
Synergi Plant Training

Dashboard

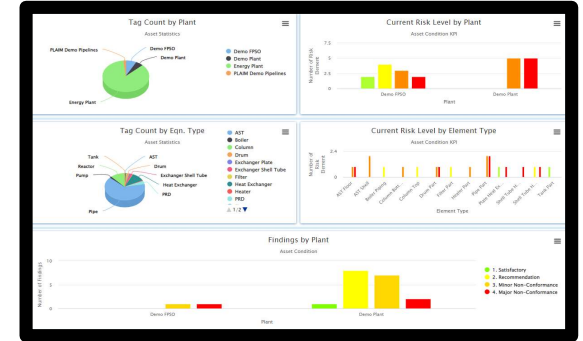
彰顯全定量 RBI 及 AIMS 的導入效益



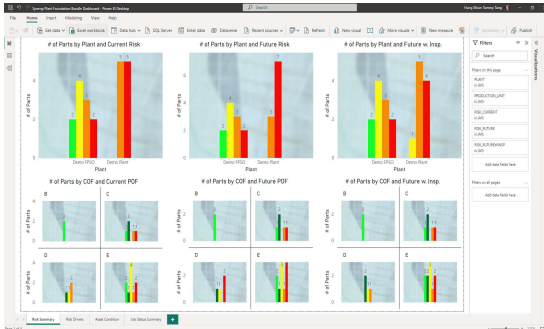
全範圍資產設備風險警示



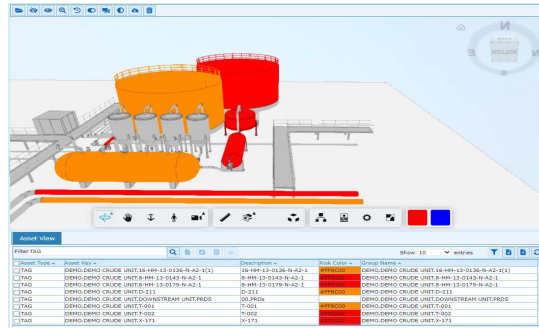
標準的方法流程與結果共享平台



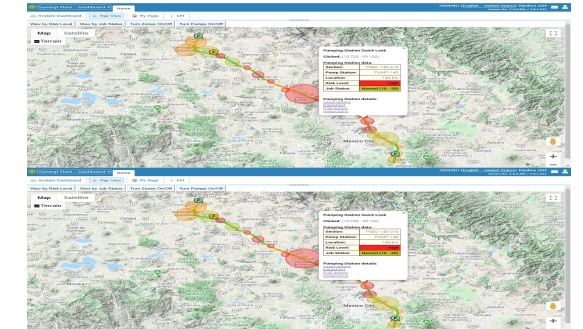
明確定義的關鍵問題與解決方案



開放式 BI 與 AI 系統整合



3D視覺化的結果呈現



融入現實世界資訊的數位資產

Dashboard Screen



Risk Status and Overview (1)

- Current Risk
Number of risk parts in current risk levels

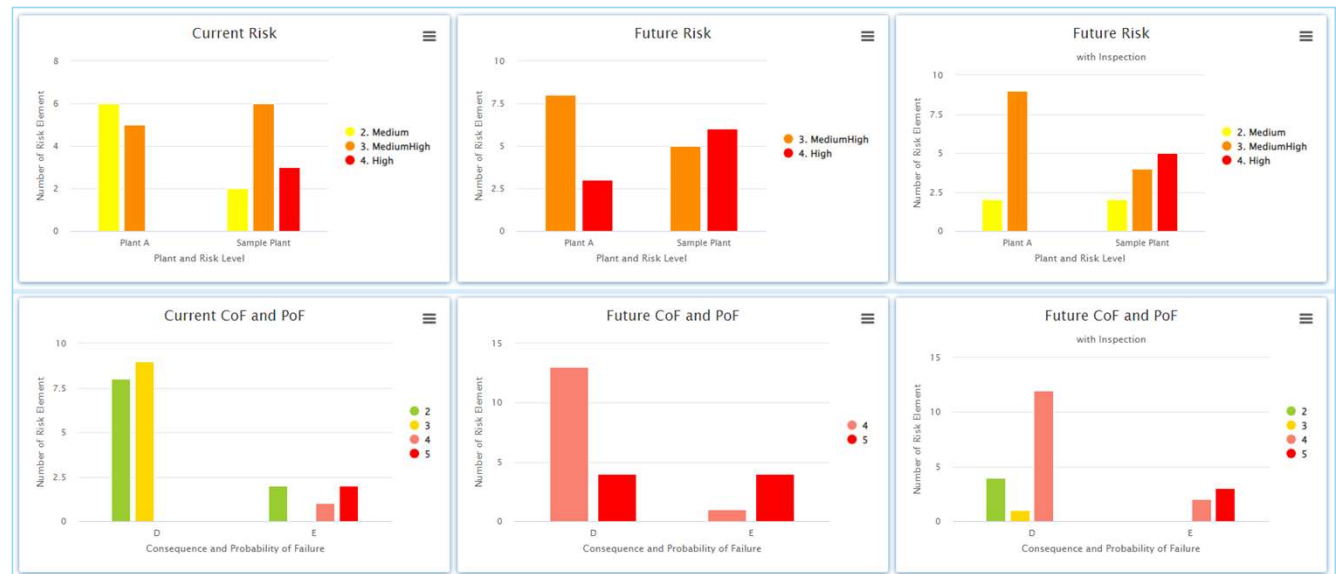
- Future Risk
Number of risk parts in future risk levels

