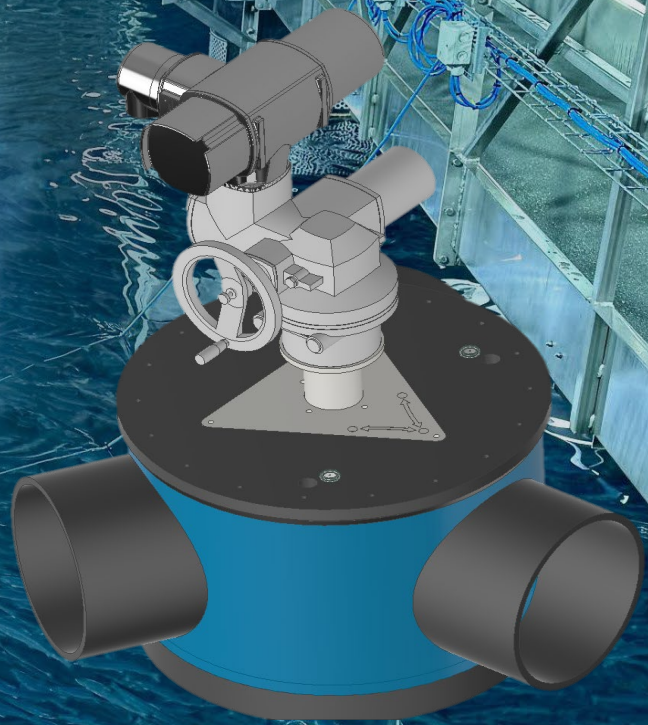
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Valves for transporting water, fish and feed

Water processes use butterfly and control valves

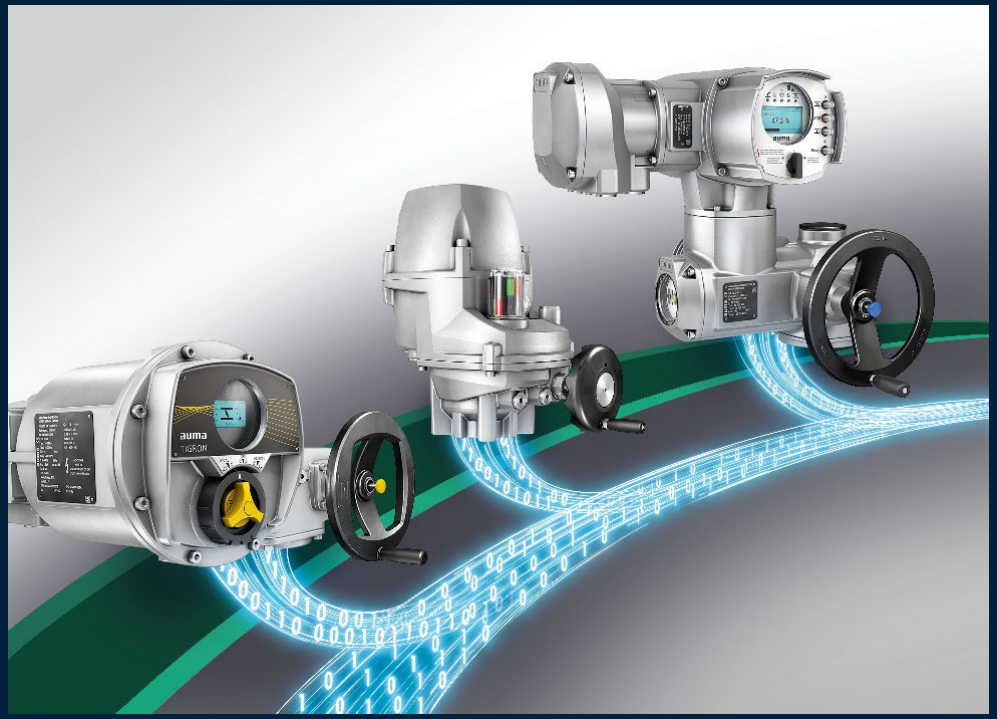






Fish transport - 3-way on/off valves

auma | EtherNet/IP ODVA



auma®

Solutions for a world in motion.

Actuator: electric motorized device that opens, closes, or adjusts an industrial valve.

AUMA is present throughout the entire process, across the fish-tech segment, wastewater, drinking water, industry, and power.

