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Ingenuity for life

XHQ Operation Intelligence

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siemens.com/xhq

The Industrial Revolution – Which is level of your maturity is your organization?

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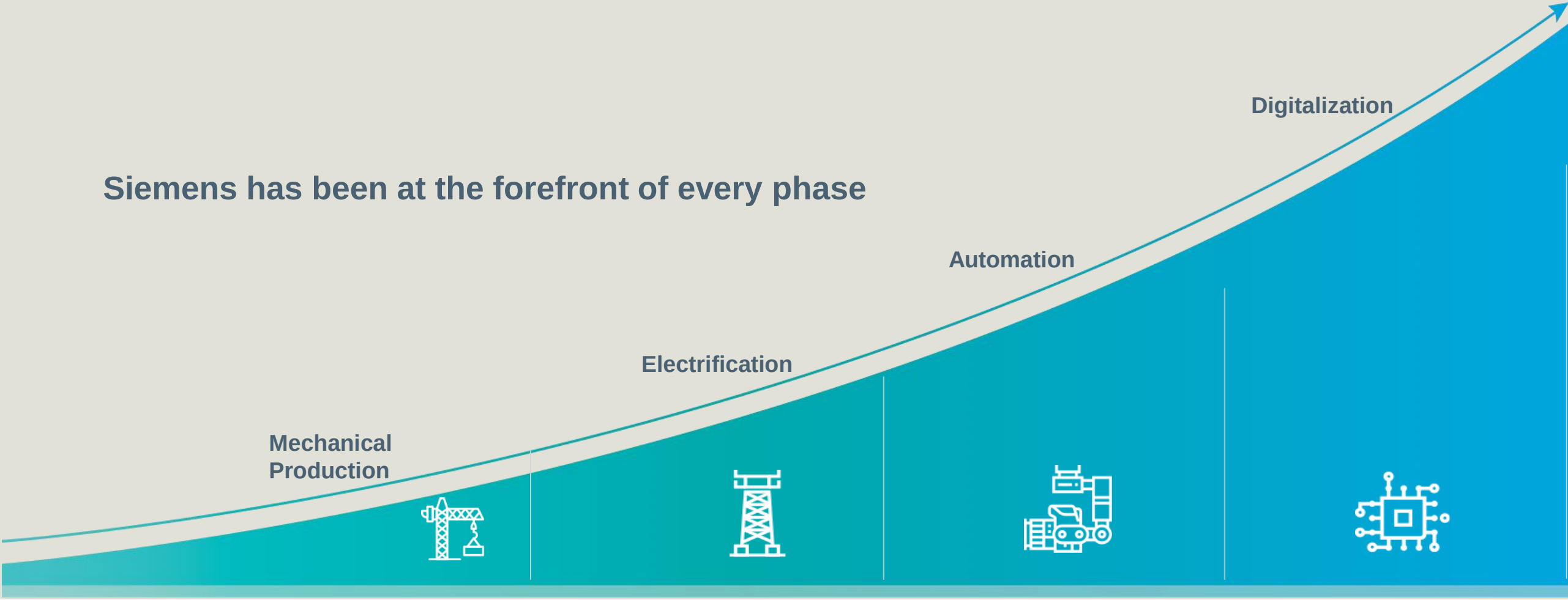

Siemens has been at the forefront of every phase

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It is all about Data!

Data is everywhere but do you already make best use of that data?

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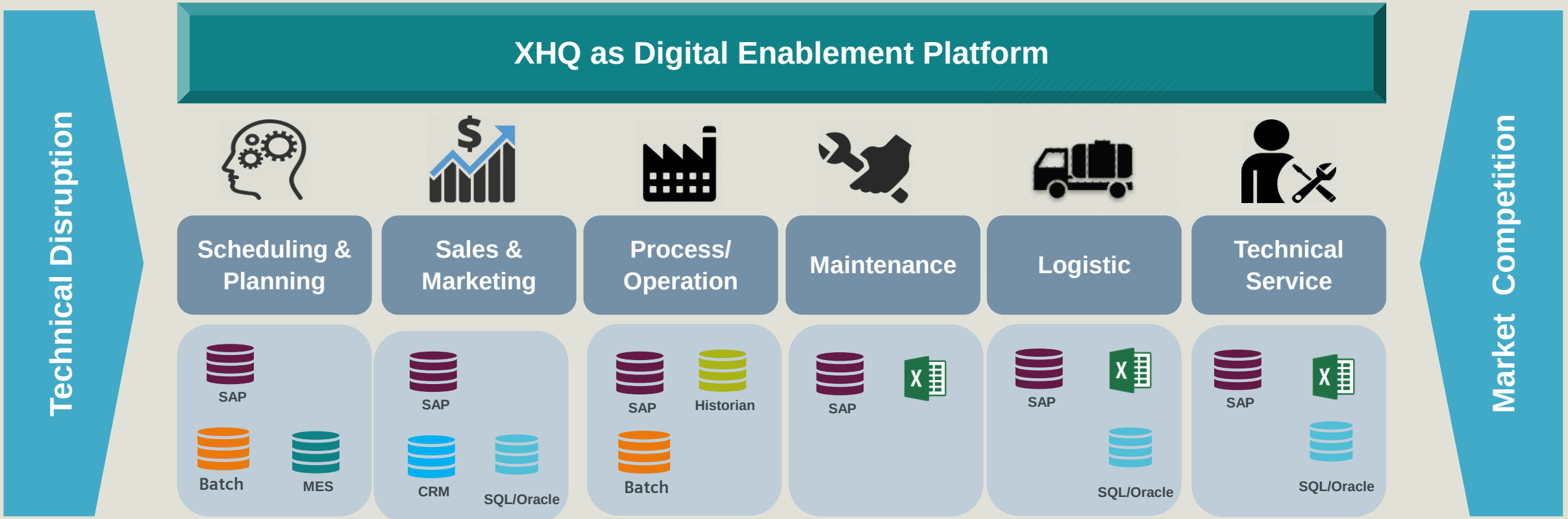
Data Integration is fundamental for your Digital Journey



