



**Rockwell
Automation**

Data Ready Machines

Smart manufacturing is powering a data explosion

Data generated by smart technology holds tremendous untapped value and possibilities

Connected IoT devices will generate **80 zettabytes** of data yearly by 2025¹

Manufacturers with annual revenue less than \$500 million USD use only **38%** of their data effectively²

95% of manufacturers are using or evaluating smart manufacturing technology³

Smart Machines have already unlocked powerful insights at the machine level

Smart Machine

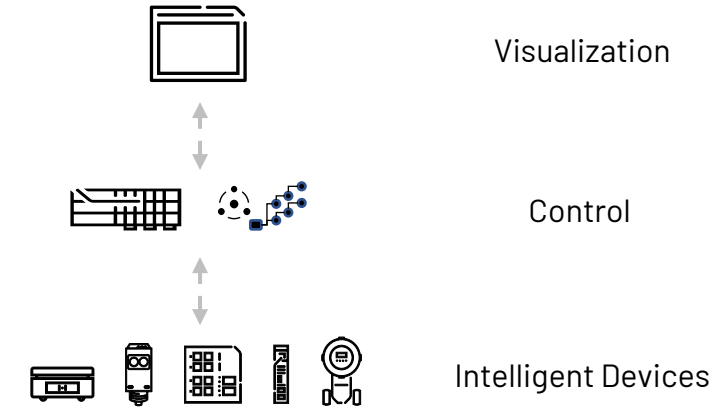
Leverage that information for analytics and insight at the machine



Organize that data and turn it into actionable information



Identify and/or create equipment-level data



DataReady™ Smart Machines help break the standoff

DataReady™

Make contextualized data and information available for egress, unlocking insights across a production line and/or fleet

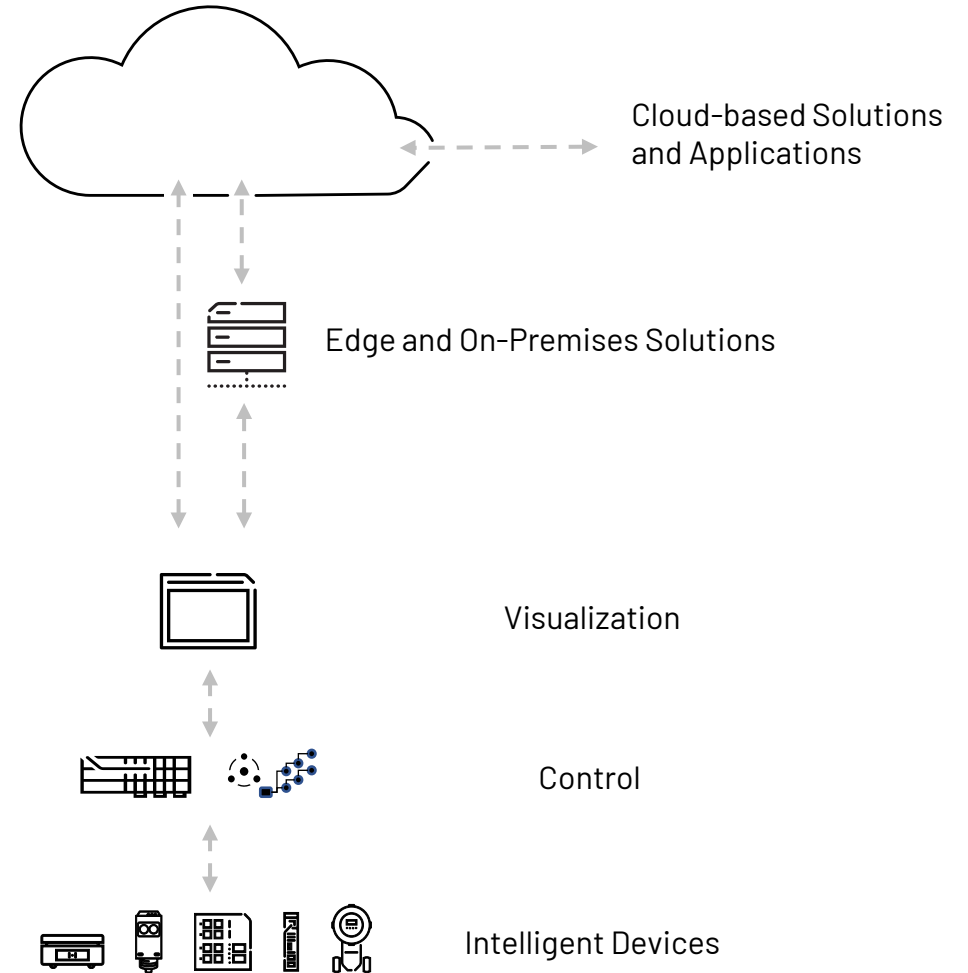


Smart Machine

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The Rockwell Automation approach: Decoupling information availability from consumption

Organizing and preparing data

OEMs can organize data and make it available to be egressed from the machine...

Analyzing data and taking action

...so that OEMs and End Users can flexibly make decisions about use cases and applications



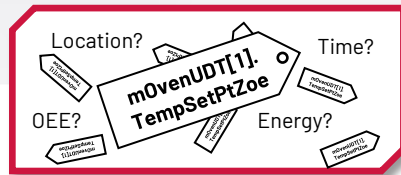
With this approach, OEMs & End Users can move forward together

Smart Objects streamline and standardize data preparation

Organize data into information models at the source and reduce time-consuming effort at the information layer

Data output from Classic workflow

An expert spends hours organizing data to make it usable



Unstructured

Data points are not named intuitively, and relationships are not mapped

Unsynchronized

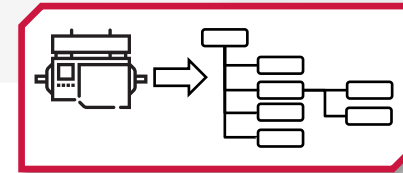
Inconsistent or disparate time stamps across different parts of the manufacturing process

Lacks OT context

Tagging and attributes must be assigned manually

Data output from Smart Objects

Data is organized automatically at the source



Structured

Data points are organized into an information model with relationships mapped

Synchronized

Time stamps on data from different sources are precise and consistent

Contextualized

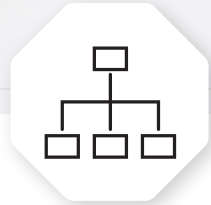
Data has attributes such as location, energy consumption and OEE information

FactoryTalk® Optix™ supports visualization at the machine level, and data egress to wherever it's needed



Connect

Integrate data from different sources, including seamless pairing with Smart Objects and Logix



Contextualize

Transform operational data with object-oriented modeling and contextualization, preparing data for analysis by other applications



Visualize

Visualize and analyze data at the edge to empower real-time decision-making



Communicate

Share visualizations remotely and egress data to the cloud to feed other applications from both Rockwell Automation and third parties

The Rockwell Automation DataReady™ solution

Organizing and preparing data

Smart Objects



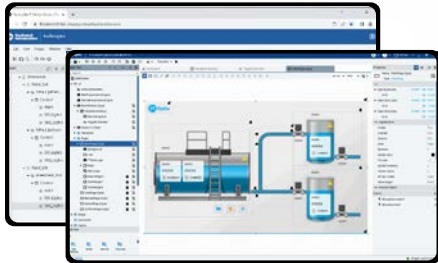
FactoryTalk® Optix™



FactoryTalk® Remote Access™

VPN

FactoryTalk® Design Studio™
Studio 5000 Logix Designer®
FactoryTalk® Optix Studio™ Pro



MQTT,
OPC-UA,
REST

Analyzing data and taking action



influxdb



aws

fiix



FT DataMosaix™

PLEX

Google Cloud





**Rockwell
Automation**

ICS CyberSecurity

Industrial security challenges

Not being prepared can be catastrophic with new threats emerging constantly

COMPLEXITY EXPOSES THREATS



75% of executives believe infrastructure is too complex

SOPHISTICATED ATTACKS



2/3 attacks are facilitated by ransomware-as-a-service

WIDENING SKILLS GAP



Cybersecurity job openings in U.S. up 29% in the past 12 months

EMERGING THREATS



IoT devices suffer an average 5,200 cyberattacks per month

Cybercrime has increased

600%

since the start of the pandemic



Cybercrime pays - and it's only getting worse

INDUSTRIAL COMPANIES ARE PRIME TARGETS

Legacy unpatched infrastructure, IoT, insider threats and a lack of skilled resources create vulnerabilities.

In the last 3 years...

61%

Industrial manufacturers have experienced a cybersecurity breach

By 2025 expect to pay...

\$10T

Estimated cost of cybercrime annually



Every organization is vulnerable



60% of cyberattacks go undetected



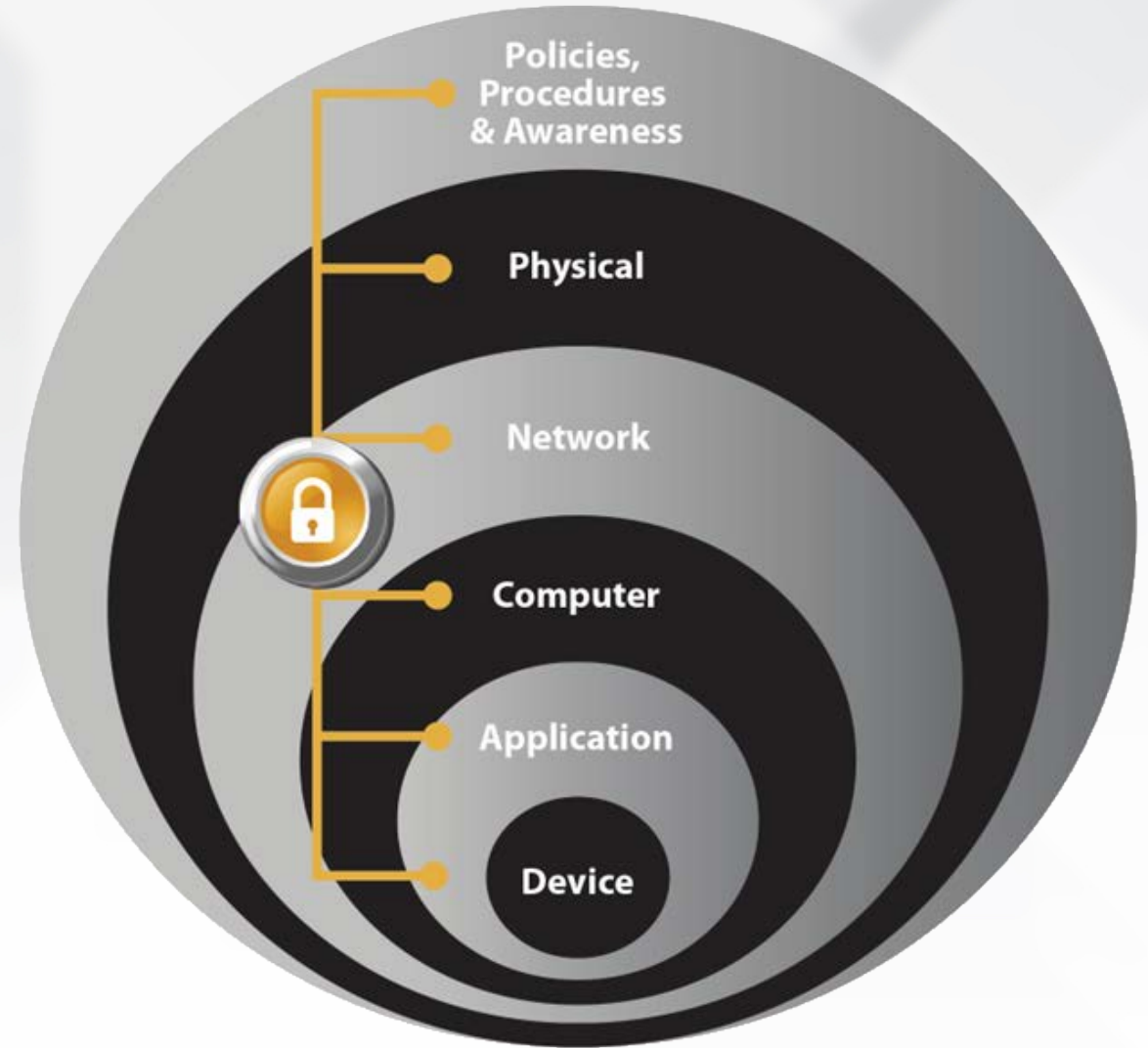
Most organizations aren't prepared



Be proactive to avoid catastrophe

Holistic Approach

- Understand risk
- Prioritize risk mitigations
- Defense in depth
- Standards-based approach



CISA
CYBER INFRASTRUCTURE



NIST



CPNI
Centre for the Protection
of National Infrastructure

Rockwell Automation's Industrial Cybersecurity Framework

A RELIABLE NIST BASED APPROACH



- Organizational context
- Risk management strategy
- Roles and responsibilities
- Policies and procedures



- Asset management
- Business environment
- Risk assessment
- Risk management strategy



- Awareness control
- Awareness and training
- Data security
- Info protection and procedures
- Maintenance
- Protective technology



- Anomalies and events
- Security continuous monitoring
- Detection process



- Response planning
- Communications
- Analysis
- Mitigation
- Improvements



- Recovery planning
- Onsite Restoration
- Improvements
- Communications

Why Rockwell Automation **Threat Detection**?



Our deep expertise secures your industrial automation systems.



Our scalable solutions meet the needs of organizations both large and small.



Our efficient implementations accelerate time to value.

Rockwell Automation Network & Security Services

Differentiation

- Converged skill set of operational technology (OT) and information technology (IT)
- Experience across industrial control applications and networks
- Breadth of industry standard committee (ISA, NIST, INL, DHS...) participation
- Ability to address security risks without sacrificing productivity
- Full life cycle service offering with global delivery capability



Network &
Security Services

- NSS is a team of industrial automation and IT experts that **Assess, Design, Implement, Validate** and **Monitor** plant-wide network infrastructure.
- Unlike large IT vendors and resellers, we offer a comprehensive and tailored solution that balances both IT requirements and production goals of your company.



**Rockwell
Automation**

Thank You!