# AMERICAN INDUSTRIAL

# Fast-Track Your Way to an



The Industrial Internet of Things (IIoT) provides a path for virtually all industrial enterprises to jump ahead of and edge out their competition, arming them with more robust and actionable data on their remote operations - *if* they can access it quickly. The challenge is that much of the insights generated by remote sensors and devices today are still stranded in the field. Traditional approaches of centralized data processing and network polling simply can't support the breadth of data and real-time delivery speed required to realize next generation IIoT infrastructure.

## WHAT'S NEEDED IS A PARADIGM SHIFT High Speed 10 Gigabit Network Switches

ITS, and Automation need high capacity Gigabit Rings Fully Redundant ERPS Rings from DYMEC.

## THE CURRENT WAY

### **Centralized Computing**

Data from remote locations must traverse the entire network to reach the closet or the cloud for analysis.

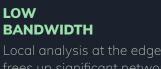


### THE DYMEC IIOT WAY

### **Edge Computing**

Processing is distributed to the edge of the network, where data is being generated in real time.





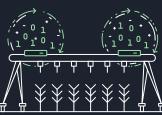
Local analysis at the edge frees up significant network resources.



Bandwidth ptimization ensures apid response times.

**ALL DATA** 

ACCESSIBLE





ACTIONS Operations can now react immediately to

mean operations must prioritize what data to pull – a fraction of all available.

HIGH LATENCY Network congestion causes lags in data acquisition and analysis.

call more data for deeper analysis.



in-the-moment datc and automate responses.



By 2022, **75% of enterprise-generated data** will be created and processed **outside** a traditional centralized data center or cloud.<sup>3</sup>

**DECISION DELAYS** 

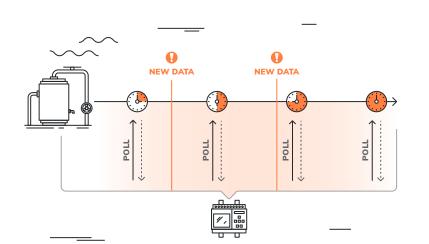
Latency leaves

real-time control.



### **Poll-Response Topology**

With traditional polling protocols, edge sensors and devices are polled for status updates even if nothing has changed, causing data redundancy and bandwidth waste.



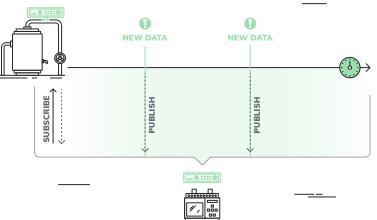
### **DAILY OR HOURLY DATA** Polls are only made at a pre-set interval.

**STATIC** 

**INCOMPLETE** This creates gaps in insight into what's happening at the remote site.

If events occur between polling, they

are not known until the next poll.



# Events can be seen as soon as they occur.

### DYNAMIC

Conditions and status can be assessed in real time for immediate action.

**MINUTE-BY-MINUTE DATA** 

### GRANULAR

Now operations can see what they were missing before.

A pub/sub approach **reduces bandwidth needs by 80-95%** while driving millisecond response times.

# **MAKING THE MOVE**

Get more out of your existing fiber systems and network, fast.

So how can you evolve your approach without significant time and cost investment? **With DYMEC.** 

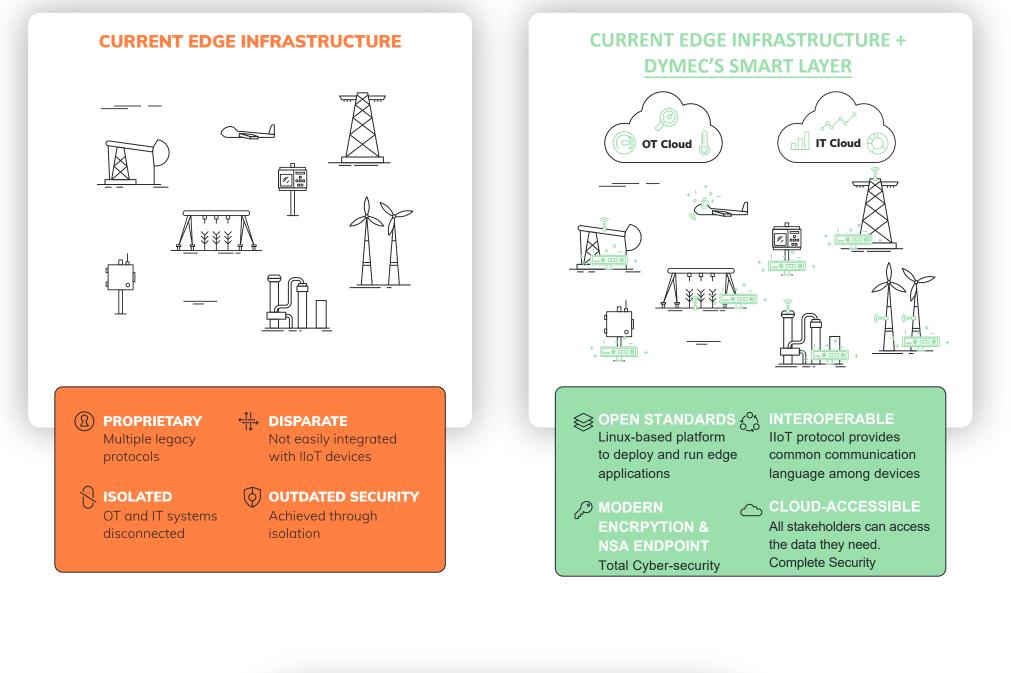
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### **BUILD ON WHAT YOU HAVE**

DYMEC's ruggedized edge intelligent solutions are built to rapidly enhance your existing infrastructure and devices – providing a route to rapid modernization at a fraction of the time and cost to replace legacy equipment.