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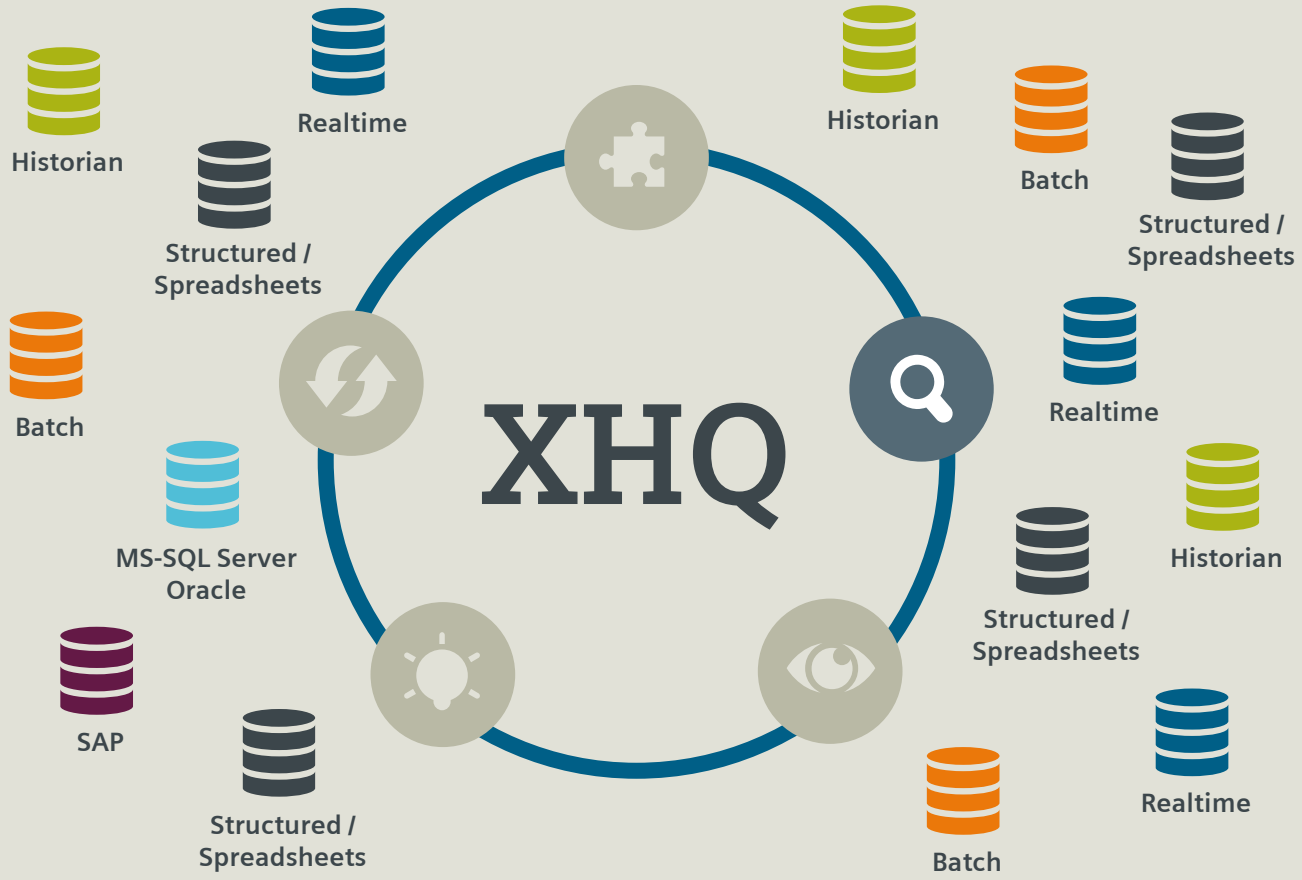
Introduction of XHQ enable your Digital Journey

Aggregate and Integrate

Contextualize

Visualize

Real-time and comprehensive data presentation to improve your operational performance



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How data will be presented to you?

- Data can be viewed through multiple platforms:
  - Command and Control Center (CCC)
  - Traditional Desktop/ Laptop (Web based)
  - Mobile (Phone and Tablets)
  - Helmets and Glasses

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XHQ Operations Intelligence Software

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Key Benefits

Improve your business performance with fact-based decision making platform

Increase your productivity by high data transparency to all users / stakeholders

Maximize your operational efficiency through real time data access

Drive your Operational Excellence

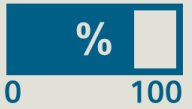
Faster information access

Higher transparency

Empowered decisions

8%

Reduction in the operating costs



9%

increase in facility utilization

2.5%

increase in operational availability

11%

increase in production

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Full Capabilities for horizontal and vertical Data Integration across organization

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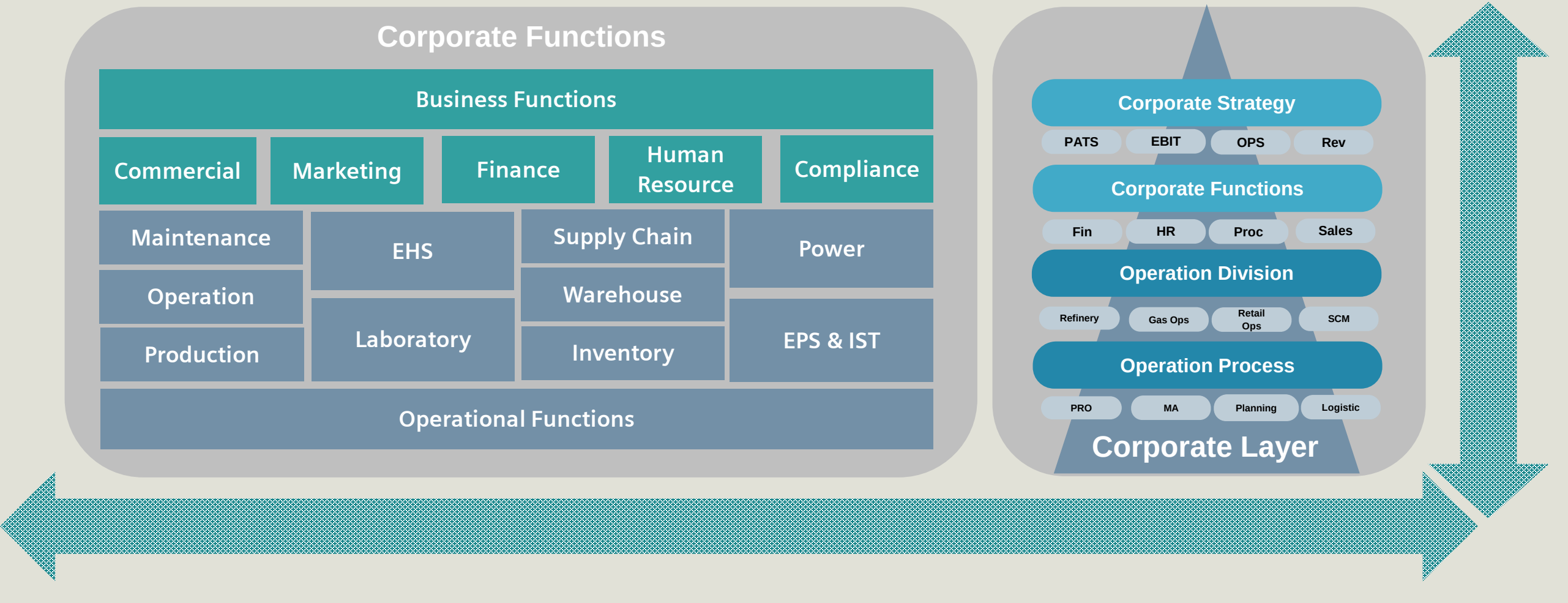

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XHQ addressing Industry pain points

How to leverage on Technology to drive competitive industry landscape?

How to ensure smooth Operation without any disruption?

How to improve your operation performance better productivity?

Industry Pain Points	Key XHQ Module	Core Functionalities
Aging Equipment/ Asset	360 view of Critical Asset	Asset Performance Monitoring
High Energy Consumption	Production/ Operation	Performance Benchmarking and Utilization Monitoring
High Maintenance Cost	Maintenance	Maintenance Status, Cost and Plan monitoring
Complex Operations	Production/ Operation	Process monitoring and Production Analysis
Hazard Operations	Safety	HSE Monitoring

Digital Dashboard, KPIs & Drill down

Data Integration and Aggregation

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How to build XHQ Use Case?

