



Outotec's Digital Services Platform: How OSIsoft is Helping Transform Our Business

Presented by Kerry O'Sullivan
Outotec MES Manager

Outotec

Outotec – A process technology company



Serving the metals & mining, water treatment, energy and chemical industries

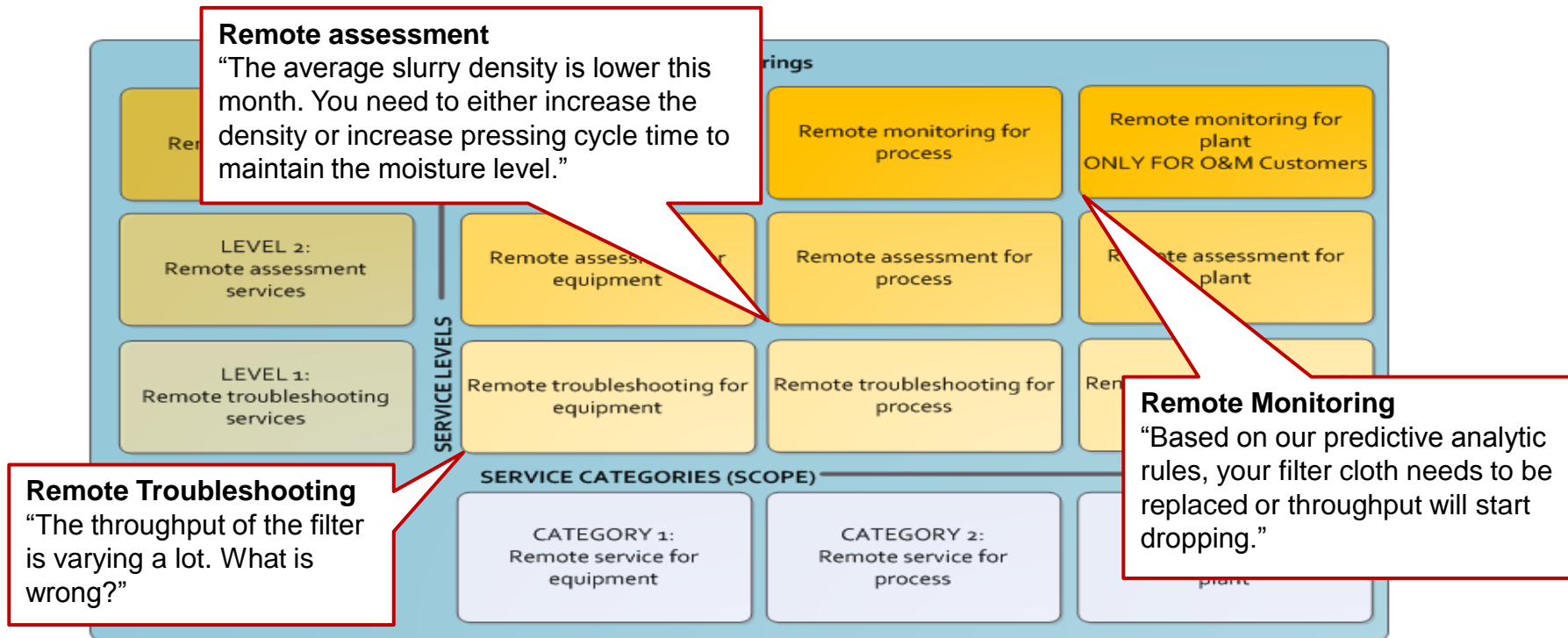
Megatrends and Customer Challenges

Talent scarcity	Talent – especially close to mining site – scouting has become more difficult and mine owners cannot find the required capabilities.
Industrial Internet	Whilst more and more data is available, also making sense of that data becomes more and more difficult.
Potential for optimization	Plants are connected to global markets and customers. Optimizing over the entire value-chain is hard.
Full visibility	End-to-end visibility of operations is crucial for comparisons and business decisions.