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Grow-out tanks:

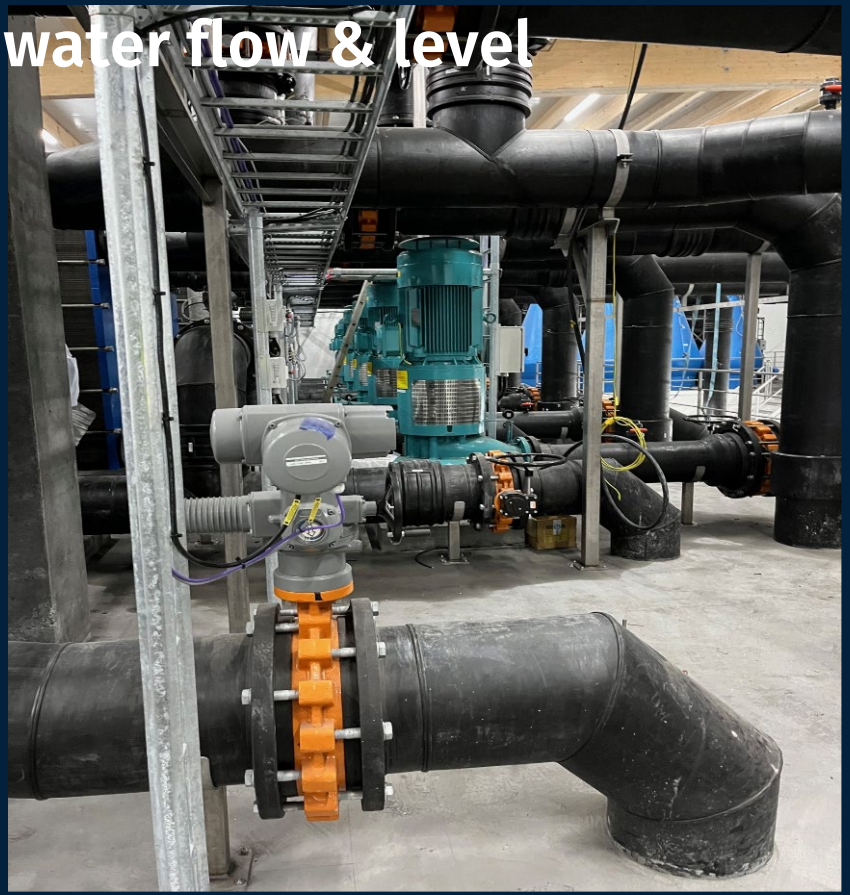
28 metres diameter; 13 metres tall; 5000 cubic seawater





Tank inside; Actuators control water flow & level





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One vendor’s controller. Another vendor’s actuators.

PLC: the central controller that coordinates every device.

“Can we do it better with EtherNet/IP?”



