

**PDF/SOLUTIONS®**  
**2025 Users Conference**

# **PDF Solutions**

# **Equipment and Fab**

# **Integration Solutions**

*Secure, Remote Equipment Connectivity and Control*

**Bob Reback**

December 4, 2025



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04.

**ASML**

**Customer Presentation**

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# **A World-Wide-Secure-Web**

## **Remote Connectivity in Semi Manufacturing**

Eduard Gerhardt  
Sr. System Engineer

12/03/2025  
Santa Clara

# Agenda

1. Remote Connectivity
2. Use Cases
3. Equipment Data
4. Outlook



## Where it all started - ARPANET

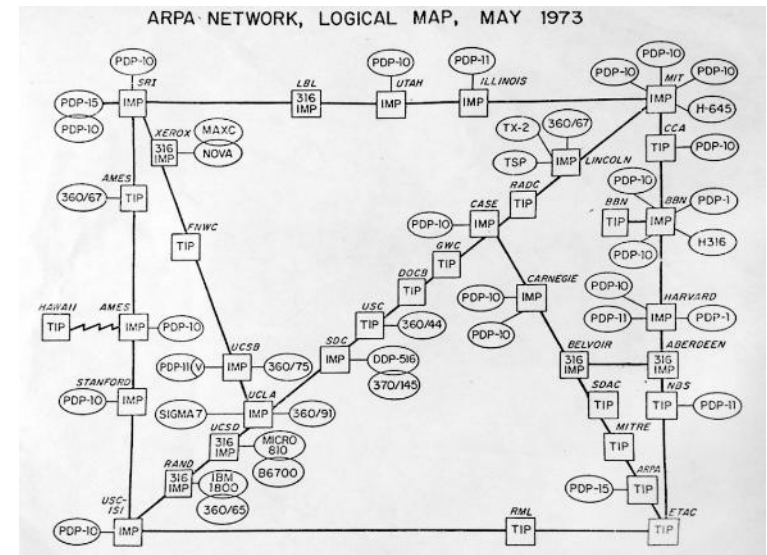
## 1965 – Moore's Law formulated

## 1970 – Development of TCP/IP

## 1973 – Ethernet enabling LANs

## 1984 – ASML founded

1998 – Google invented, Paypal launched



# Remote Connectivity

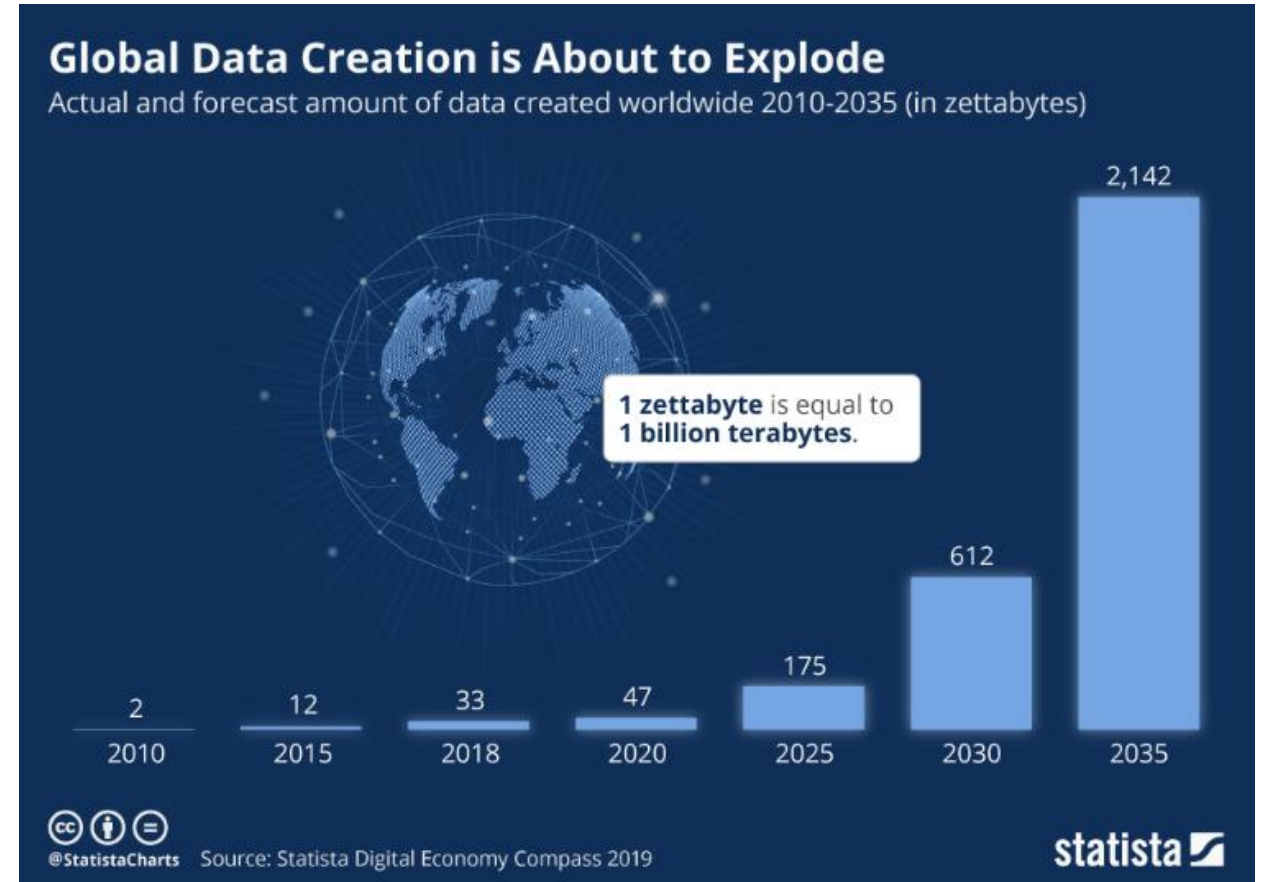
Data creation will explode – the need for data access will match the rate

Data creation due to:

- Increase in internet access
- Mobile technology and smartphone adoption
- Rise of Social Media
- Multimedia Content
- Internet of Things
- Cloud Computing
- Artificial Intelligence

Data Access requires:

- Data Center capacity
- Storage and Network Infrastructure
- Smart Data Management Tools

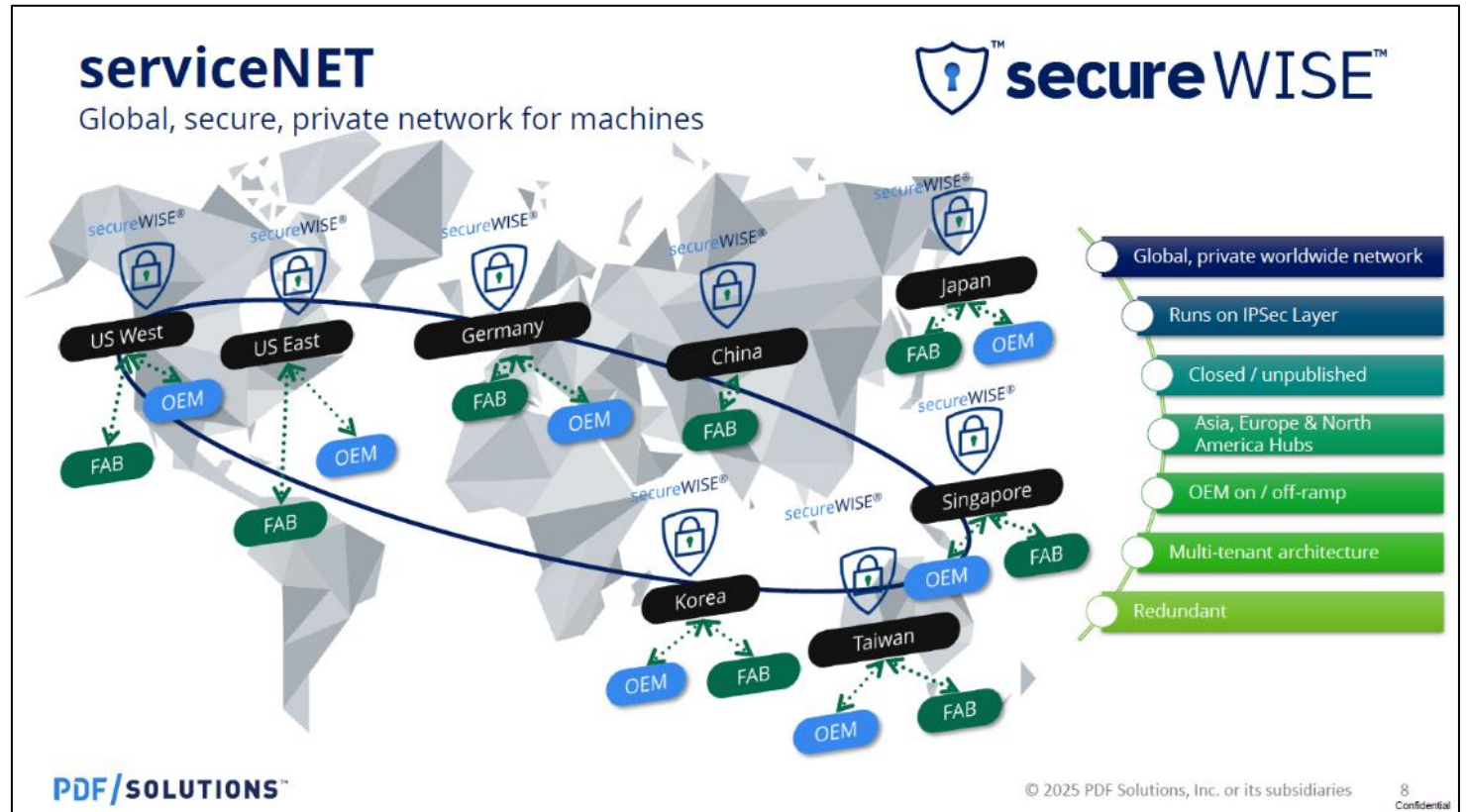


# Remote Connectivity

## Public Data growth indicative to Enterprise Data growth

A world-wide-secure-web is needed to serve the needs of ASML's Customer Service Operations.