Outotec Digitalization Approach

Digitalization: Remote Services Portfolio

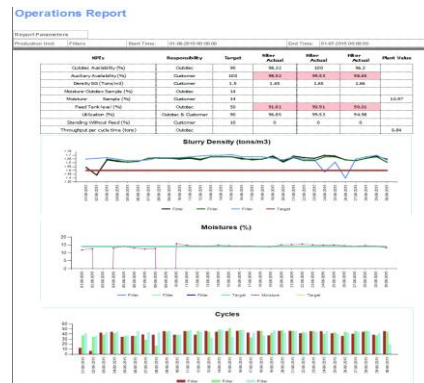
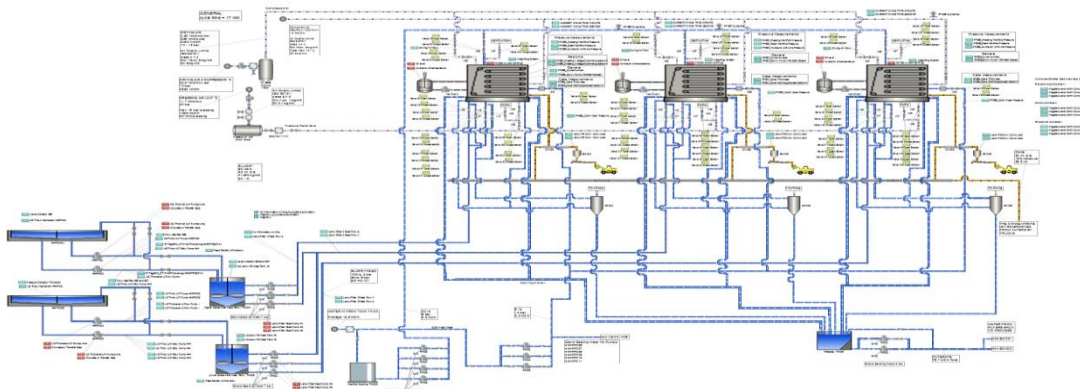
Outotec provides our customers with 9 Remote Service Products:



Digitalization: Remote Services at a glance

Process analysis and troubleshooting

Periodic Assessment Reports



Dashboards and reports (Sample for Filter Process)



Dedicated experts available



Sample Case: Outotec solving concentrator plant recovery performance problem

Define

- Dewatering process unstable
- Flocculent overusage causing disturbances in metals separation
- Customer unable to find root cause

Measure

- OSC enabled Automatic collection of historical data from local site to Outotec digitalization platform (based on OSIsoft solutions)

Analyze

- Utilized 6-sigma analysis tools and found a correlation between a controller in the upstream floatation process that is potentially causing heavy oscillations downstream

Improve

- Outotec will provide additional on-site support to execute tests to prove hypothesis
- Remote service tools to provide data to verify improvements in recovery

Control

- Outotec Operational Support Center (OSC) will continue to monitor to ensure that the process is kept under control.

Recovery
10% below
expected
level

Outotec Digitalization Architecture

Outotec Digitalization platform

Working towards:



Outotec Web portal for digitalization platform

Process Diagnostics:

SAVCOR Wedge

Predictive analytics:

Outotec applications

Modeling:

Outotec applications



- PI Integrator for
Business Analytics
(Future: 2015)