- Future Risk with Inspection
Number of risk parts in future risk levels if RBI recommended inspections are executed

- Current CoF and PoF
Number of risk parts in current PoF levels separated by current CoF levels

- Future CoF and PoF
Number of risk parts in future PoF levels separated by future CoF levels

- Future CoF and PoF
Number of risk parts in future PoF levels separated by future CoF levels if RBI recommended inspections are executed



Risk Status and Overview (2)

- Current Consequence
Number of risk parts in current CoF levels separated by each consequence driver

- Current Probability
Number of risk parts in current PoF levels separated by each probability driver



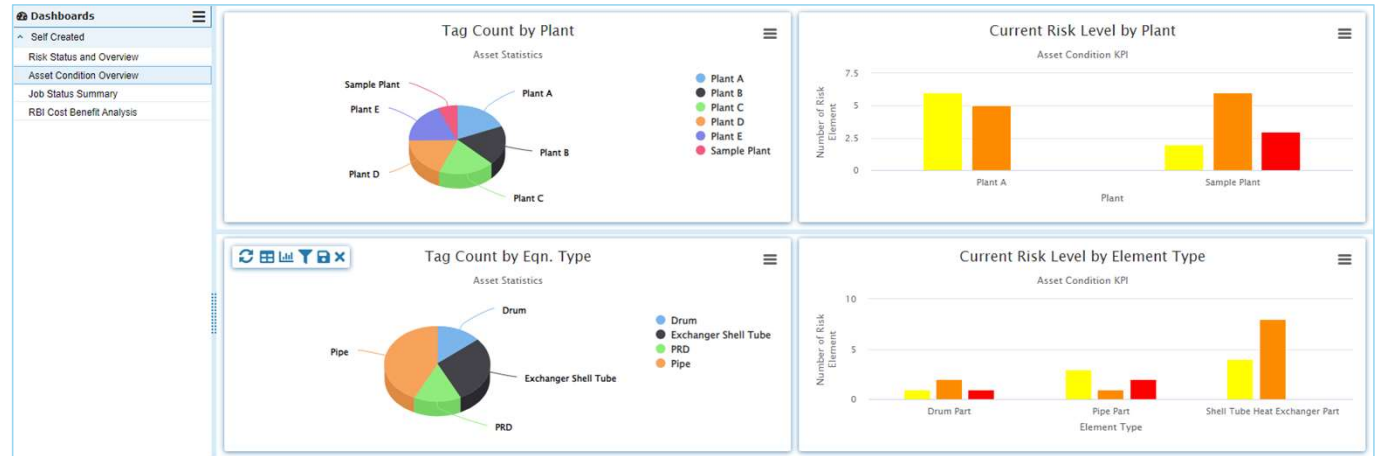
Asset Condition Overview (1)

- Tag Count by Plant
Number of Tags in different plants

- Current Risk Level by Plant
Number of risk parts in current risk levels

- Tag Count by Eqn. Type
Number of Tags in different equipment types

- Current Risk Level by Element Type
Number of risk parts in current risk levels

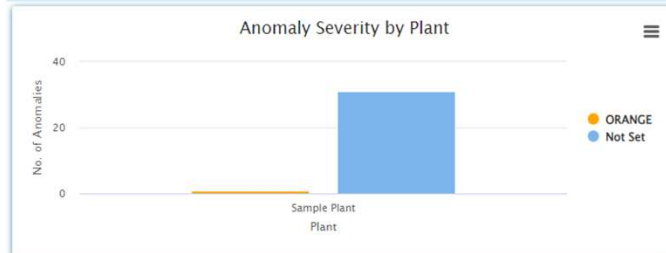


Asset Condition Overview (2)

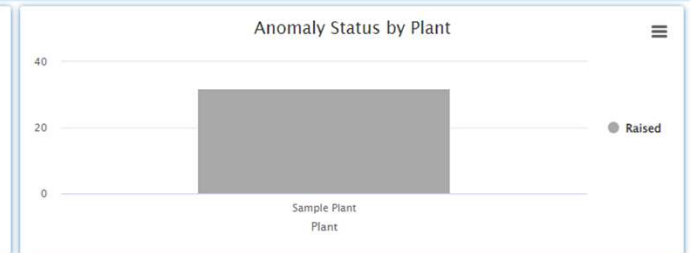
- Inspection Findings by Plant
Number of findings in different categories separated by plants



- Anomaly Severity by Plant
Number of anomaly in different severities separated by plants



- Anomaly Status by Plant
Number of anomaly in different status separated by plants



Job Status Summary

• Job Status by Eqn. Type
Number of inspections in different job status separated by equipment types

• Yearly Job Status Summary
Number of inspections in different job status separated by years



