

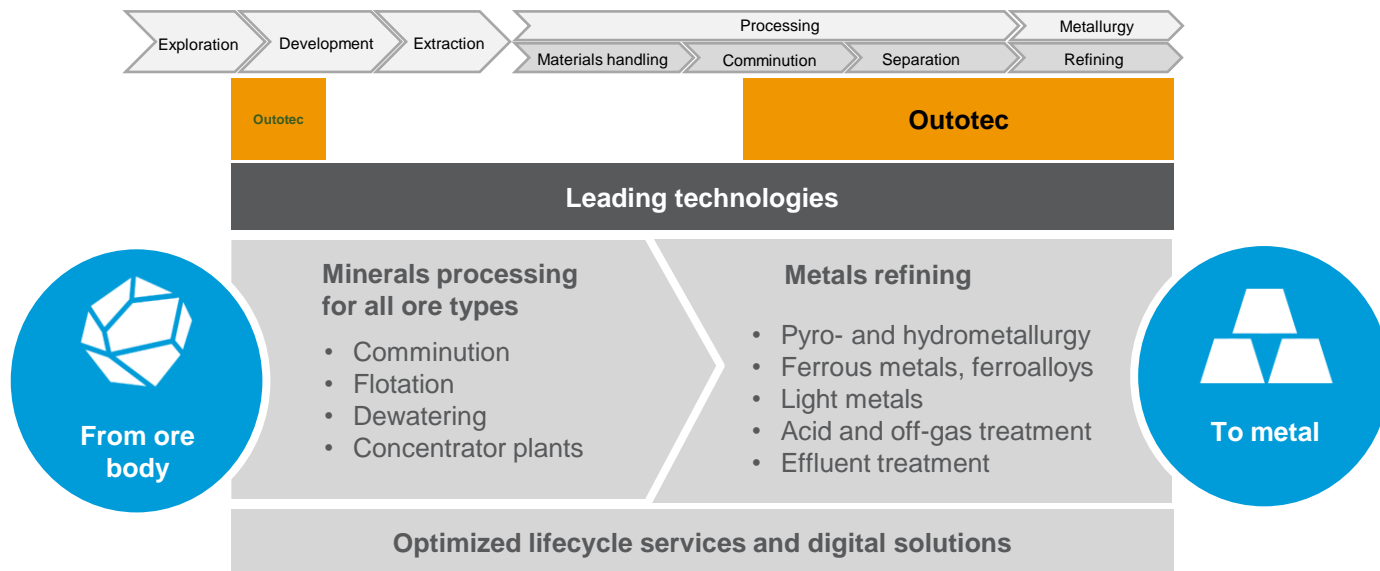
PI System As A Core Of Outotec's Remote Services

Mikko Paakkolanvaara
Manufacturing Information Systems Specialist

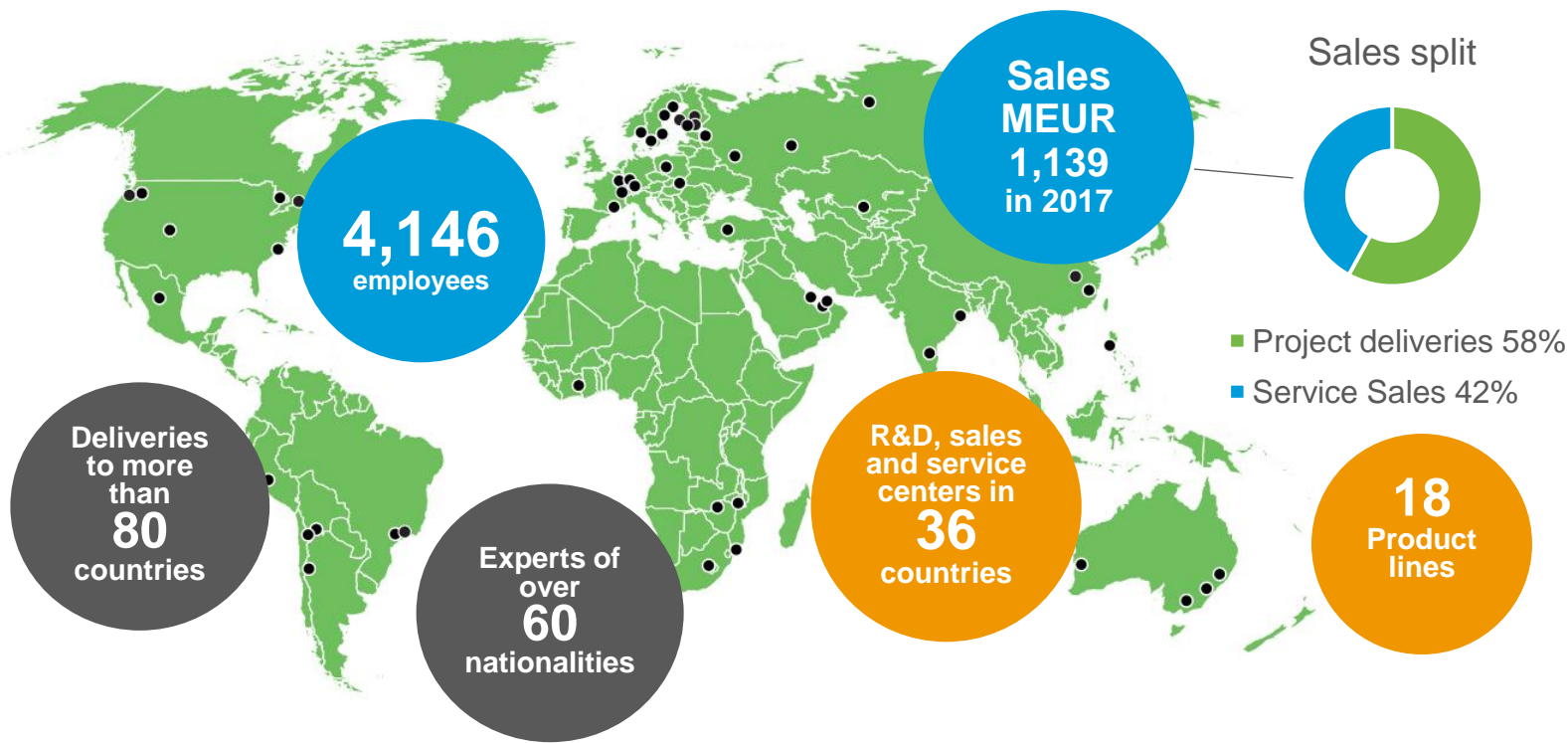
The Outotec logo is displayed in red text within a white rectangular box. The word "Outotec" is written in a bold, sans-serif font.

Outotec – a process technology company

- Global leader in minerals and metals processing technologies



Local operations, global presence



Remote Services

Expertise, reachability, continuous improvement



Together for the same goal

- Long-term continuous improvement improving customer productivity
- Fast resolution to production issues



Reachability

- Fast reaction upon request
- Best expertise on Outotec technology

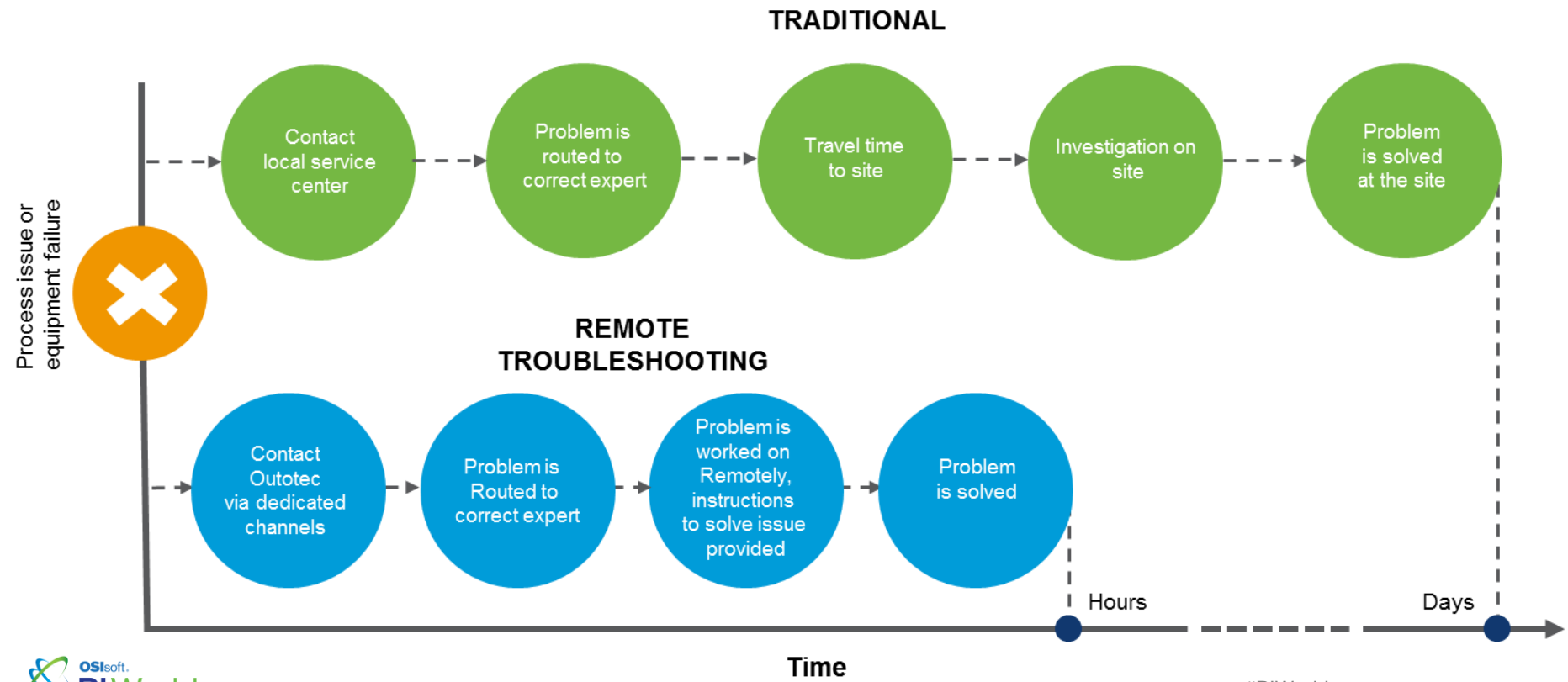


Compliance with regulations

- Information security ensured
- User Access Management
- Environmental Reporting

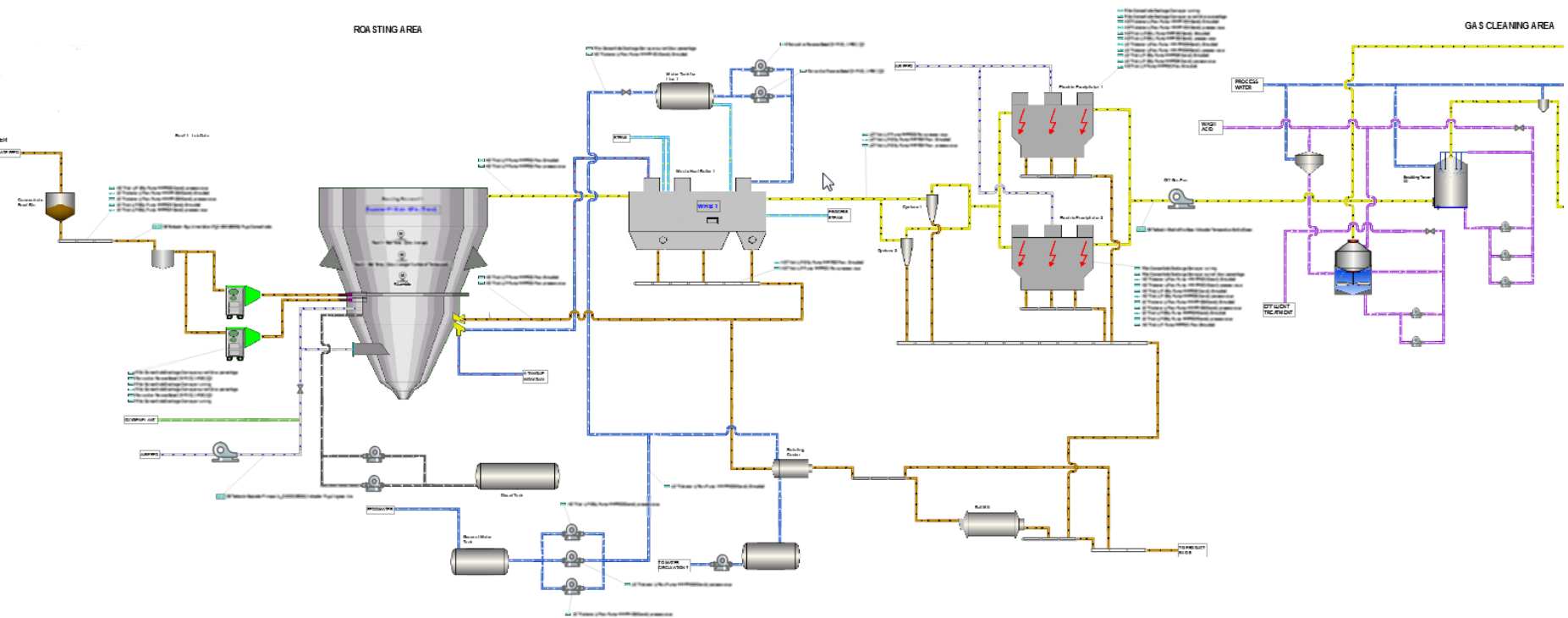
Remote Troubleshooting

Fast way to recover production

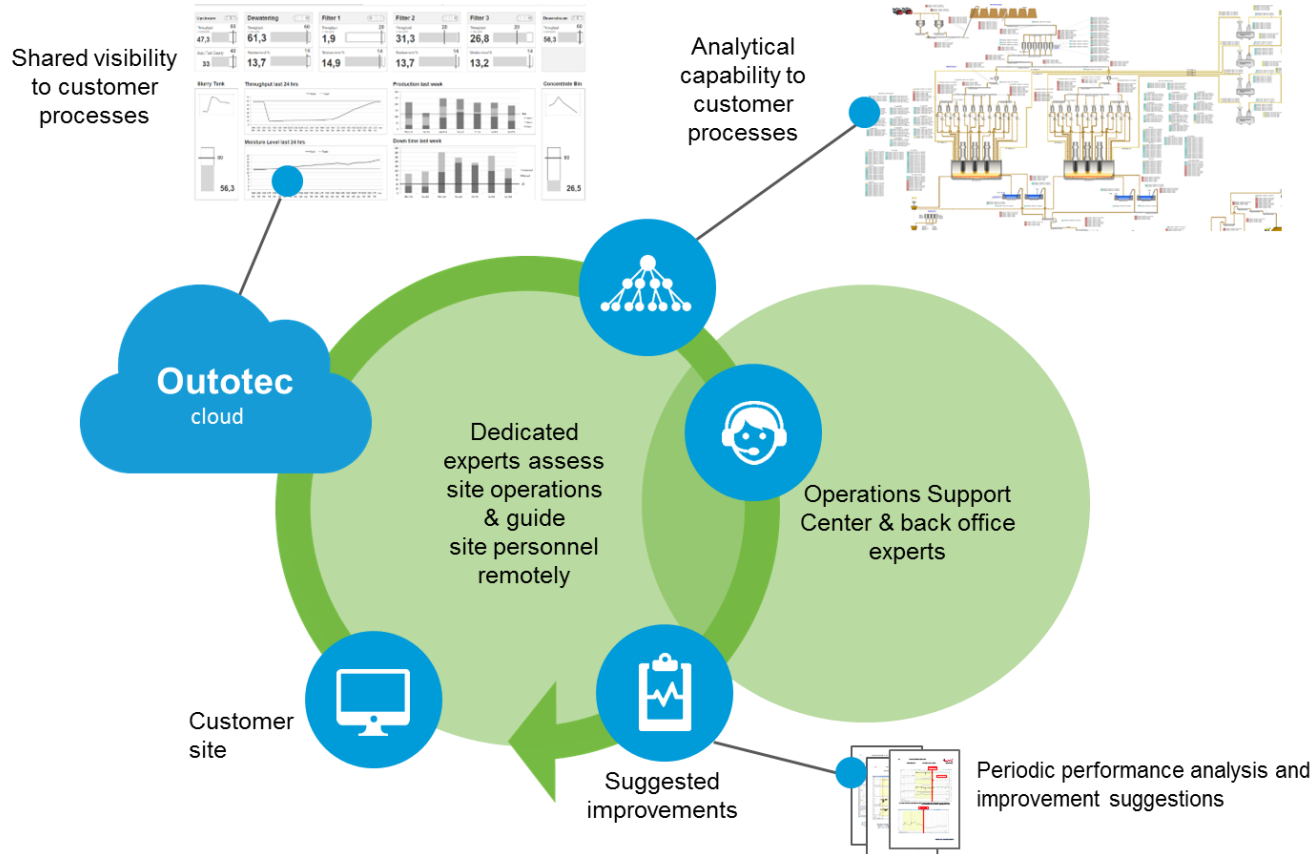


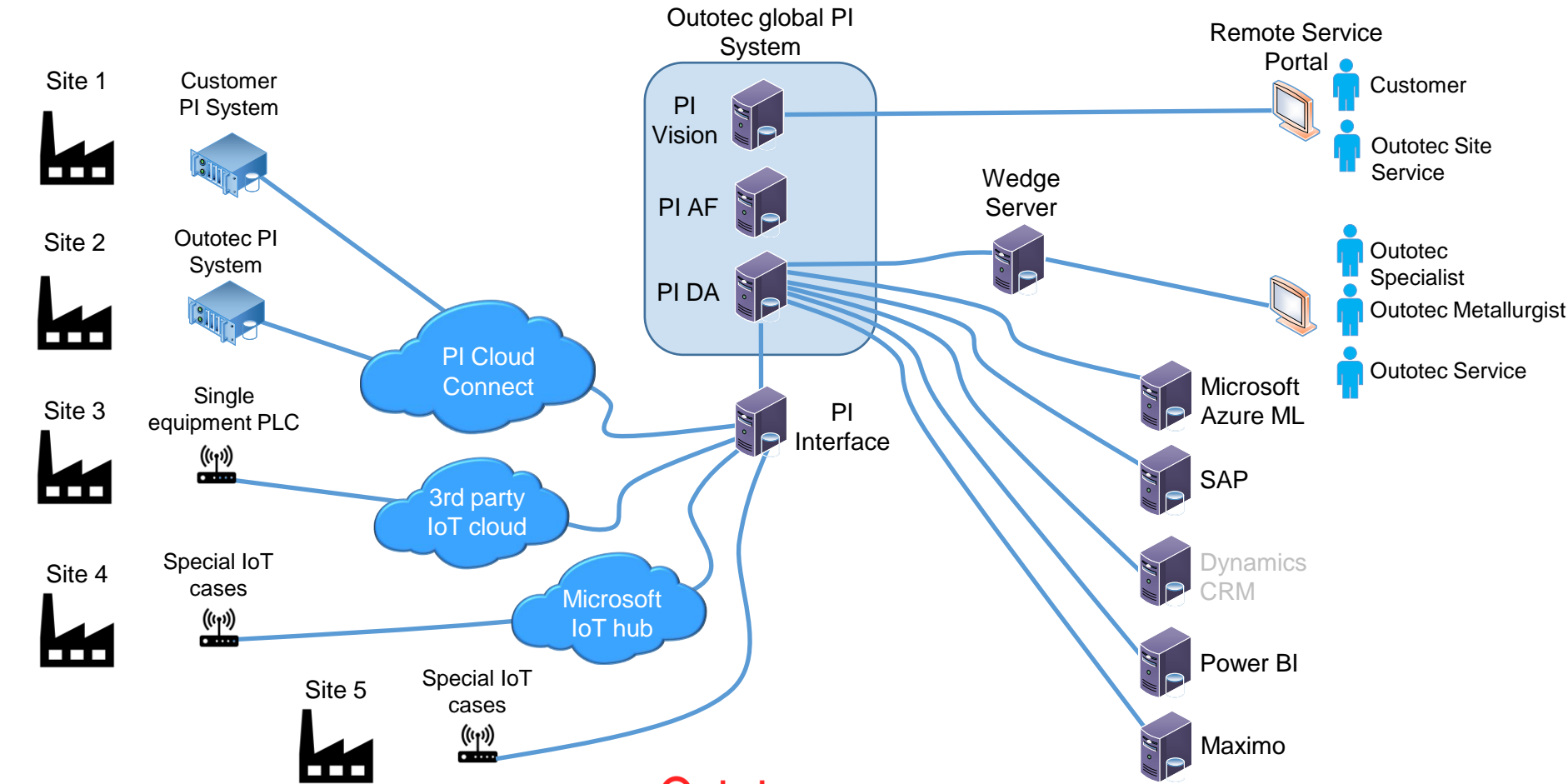
Wedge

Advanced analytics based on process data



Remote Assessment





Asset Framework Enabling fast Deployment

- Customer template

vs.