Fieldbus Characteristics

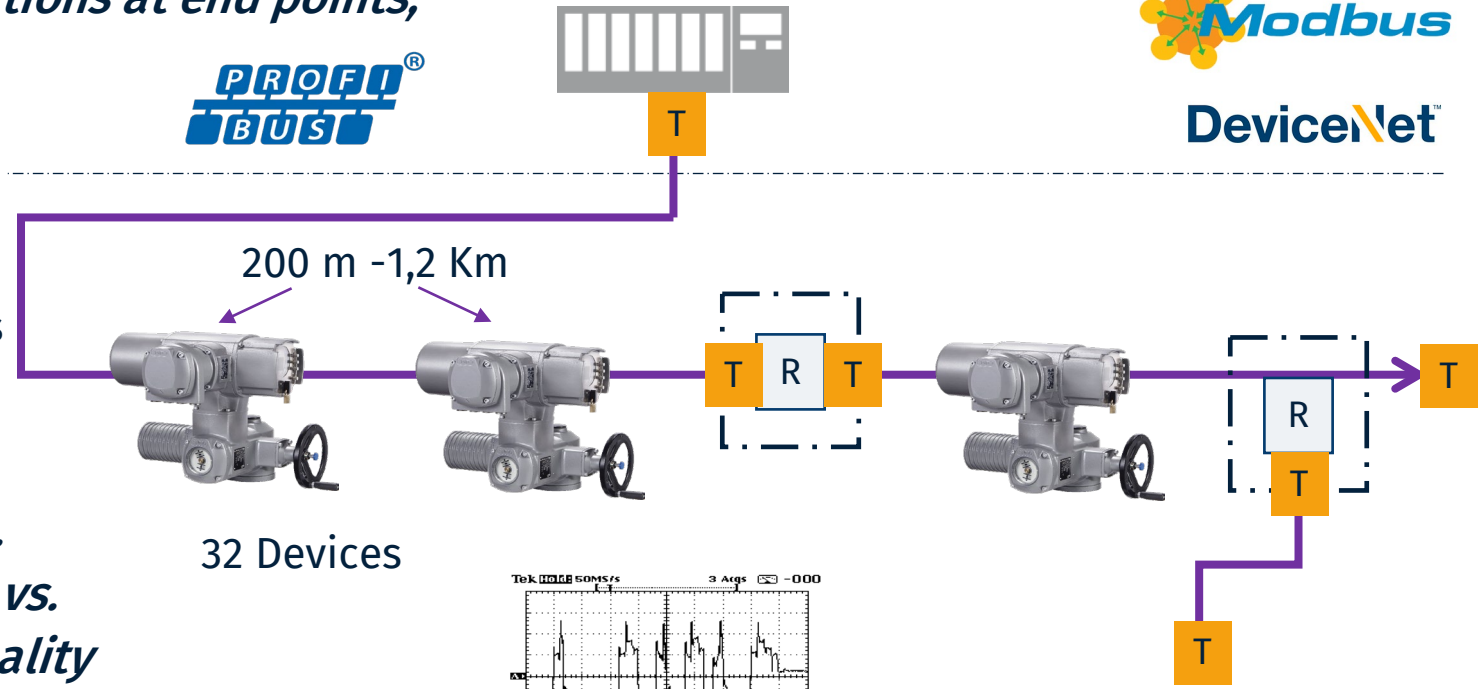
Complex Engineering

2 Wire Signal;
Terminations at end points;

PROFIBUS®

Modbus

DeviceNet™



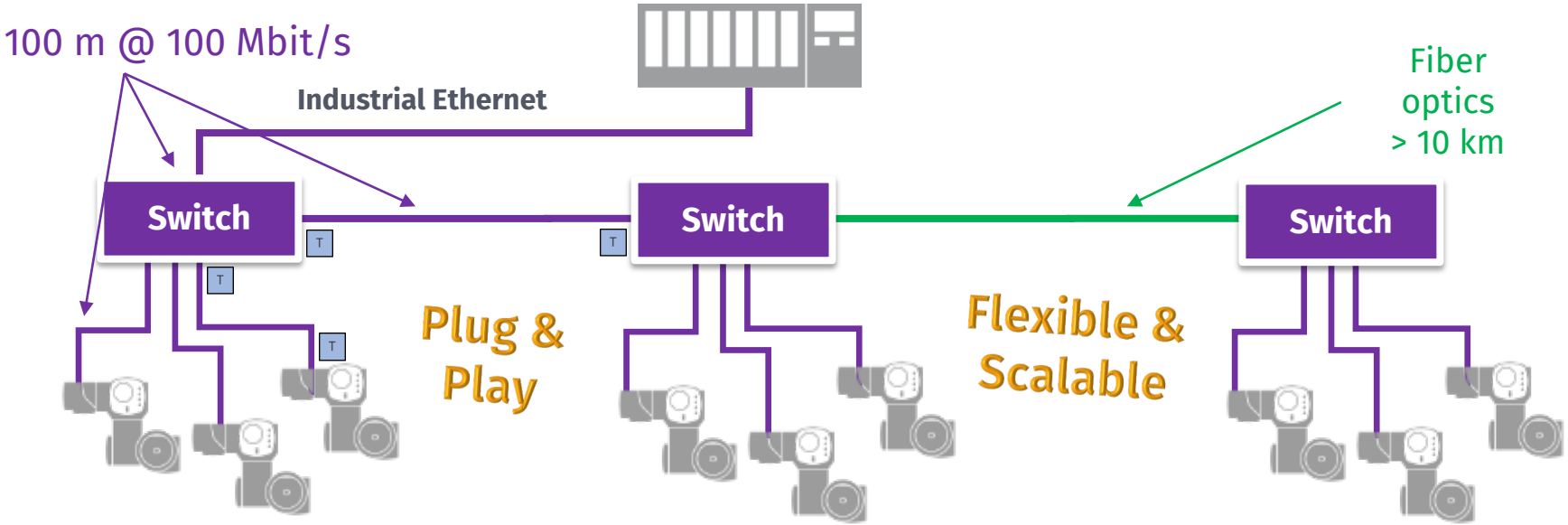
32 Devices

Speed vs.
Distance vs.
Cable Quality

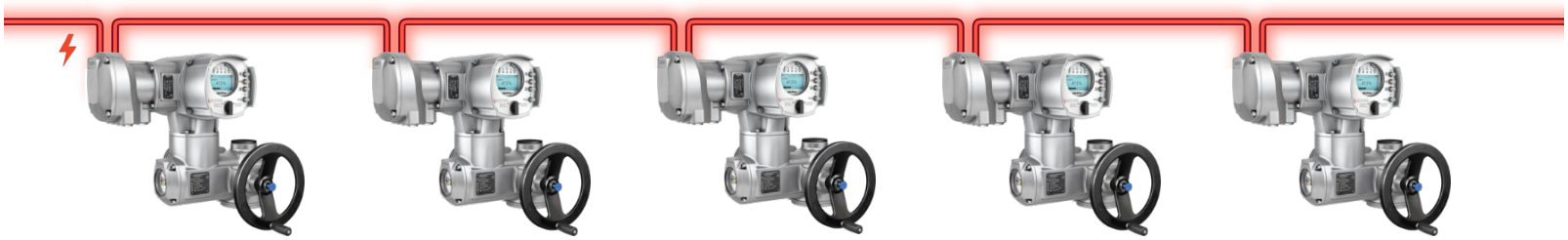
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System Architecture Industrial Ethernet