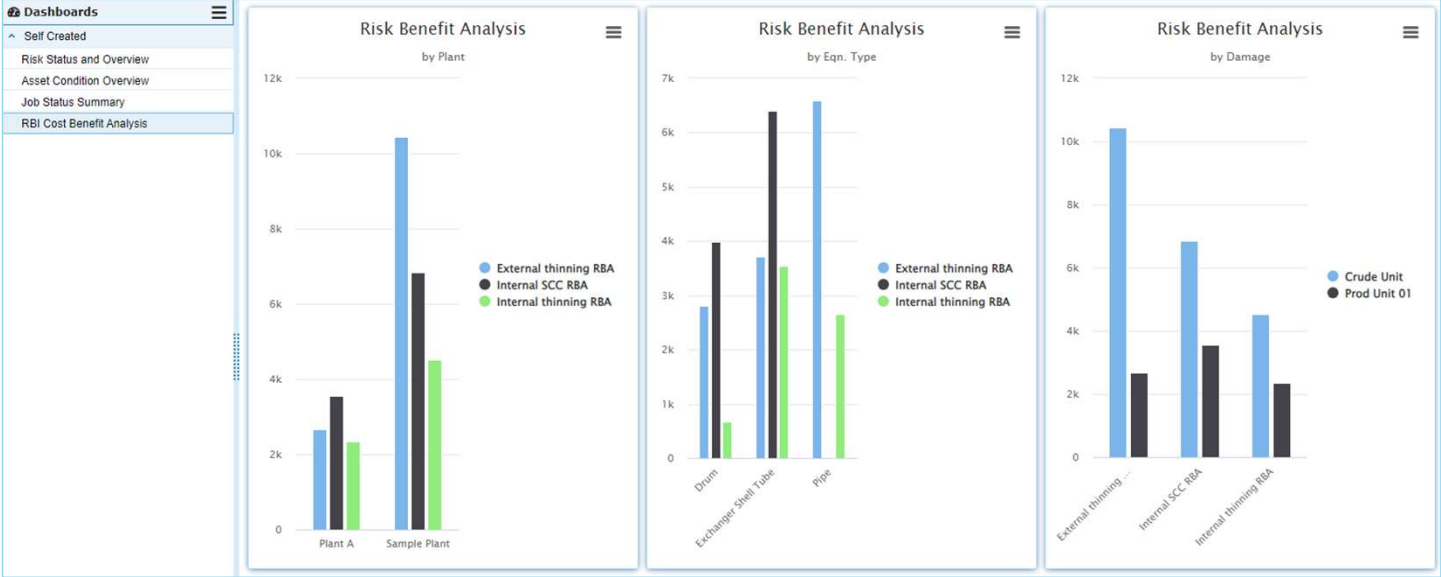
RBI Cost Benefit Analysis

- Risk Benefit Analysis by Plant
RBA values in different damage mechanisms separated by plants

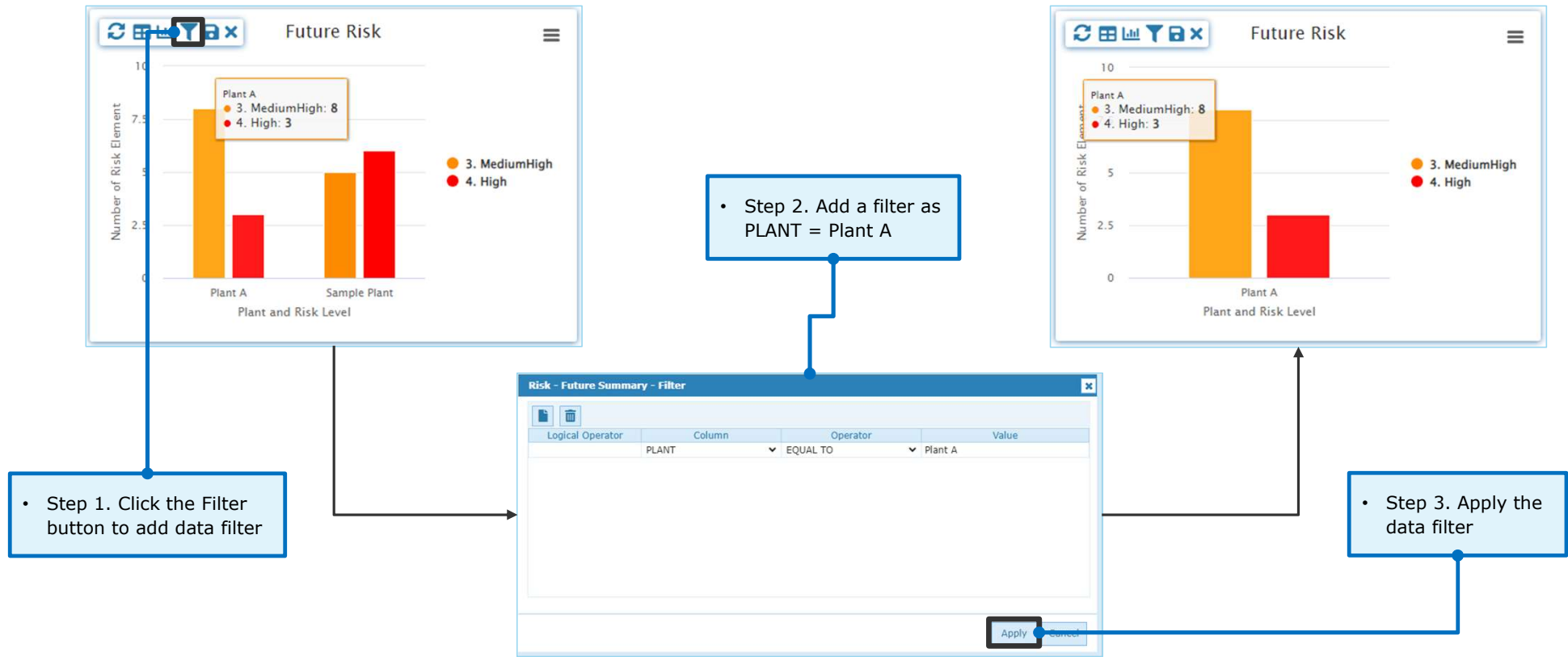
- Risk Benefit Analysis by Eqn. Type
RBA values in different damage mechanisms separated by equipment types

