

Francisco Ogunseye, Software Engineer

Francis Ogunseye is a Software Engineer at Intel Corporation, where he designs and supports automation solutions used across sites. Since joining Intel in 2021, he has worked as a Strategic Engineer in Facilities Ultra Pure Water, a Business Intelligence Developer creating automated reporting solutions in Power BI and Tableau, and now in Industrial Automation supporting Seeq Analytics initiatives tied to Intel's Industry 5.0 vision. Before Intel, Francis spent eight years at Dow Chemical as a Production and Improvement Engineer. He is passionate about learning new processes, using data to identify plant optimization opportunities, and solving complex problems through structured analysis and collaboration. He holds a BSE in Chemical Engineering from the University of Michigan and a Master's in Data Analytics from Texas A&M University.



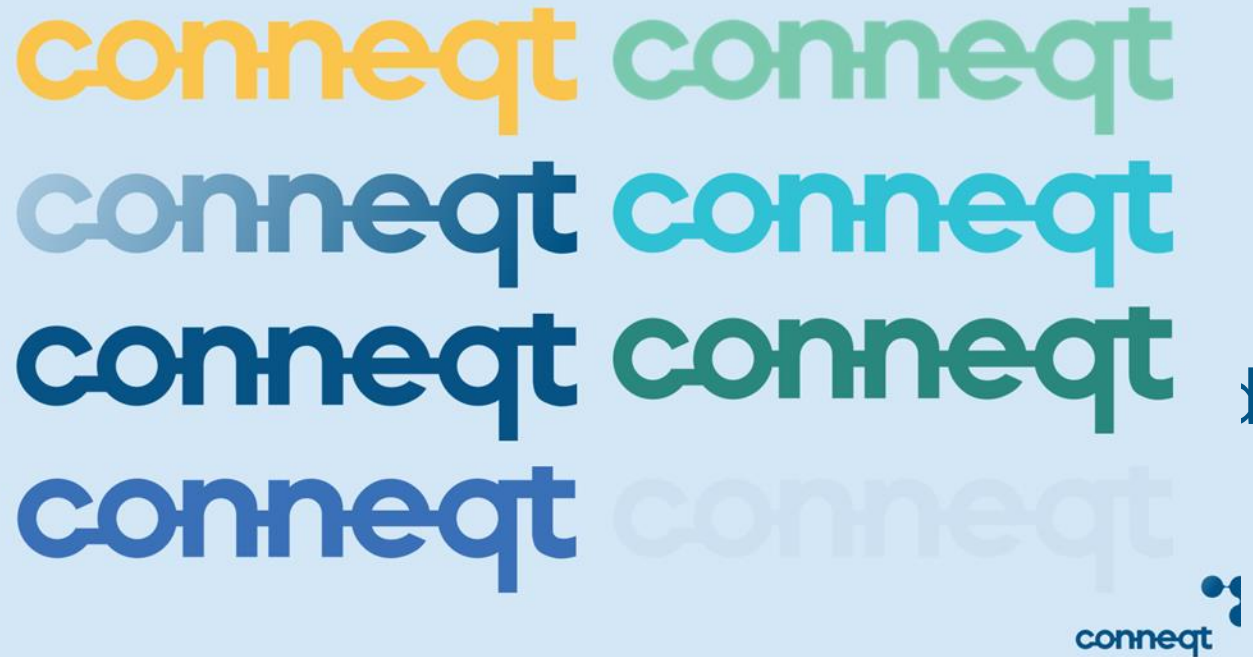
Presentation Title

Title:

Modernizing Facility
Maintenance

Abstract:

This session shows how shifting from alarm-based and time-based maintenance to automated condition-based maintenance in facility operations reduced unnecessary work, labor, and consumable costs by about 15%. Integrated analytics and AI-assisted workflows improved fleet-wide availability, enabled more consistent maintenance practices, and supported continuous operational improvement.





Modernizing Facility Operations with Condition-Based Maintenance and Agent Q

Francis Ogunseye
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June 2, 2026

Agenda

- 01** Introduction & Acknowledgements
- 02** The Problem: Reactive vs. Condition-Based Maintenance
- 03** Architecture & Agent Q Overview
- 04** Capabilities, Boundaries & Live Demo
- 05** Facilities Maintenance in Action — Case Studies
- 06** Roadmap for Action & Key Principles
- 07** Q&A

Key Acknowledgement



Dr Patrick Bradley
Automation Architect



Subhadra Sampathkumaran
Software Engineering Manager



Manoj Athawale
Sr. Machine Learning Engineer



Allen Lunsford
Facilities Engineer



Ryan Ahearn
Facilities Engineer

WHO WE ARE

Intel Global Facilities Operations



2 facilities groups

Supporting front-end and back-end manufacturing



9 factories

4 front-end + 5 back-end



24x7 operations

Mission-critical facilities support



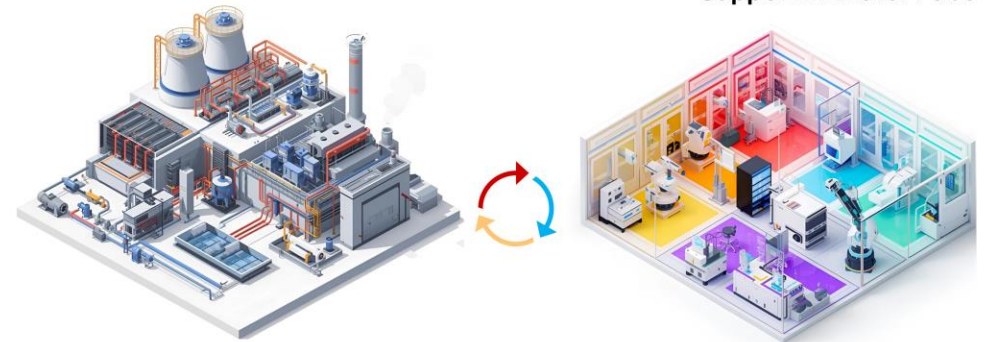
2000+ employees

Engineers, technicians, contractors

Intel Foundry Global Reach



Enabling Precision: The Critical Role of Facilities Support in Wafer Fabs



Exhaust Systems
N2 Plant
Ultra Pure Water Plant
Vacuum Systems

Waste Water Treatment
Power Systems
Oil-Free High-Pressure Air
Chemical & Gas Delivery

Boiler & Chilled Water Plant
Process Cooling System
Cooling Towers
HVAC Systems

Automation Perspective



Global footprint and time zone coordination



Diverse disciplines and operational use cases



Need for standardization across sites and assets



24x7 mission-critical reliability requirements

The Problem: Reactive vs Condition Based Maintenance

Evolution of Predictive Maintenance In Facilities

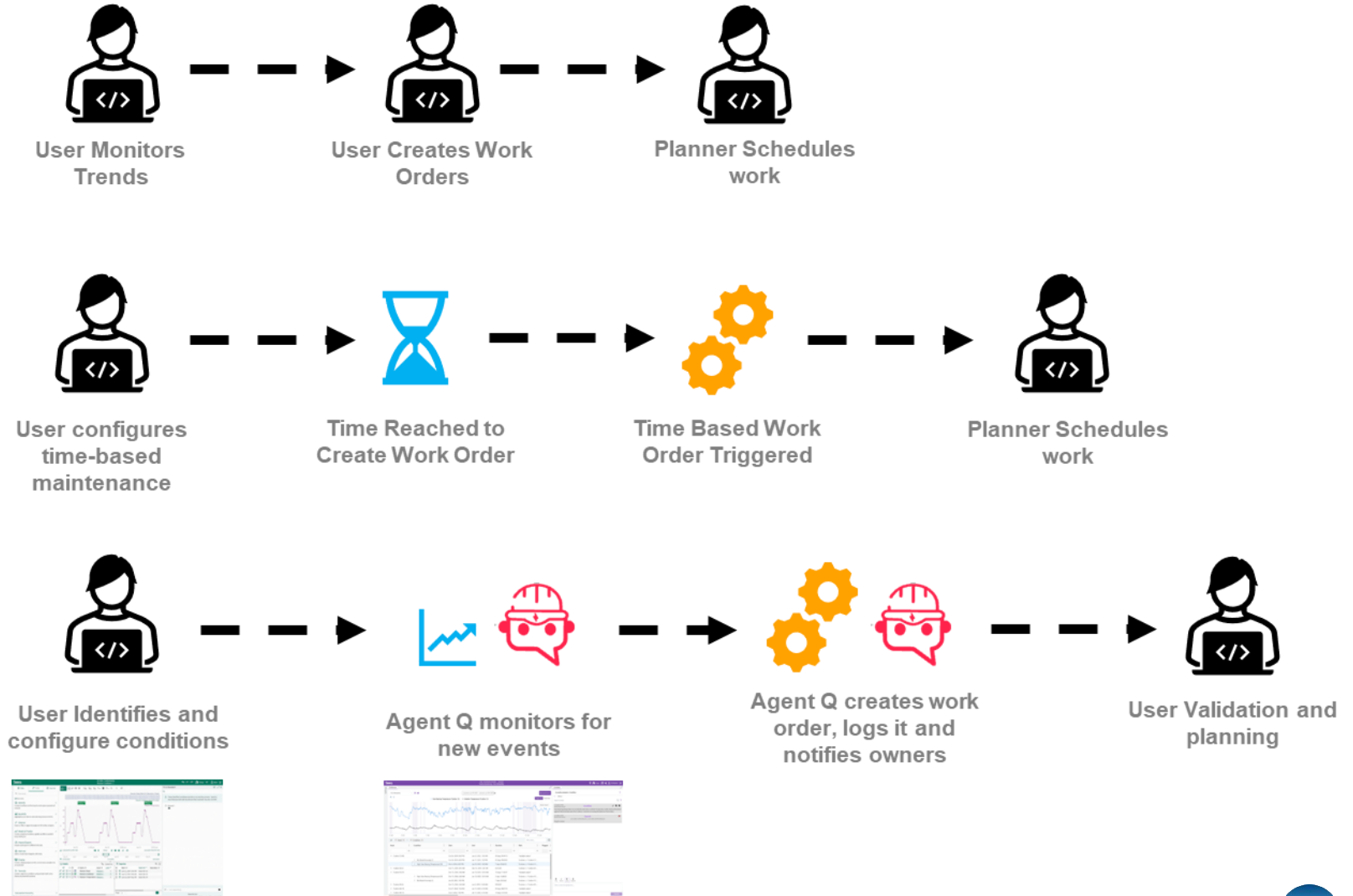


10-15% | ROI

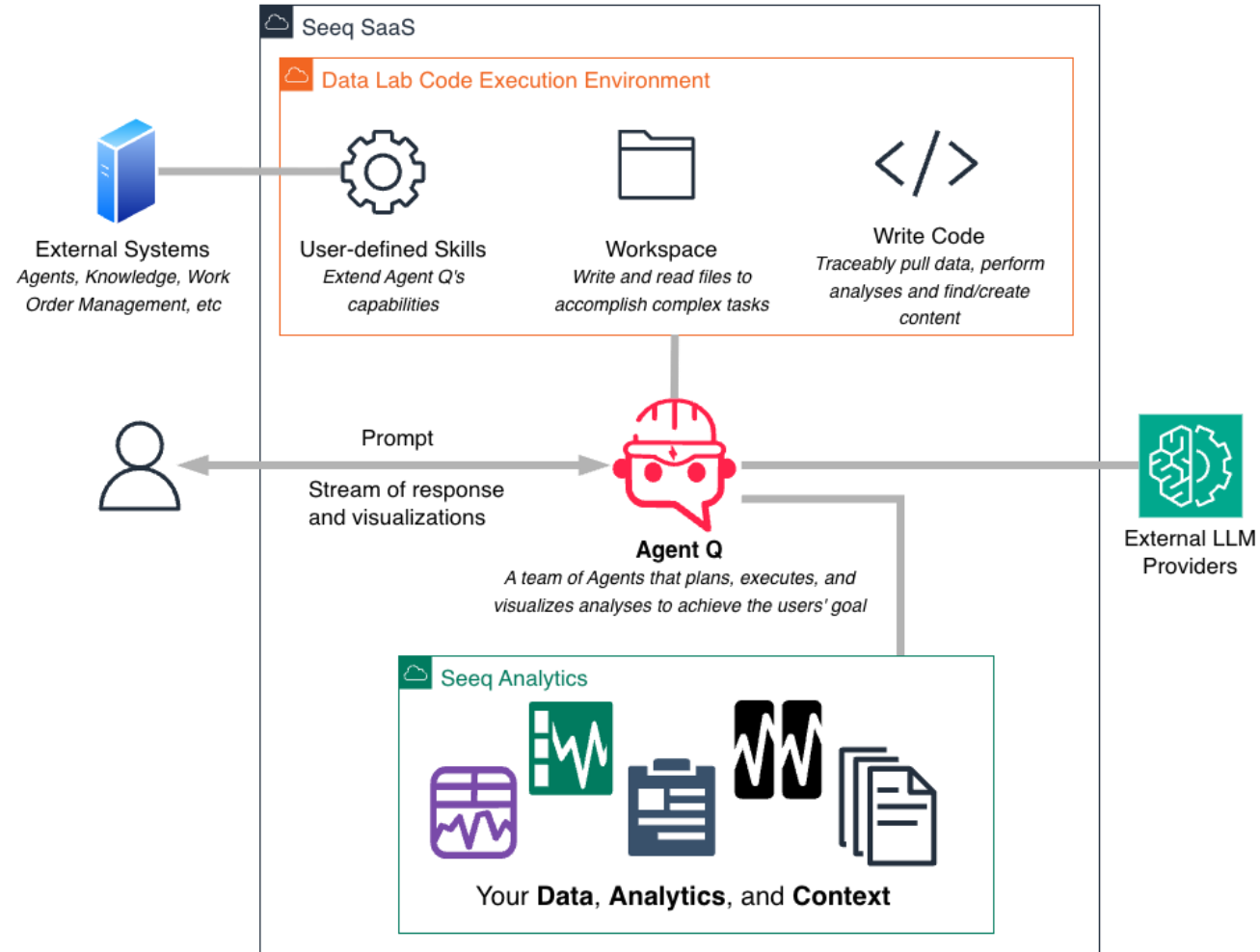
Reduced Equipment Downtime

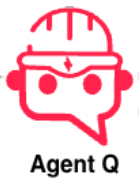
Labor Saving

Consumables Cost Savings



Architecture





Agent Q

Capabilities and Boundaries

What the Agents CAN Do

Intelligent Guidance

Step-by-step instructions on agent capabilities and features

Automated Work Orders

Create work orders based on equipment conditions or user requests

Comprehensive Data Retrieval

Access work orders, job plans, labor details, and asset information

Document Retrieval

Search SOPs, troubleshooting specs, and maintenance procedures

Natural Language Processing

Understand and respond to queries in conversational language

What the Agents CANNOT Do

Work Order Modifications

Cannot update or delete existing work orders

Direct Equipment Control

Cannot interface directly with equipment controls or safety systems

System Administration

Cannot modify user permissions or system configurations

Replace Human Judgment

Provides guidance but does not replace qualified decision-making

Key Principle

Humans remain in the loop for all critical decisions. Agent Q augments — it does not replace — qualified expertise.



Integrations Demo – Anomaly Detection



Integrations Demo – Create Work Order

Recording

2026-05-06 07:11 UTC

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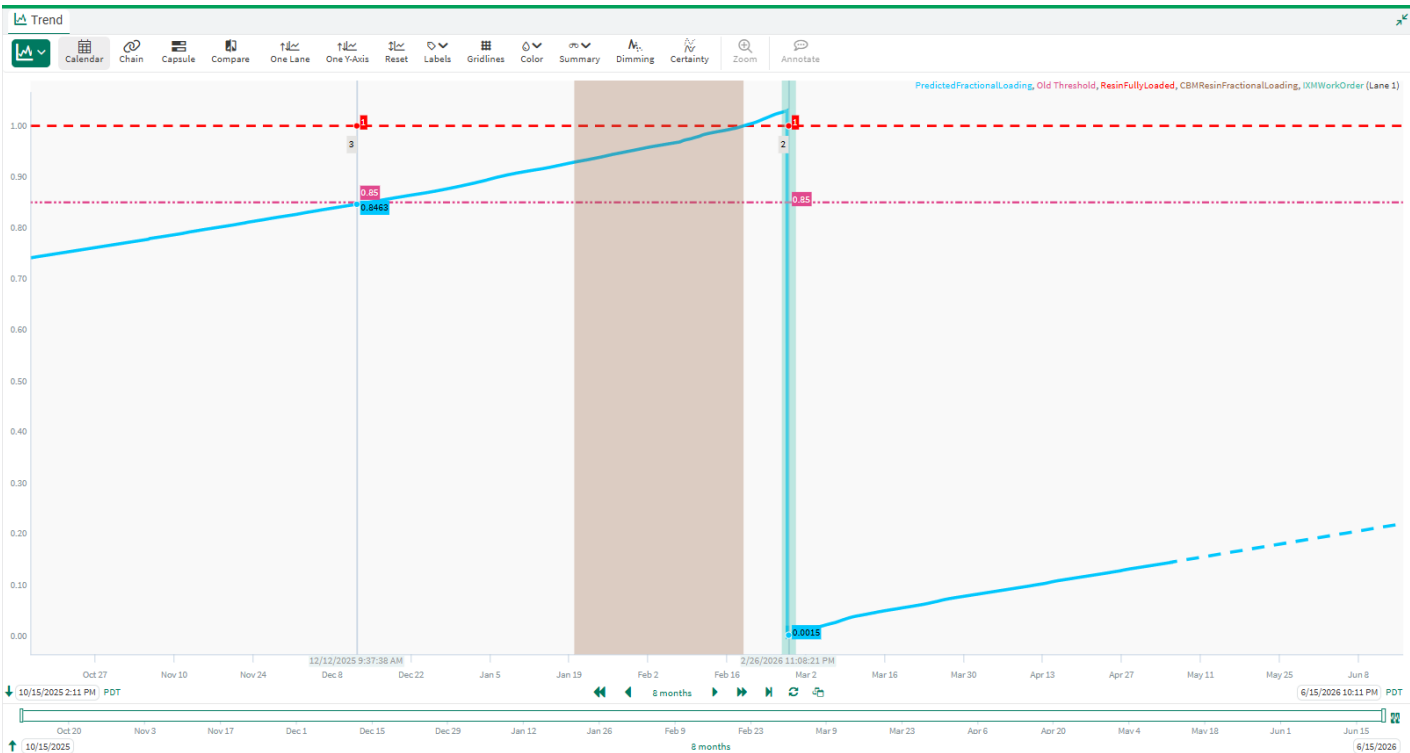
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Facilities Maintenance in Action

Consumables life cycle optimization



Optimization Impact

BEFORE
85% Resin Loading Trigger



NOW
30-Day Advance Forecast

~15%
Labor
Savings

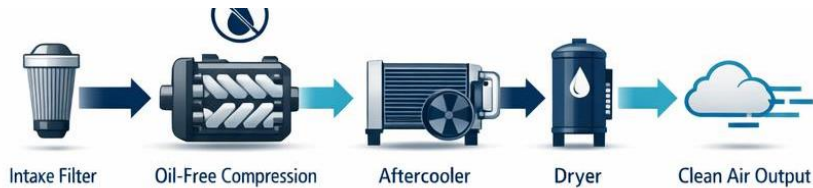
~15%
Consumables
Savings

Annual Savings per Year



Facilities Maintenance in Action

Compressor cycle optimization



Optimization Impact

BEFORE
Frequency-Based (1-2x/yr)
Assumes 100% runtime for all compressors



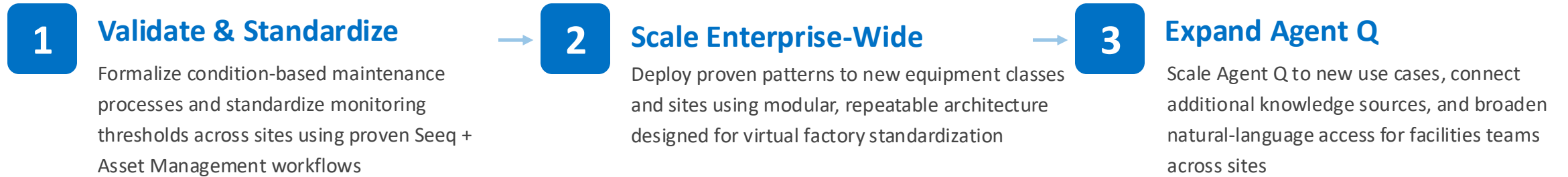
NOW
Cycle-Based Maintenance
Scheduled by actual compressor runtime hours

~\$600K

Annual Savings
in maintenance costs

*By aligning maintenance to actual runtime
instead of assuming 100% operation*

Roadmap for Action



Scale Existing Use Cases



Build New Use Cases



Key Principles for Your Organization



Designed for modularity and standardization — every use case we prove makes the next one faster to deploy



Thank You

Modernizing facility operations — from reactive alarms to intelligent, autonomous maintenance

Questions?

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A joint Intel + Seeq initiative | Condition-Based Maintenance & Agent Q

A TRULY GLOBAL OPERATION

Intel Foundry's global manufacturing footprint — built for scale, resilience, and round-the-clock execution

01 — GLOBAL SCALE

9

fabs across 4 countries

Front-end fabs in Arizona, Oregon, New Mexico, Ireland, and Israel; assembly & test sites in Costa Rica, Vietnam, Malaysia, and Chengdu — spanning every major time zone.

02 — ALWAYS ON

24/7

mission-critical operations

Continuous wafer production with handoffs across regions every shift — ensuring uninterrupted supply, rapid response, and zero downtime tolerance for customer commitments.

03 — SUPPLY RESILIENCE

~75%

of fabrication in the U.S.

A diversified footprint anchored in the United States, complemented by trusted sites in Europe and Asia — engineered for supply continuity through any disruption.

04 — OUR PEOPLE

~85K

employees worldwide

Engineers, technicians, and operators running facilities every hour of every day — the human backbone behind continuous, mission-critical manufacturing.