- ASML utilizes secureWISE since 2005
- Supports all ASML Equipment tools
- On-prem solution
- Key Requirements
  - Data Confidentiality and Encryption
  - Data Integrity and Authenticity
  - Tunneling and Encapsulation
  - Firewall and Access Control



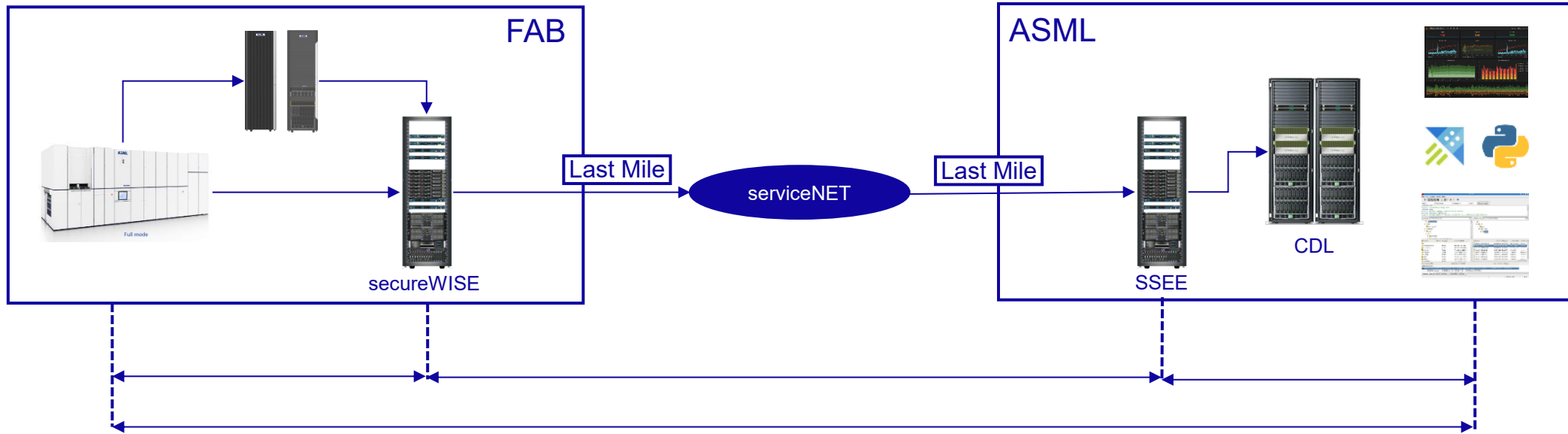




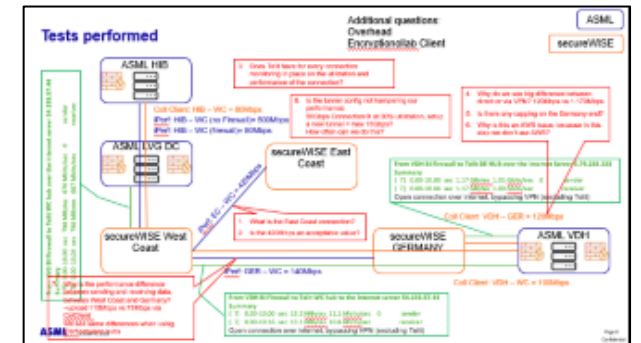
<https://www.youtube.com/watch?v=wI6nCmG-PpI>, 11/27/2025