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Identify Business and Operation Module

Identify Key Data

Identify KPI

Identify Data Sources

Answering key Business and Operation strategy to mitigate industry pain points

Module	Key data	Key KPIs	Key Data Sources
Production Performance	• Production Data • Batch Data • Safety Data • Utility Data • Maintenance Data • Planning & Scheduling • Quality Data • Financial Data etc.	• Plant Production Plan vs Actual • History Plan vs Actual Trending • Utilization • Production Cost • Maintenance Cost • Unplanned Outage • HSE Metric • Rejects and waste etc.	• PLC/DCS/SCADA/ Batch • Process Historian • SAP PM/ Maximo • Prod Planning- SAP PP • MES / LIMS • ERP system/SAP SD • Excel Spread Sheets • Manual log data etc.
360 view of Critical Asset	• Production Data • Maintenance Data • Inventory Data etc.	• OEE (Overall Equipment Efficiency) • Critical Process Parameters monitoring • Equipment Availability • Inspection Schedule • Maintenance Work Order tracking • Maintenance cost etc.	• PLC/DCS/SCADA • Process Historian • ERP system/SAP PM/ MM/ WM • SAP PM/ Maximo / CMMS • Excel Spread Sheets • Manual log data etc.
Quality	• Production Data • Quality Data	• Product Quality • Process Quality • Product Off-Specs COQ • Dispatches • Lab Sample Results- Rejects • Trending of Specifications etc.	• Process Historian • SAP QM • LIMS-Sample Manager • MES • Excel Spread Sheets • Manual log data etc.
Maintenance	• Maintenance Data • Production Data • Inventory Data etc.	• Maintenance Cost Plan vs Actual • Work Order Tracking • Critical Parts Monitoring • Spare alerts by equipment etc.	• PLC/DCS/SCADA • Process Historian • ERP system/SAP PM • Maximo / CMMS • Excel Spread Sheets • Manual log data etc.
Safety	• Safety Data • Production Data • Energy & Utility Data etc.	• Lost Time Incidents • Near Misses • Safety Equipment WO Tracking • CO2 Emission • Energy Cost etc.	• PLC/DCS/SCADA • Process Historian • HSE / Utility data source • Maximo • SAP HSE

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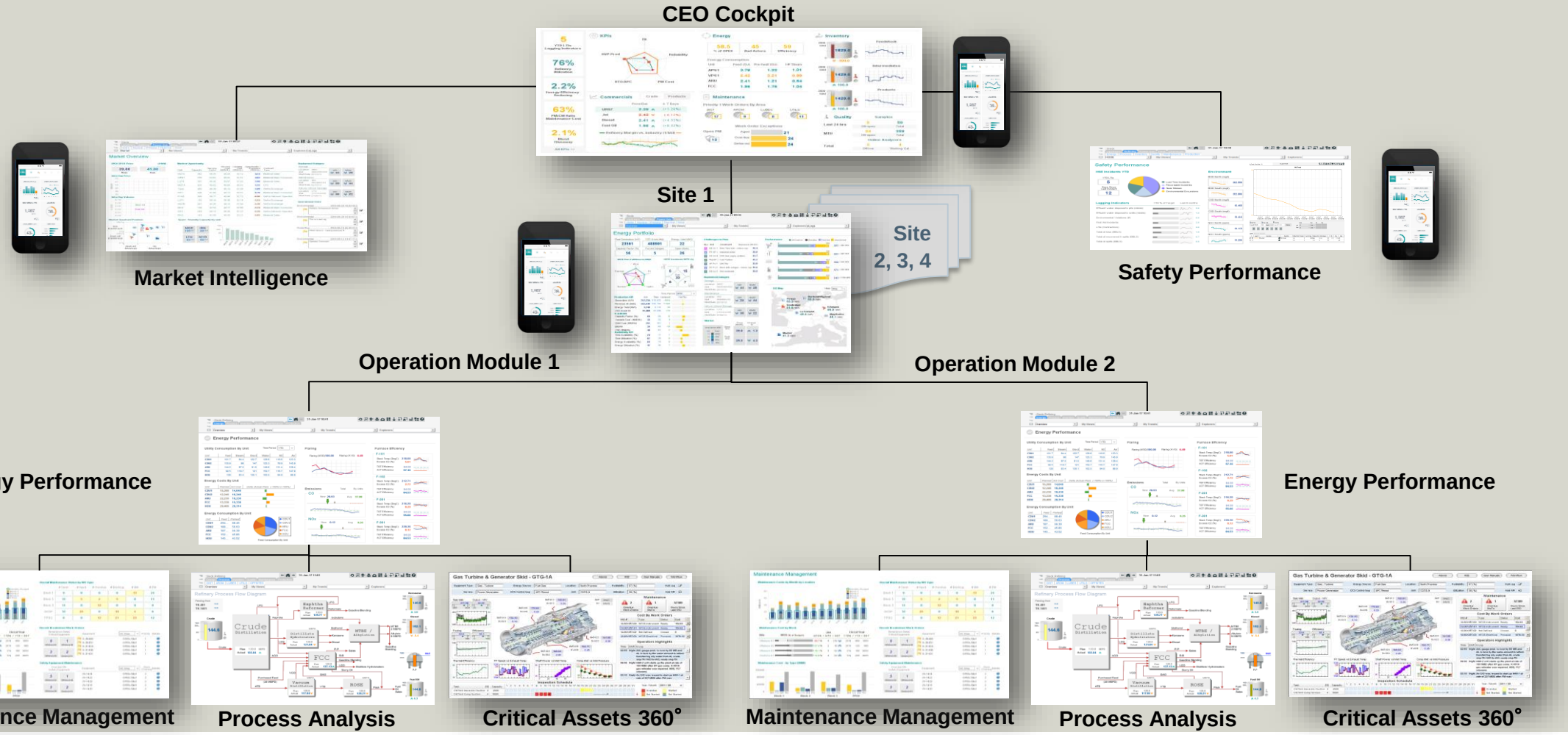
Digital Operation (Sample Use Case)



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CEO Cockpit (Sample Use Case)

