



WHEN TRUST MATTERS

Synergi Plant Best Practice implementation

Case studies – Dashboard

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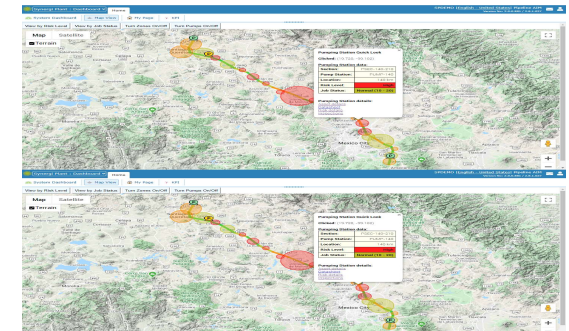
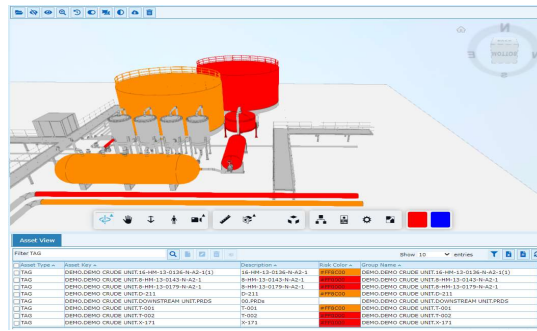
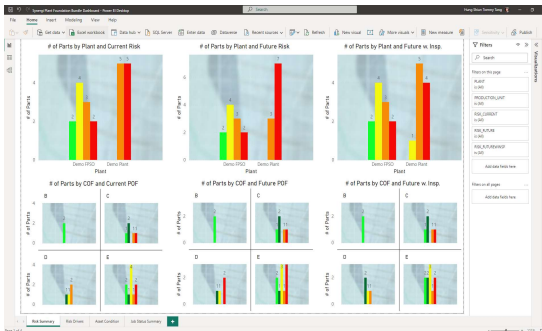
Synergi Plant Visualization



Synergi Dashboard using Synergi Plant Data

Synergi Plant RBI

Synergi Plant Dashboard



Power BI using Synergi Plant Data

3D Model in Synergi Plant

Pipeline Integrity in Synergi Plant

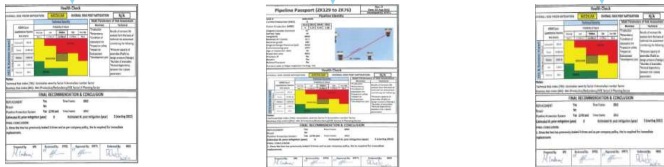
Synergi Dashboard

- Dashboard across multiple Synergi products

Synergi Integrated Dashboard



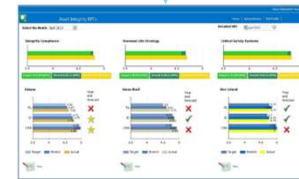
Group Level Overview



Rapid Risk and Performance Profile



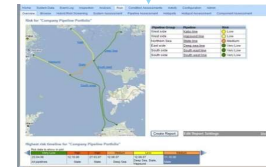
Field and Plant Level View



Risk and Performance



Plant and Topside



Pipeline

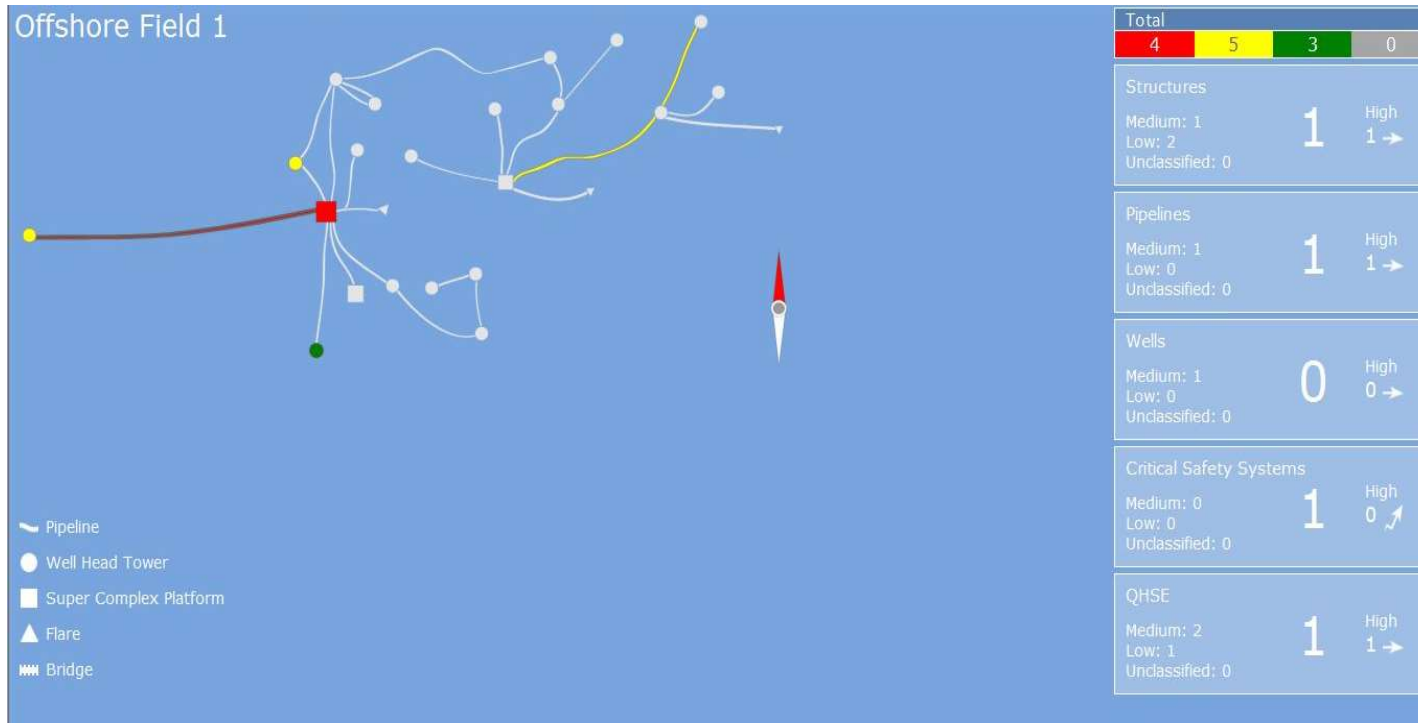


Structure

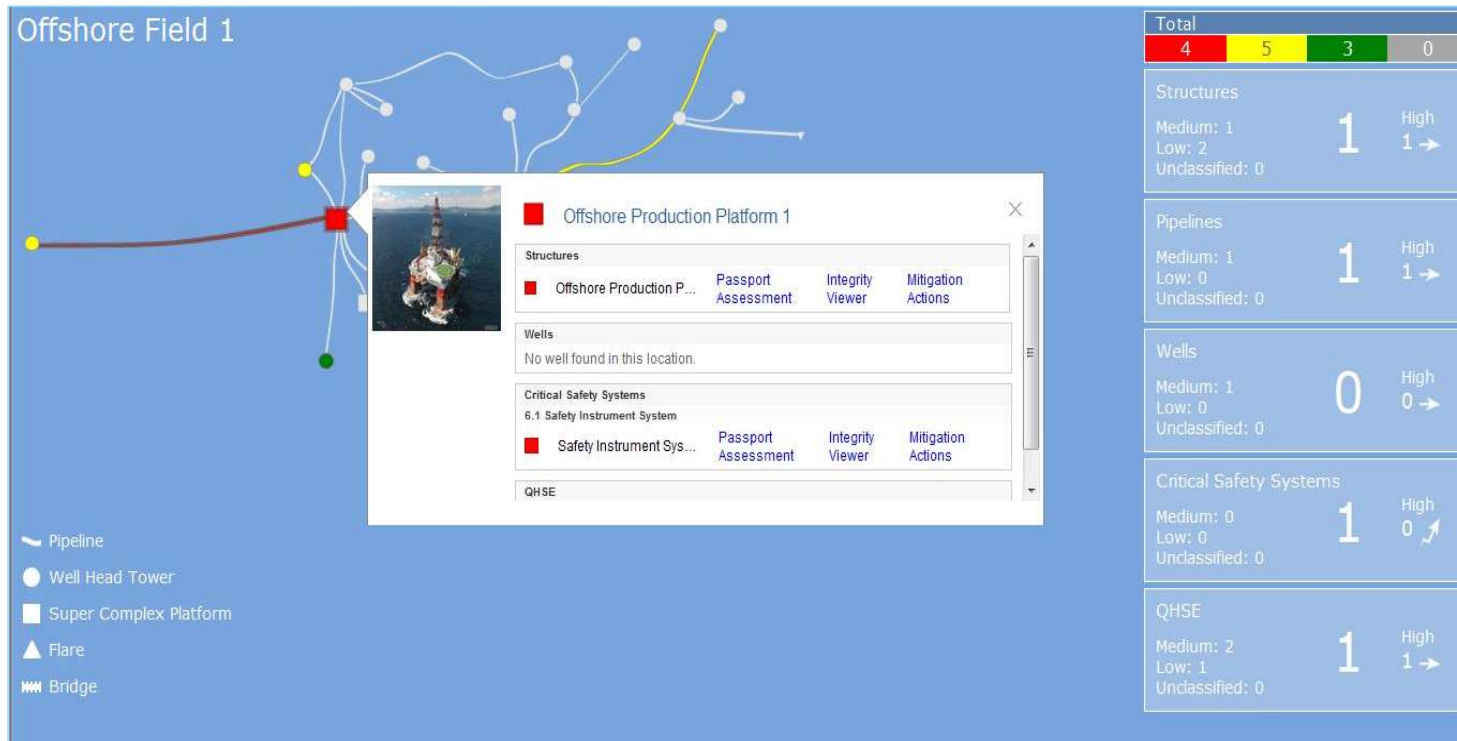
Quick overview for company asset risk status and trend