- Outotec Template

- Different raw data templates from different sites
- Outotec template enabling fast deployment**
- Universal naming
- KPI's calculated the same way between sites

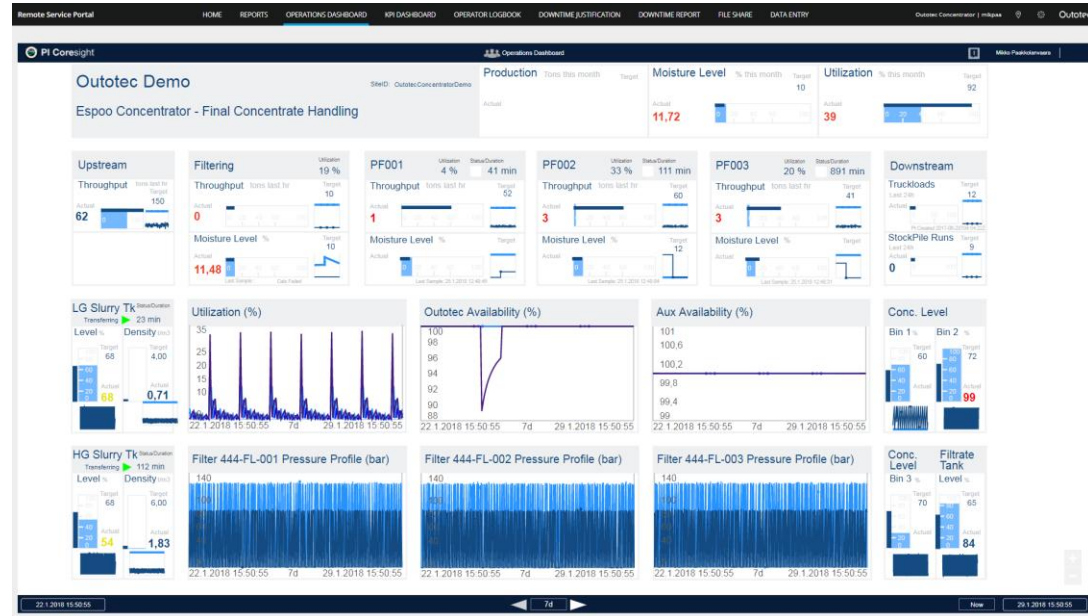
The screenshot displays the Outotec Template software interface. On the left, a hierarchical tree shows the structure of the plant, including elements like 'Filtrate Tank', 'Higher Grade Filter Feed Tank', 'PF001 Concentrate Bin', 'PF001 Discharge Conveyor', 'PF001 HG Feed Pump 1', 'PF001 HG Feed Pump 2', 'PF001 PF 144/144 M1 45', 'PF002 Concentrate Bin', 'PF002 Discharge Conveyor', 'PF002 Feed Pump 4', 'PF002 HG Feed Pump 3', 'PF002 PF 144/144 M1 45', 'PF003 Concentrate Bin', 'PF003 Discharge Conveyor', 'PF003 Feed Pump 5', 'PF003 Feed Pump 6', and 'PF003 PF 144/144 M1 45'. On the right, a table lists various KPIs categorized by 'Availability and Utilization Data' and 'Downtime Duration'. The table includes columns for 'Name', 'Value', and 'Unit'.

Name	Value	Unit
Category: Availability and Utilization Data		
Auxiliary Availability Day	1	Day
Auxiliary Availability MTD	1	MTD
Chute Choke Day	0	Day
Chute Choke MTD	0	MTD
Outotec Availability Day	1	Day
Outotec Availability MTD	1	MTD
Overall Availability Day	1	Day
Overall Availability Hour	1	Hour
Overall Availability MTD	1	MTD
Standing Without Feed Day	0	Day
Standing Without Feed MTD	0	MTD
Utilization Day	1	Day
Utilization Hour	1	Hour
Utilization MTD	1	MTD
Category: Downtime Duration		
Downtime Consequential Day	0	Day

Remote Service Portal

Shared insights and tools for day-to-day operations

- Process Book and Coresight dashboards published via web browser
- Fast deployment of recurring projects
- User role based dashboards
- Manual data entry forms
- Reporting
- Logbook functionalities
- Selected customer reference:
 - Anglo Platinum South Africa



INCIDENT REPORT

☒ Incident report
☐ Shift handover

SHIFT GROUP: Group 1
 DATE: 04/04/2018
 TIME: 4:08:53 PM
 CREW:
☒ Use current time

CATEGORY: Operation
 TYPE: Status
 ITEM: Concentrator Plant

STATUS: Open

DESCRIPTION:
 Enter report description

CORRECTIVE ACTIONS:
 Enter corrective actions for the incident

ATTACHMENTS:
 The maximum file size is 15 MB
 + ADD FILE

CANCEL SAVE

Example 1:

- Logbook
- Incident reports and shift change over forms

Example 2:

- Downtime justification and downtime

Downtime justification

PF001 PF 144/144 M1 45

Justified events < March, 2018 > Ascending

Breakdown reason	42min
<input checked="" type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	59min
<input type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	50min
<input type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	50min
<input type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	51min
<input type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	50min
<input type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	51min
<input type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	58min
<input type="checkbox"/> Short Break Automatically set short break Acknowledged automatically	50min

PF001 PF 144/144 M1 45
 Justified on 03/24/2018 1:20 PM by System
 03/24/2018 12:01 PM - 1:00 PM

DOWNTIME REASON

Breakdown	Automation
Planned Maintenance	Mechanical
Plant Breakdown	Operation
Wait Time	Other
Short Break	

Electrification terminal box X12 (upper frame)
 Electrification terminal box X22 (in moving plate)
 Electrification terminal box X32 (right side)
 Electrification terminal box X42 (left side)
 Electrification HH-unit
 Electrification terminal box X1 (control unit)
 Electrification terminal box X2 (in filter)
 Electrification terminal box X5 (in hydraulic unit)
 Sensor failure
 Communication failure
 Automation failure (PLC, Touchscreen)
 Other

DOWNTIME DESCRIPTION
 Acknowledged automatically

UNJUSTIFY REVERT SAVE

Remote Service Offering in Future

- Outotec's strategy: PI System as an ERP for process data
- Enhanced portal monitoring capabilities
 - Processes
 - Systems
 - Data flows
 - Notifications and alarms based on process conditions
- LIMS module
- Predictive maintenance, Asset performance management
- Integrated machine learning capabilities

Outotec

PI System As A Core Of Outotec's Remote Services



CHALLENGE

No or poor visibility to online/history data

- Remote or isolated site locations
- Long response times to service requests

SOLUTION

Globally centralized database with online process data. One truth!

- Full PI system taken into operation
- Remote Service Portal available
- Advanced analytics based on process data

RESULTS

Faster response and recovery times. Improved operational capability

- Reduced need to travel on site
- Shorter operation downtime during process issues
- Fast deployment of service

PI System As A Core Of Outotec's Remote Services



- **Mikko Paakkolanvaara**
- mikko.paakkolanvaara@outotec.com
- Manufacturing Information Systems Specialist
- Outotec Finland

Questions?

Please wait for
the **microphone**

State your
name & company




Please rate this session in the mobile app!

**DOWNLOAD
THE MOBILE APP**

- Rate sessions and provide feedback
- Meet and connect with other attendees

Join the conversation and SHARE
what you saw #osisoft #piworld

A smartphone screen displaying the OSIsoft PIWorld app interface, featuring the app's logo and name.

THANK YOU

OSIsoft.
PIWorld

謝謝 KEA LEBONA
TAPADH LEIBH 고맙습니다
БАЯРЛАЛАА MISAOTRA ANAO
DZIĘKUJĘ CI NGIYABONGA TEŞEKKÜR EDERIM GRACIES
OBRIGADO شڪرا
DANKON TANK TAPADH LEAT SALAMAT
DANKIE TERIMA KASIH
KÖSZÖNÖM
СПАСИБО
PAKMET CIZGE
GO RAIBH MAITH AGAT
БЛАГОДАРЯ GRACIAS
ТИ БЛАГОДАРАМ
MAHADSANID
TAK DANKE
RAHMAT
HATUR NUHUN
MERCİ
PAXMAT CAĞA
CẢM ƠN BẠN
WAZVIITA
FALEMINDERIT
DANK JE ΕΥΧΑΡΙΣΤΩ GRATIAS TIBI
AČIŲ SALAMAT MAHALO IĀ 'OE TAKK SKALDU HA
GRAZZI PAKKA PĒR
PAXMAT CAĞA
SIPAS JI WERE TERIMA KASIH
UA TSAUG RAU KOJ
ТИ БЛАГОДАРАМ
СИПОС
MULTUMESC
FAAFETAİ
ESKERRIK ASKO
HVALA ХВАЛА ВАМ
TEŞEKKÜR EDERIM
HVALA
DЗЯКУЙ
DI OU MÈSI
ĐAKUJEM
MATUR NUWUN
GRAZIE