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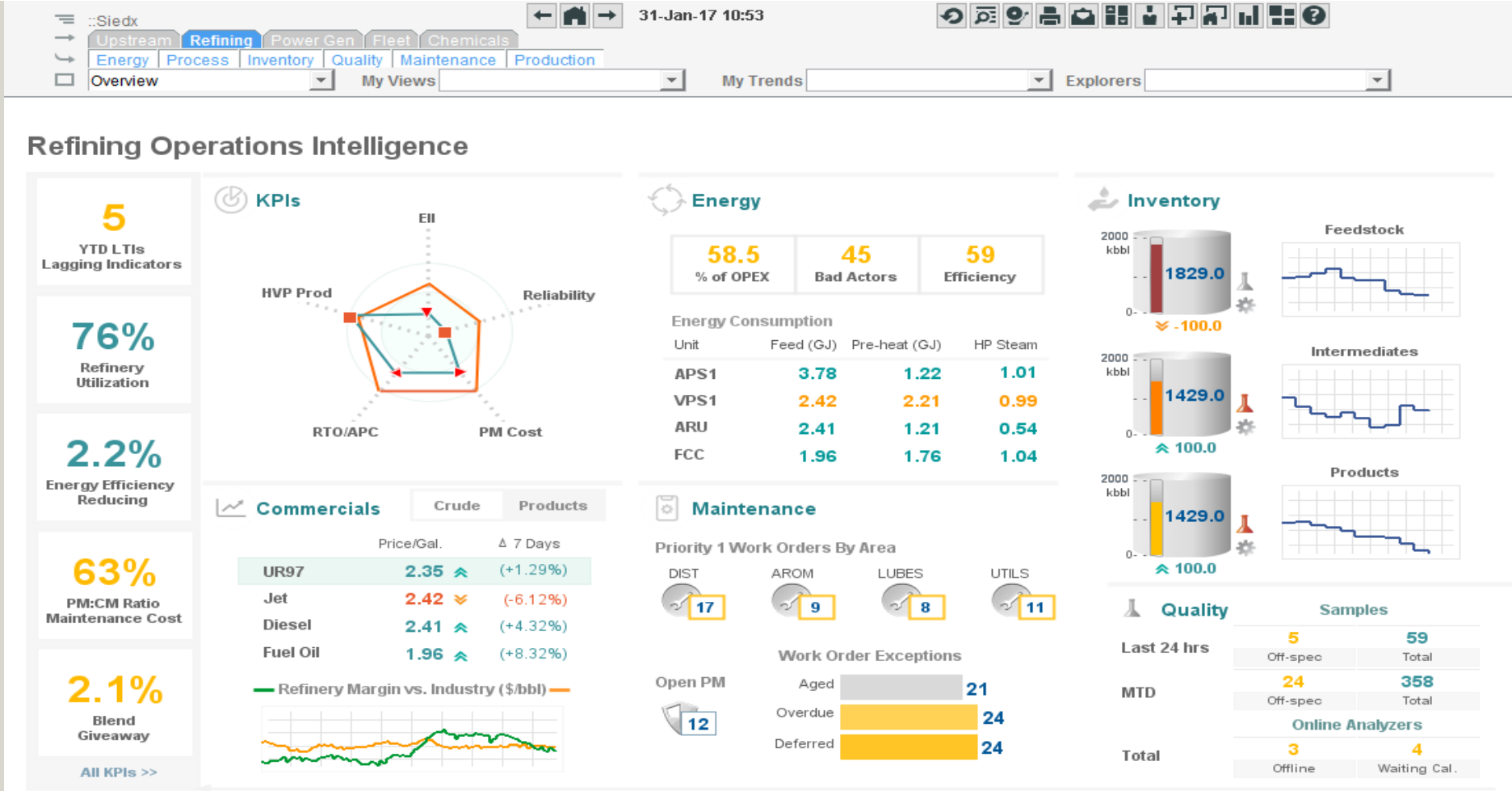
Overview

- All KPIs at one glance
- Drill into details
- Customizable
- Visual templates
- Real-time
- Internal & external



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Market Intelligence (Sample Use Case)

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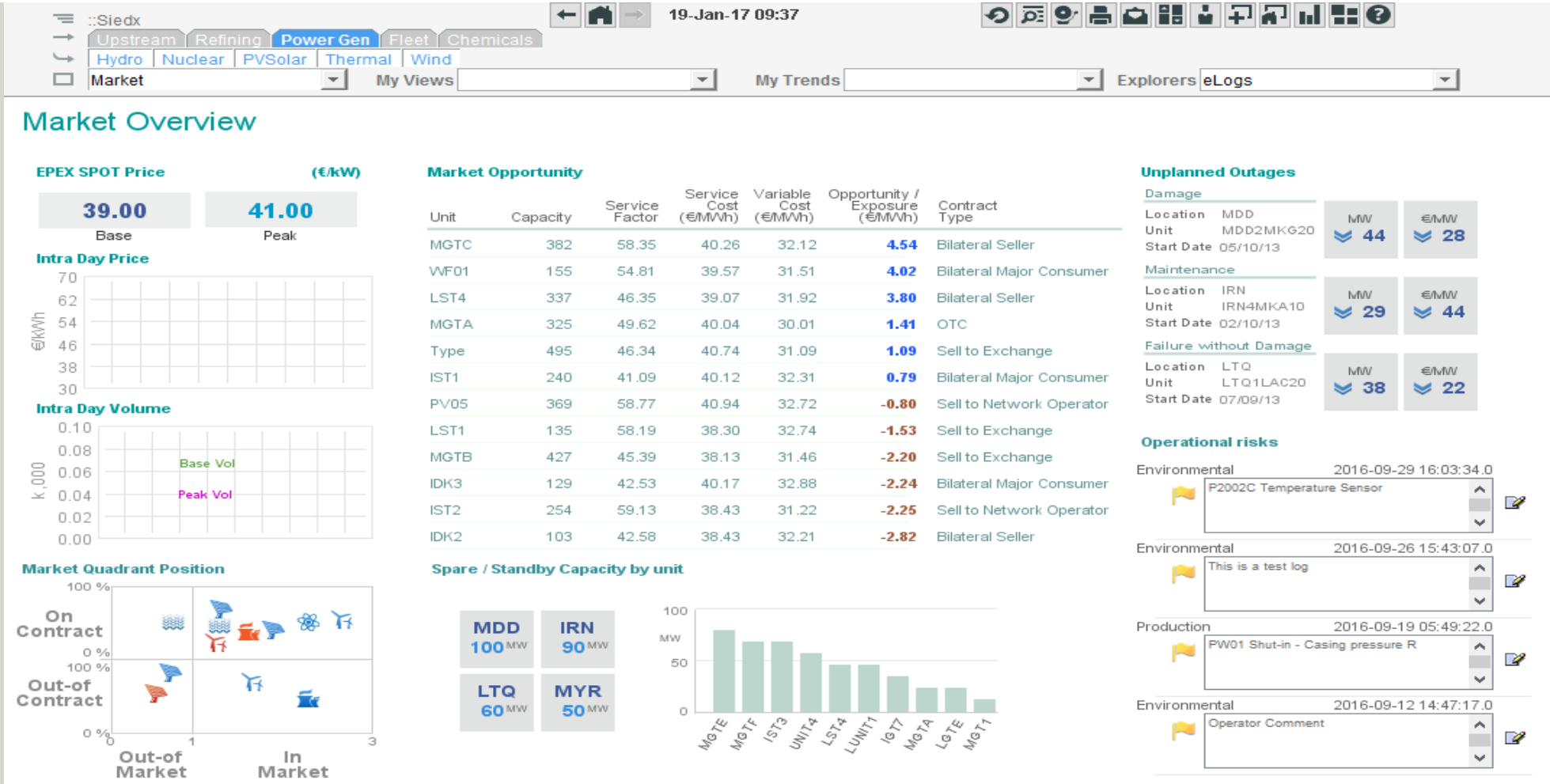
Overview

- KPIs
- Real-time
- Benchmark



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Safety Performance (Sample Use Case)

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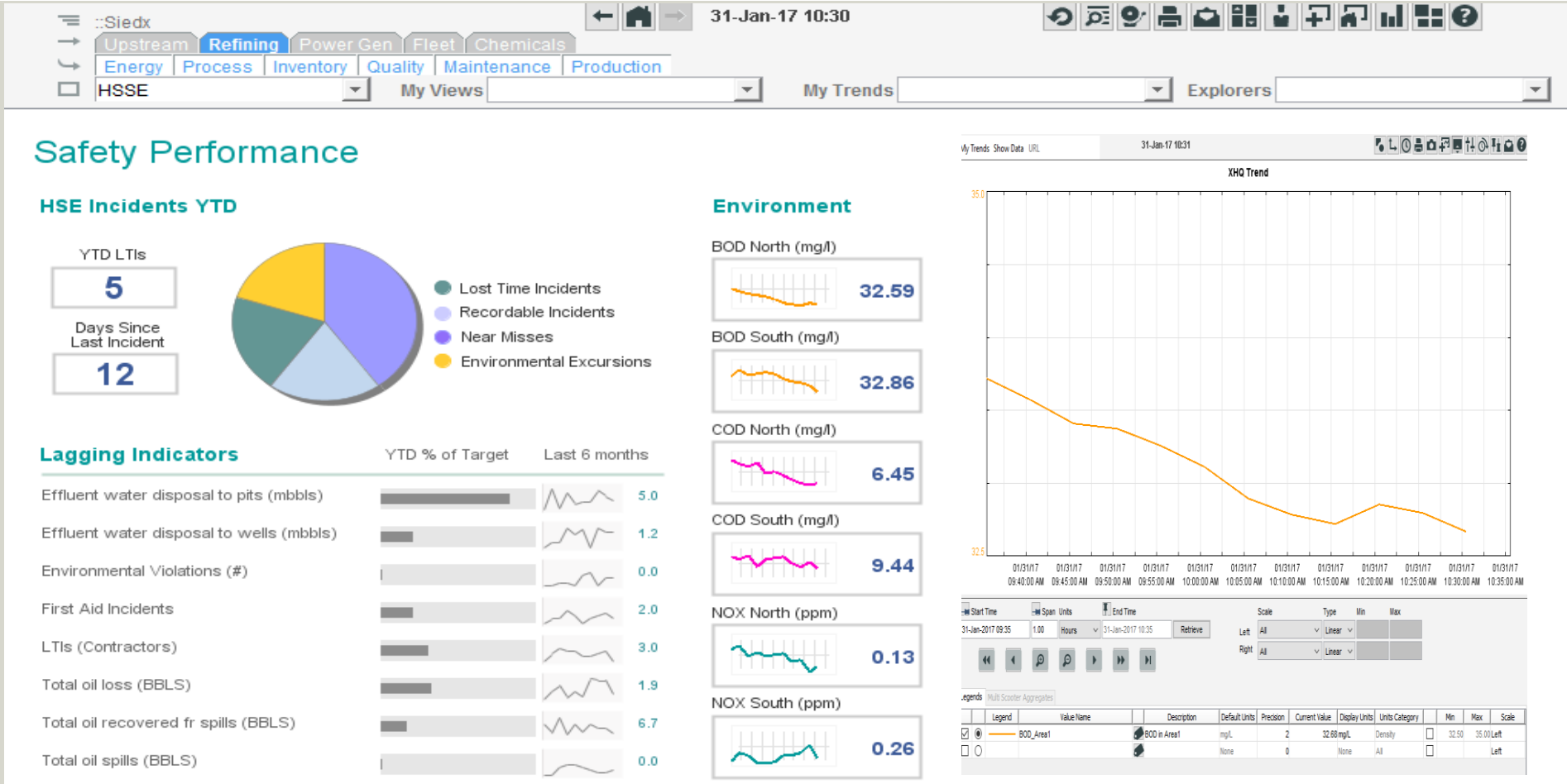
Overview

- HSE at one glance
- Drill into incidents
- Real-time



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Site Consolidated Performance View (Sample Use Case)

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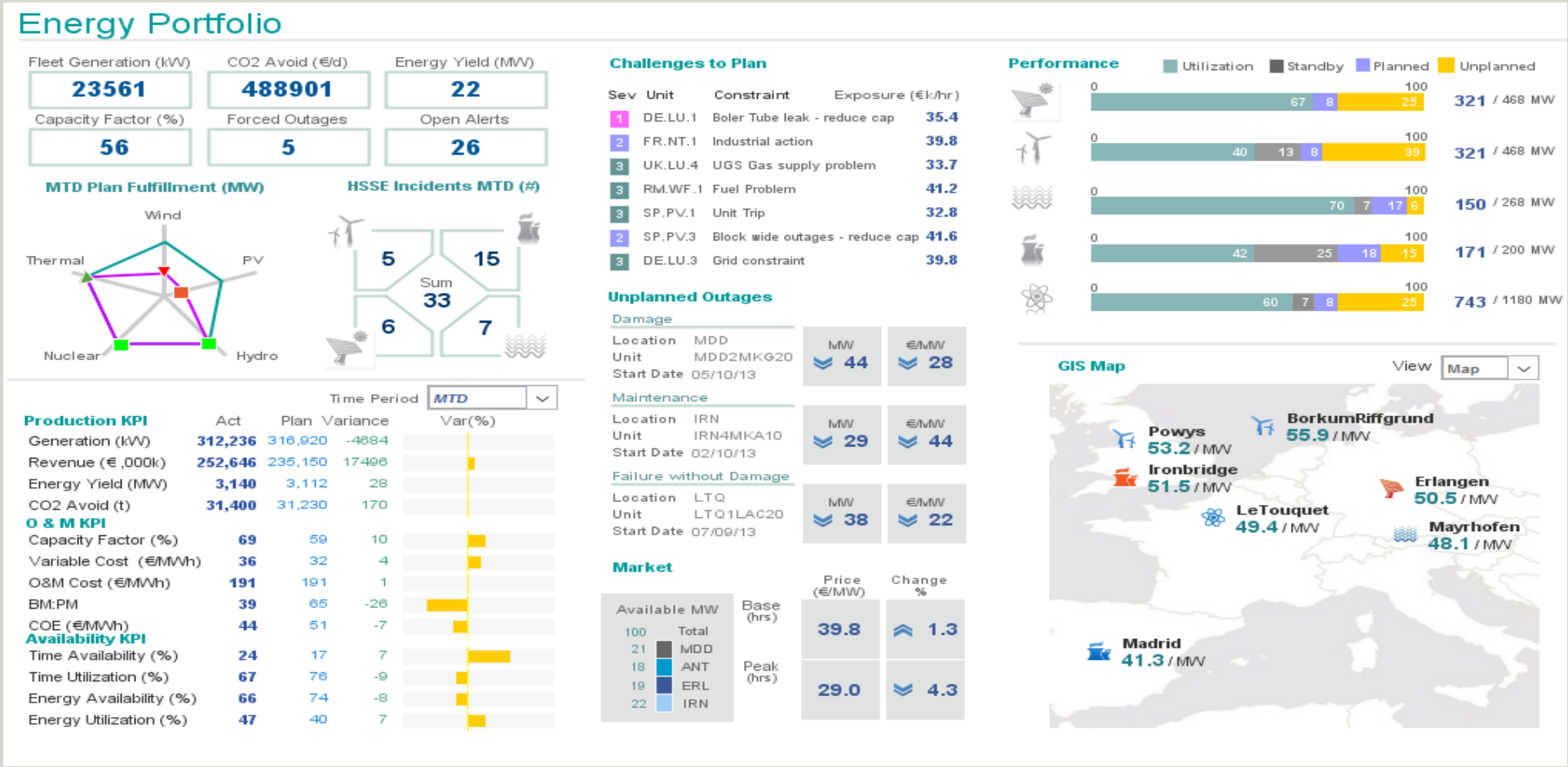
Overview

- Site KPIs
- Real-time
- Benchmark against other Sites



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Plant Energy Performance (Sample Use Case)

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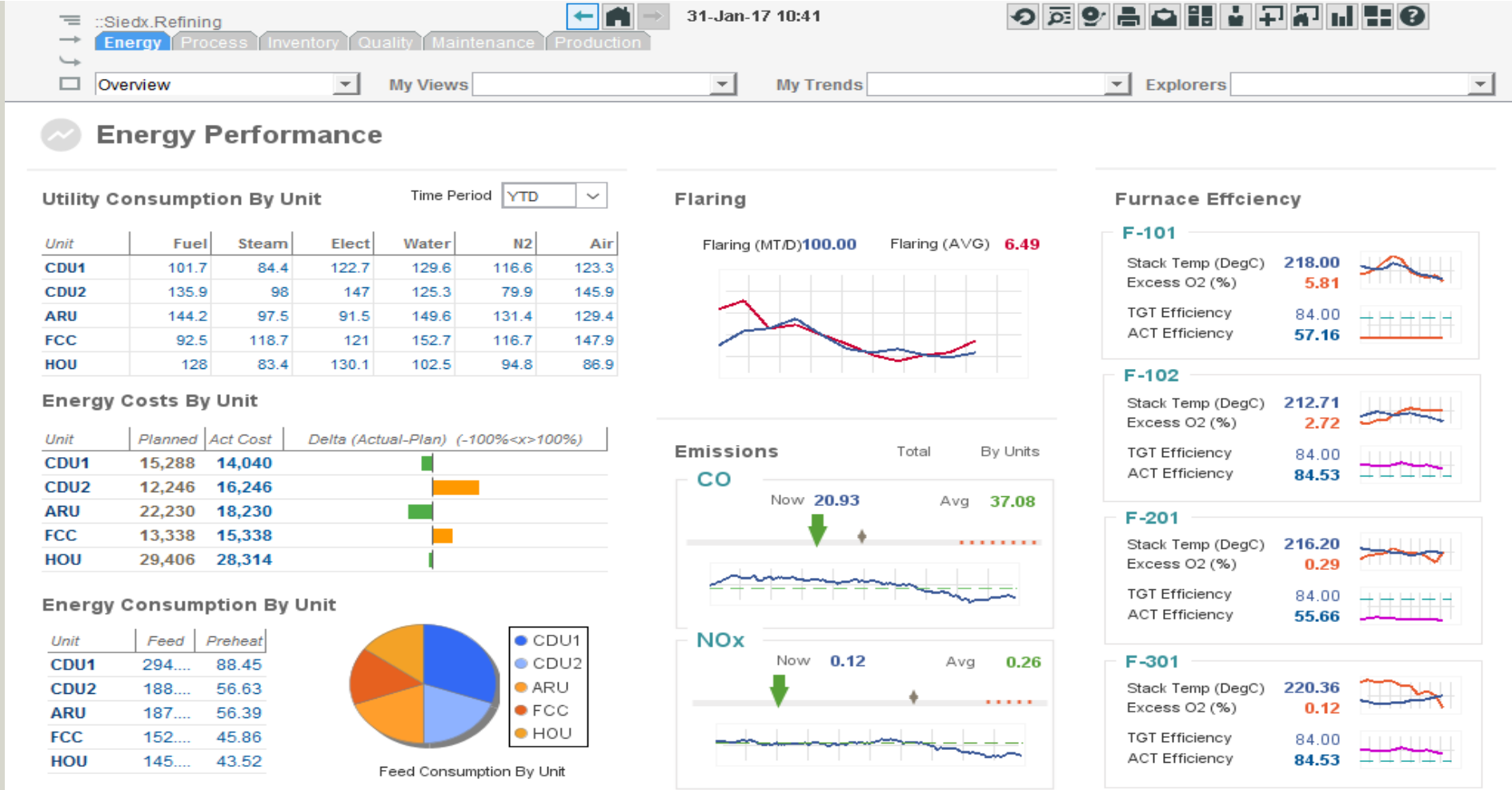
Overview

- Production KPIs
- Real-time
- Benchmark against other Production Areas



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Plant Operations: Maintenance Management (Sample Use Case)

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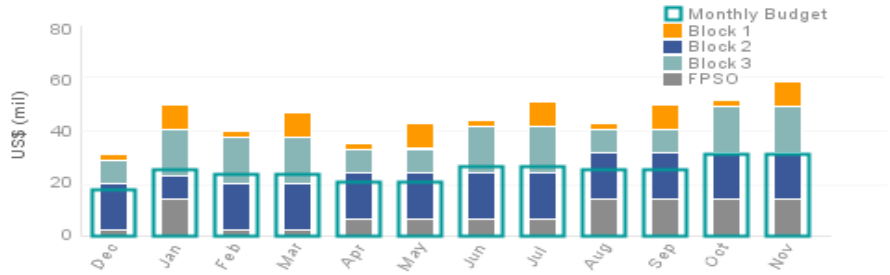
Overview

- Maintenance KPIs
- Real-time

Maintenance Management

Maintenance Costs by Month by Location



Overall Maintenance Status by WO Type

	# Open	# Aged	# Overdue	# Backlog	# BM	# PM
Block 1	9	0	0	0	13	24
Block 2	12	5	4	5	0	11
Block 3	11	0	12	0	0	9
GOSP	12	24	0	19	4	6
FPSO	6	0	12	21	23	12

Maintenance Cost by Block

Site	MTD (% of Budget)	Jan MTD%	Jan MTD	Jan BGT	Fiscal Year YTD%	Fiscal Year YTD	Fiscal Year BGT
Offshore-S1	64.7 %	4	150		25 %	459	1800
Offshore-S2	107.6 %	2	40		26 %	125	480
Offshore-S3	115.1 %	3	60		5 %	189	3600
Onshore-S1	113.8 %	4	80		5 %	256	4800

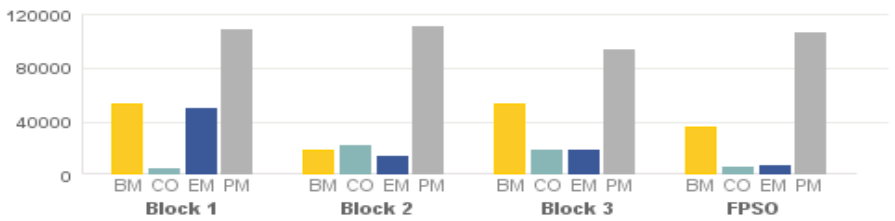
Recent Breakdown Work Orders

Breakdown Maint Critical Equipment

5 Offshore-S1	1 Offshore-S2
3 Offshore-S3	2 Onshore-S1

Equipment	All Sites	Priority	Details
K-3044B	OffSh-Site1	1	
K-3045C	OffSh-Site1	1	
K-3143A	OffSh-Site1	1	
K-3143B	OffSh-Site1	1	
K-3143C	OffSh-Site1	1	

Maintenance Cost - by Type ($MM)