- Risk Benefit Analysis by Damage
RBA values in different production units separated by damage mechanisms

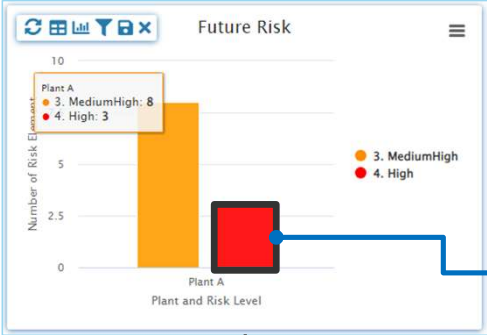
- RBA value:
For every dollar invested in RBI assessment, how much risk in dollars can be reduced



Set Filter on Widget



Drilldown to data list



• Double-click the data bar to drilldown to data list

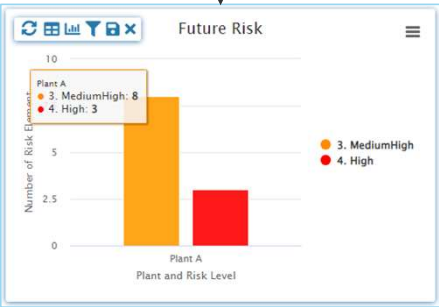
PLANT	PRODUCTION_UNIT	PROCESS_UNIT	TAG	ELEMENT_ID	ELEMENT_KEY	ELEMENT_DESC	ELEMENT_TYPE	ACTIVITY_ID	ACTIVITY_DESC	POF_FACTOR_CURRENT	POF_FACTOR_FUTURE	POF_FACTOR_FUTUREWINSP
<input type="checkbox"/> Plant A	Prod Unit 01	Unit X01	2-WW-13-0140-S-A2-1	26196840	2-WW-13-0140-S-A2-1-EL	2-WW-13-0140-S-A2-1-EL	Pipe Part	658471	Unit X01 RBI	2.585552718835098	1650.7560897197995	139.5588049993362
<input type="checkbox"/> Plant A	Prod Unit 01	Unit X01	8-HM-13-0179-N-A2-1	26196846	8-HM-13-0179-N-A2-1-EL	8-HM-13-0179-N-A2-1-EL	Pipe Part	658471	Unit X01 RBI	5.70413819178045	1180.2838231351554	131.44757393212956
<input type="checkbox"/> Plant A	Prod Unit 01	Unit X01	X-27	26196863	X-27 Tube Bundle	X-27 Tube Bundle	Shell Tube Heat Exchanger Part	658471	Unit X01 RBI	9.192106260617024	1405.0047413213997	147.94261112681488

Navigate to the detail screen and back to dashboard page

• Click the Back button to go back to dashboard page

PLANT	PRODUCTION_UNIT	PROCESS_UNIT	TAG	ELEMENT_ID	ELEMENT_KEY	ELEMENT_DESC	ELEMENT_TYPE
Plant A	Prod Unit 01	Unit X01	2-WW-13-0140-S-A2-1	26196840	2-WW-13-0140-S-A2-1-EL	2-WW-13-0140-S-A2-1-EL	Pipe Part
Plant A	Prod Unit 01	Unit X01	8-HM-13-0179-N-A2-1	26196846	8-HM-13-0179-N-A2-1-EL	8-HM-13-0179-N-A2-1-EL	Pipe Part
Plant A	Prod Unit 01	Unit X01	X-27	26196863	X-27 Tube Bundle	X-27 Tube Bundle	Shell Tube Heat Exchanger Part

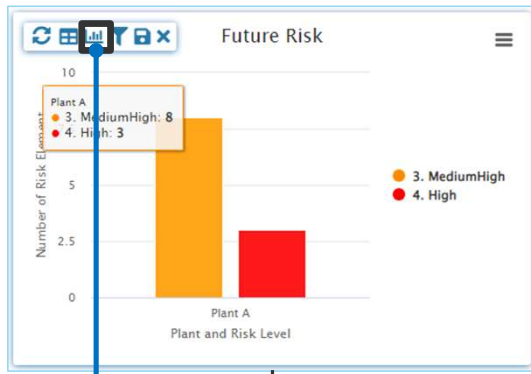
• Click the Navigate button to go to the detail screen