Decoupled devices; Defined signal characteristics between ports



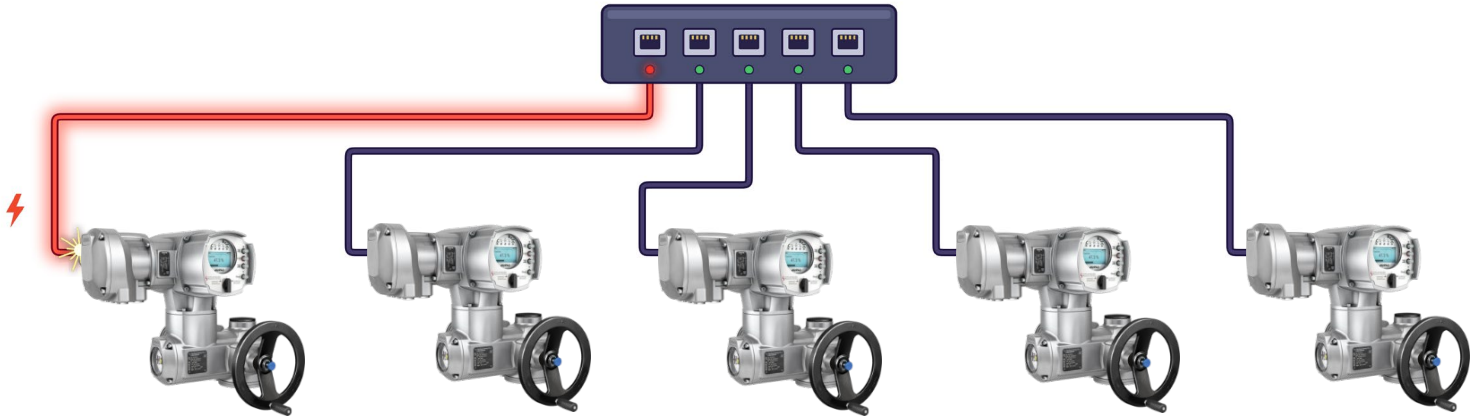
One fault. The whole line feels it.



Fieldbus: every device on one electrical line.

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“If you have a problem, you see in which port the problem is immediately.”

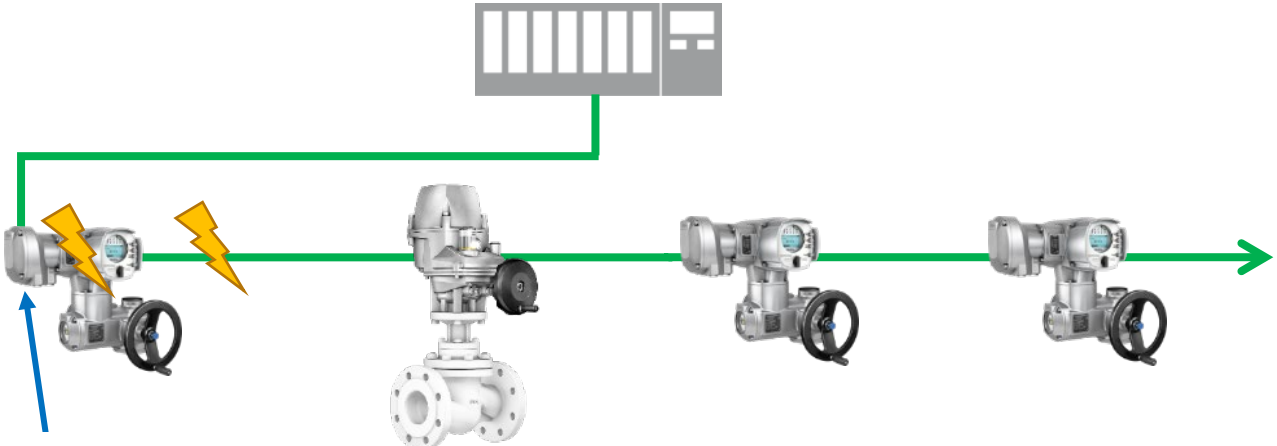


Fault Tolerant

Industrial Ethernet: every device on its own port.

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Ethernet Topologies – Line (Bus)