Safety Equipment Maintenance

Overdue PM Safety Equipment

5 Offshore-S1	1 Offshore-S2
3 Offshore-S3	2 Onshore-S1

Equipment	All Sites	Days Overdue	Details
W-1424	OffSh-Site1	2	
W-1422	OffSh-Site1	2	
W-1429	OffSh-Site1	2	
W-1419	OffSh-Site1	2	
W-1420	OffSh-Site1	2	

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Plant Operations: Process Analysis (Sample Use Case)

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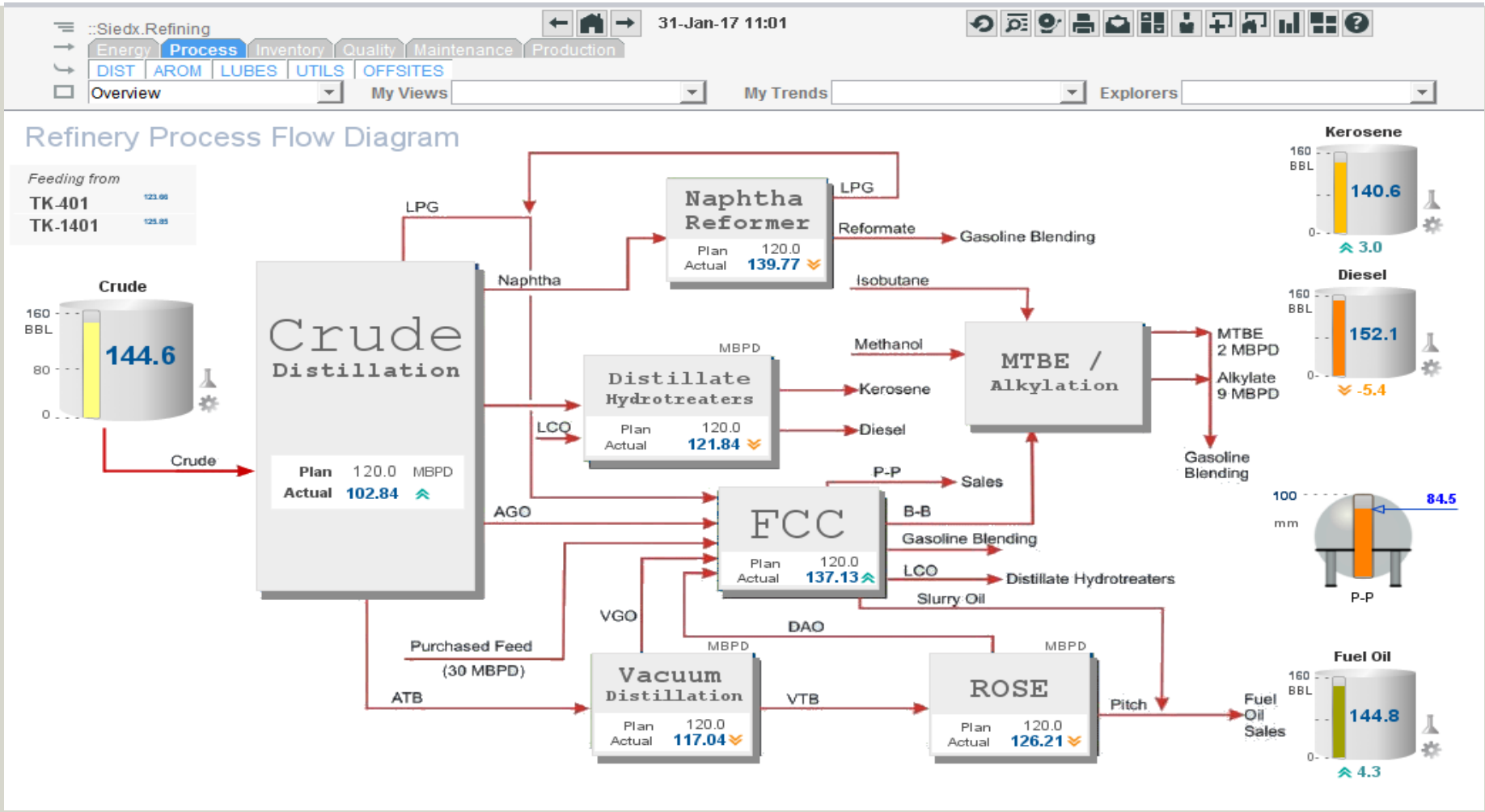
Overview

- Analysis with Benchmarking
- Maintenance & Reliability Analytics
- Early warning Predictive Analytics
- Root cause Analytics



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Plant Operations: Critical Assets Conditioning Monitoring (Sample Use Case)

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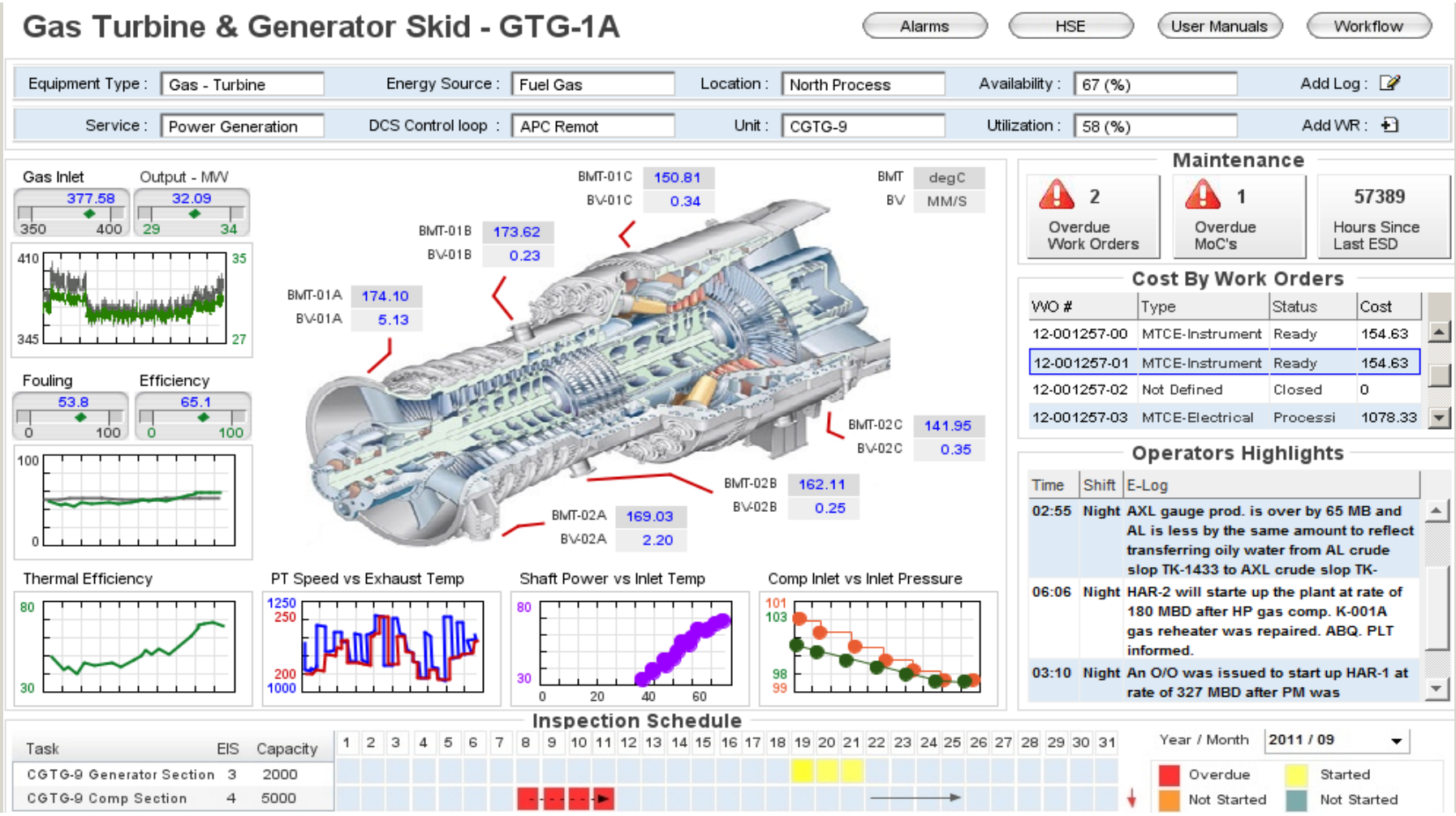
Overview