• Select the data row which you want to navigate to the detail screen

Name	Answer
Business Impact Cof	D
Equipment Damage Area Cof	C
Flammable Fatality Area Cof	
Toxicity Area Cof	
Cof Categories - Safety	

Change Widget Graph Attributes



- Click the Graph button to change widget graph attributes

Risk - Future Summary - Graph Properties

Graph

Title: Future Risk

Sub Title:

Type: Column

Legend:

Shared Tooltip:

X Axis

Title:

Color:

Suffix:

Line Width:

Line Color:

Orientation:

Primary Y Axis

Title:

Color:

Suffix:

Line Width:

Line Color:

Secondary Y Axis

Title:

Color:

Suffix:

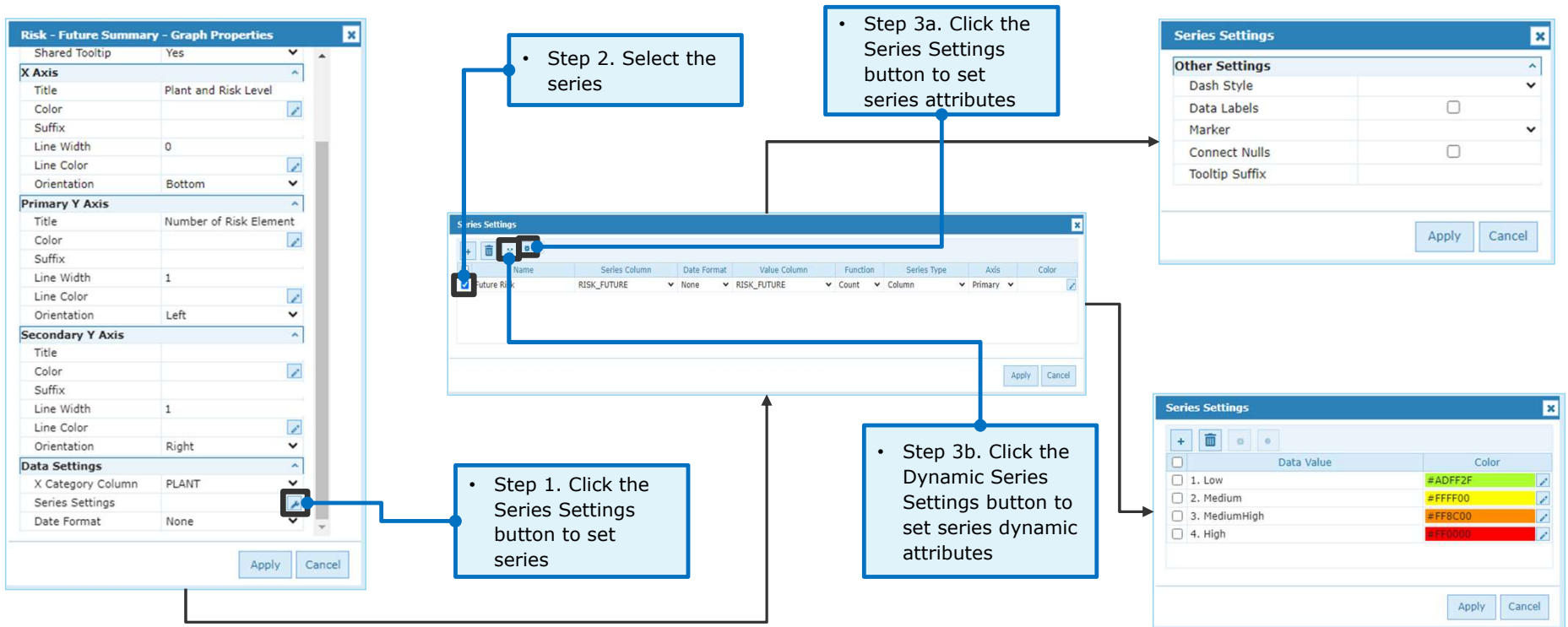
Line Width: 1

Line Color:

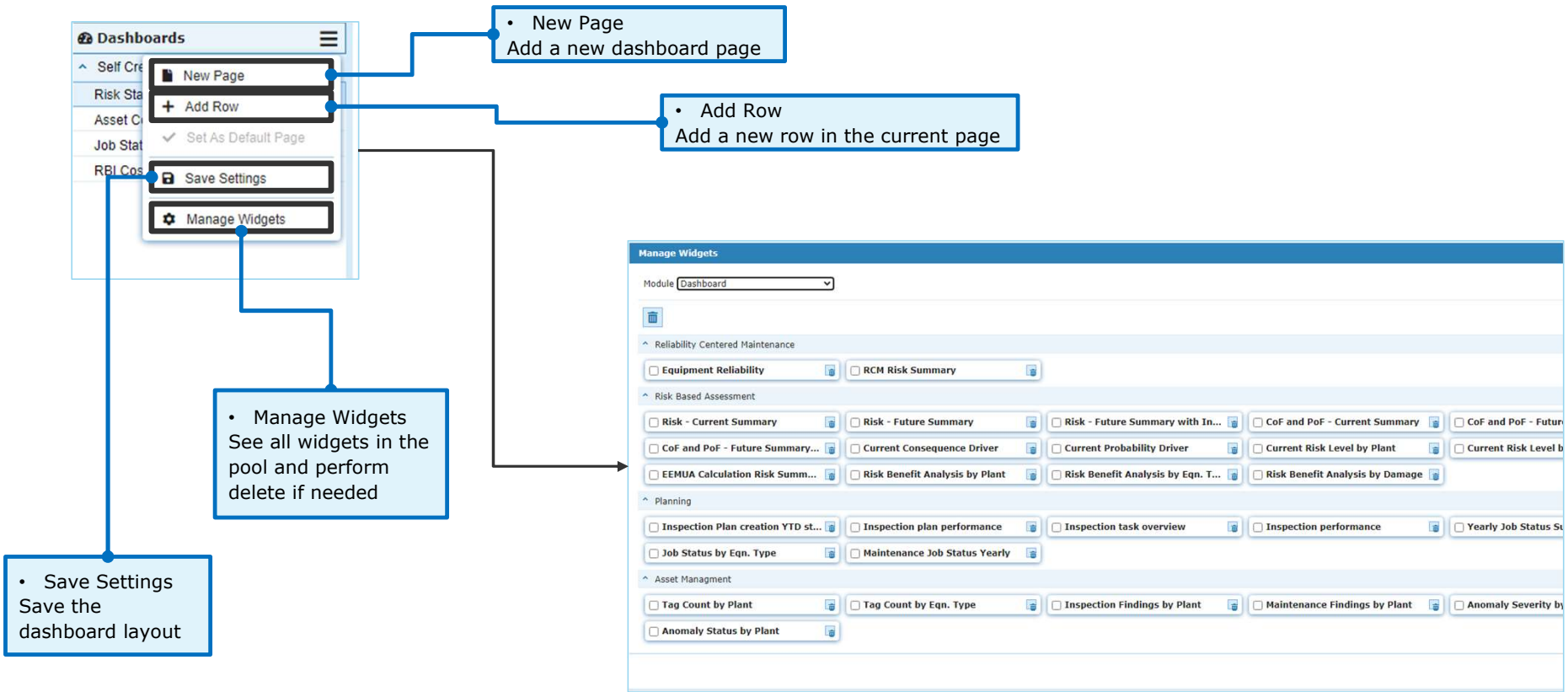
Apply Cancel

- Change the graph title, subtitle, graph type, legend visibility, and other attributes

Data Series Settings



Page and Layout Management



Drag and Drop Widgets

Current Risk Level by Plant
Asset Condition KPI

Current Risk Level by Element Type
Asset Condition KPI

Widgets
Expand All

- Current Consequence Driver
- Current Probability Driver
- Current Risk Level by Plant
- Current Risk Level by Element Type
- EEMUA Calculation Risk Summary
- Risk Benefit Analysis by Plant**
- Risk Benefit Analysis by Eqn. Type
- Risk Benefit Analysis by Damage
- Planning
- Inspection Plan Creation YTD status
- Yearly Job Status Summary
- Job Status by Eqn. Type
- Maintenance Job Status Yearly
- Asset Management

- Drag the widget name from the widget pool and drop it on the dashboard page to add the widget into the page