Map view on web with highlighted asset status



Drilling down to various asset integrity details



Performance management by dashboard

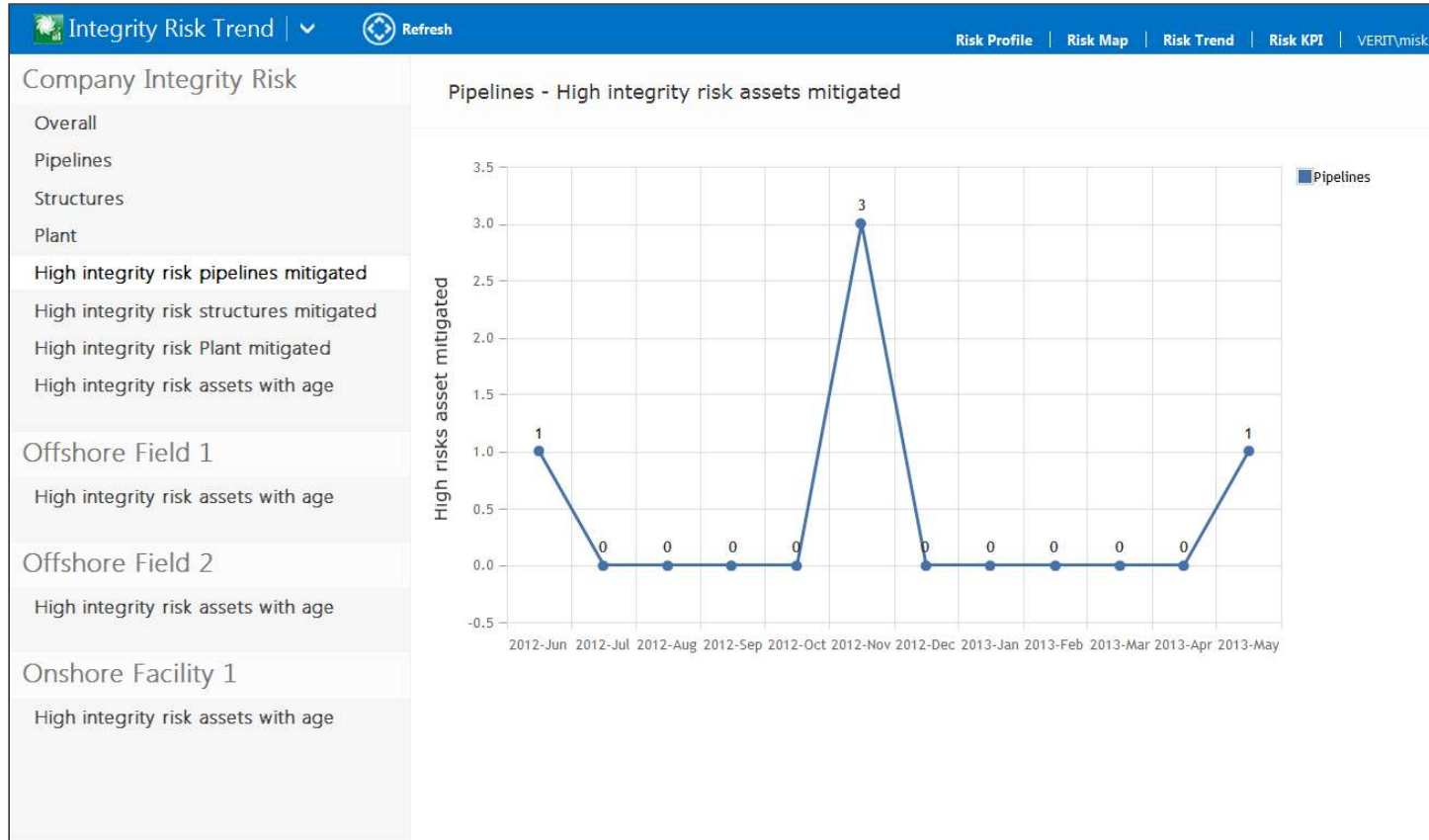
- Monitor integrity and operational processes
- Monitor risk mitigation KPI
- Monitor risk trend
- Drive continuous improvement
- Ensure accountability and audit trails
- Vehicle to ensure compliance with regulations



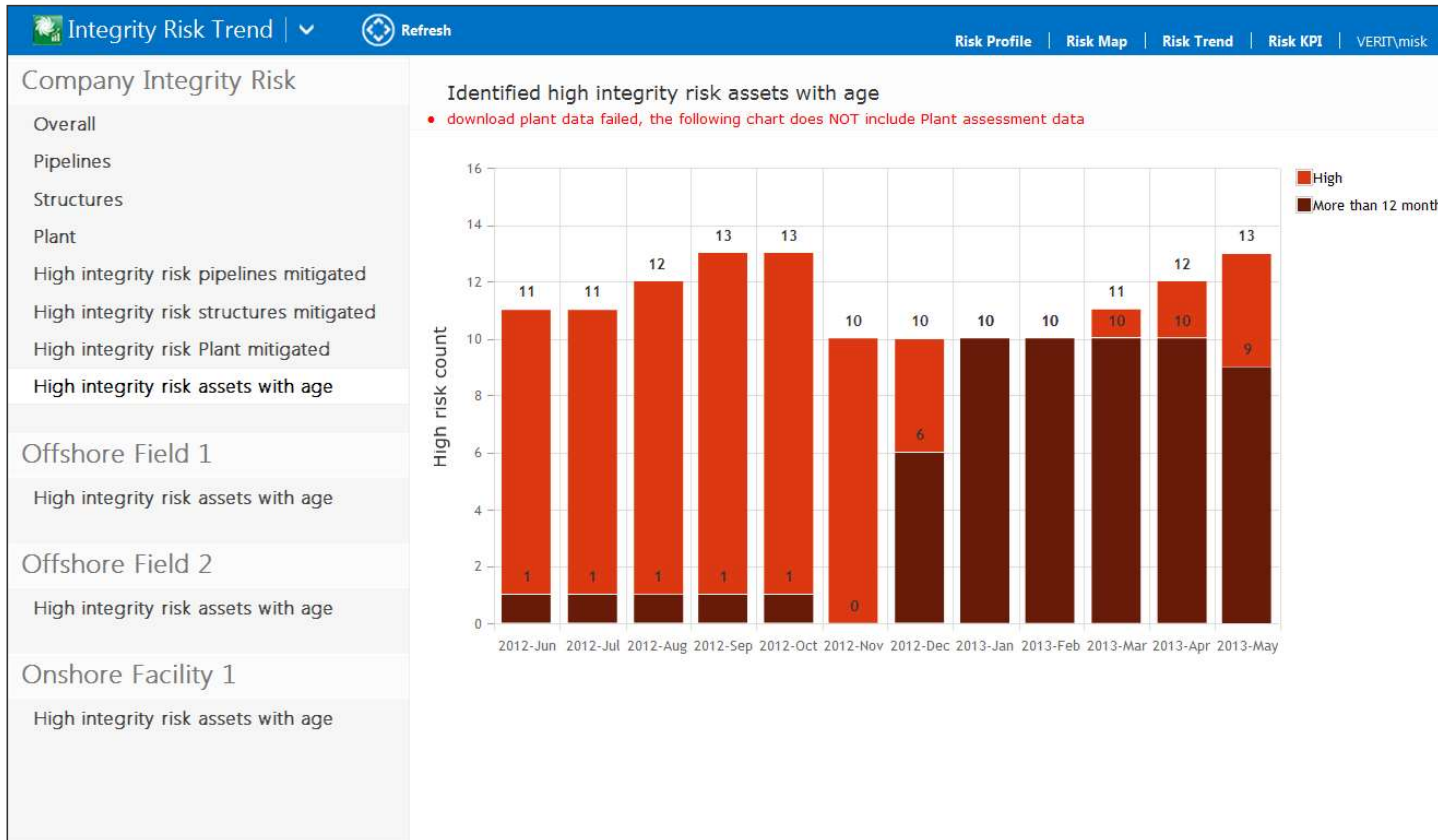
Quantify asset risk and monitor the risk change