- PI Data Archive
- AF
- Asset Analytics

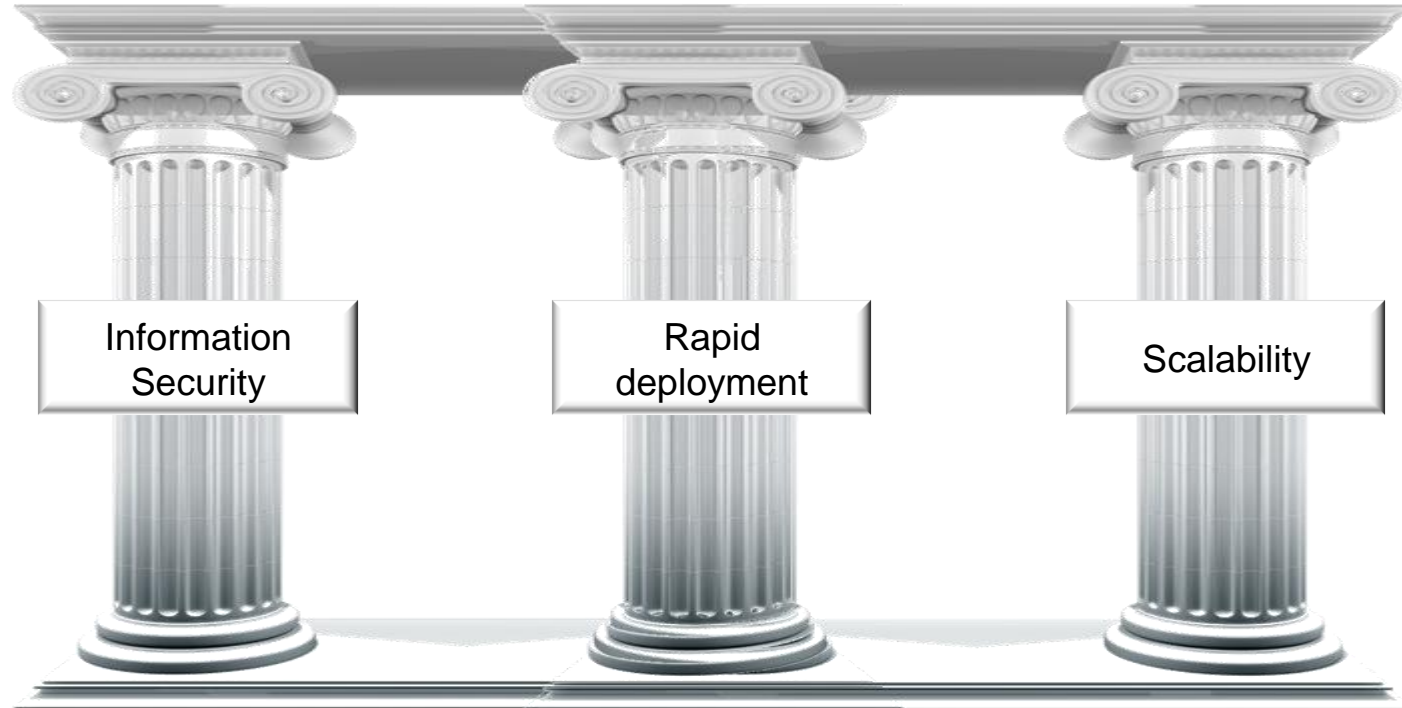


SIEMENS

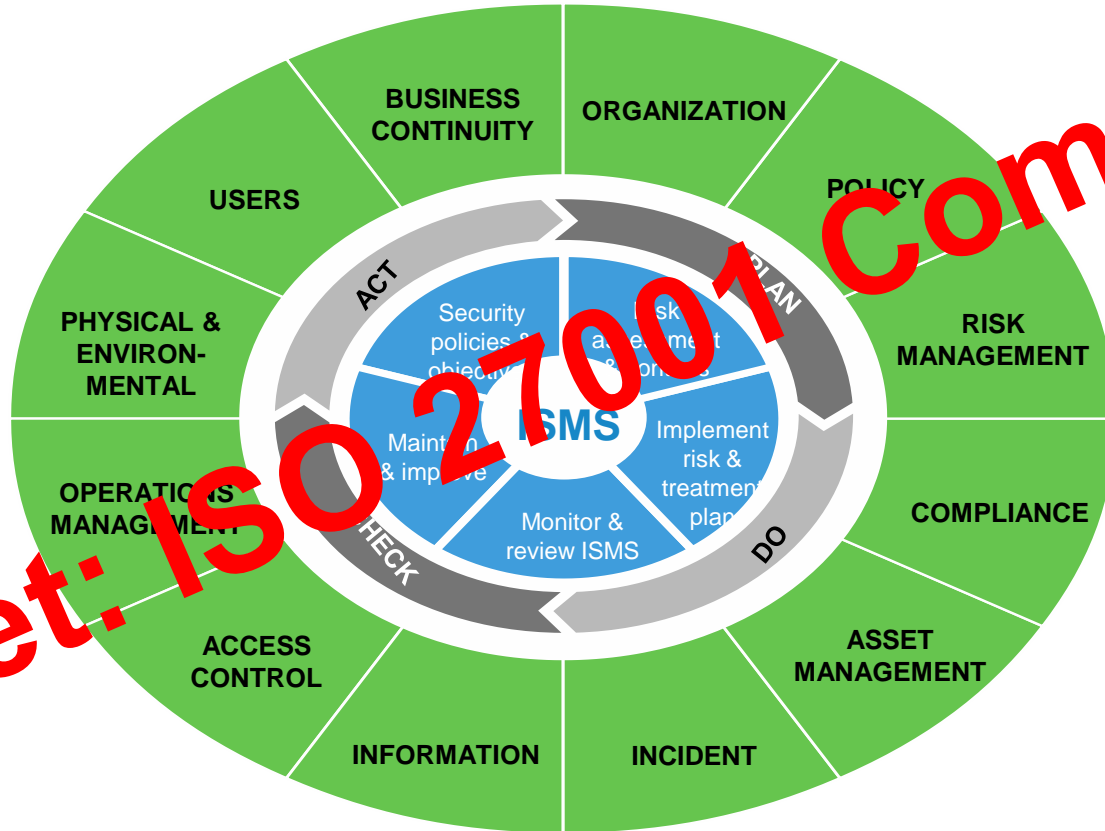