Tag Count by Plant
Asset Statistics

Current Risk Level by Plant
Asset Condition KPI

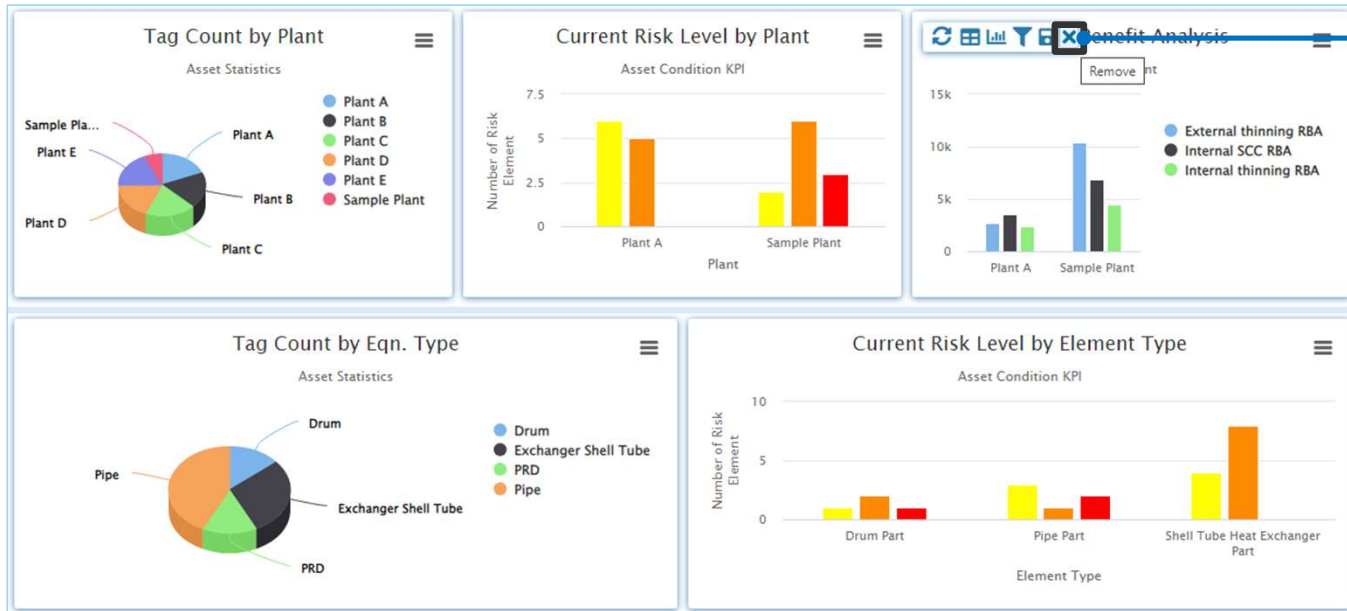
Risk Benefit Analysis
by Plant

Tag Count by Eqn. Type
Asset Statistics

Current Risk Level by Element Type
Asset Condition KPI

Inspection Findings by Plant
Asset Condition

Remove Widget from Page



- Click the Remove button to remove a widget from the dashboard page

Dashboard Data Lists

The screenshot shows the 'Dashboard Data Lists' interface in Synergil Plant AIRMS. The table displays risk data for Plant A across various COF (Criticality of Failure) labels. The data is color-coded based on risk levels, with red indicating high risk and green indicating low risk. A callout box points to the 'Export to Excel' icon in the top right corner of the table area.

Plant	COF Label	Curr. POF	Curr. A	Curr. B	Curr. C	Curr. D	Curr. E	Fut. POF	Fut. A	Fut. B	Fut. C	Fut. D	Fut. E	FwL	FwL A	FwL B	FwL C	FwL D	FwL E
Plant A	Business Impact CoF	5	0	0	0	0	5	0	0	1	0	0	5	0	0	0	0	0	0
Plant A	Business Impact CoF	4	0	0	0	0	4	0	0	0	0	0	4	0	0	1	7	0	0
Plant A	Business Impact CoF	3	0	0	0	5	3	0	0	0	0	0	3	0	0	0	1	0	0
Plant A	Business Impact CoF	2	0	0	1	5	0	2	0	0	0	0	2	0	0	0	2	0	0
Plant A	Business Impact CoF	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Plant A	Environmental CoF	5	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0
Plant A	Environmental CoF	4	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0
Plant A	Environmental CoF	3	5	0	0	0	3	0	0	0	0	0	3	1	0	0	0	0	0
Plant A	Environmental CoF	2	6	0	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0
Plant A	Environmental CoF	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Plant A	Equipment Damage Area CoF	5	0	0	0	0	5	0	3	0	0	0	5	0	0	0	0	0	0
Plant A	Equipment Damage Area CoF	4	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0
Plant A	Equipment Damage Area CoF	3	0	5	0	0	3	0	0	0	0	0	3	0	1	0	0	0	0
Plant A	Equipment Damage Area CoF	2	0	6	0	0	2	0	0	0	0	0	2	0	2	0	0	0	0
Plant A	Equipment Damage Area CoF	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Plant A	Flammable Fatality Area CoF	5	0	0	0	0	5	0	1	2	0	0	5	0	0	0	0	0	0
Plant A	Flammable Fatality Area CoF	4	0	0	0	0	4	0	0	0	0	0	4	0	1	7	0	0	0
Plant A	Flammable Fatality Area CoF	3	0	0	5	0	3	0	0	0	0	0	3	0	0	1	0	0	0
Plant A	Flammable Fatality Area CoF	2	0	1	5	0	2	0	0	0	0	0	2	0	0	2	0	0	0
Plant A	Flammable Fatality Area CoF	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Plant A	PLL CoF	5	0	0	0	0	5	0	1	2	0	0	5	0	0	0	0	0	0
Plant A	PLL CoF	4	0	0	0	0	4	0	0	0	0	0	4	0	1	7	0	0	0
Plant A	PLL CoF	3	0	0	5	0	3	0	0	0	0	0	3	0	0	1	0	0	0
Plant A	PLL CoF	2	0	1	5	0	2	0	0	0	0	0	2	0	0	2	0	0	0
Plant A	PLL CoF	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Plant A	Safety Area CoF	5	0	0	0	0	5	0	1	2	0	0	5	0	0	0	0	0	0
Plant A	Safety Area CoF	4	0	0	0	0	4	0	0	0	0	0	4	0	1	7	0	0	0
Plant A	Safety Area CoF	3	0	0	5	0	3	0	0	0	0	0	3	0	0	1	0	0	0
Plant A	Safety Area CoF	2	0	1	5	0	2	0	0	0	0	0	2	0	0	2	0	0	0
Plant A	Safety Area CoF	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0