Tracking risk mitigation actions



Focus on high risk assets and their ages



Identify high risk assets and drill down to details

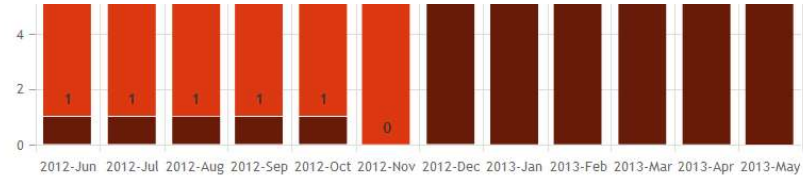
High integrity risk assets with age

Offshore Field 2

High integrity risk assets with age

Onshore Facility 1

High integrity risk assets with age



2013-May

Asset Type	Asset ID	Risk Level	Age of risk in days
Structure	location id	High	517
Structure	location id	High	502
Structure	location id	High	487
Pipeline	line id	High	517
Structure	location id	High	517
Structure	location id	High	502
Pipeline	line id	High	517
Structure	location id	High	517
Structure	location id	High	502

Synergi Plant Dashboard

- Configurable dashboard within Synergi Plant

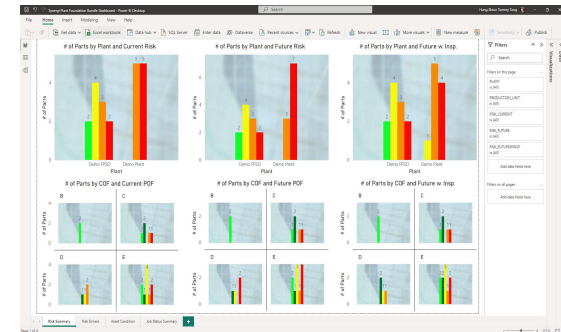
Dashboard – Tracking risk, asset, and job status



Synergi Plant Dashboard



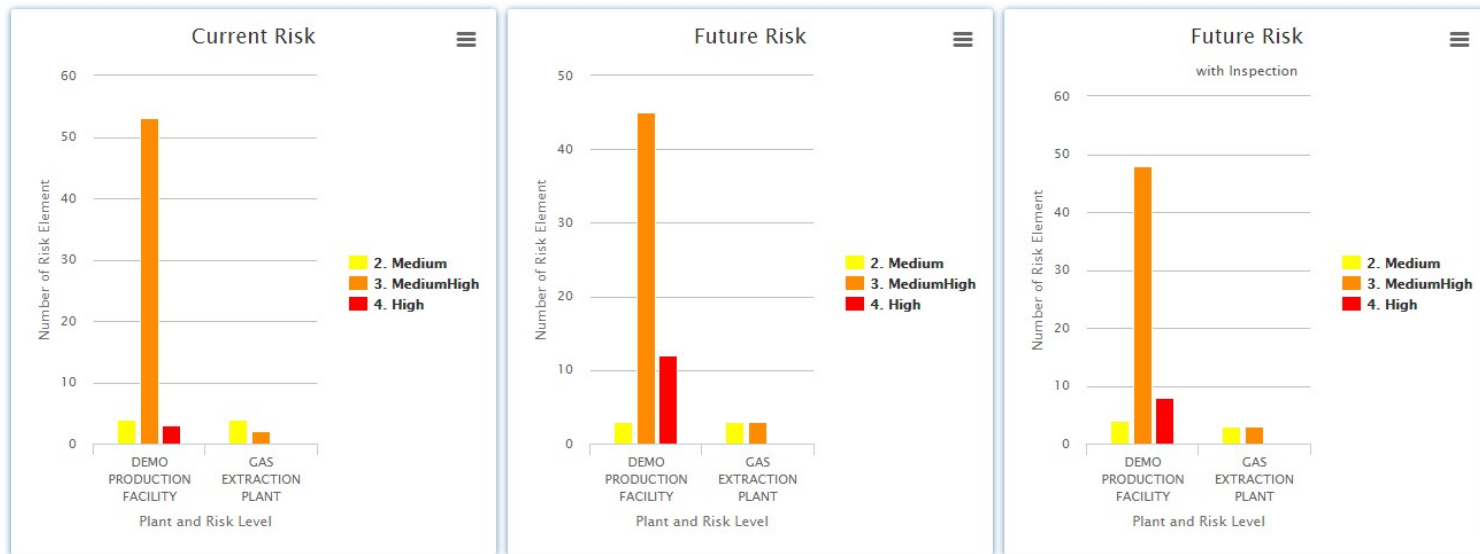
Causes and evidences



External BI and AI tools

Risk status and overview

– Current, future, and future with inspection risk level summary



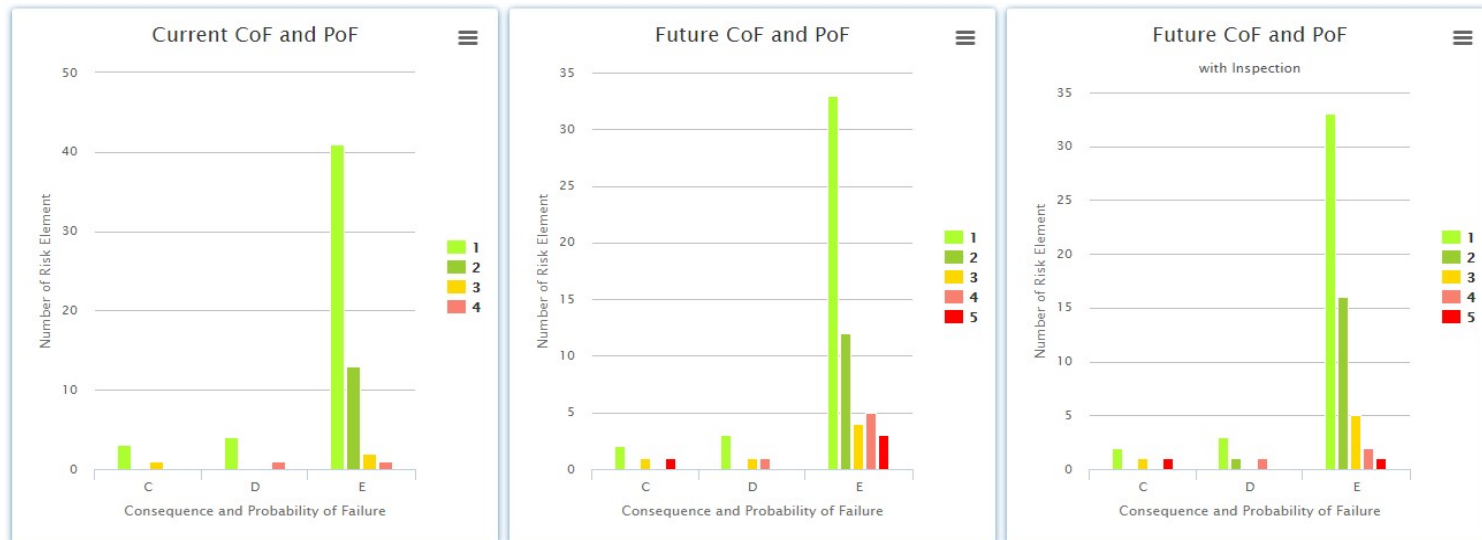
Data filter available: Plant, Unit, Equipment type

Legend filter available: Risk level

Drilldown navigation: Element RBI assessment detail page

Risk status and overview

– Current, future, and future with inspection PoF and CoF pivot



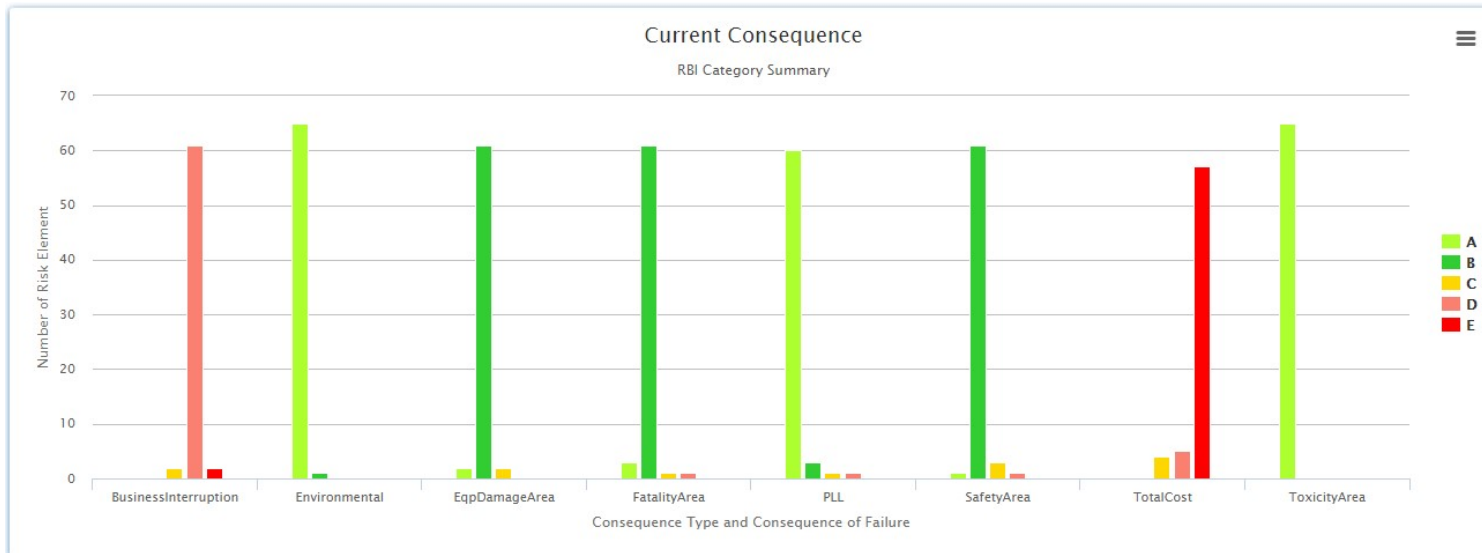
Data filter available: Plant, Unit, Equipment type, CoF category

Legend filter available: PoF category

Drilldown navigation: Element RBI assessment detail page

Risk status and overview

– Current driving consequence of failure



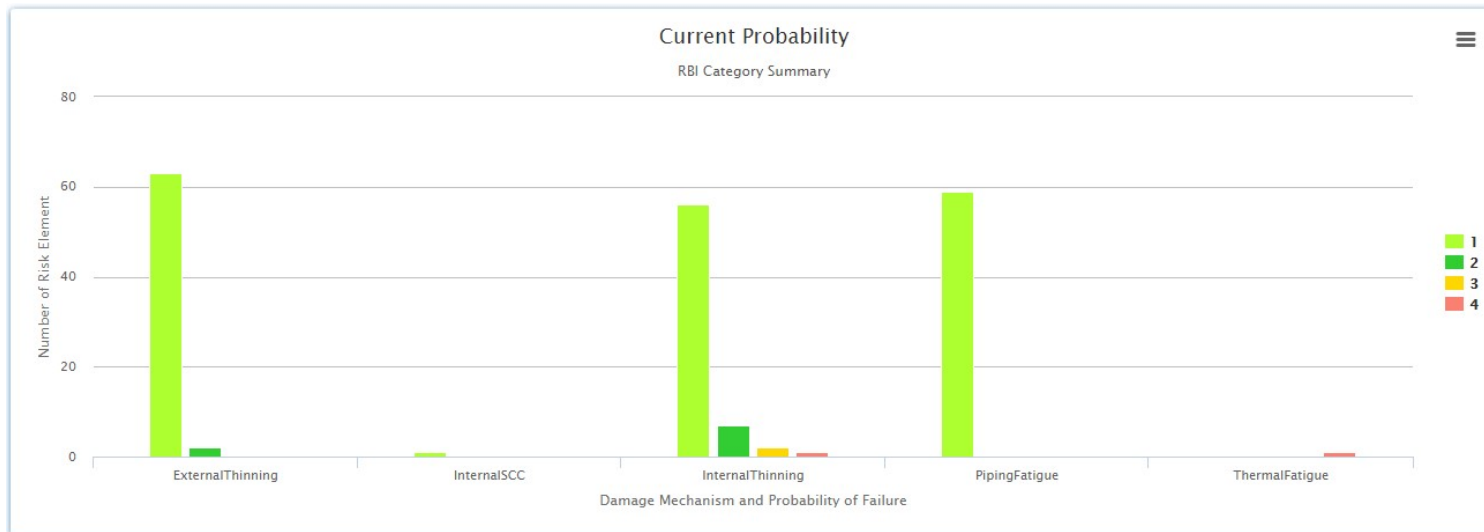
Data filter available: Plant, Unit, Equipment type, Consequence driver

Legend filter available: CoF category

Drilldown navigation: Element RBI assessment detail page

Risk status and overview

– Current driving probability of failure



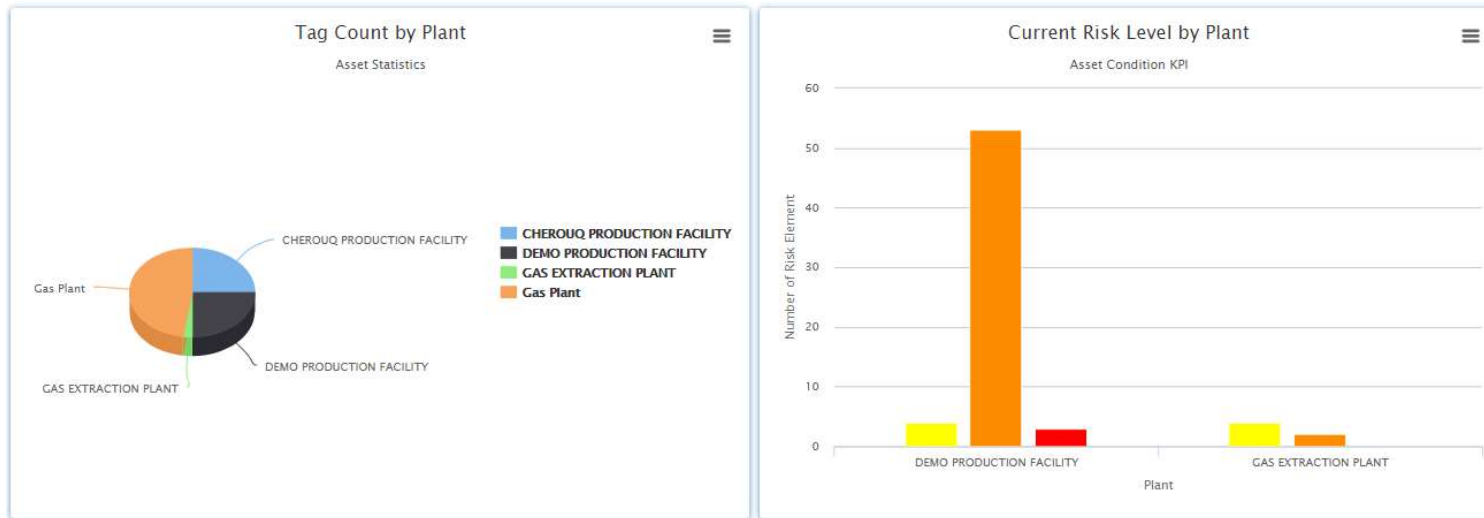
Data filter available: Plant, Unit, Equipment type, Probability driver

Legend filter available: PoF category

Drilldown navigation: Element RBI assessment detail page

Asset condition overview

– Tag count and current risk by plant



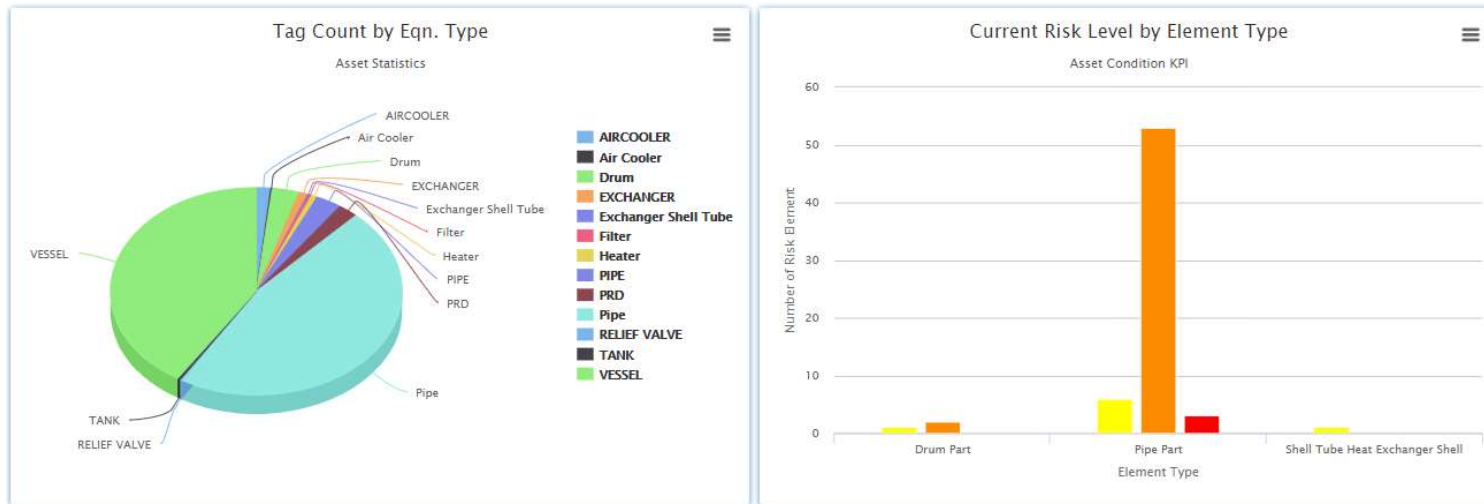
Data filter available: Plant, Equipment type, Risk level

Legend filter available: Plant

Drilldown navigation: Tag tabbed-screen and element RBI assessment detail pages

Asset condition overview

– Tag count and current risk by equipment type



Data filter available: Plant, Equipment type, Risk level

Legend filter available: Equipment type

Drilldown navigation: Tag tabbed-screen and element RBI assessment detail pages

Asset condition overview

– Findings by plant and equipment type

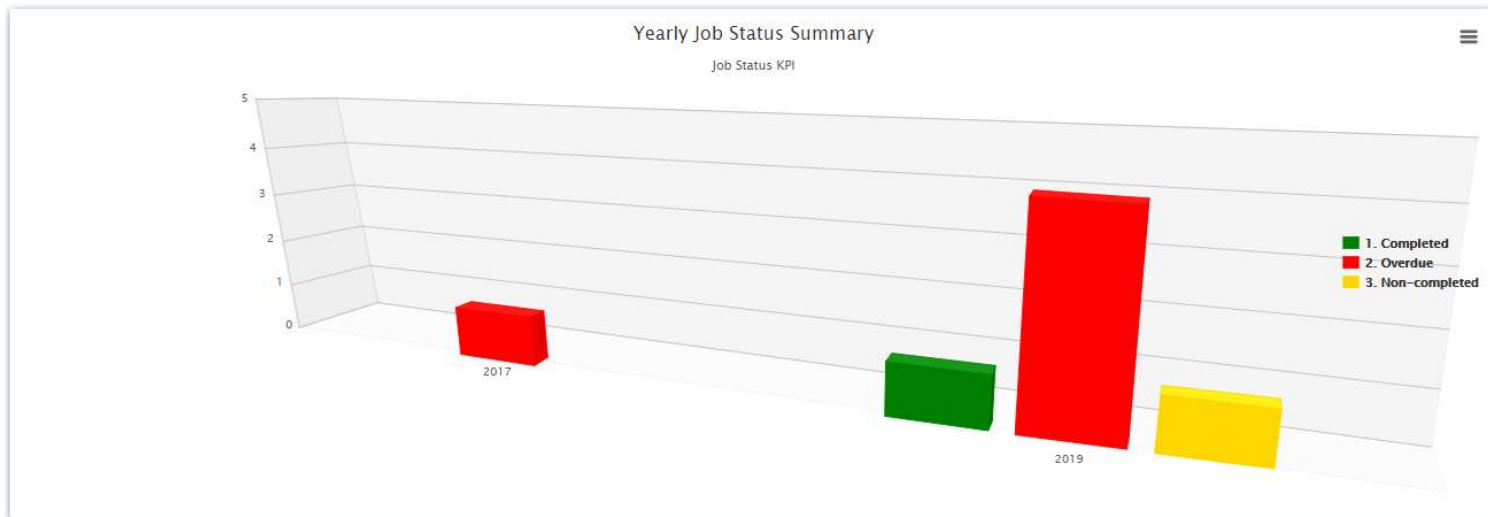


Data filter available: Plant, Unit, Equipment type, Finding category

Legend filter available: Finding category

Drilldown navigation: Inspection job with finding page

Job status summary - Yearly job status summary

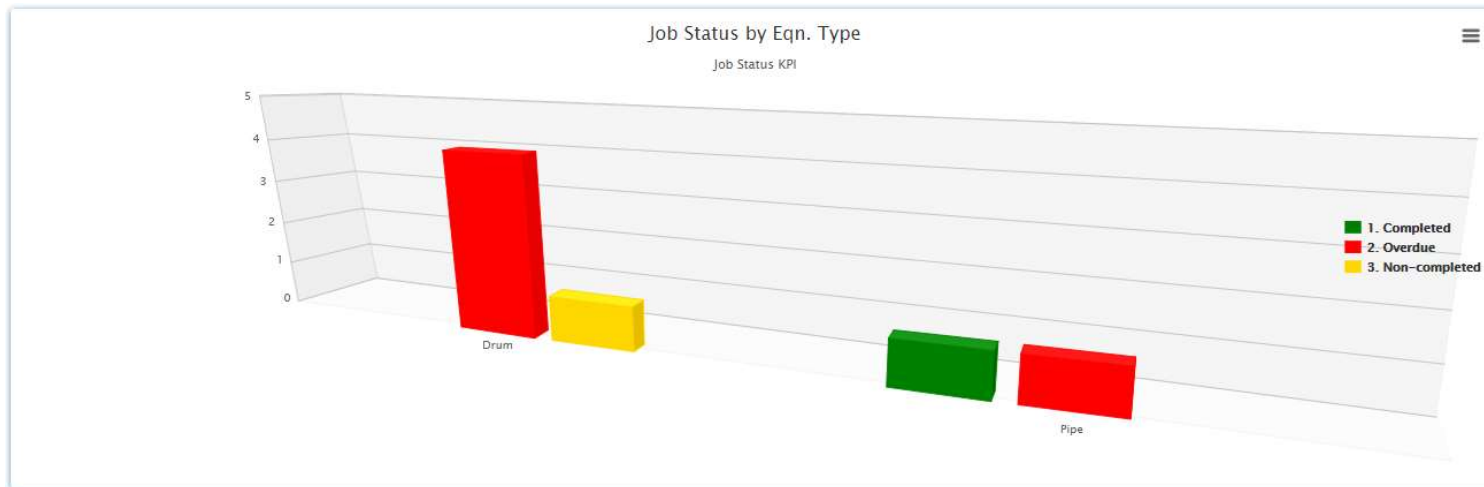


Data filter available: Plant, Unit, Equipment type, Job status

Legend filter available: Job status

Drilldown navigation: Inspection job page

Job status summary - Job status by equipment type



Data filter available: Plant, Unit, Equipment type, Job status

Legend filter available: Job status

Drilldown navigation: Inspection job page

3D models showing asset risk and inspection anomalies

Synerg Plant : Demo Package

Facility data | RBI | Inspection | Measurement | Anomaly | Library | RBI Setup

SPDEMO [English - United States] MCP Demo
Version No: 5.7.0.242 / 5.7.0.001

Asset details | Import / Export | Inspection report | Risk matrix | 3D Viewer

Process unit : * 20 Separation and Stabilisation

Asset View | Members Group | Anomalies Registered

Filter TAG

Asset Type	Asset Key	Description	Risk Color	Grp
TAG	VERITAS-0.5-DH-1104-C15B	0.5-DH-1104-C15B	#F9B806	VEF
TAG	VERITAS-0.5-DH-1204-C15B	0.5-DH-1204-C15B	#F9B806	VEF
TAG	VERITAS-0.75-GC17-192-001-B1	0.75-GC17-192-001-B1	#E9F906	VEF
TAG	VERITAS-0.75-GC17-192-003B-B1	0.75-GC17-192-003B-B1	#E9F906	VEF

Showing 1 to 33 of 33 entries

Synerg Plant : Demo Package

Facility data | RBI | Inspection | Measurement | Anomaly | Library | RBI Setup

MGR [English - United States] POC
Version No: 6.0.1.1588 / 5.7.1.000

Asset details | Import / Export | Inspection report | Risk matrix | 3D Viewer

Process unit : 250 - Gas Conditioning

Asset View | Members Group | Anomalies Registered

Filter

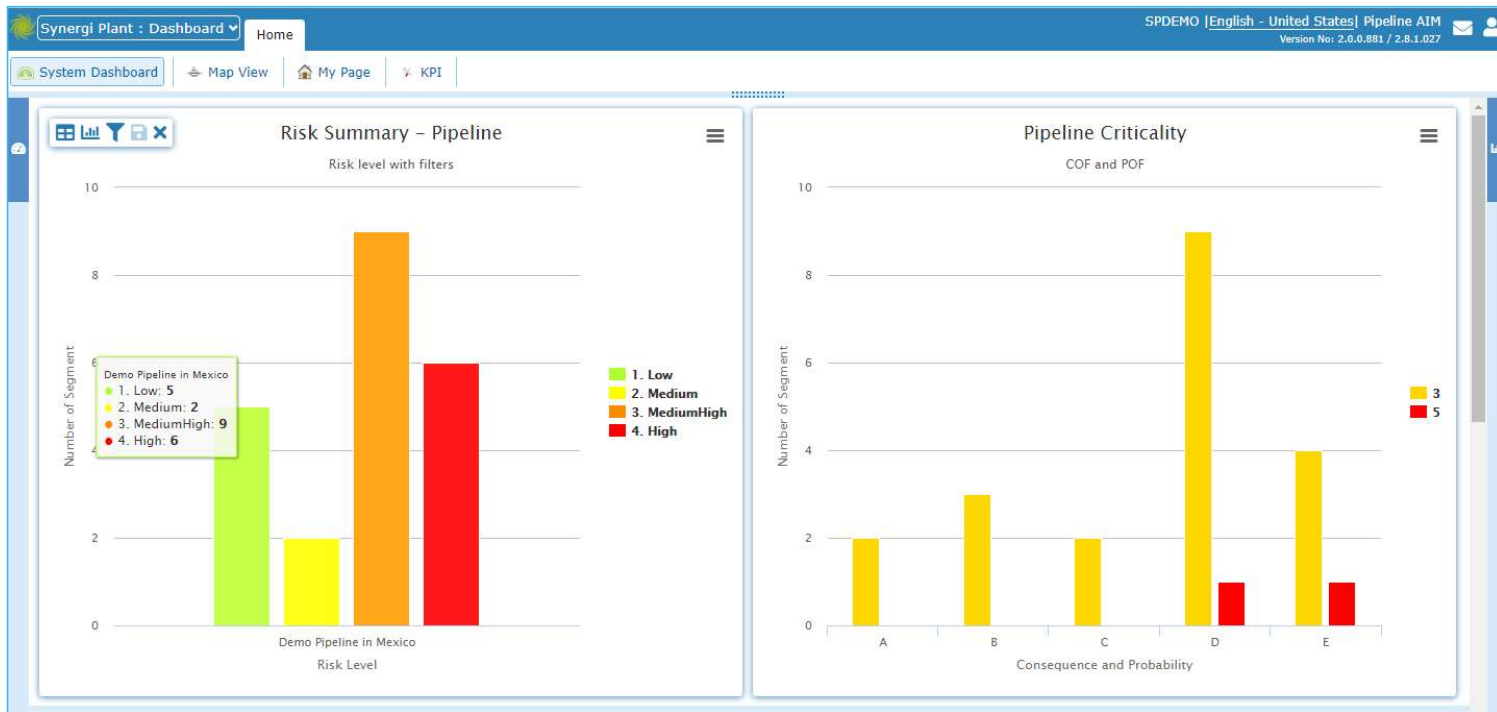
Asset Name	Insp ID	Report No	Anomaly No	Insp Date	Follow Up Date	Insp Type	Anomaly Code	FFP Status	Inspection
V-250-0716	0716 COR	2019/0011	DNVGL-ANOM-008	12/06/2020		SCHEDULED_JOB		YELLOW	

Showing 1 to 1 of 1 entries

Dashboard and Map Screens

- Pipeline Integrity using Synergi Plant

Risk Summary and Criticality



Risk Consequence Driver



Risk Threat Driver



Dashboard drilldown to segment list

Synergi Plant : Dashboard Home SPDEMO |English - United States| Pipeline AIM
Version No: 2.0.0.881 / 2.8.1.027

System Dashboard Map View My Page KPI

Navigate Show 500 entries

	PLANT	PRODUCTION_UNIT	PPL_SECTION	TAG_ID	TAG_KEY	TAG_DESCRIPTION	ACTIVITY_ID	COFORPOF	CATEGORY_ID	CATEGORY_NAME	OPTION_LABEL
<input type="checkbox"/>	PLAIM Demo Pipelines	Demo Pipeline in Mexico	Pipeline Section 048-140 km	18522824	PSEG-055-066	Pipeline Segment 055-066	640894	COF	53	REPUTATION	E
<input checked="" type="checkbox"/>	PLAIM Demo Pipelines	Demo Pipeline in Mexico	Pipeline Section 048-140 km	18522825	PSEG-066-071	Pipeline Segment 066-071	640894	COF	53	REPUTATION	E
<input type="checkbox"/>	PLAIM Demo Pipelines	Demo Pipeline in Mexico	Pipeline Section 048-140 km	18522826	PSEG-071-080	Pipeline Segment 071-080	640894	COF	53	REPUTATION	E
<input type="checkbox"/>	PLAIM Demo Pipelines	Demo Pipeline in Mexico	Pipeline Section 048-140 km	18522830	PSEG-118-125	Pipeline Segment 118-125	640894	COF	53	REPUTATION	E
<input type="checkbox"/>	PLAIM Demo Pipelines	Demo Pipeline in Mexico	Pipeline Section 140-210 km	18522835	PSEG-150-160	Pipeline Segment 150-160	640894	COF	53	REPUTATION	E

Dashboard drilldown to risk details

Synergi Plant : Demo Package Facility data RBI Inspection Measurement Anomaly Library RBI Setup SPDEMO |English - United States| Pipeline AIM Version No: 2.0.0.881 / 2.8.1.027

Assessment Audit Trail Executive Summary

Tag : Pipeline Segment 066-071

Search Asset PSEG-066-071

Asset PSEG-066-071 Description Pipeline Segment 066-071 Status On Going - Assessment

Overview Final Consequences Failure Mechanism Likelihood Calculation Final Probability Inspection recommendations

Approval Executive Summary

Risk Details

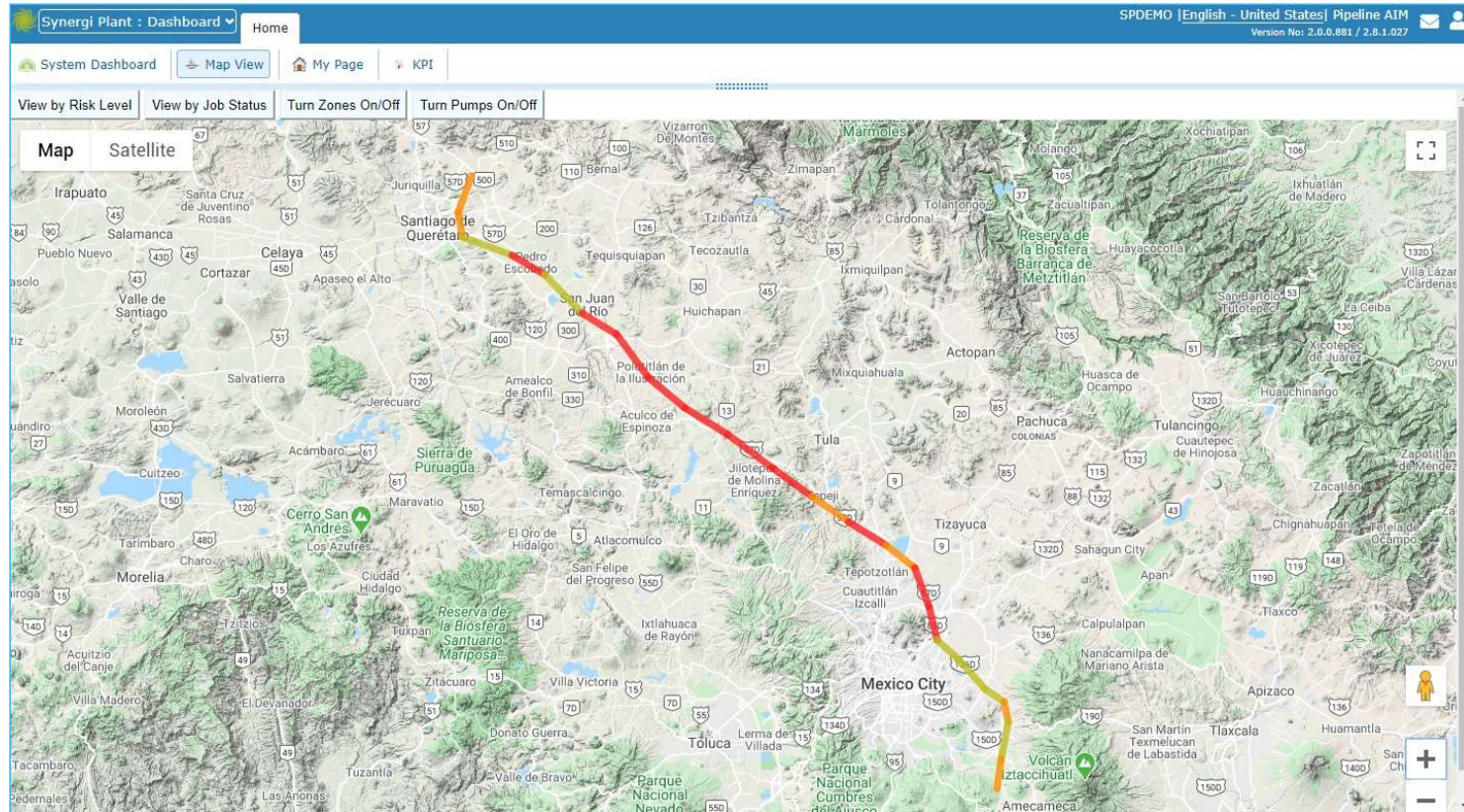
		Consequence				
		A	B	C	D	E
Probability	5	Yellow	Orange	Red	Dark Red	Dark Red
	4	Light Green	Yellow	Orange	Red	Dark Red
	3	Light Green	Light Green	Yellow	Orange	Red (H)
	2	Light Green	Light Green	Light Green	Yellow	Orange
	1	Light Green	Light Green	Light Green	Light Green	Orange

Risk H

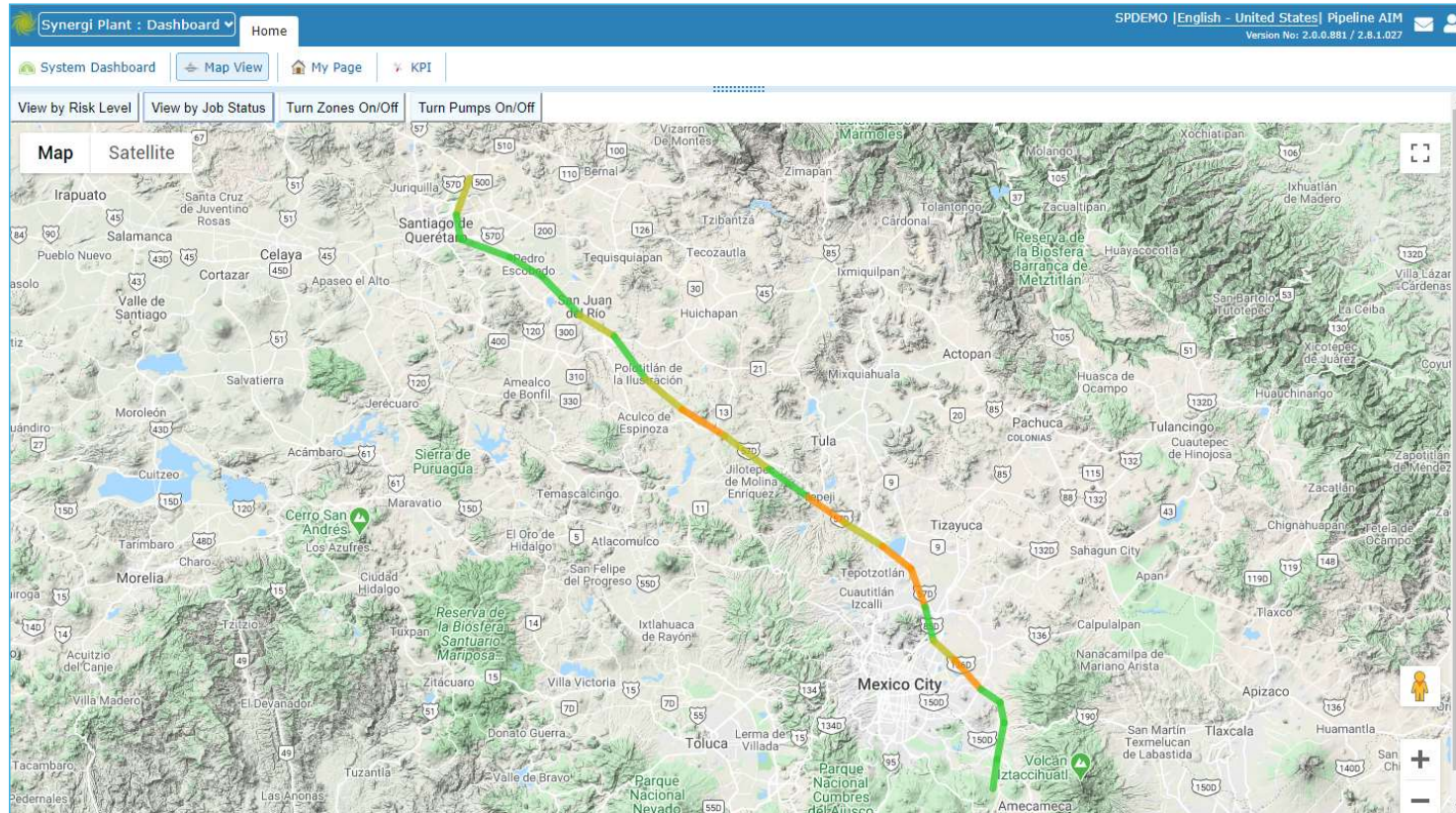
Total PoF

Final Consequences			Final Probability		
Name	Answer	Color	Name	Answer	Color
Worst case CoF	E	Red	PoF		
Safety	A	Green	Internal corrosion PoF		
Environmental Related Issues.	A	Green	Excavation PoF		
Financial	B	Yellow	Impact damage PoF	1	Green
Reputation of the company.	E	Red	Sabotage PoF	1	Green
			River / Flooding damage PoF	2	Light Green
			Soil movement PoF	3	Yellow

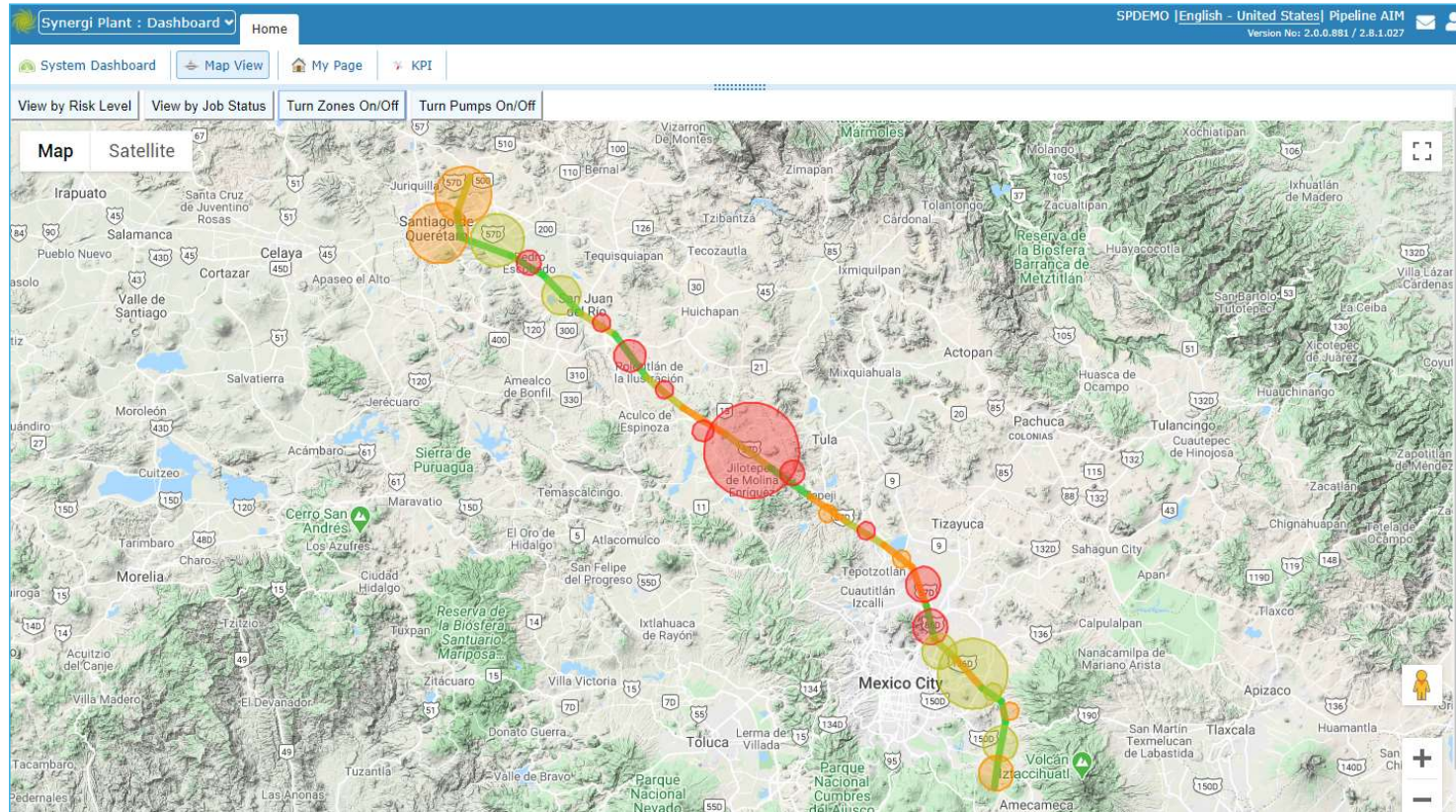
Google map with pipeline segments – view by risk status



Google map with pipeline segments – view by job status



Hazard or risk zone overlay



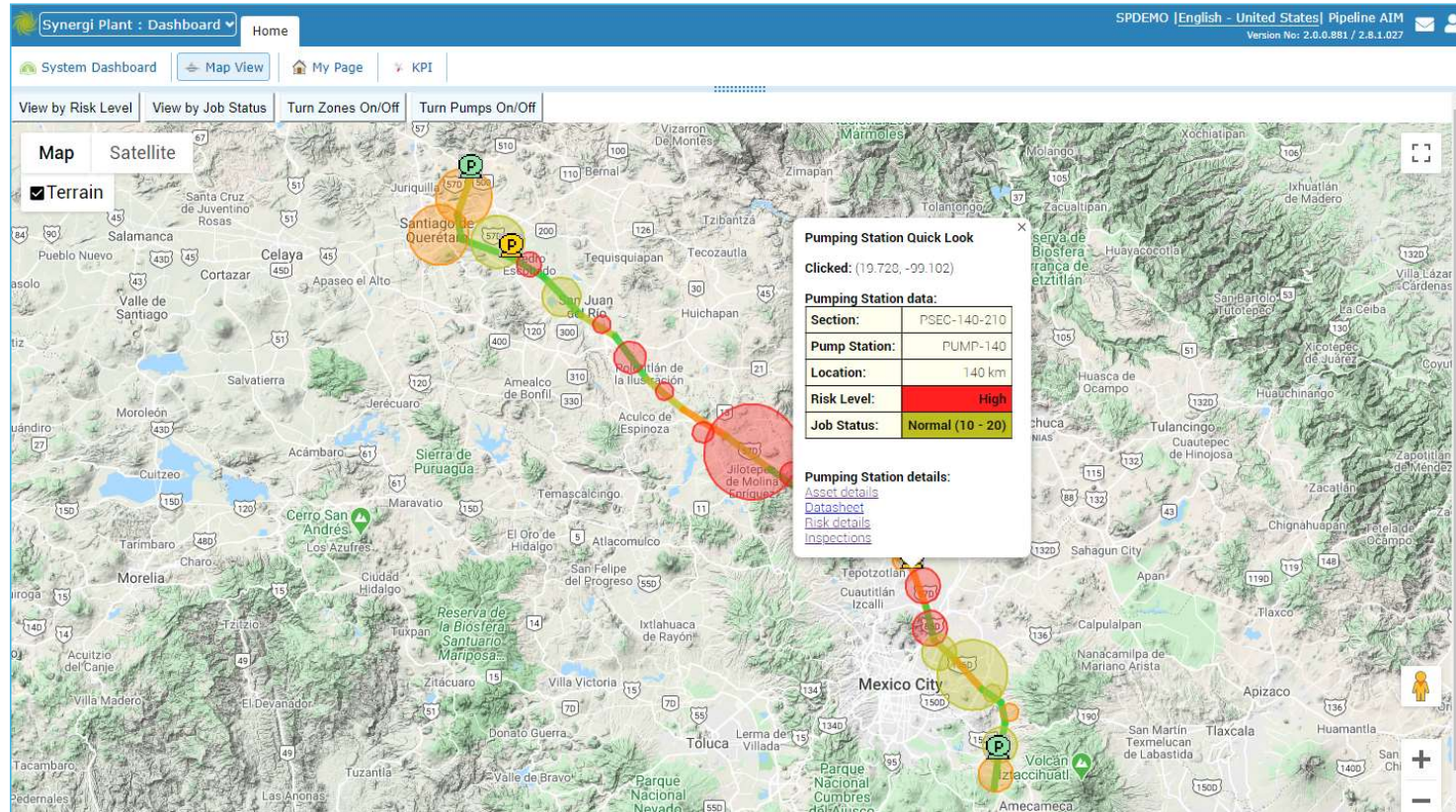
Quick info with drilldown links

Pipeline Segment Quick Look
 Clicked: (20.050, -99.477)

Segment data:	
Section:	PSEC-040-140
Segment:	PSEG-001-118
Length:	27 km
Soil Type:	Arcilloso
Material:	API 5L X70
Nominal Thickness:	0.90 inch
Zone Type:	WildLand
Zone Radius:	13.50 km
Risk Level:	High
Job Status:	Normal (10 - 20)

Segment details:
[Asset details](#)
[Datasheet](#)
[Risk details](#)
[Inspections](#)

Pumping station markers, quick info with drilldown links



Potential extension to implment other asset integrity modules

Synergi Plant : Dashboard | Home SPDEMO | English - United States | Pipeline AIM
Version No: 2.0.0.881 / 2.8.1.027

[Demo Package](#)
[Dashboard](#)
[Facility management](#)
[Failure Register](#)
[RBI](#)
[RCM](#)
[Safety Integrity Level](#)
[Inspection management](#)
[Maintenance Mgmt](#)
[Work Pack Management](#)
[Monitored Data](#)
[Inspection Memo/Anomaly](#)
[Integration](#)
[Administration](#)

Pipeline Segment Quick Look

Clicked: (19.064, -99.077)

Segment data:	
Section:	PSEC-140-210
Segment:	PSEG-140-150
Length:	10 km
Soil Type:	Arcilloso
Material:	API 5L X70
Nominal Thickness:	0.00 inch
Zone Type:	Population
Zone Radius:	5.00 km
Risk Level:	High
Job Status:	Many (20 - 30)

Segment details:
[Asset details](#)
[Data sheet](#)
[Risk details](#)
[Inspections](#)

synergiplantap.southeastasia.cloudapp.azure.com/.../HomePage.aspx?urladdr=%.../ile de Bravo/Parque

WHEN TRUST MATTERS

Synergi Plant Best Practice implementation

Case studies - Dashboard

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