IBM SCCD

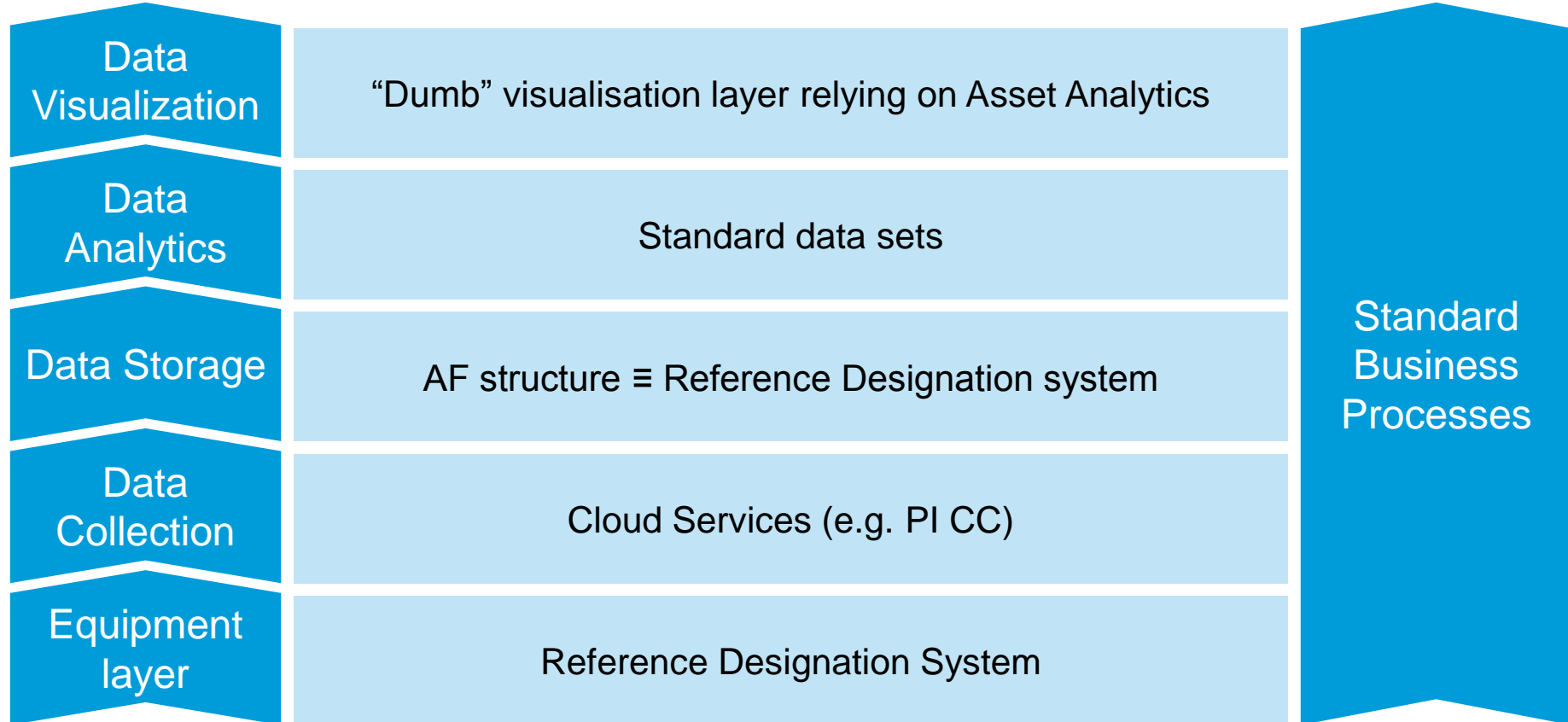
Solution build upon 3 pillars: Information Security, rapid deployment and scalability