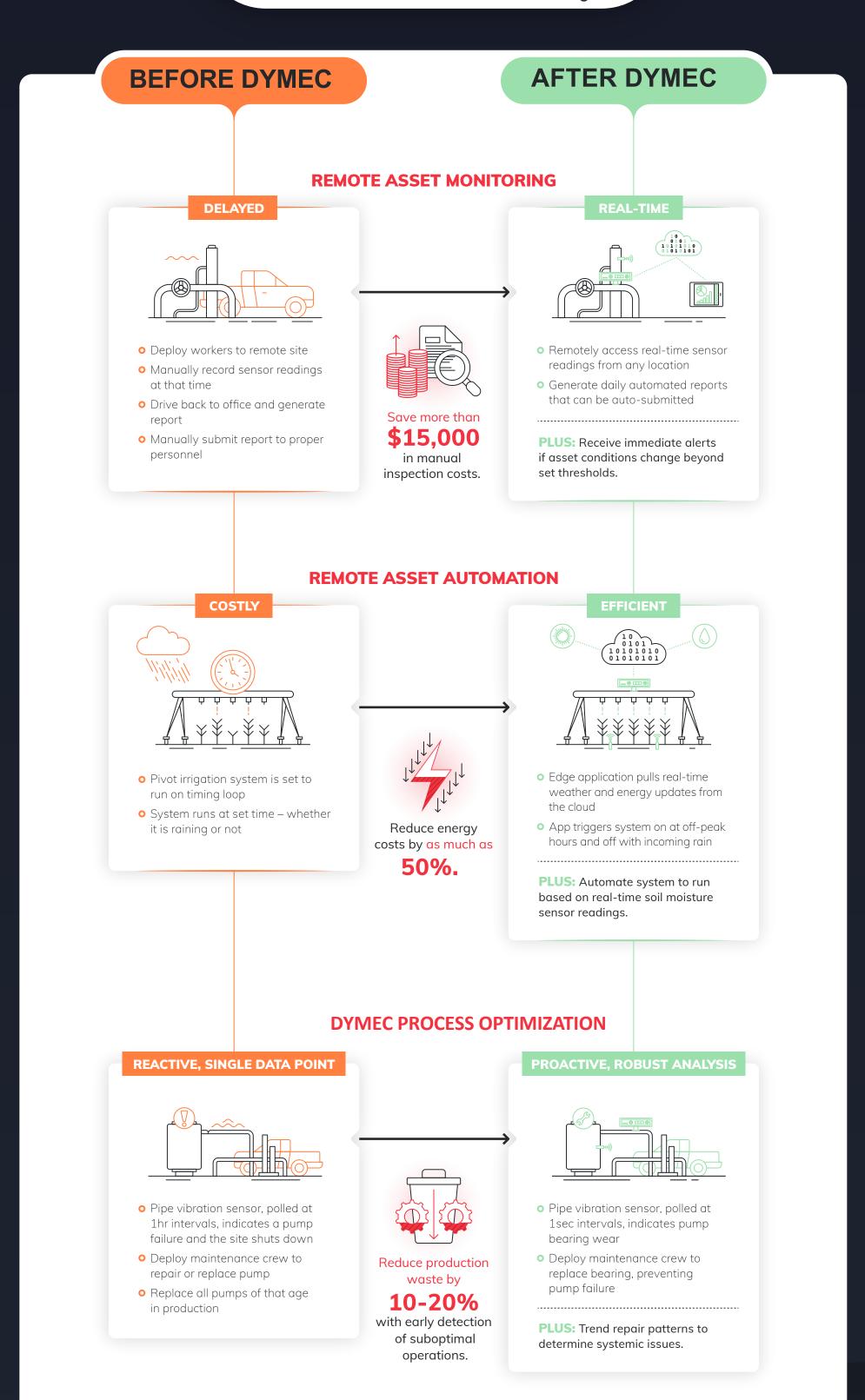
# Publish/Subscribe Architecture

An IIoT protocol enables report-by-exception publishing so that updates are only delivered when status or conditions change – reducing bandwidth while speeding response times.



## A SMART / SECURE EDGE IN ACTION

Here are just a few things you can do with a Secure & smarter industrial edge.





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With DYMEC as your partner, IIoT is not a far-off vision but a near-term reality.

DYMEC - Made in USA - is ready to help your industrial operation capitalize on IIoT efficiencies to further your competitive edge.

To learn how, visit www.DYMEC.com today.

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