- 360° view on key assets
- Performance / Maintenance / Costs
- WO Tracking
- Inspection Scheduling



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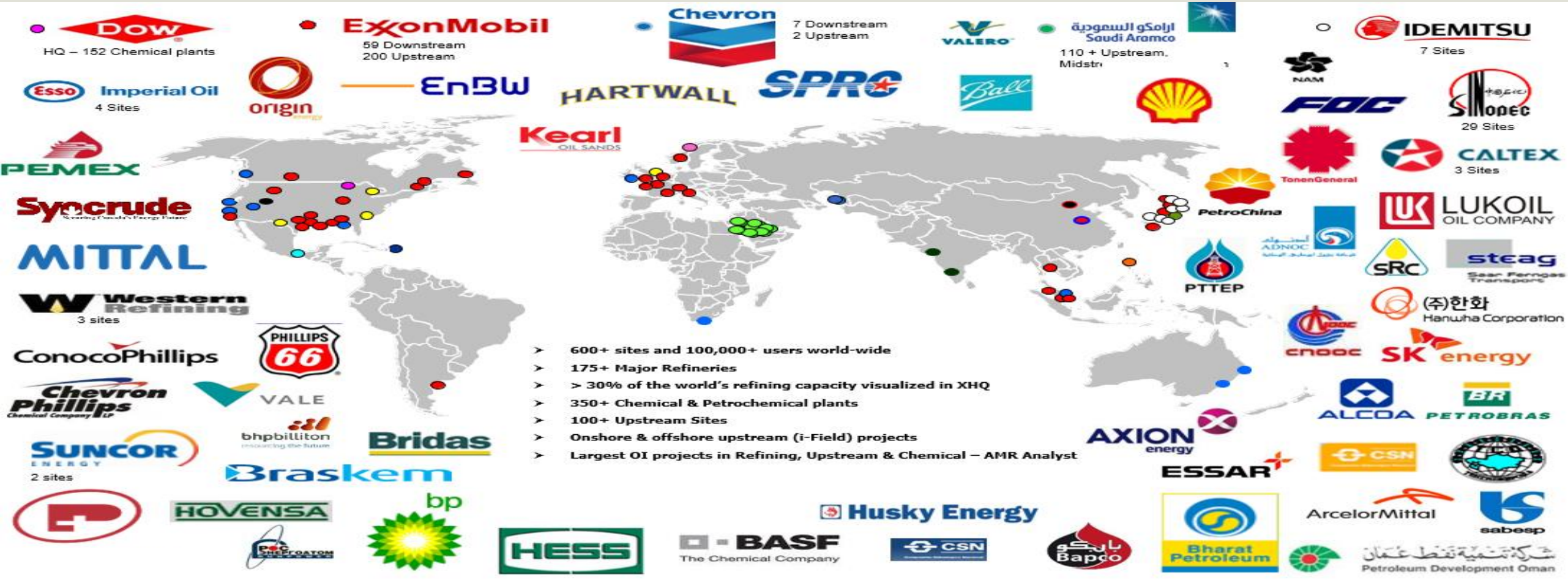
Customer References



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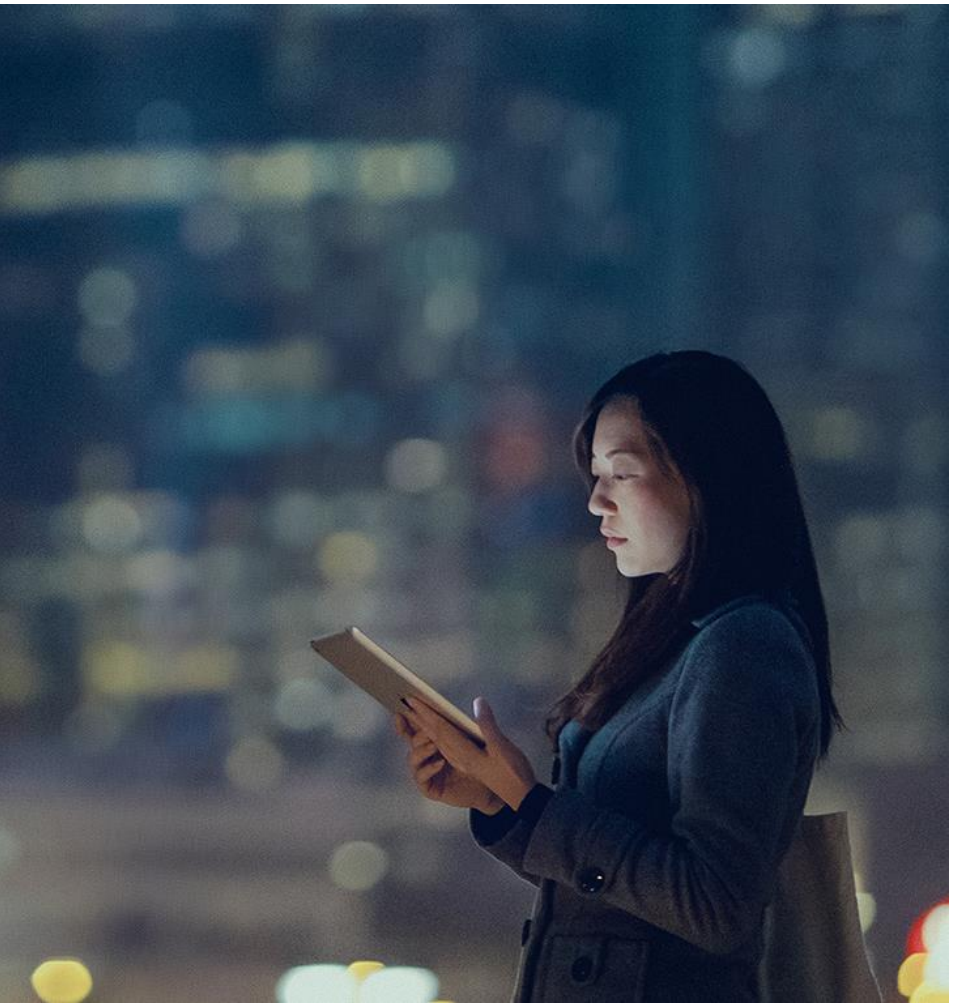
Thank you



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