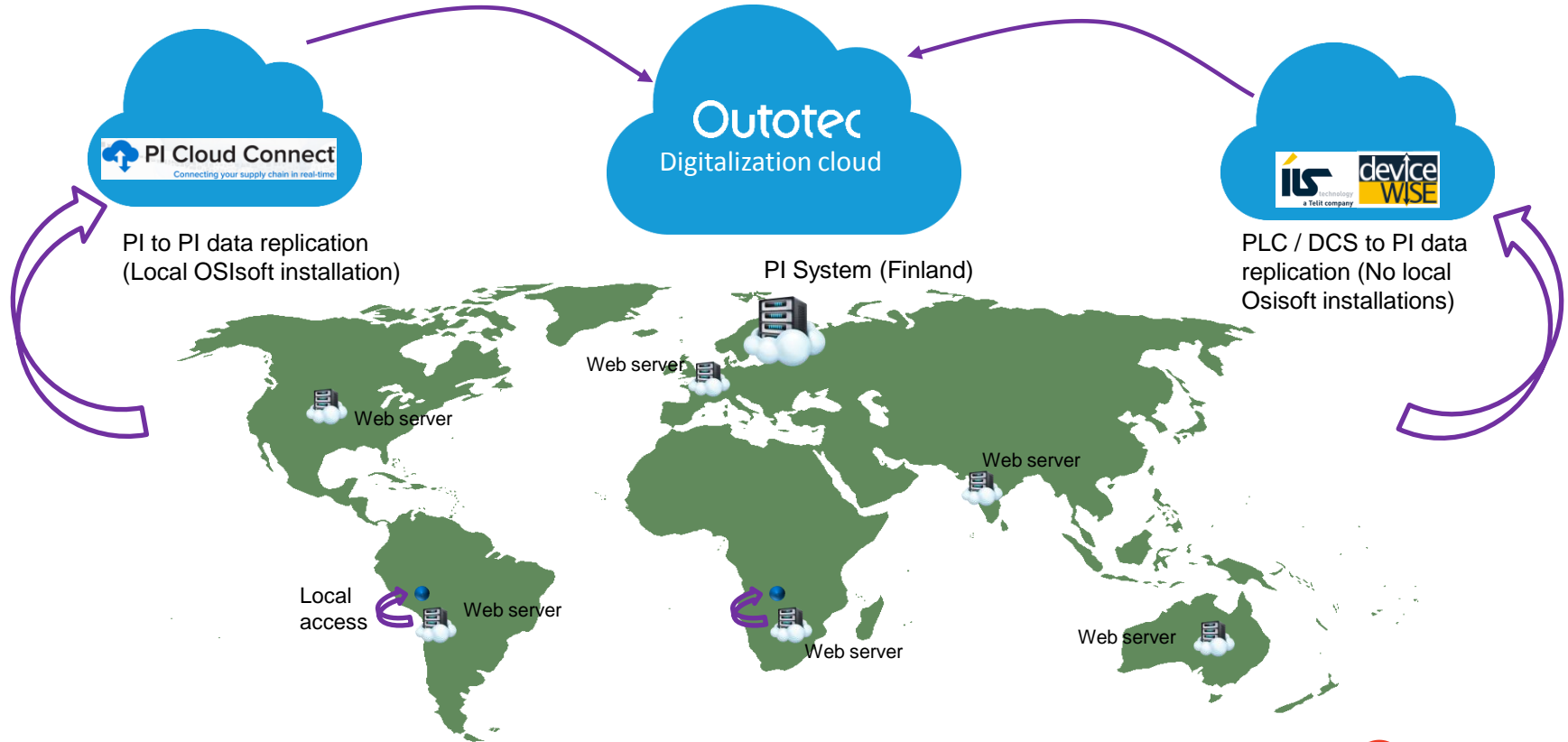
Information Security is at core of everything we do



Rapid deployment and standardization at core of systems



Scalable architecture to meet global demand



Digitalization

- How we will collect the data?

Two preferred options:

Option 1:



OSIsoft Solution

“Customer makes data available in local OSIsoft PI Data Archive and provide controlled access to Outotec over internet ”

Option 2:

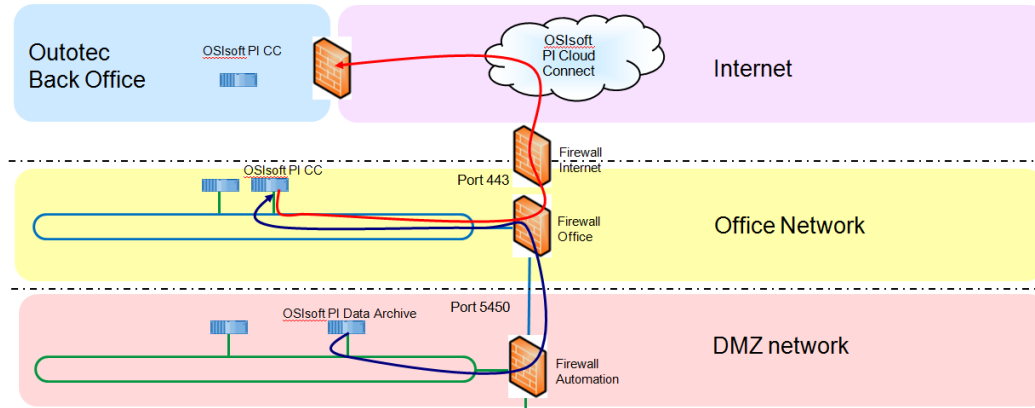


ILS solution

“Customer makes data available in OPC server or direct from PLC. Outotec installs secure ILS software agent to access data.”

Digitalization: Data Collection

- PI Cloud Connect Solution



- Local site has an existing PI System.
- Customer / Outotec connects to OSIsoft's PI Cloud Connect service in order to replicate data to Outotec systems.
- Customer can control what data is published. Outotec has no access to local OSIsoft Data Archive.
- Stable / secure service delivered by OSIsoft.

Outotec Digitalization benefits



Example: Spotting problems in furnace operation

A smelter plant experiences a flash smelting furnace problem with an out of control chemical reaction. The risk of foaming would force a shutdown of the furnace.

With Outotec Remote Services, the issue can be spotted remotely in time to prevent this.

The furnace is emptied and restarted in four hours. If the situation had escalated, the furnace would have caused a serious safety risk and been out of production for two days. Additionally, the operational processes of the monitored site are safer for personnel.

Savings: €5.2M

Outotec Digitalization key challenges

Digitalization– Key challenges

Mitigation actions

Change Management	Handling digitalization deployment in diverse org. with numerous business lines.	Main focus on single business line to prove business case and fine tune deployment methods before roll out.
Data collection	Find single low cost “one size fits all” method.	Numerous pilots ongoing to find a small subset of data collection options. Reference designation system.
Data security	Secure the data. Persuade customer to share data.	Initial focus on customers who value Outotec partnership. Engage security consultant - Build case.
Operational Feedback loop	Services must be aligned with customer operational strategies and advice needs to be followed up.	Outotec extending capabilities in this area to ensure that Outotec has peers on every level.
Standard data models	Common templates for all equipment and process.	Strategic buy in required from business line management. Definition of AF templates with SMEs.

Summary

“The OSIsoft platform, as part of our Remote Services, is enabling Outotec to deliver a portfolio of exciting new products that will open up new revenue streams and revolutionize the way that we do work.”

Outotec



BUSINESS CHALLENGES

- A. Talent scarcity at sites to optimize use of equipment / processes
- B. Outotec spend a lot of time travelling to site and collecting data
- C. Outotec want to utilize our global knowledgebase to offer more real-time analysis and optimization services

SOLUTION

- A. Digitalization Strategy to enable low cost data collection and analysis
- B. Provide value adding services to the customer as well as data to our specialists to assist with on-site issues without leaving their desks.
- C. Connected services contract from OSIsoft opening up the use of full suite of OSIsoft products

RESULTS AND BENEFITS

- Service offering better aligned to customer needs
- Less reliance on CAPEX projects with valuable lifecycle service revenues
- Feedback loop to product development team to improve products

Contact Information

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Questions

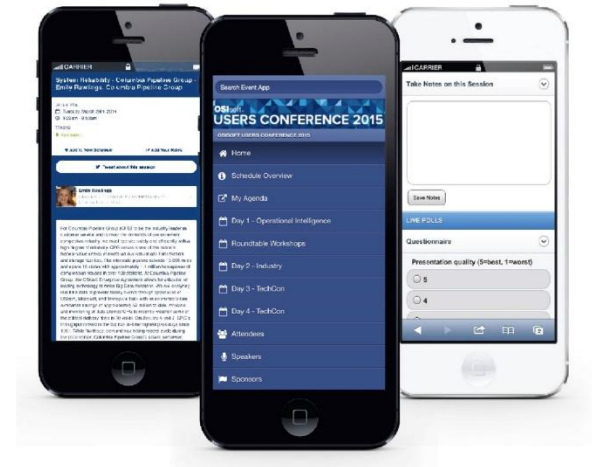
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State your
name & company

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감사합니다

谢谢

Danke

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado