Cultivating Smart Manufacturing Innovation

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**CESMII SM Platform™ “Markitecture”**

### Apps

- COTS OT Apps
- Workflow
- AI Engines
- Homegrown Apps
- PLM Integration
- Enterprise Integration

### Smart Manufacturing API - Streaming & Historical Data via Model

Data Store

Data Contextualization - Federate all Profiles & Assemble Data Model

Data Management - Connect, Monitor, Manage

### Edge

Connect, Ingest, Buffer... (OSI, OPC, CIP, MQTT...)

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**Smart Manufacturing Marketplace**

- SM Profiles™ (Device, Machine, Process)
- Member Apps *
- SM Platform™
- Profile Designer™
Problem #1 – Interface Anarchy
Problem #2 – Alternate Evolution


https://www.watelectronics.com/how-to-program-the-programmable-logic-controllers/
Problem #3 – The “Big Data” Myth

IT CAME FROM THE DATA LAKE

Agenda
- Problems to Solve
- Profiles
- High Level Architecture
- Q&A
How Profiles are Used

SM Profiles are an extension to the OPC/UA Information Model that can be distributed to automate the creation of information value throughout a software architecture.

Uses and modifies data to create value

Consumes the interface to allow independent development.

Contextualizes, relates and stores data in a model

Defines the object model and interface

Gathers raw data

Determines what data to collect and how

Manufacturing Operation