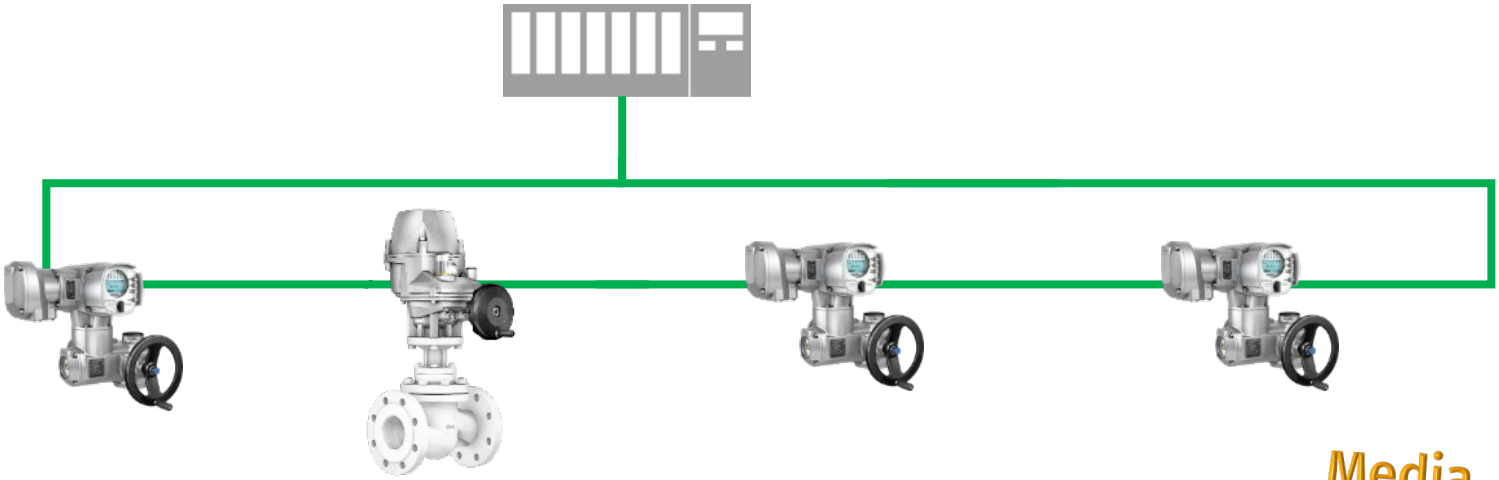




Single Point of Failure possible !

Ethernet Topologies – Ring

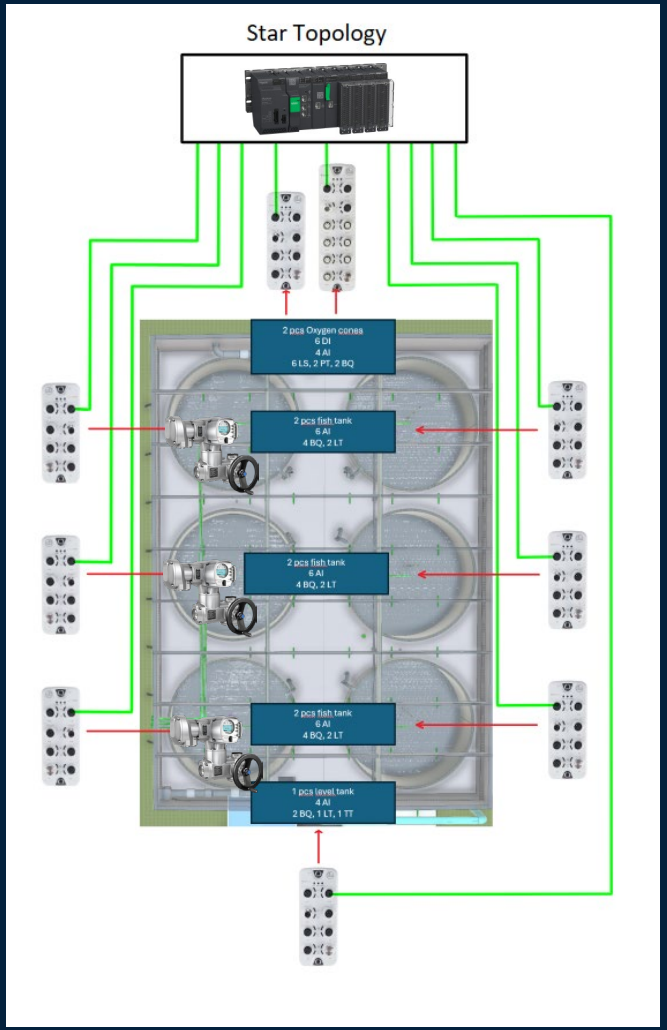
DLR (Device Level Ring Protocol) on field level

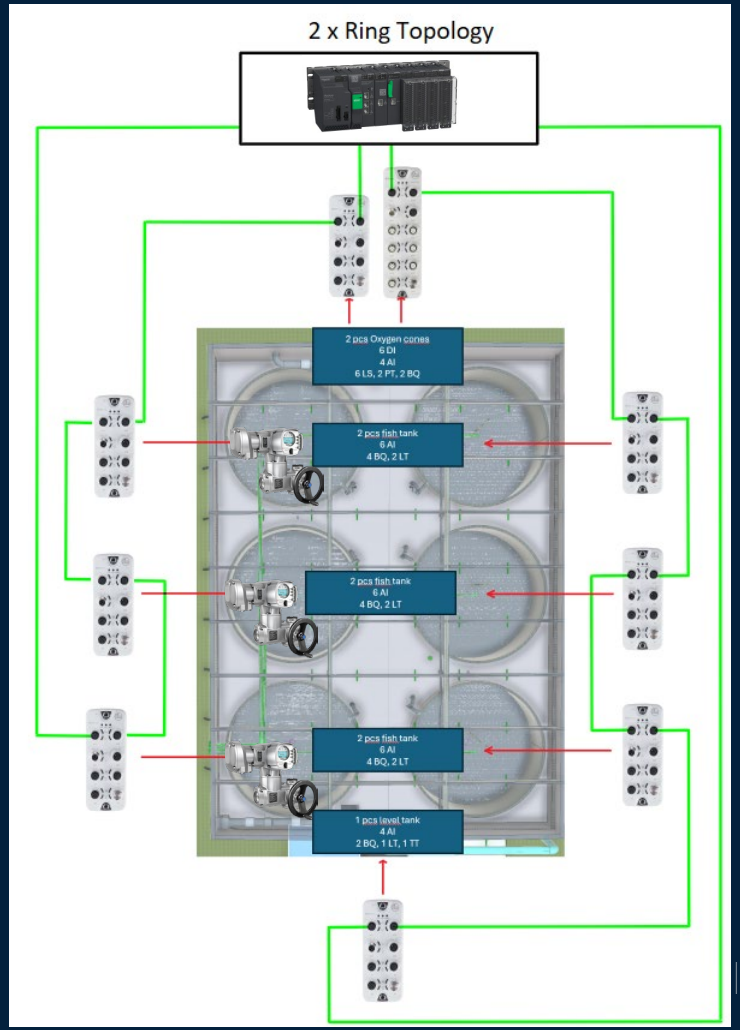


Media Redundancy

One Fault for free!

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The Network

- Redundant Ring
  &
  Star Topology
- Switch Backbone
- Point to Point
  to Actuators
- Very fault tolerant

EtherNet/IP ODVA

High performance &
seamless data access

Flexible topologies with
unlimited scalability

Reliable & robust
-> redundancies

Plug & Play

“Can we do it better with EtherNet/IP?”





A reported network problem.

A laptop plugged in.

Every device visible and working.

Cause: a programming configuration, not the network.

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ODVA CONFORMANT

“We know everything is tested… It should work because it’s tested.”

Jens Ulrik Jensen, AUMA

Every product family carrying the EtherNet/IP mark passes independent conformance testing before it ships.

auma® | EtherNet/IP™ ODVA



“I have not seen so many companies work so well together.”

Jens Ulrik Jensen, AUMA

“What makes EtherNet/IP trustworthy isn’t the technology alone. It’s the process behind it. Independent governance, independent testing, and a community of competitors who have agreed to hold themselves to the same standard.”

Dr. Al Beydoun, President and Executive Director, ODVA

auma® | EtherNet/IP® ODVA



Aalborg, Denmark. The fourth treatment stage.

EU Urban Wastewater Treatment Directive: a new fourth stage to remove pharmaceutical residues.



180 installed actuators with EtherNet/IP

Valves up to DN 800, about 80 cm across.

auma® | EtherNet/IP™ ODVA

“If they’re changing one actuator, they stay in the old loop.”

“But if they’re starting a whole new project, they change everything.”

Jens Ulrik Jensen, AUMA

auma® | EtherNet/IP™ ODVA



“When you have done one program for the whole factory, you don’t have to do it again.”

Add devices without redesigning the network.

Reuse the logic already written.

Diagnostics flow straight to the control room.

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By the Numbers

auma | EtherNet/IP ODVA

200

AUMA EtherNet/IP actuators currently installed at Laxey

10–12 months

From salmon smolt to harvest, with zero tolerance for network failure

1,000

Projected AUMA actuators at Laxey at full build-out

20+ years

EtherNet/IP maintaining backward compatibility across generations of devices

36,000 tonnes

Laxey's targeted annual salmon production at full capacity

400+

Member companies building to the EtherNet/IP specification

180

AUMA EtherNet/IP actuators in the Aalborg Forsyning installation

700+

Licensed vendors building EtherNet/IP devices worldwide


A salmon farm and a wastewater plant.
Two industries, two countries, one network.
auma | EtherNet/IP ODVA


Thank you.
Questions?
auma
EtherNet/IP
ODVA



A Data Center's Motivation for IPv6

Joe LeBeau, Lead Controls Engineer, Data Center Infrastructure, Meta

Who is asking, and why it matters

1000s
EtherNet/IP nodes per data center site

10s
of sites, on one enterprise network fabric

IPv6
is already the native protocol on the IT side of our campuses

Hyperscale data center controls is a customer of EtherNet/IP, not a vendor of it.

- Every chiller, pump skid, CDU, fan wall, switchgear controller, and power meter is an EtherNet/IP node — and the count grows with every GW we build.
- Our IT organization runs IPv6-first. Every IPv4-only OT device is a translation layer we have to design, secure, and maintain.
- We are the demand signal vendors say they haven't heard. This talk is that signal, on the record.

This is not a new idea — it is an unfinished one

2012	2018	2025	2025	2026
"EtherNet/IP over IPv6 — Evolution, Not Revolution"	**Constrained EtherNet/IP & 6TiSCH**	**"An IPv6 Roadmap for EtherNet/IP"**	**ODVA Annual Meeting**	**Today**
Dual-stack proposal, multi-vendor proof of concept	IPv4/IPv6 mapping for constrained devices	Framework and timeline across SIGs; name-based operation	"IPv6 will be included in the specification soon after updates are finalized"	Still not a conformance requirement

Fourteen years from first proposal to “soon.” The technical work is largely done. What's missing is a date, an owner per SIG, and a conformance line in the sand.

The address problem is private space, not public

Nobody puts a PLC on a public IP. The exhaustion that hurts is RFC 1918 space colliding across a flattened enterprise.

IPv4 in a multi-site OT estate

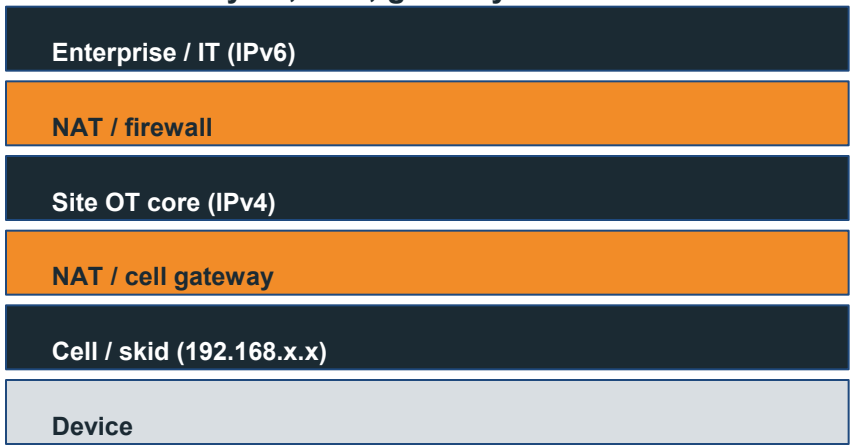
- 10/8 sounds infinite until every campus, integrator, and vendor VPN carves it independently
- Overlapping subnets force NAT at every boundary — and NAT breaks CIP connection origination, UNIDs, and browse tools
- Address plans live in spreadsheets; device replacement means re-keying static IPs by hand
- Growth is gated by re-addressing projects, not by hardware

IPv6 in the same estate

- A single /48 per site: 65,536 subnets, each effectively unlimited
- Globally unique addresses end-to-end — no NAT, no overlap, no translation gateways to secure
- SLAAC / DHCPv6 plus DNS-SD: the address is derived, the name is what humans and tools use
- Growth is gated by switch ports, which is the constraint it should be

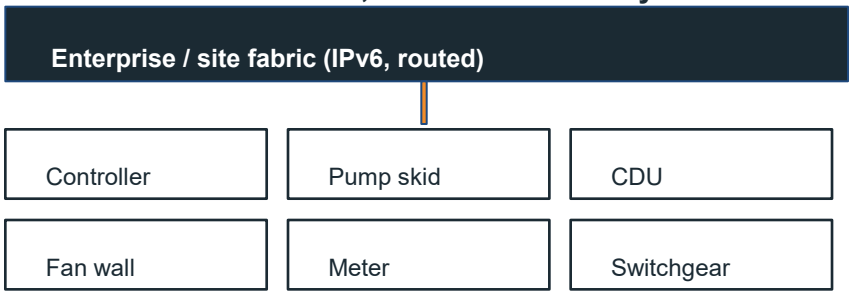
Flatter OT networks expose IPv4's limits

Traditional: layers, NAT, gateways



Each amber box is a place where CIP browsing, UNIDs, and connection origination break — and a device we must secure and patch.

Flat: routed end-to-end, one address family



Every device has a stable, globally unique, routable address. Segmentation is policy, not subnet arithmetic.

Software-defined automation needs IPv6

Orchestrated and agent-driven control treats devices as fleet members: discovered, named, replaced, and re-provisioned by software, not by a laptop and a serial cable.

Capability	With IPv6	IPv4 today
Stable identity	IPv6 global addresses + name-based operation (DNS-SD / mDNS)	Static IPv4 in a spreadsheet, MAC-keyed workarounds
Zero-touch discovery	Neighbor Discovery, SLAAC, multicast service discovery are core protocol	Broadcast browse, DHCP tricks, vendor-specific tools
Device replacement	Name follows role; address is derived — swap hardware, keep the name	Re-key IP, verify UNID, re-download config
Fleet-scale security	Policy on a routed address, mandatory IPsec framework, no NAT blind spots	Per-cell firewalls, NAT tables, exceptions
Multi-vendor orchestration	One address family from cloud to device	Translation at every vendor and site boundary

Where the specification actually has to change

The 2025 roadmap already inventoried the work. These are the items that need owners and dates.