• Dashboard Data Lists

• Export the data list into Excel spreadsheet

• A dashboard data list is the result of a custom query SQL

• For each column in the data list a color code column can be configured

Dashboard Data Configuration

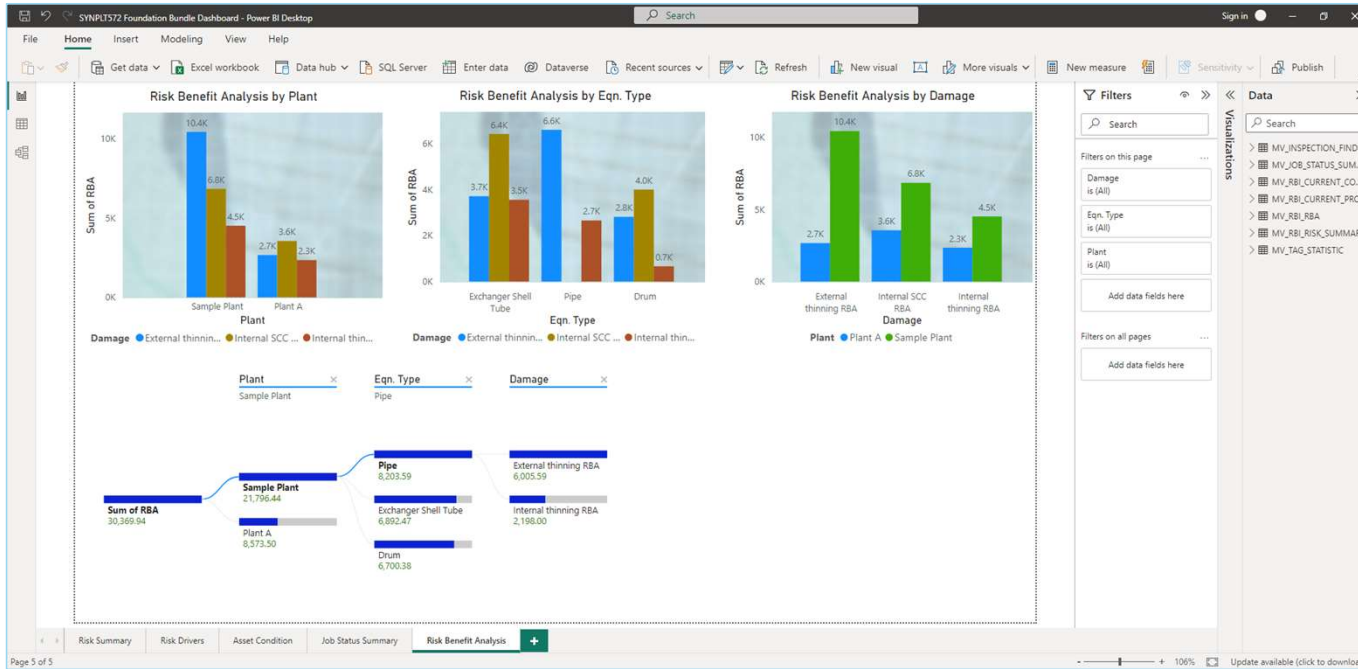
The screenshot displays the 'Dashboard Data' configuration page in the AIRMS Admin module. The interface includes a navigation menu at the top with options like 'Security', 'Configuration', and 'Dashboards'. The main content area is split into three panels:

- Configurations:** A list of dashboard widgets including 'Reliability Centered Maintenance', 'RCM Risk Summary', 'Equipment Reliability', 'Risk Based Assessment', 'Pipeline RBI overview', 'RBI Onshore - Part Inspection recommendations', 'RBI Risk Summary - Equipment', 'RBI Category Summary - Current Consequence', 'EEMUA Calculation Risk Summary', 'RBI RBA', 'API581 RBI Plant Risk Matrix', 'Planning', 'Inspection plan by status', 'Completed inspections overview', 'Inspection tasks overview', 'Job Status Summary with Year and Eqn. Type', 'Maintenance Job Status Summary', 'Asset Management', 'Break down on created and expired inspection pl', 'Equipment by type', 'WT alerts', 'Equipment Type', 'UT Wall Thickness', 'Tag Statistic', 'Tag Findings Summary', 'Maintenance Findings Summary', 'Inspection Findings Summary', and 'Anomaly Status'.
- Results:** A large SQL query defining the data source for the dashboard widgets. The query selects various fields from tables like TRM, TRC, CRIC, OPT, and EQPT, filtering by activity status and risk levels.
- Column Properties:** A table for configuring individual data columns. Each row represents a column with settings for visibility, label, color, width, and filter.

Column Name	Visible?	Label	Color Column	Width	Filter
ASSETID	No				
ACTIVITY_ID	No				
ACTIVITY_DESCRIPTION	Yes				
STATUS	Yes				
PIPELINE	Yes				
SECTION	Yes				

- The full list of dashboard widget data lists can be found in the AIRMS Admin module
- Each data list has a source SQL, a list of column properties, and graphical settings to create a dashboard widget
- In the Column Properties list, each data column can be set as visible, a custom label, and if the result value can be filtered

Data Views, Materialized Views, and Power BI Dashboard



- Synergi Plant has a set of database views and materialized views, which can be used for external dashboard, for example, in Power BI
- The database views are for retrieving data in real time, and the materialized views are for retrieving the stored data which can be synchronized periodically with the live data

Synergi Plant Training

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