# Use Cases

Equipment performance monitoring is critical



- Lithography equipment requires 24x7 performance monitoring
- Latency, bandwidth and hardware availability is crucial
- NPI brings new requirements which require technical deep dives and improvements



# Use Cases

## Utilizing secureWISE capabilities

### FTP Data Downloads

- Ad-hoc
- Central scheduled jobs
- Local scheduled jobs

### HTTP Access

- Ad-hoc
- Automated Performance Monitoring
- Application

### RTO Access

- VNC View
- VNC Control (upon operator approval)

### RAA

- Send authorized commands to equipment

Recent [redacted] asml [redacted] - Collaborative Client v1010

Active Sessions

Settings... Join Exit Refresh

Joined	Status	Last Joined	Session	Tool(s)	Auto-Connect	Description
X	🟢		ASML_TWINSKAN_[redacted]	ASML_TWINSKAN_[redacted]	FTP	N/A

ASML\_TWINSKAN\_M8357 Details

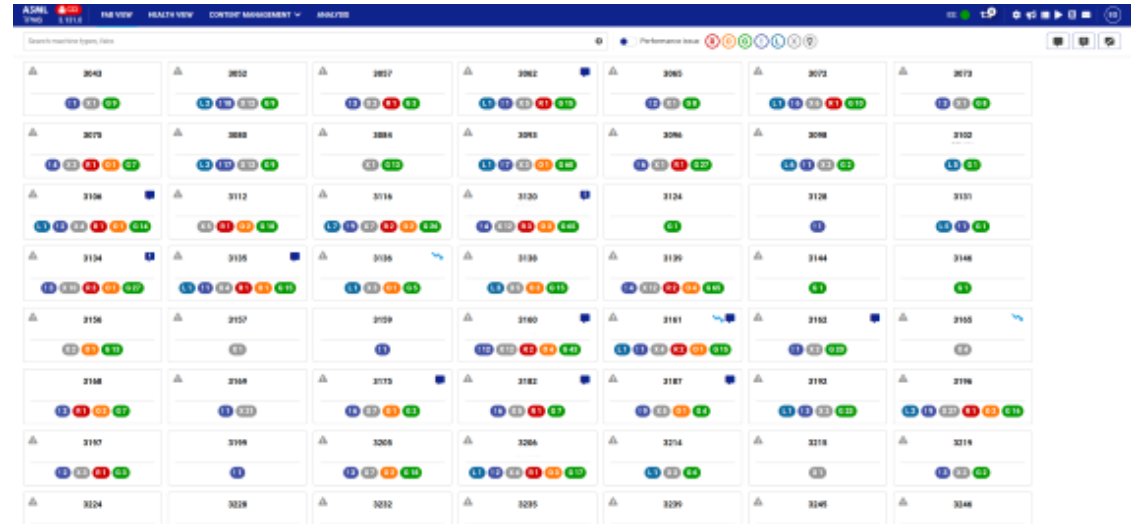
Latency	Tool	Service Status	Service	Last Status Check	Error
🟢 340 ms	ASML_TWINSKAN_[redacted]	✓	FTP	10/8/25, 3:31 AM	n/a
		✓	HTTP	10/8/25, 3:31 AM	n/a
		✓	RAA	10/8/25, 3:31 AM	n/a
		✓	RTO	10/8/25, 3:31 AM	n/a
		✓	TCS	10/8/25, 3:34 AM	n/a

# Equipment Data

Equipment monitoring – need for low latency and real time data

Data helps us to make better informed decisions at the right time.

- Performance monitoring
- Manufacturing and Yield Optimization
- Predictive Maintenance
- Software Patches and Upgrades

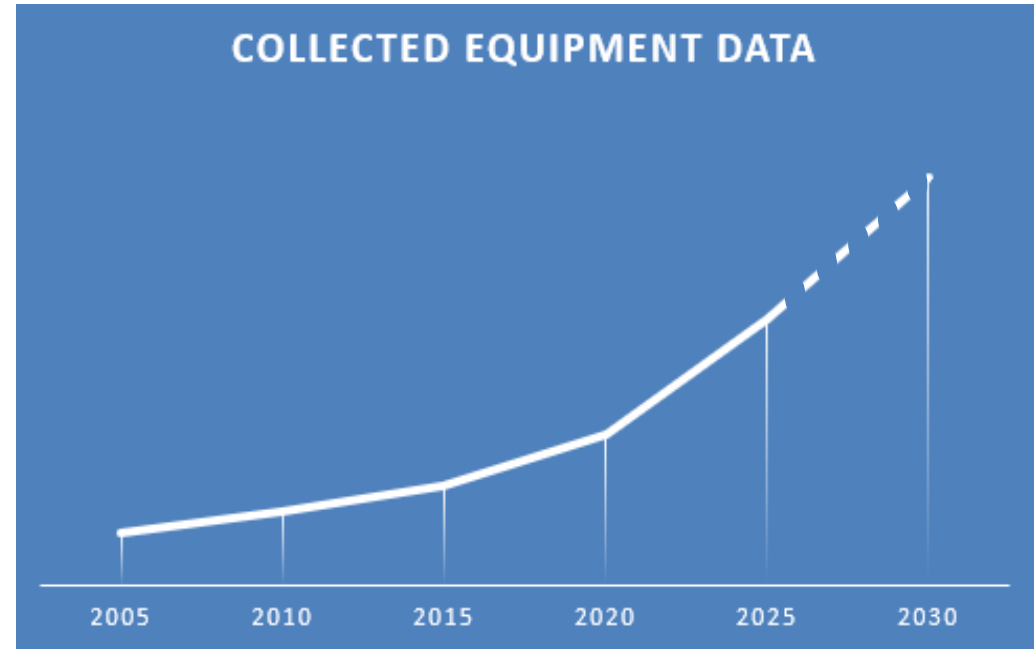


# Equipment Data

## Data growth

The increasing amount of high-density data helps us in analytical troubleshooting and predictive analytics.

- Machine Data growth by a factor of 3 for past 10 years
- More data created and more data accessed
- Infrastructure and Data Management investments

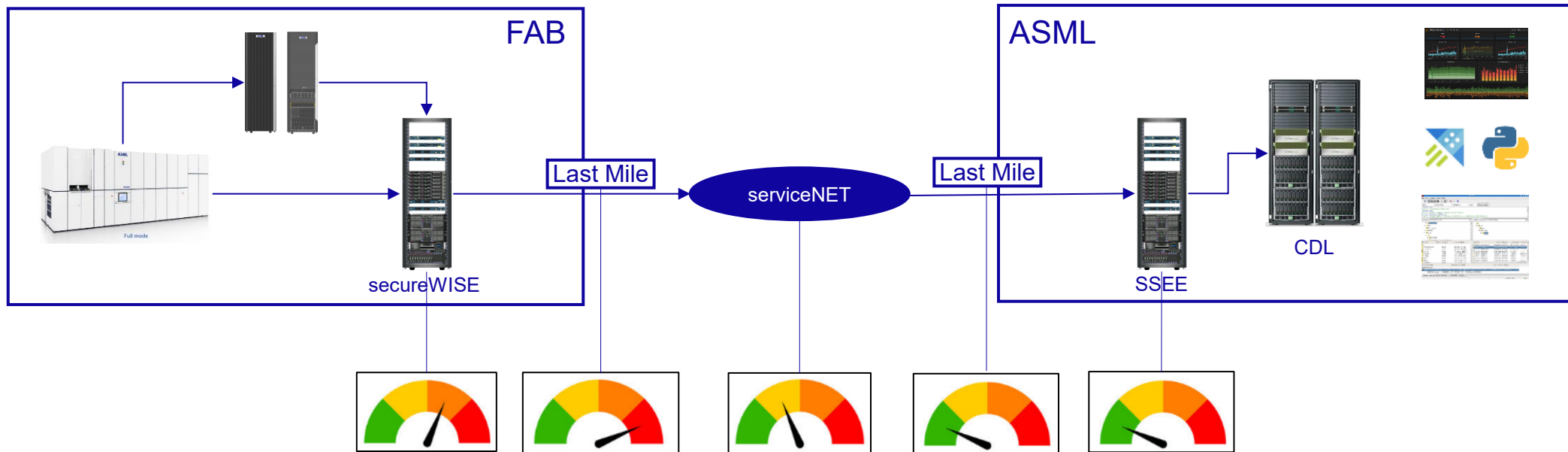




# Outlook

## Partnering to advance remote connectivity and monitoring capabilities

1. Strengthen collaboration
  - Align processes to enhance collaboration
2. Technological Advancements
  - Continue innovating hardware and network capabilities
3. Data Analytics & Proactive Monitoring
  - Support pro-active performance monitoring



# ASML

# Thank you!



Eduard Gerhardt  
Sr. System Engineer

+1 480 696 2825  
[eduard.gerhardt@asml.com](mailto:eduard.gerhardt@asml.com)



Chandler, AZ, USA

# Thank You

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