



Factory Operations Visibility and Intelligence (FOVI)

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Takao Mizutani

Fujitsu Limited

A large, stylized globe with a red-to-orange gradient, showing a map of the world. The globe is set against a background of a white grid representing latitude and longitude lines. A semi-transparent white wave-like shape is overlaid on the globe. The website URL "www.iiconsortium.org" is written in white text across the globe.

www.iiconsortium.org



Agenda

1. Fujitsu Participation in IIC
2. Factory Operations Visibility and Intelligence Testbed
Overview
3. Demo





Fujitsu participation in IIC

- Large Industry Member
- Steering Committee Member
- Co-Chair at Security WG
- Co-Chair at BSSL (Business Strategy and Solutions) WG
- **FOVI (Factory Operations Visibility and Intelligence)**

Testbed





FOVI Testbed Objectives

- Real-time visibility to involve on-site operation managers' findings for further analysis
- More intelligence on our own manufacturing factories' challenges and processes – gathering data for;
 - Use Case 1: Product return and repair process
 - Use Case 2: High-mix production line optimization
- A reusable, horizontal, industrial IoT platform for factory data processing, visualization and analysis





Use Case 1: Product return and repair process



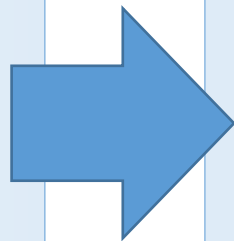
Testing station



Repairing station

Challenges:

- Avoid shipment delays
- Faster repair process



Visualization and Analysis:

1. Track repairing products status and location in the work area.
2. Recode testing procedures to reproduce the errors in repairing station.



Use Case 1: Current Results

- Achieved: Tracking & visualizing repair product status
 - Visualized items
 - Product location in the repair work area
 - Work status including alert (behind schedule, shipping time, beacon sensor battery)
- Result: 30% shipping cost reduction
 - Cost reduction for single unit shipment
 - Faster shipment process





Use Case 2: High-mix Production Line Optimization



PCB



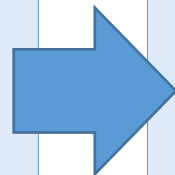
SMT process: mounting the parts



Pre-production setup

Challenges:

- Prevent machine idle times, human errors
- Control the timeline



Visualization and Analysis:

1. Collect and consolidate production line data
2. Near real-time display and alerts



Use Case 2: Current Results

- Outages reduced 25 %
 - Parts complement procedure
 - Review operation procedures on error
- Faster cause analysis and countermeasures evaluation
 - Countermeasures implemented → Immediate efficiency assessment
 - Improve Kaizen process
- New findings
 - Concealed and hidden issues discovered
 - Countermeasures cost/benefit understanding





High-mix Production Line Visualization

Wait a moment please...