1 4-byte IP assumptions (Vol 2)

Address fields throughout the EtherNet/IP volumes — TCP/IP Interface Object, sockaddr items, list identity

2 CIP Safety UNID (Vol 5)

Unique Network Identifier is built from the IPv4 address; needs an IPv6-safe form without breaking certified devices

3 CPF items (Vol 2)

Common Packet Format sockaddr info items are IPv4-shaped; add IPv6 items and dual-stack originator rules

4 Device browsing & discovery (Vol 2 / 7)

List Identity broadcast has no IPv6 equivalent; define multicast discovery and DNS-SD service records

5 Configuration & naming (Vol 1 / 7)

Name-based addressing, address-free device replacement, and EDS additions

6 Conformance test (Test SIG)

Dual-stack test cases and a required-by edition — the item that turns the rest into reality

The objections, and the answers

"Constrained in-cabinet devices can't afford IPv6 headers."

Agreed — scope the mandate. Dual-stack required for scanners, originators, controllers, and standard adapters. The constrained UDP-only profile gets a mapped path, as the 6TiSCH work already proposed.

"CIP Safety recertification will churn the installed base."

Define the IPv6 UNID form now so new safety devices certify against it once. Existing IPv4 safety devices stay valid under dual-stack; nothing installed is invalidated.

"Vendors will ship it when customers ask."

We are asking. Hyperscale, pharma, and automotive users all run IPv6-first IT. Without a conformance date, every vendor rationally waits for the other vendors.

"Dual-stack is twice the attack surface."

NAT and translation gateways are the attack surface we have today. A routed IPv6 address with CIP Security is one policy point, not two boundaries and an exception list.

The ask

Turn the 2025 roadmap into dated deliverables, with conformance as the forcing function.

1	**Publish the IPv6 spec updates** Dual-stack addressing, CPF items, discovery, and the IPv6 UNID form — in one edition, not spread across releases.	**Next edition**
2	**Name-based operation ships with it** Address-free device replacement and DNS-SD service records are part of the package, not a follow-on.	**Same edition**
3	**Dual-stack becomes a conformance requirement** For scanners, originators, controllers, and standard adapters. Constrained profile gets a scoped exemption with a mapped path.	**Edition + 2 yrs**
4	**IPv6-only optional profile** So users who have finished the migration can turn IPv4 off without falling out of conformance.	**Following edition**

What end users will put on the table

Interoperability lab

A multi-vendor characterization environment already running EtherNet/IP, DLR, and PON — available for dual-stack plugfests and test-case development.

Pilot deployments

Dual-stack EtherNet/IP in live mechanical and electrical systems, with data back to the SIGs on what broke and what didn't.

Specification review

Engineering hours on Vol 2 / Vol 5 / conformance test drafts from people who have to operate the result.

Procurement language

IPv6 conformance in RFP and specification requirements — so vendors see the ask in purchase orders, not just conference talks.

The roadmap exists. Give it a date.

Dual-stack EtherNet/IP as a conformance requirement — proposed, prototyped, and asked for by the people who deploy it.

Joe LeBeau · Lead Controls Engineer, Data Center Infrastructure, Meta · Questions welcome

2026 ODVA Industry Conference and Annual Meeting

Looking Ahead to the 25th Term

Leadership in the 25th Term

Board of Directors

- Mr. Franz Durmeier
- Mr. Jon DeSouza
- Mr. Toshiyuki Shigehisa
- Mr. Davis Mathews
- Mr. Scott Miller
- Mr. Thomas Petersen
- **Mr. Raj Bandekar *(NEW)**
- Mr. André Uhl
- Dr. Al Beydoun (ex-officio)

Technical Review Board

- Mr. Joakim Wiberg, Chair, ODVA (ex-officio)
- **Mr. Rizwan Mohammed *(NEW)**
- Mr. Torben Bertelsen
- Mr. Arulkumar Karuppanagounder
- Mr. Lucas Knapp
- Mr. Gregory Majcher
- Mr. Kai Michel
- Mr. Toshiyuki Ozaki
- Mr. Jörg Reinkensmeier
- Dr. Al Beydoun (ex-officio)

Market Advisory Committee

- Dr. Vivek Hajarnavis, Chair
- Mr. Magnus Jansson
- Mr. Arnold Offner
- Mr. Asahi Matsui
- Ms. Megan Wiens (NEW)
- Ms. Nadja Rauscher
- Ms. Adriana Vargas
- Ms. Feiyan Zhao
- Dr. Al Beydoun (ex-officio)
- Mr. Steve Fales (ex-officio)

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Looking Ahead to the 25th Term

1. Grow the EtherNet/IP ecosystem
More products, more developers, more end users.

2. Expand into emerging applications
APL, SPE, Robotics, IPv6, AI-enabled systems, etc.

3. Strengthen the value of ODVA community and EtherNet/IP ecosystem
Make participation easier and more valuable.

4. Amplify the reach and visibility of our technologies
Strengthen the EtherNet/IP story and communicate its value

5. Continue technical leadership
Advance CIP and EtherNet/IP as industrial automation evolves.

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Thank You!

See you in March 2028!