

Can IIoT transform process safety performance?

Charly Lupart
Vice President Process Automation
Schneider Electric South East Asia



Safety Case
Symposium 2018
Singapore

Life Is On

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The image features a view of Earth from space, showing the dark side of the planet with city lights and the bright side with a sun on the horizon. A complex network of glowing green lines and nodes is overlaid on the globe, representing a global network or data flow. The sun on the right creates a lens flare effect.

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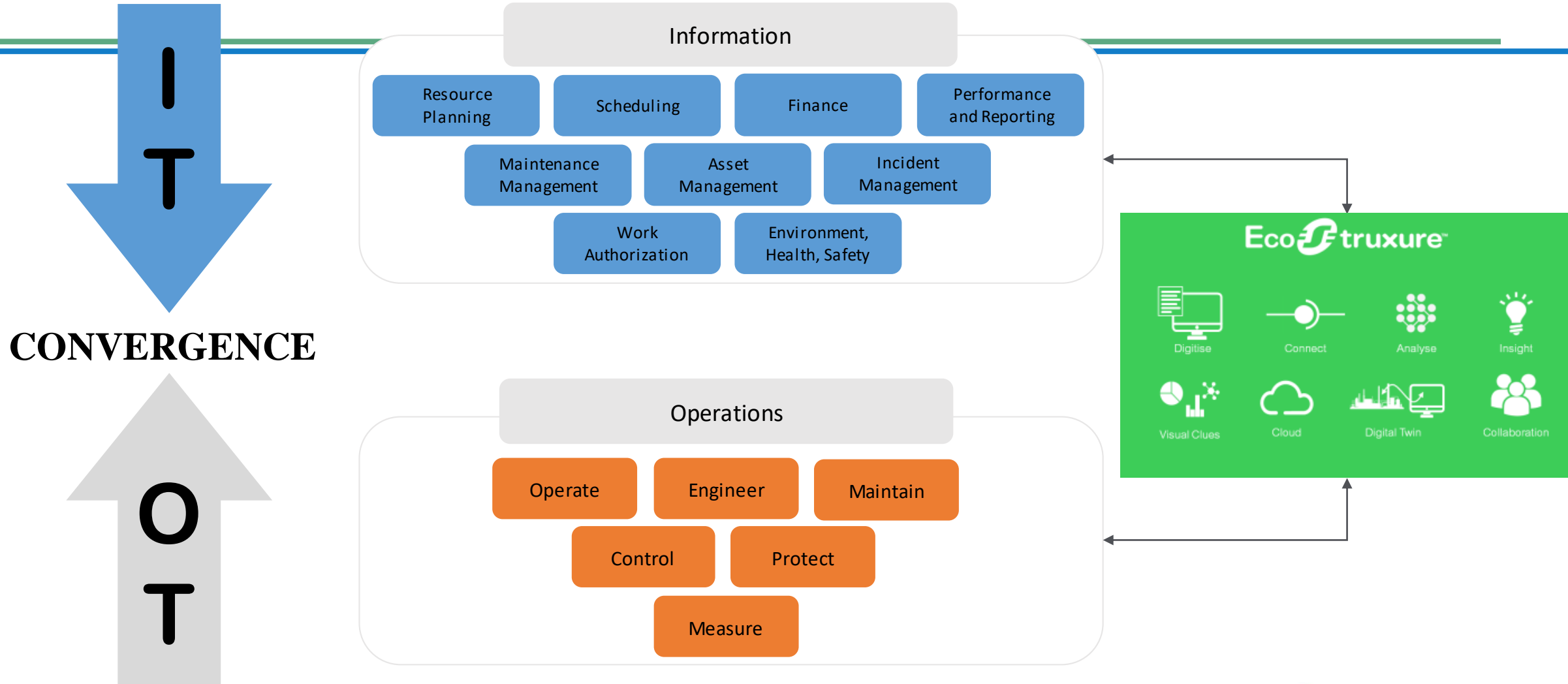


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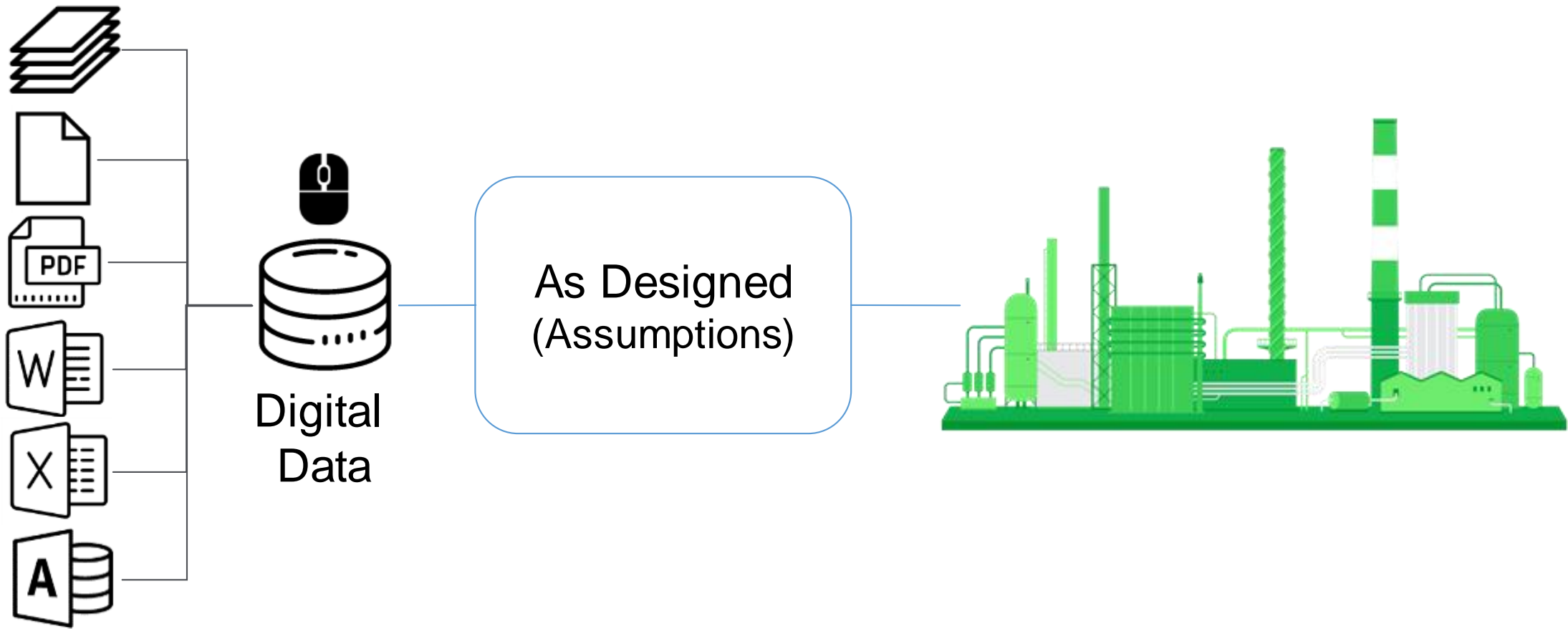
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Converging worlds



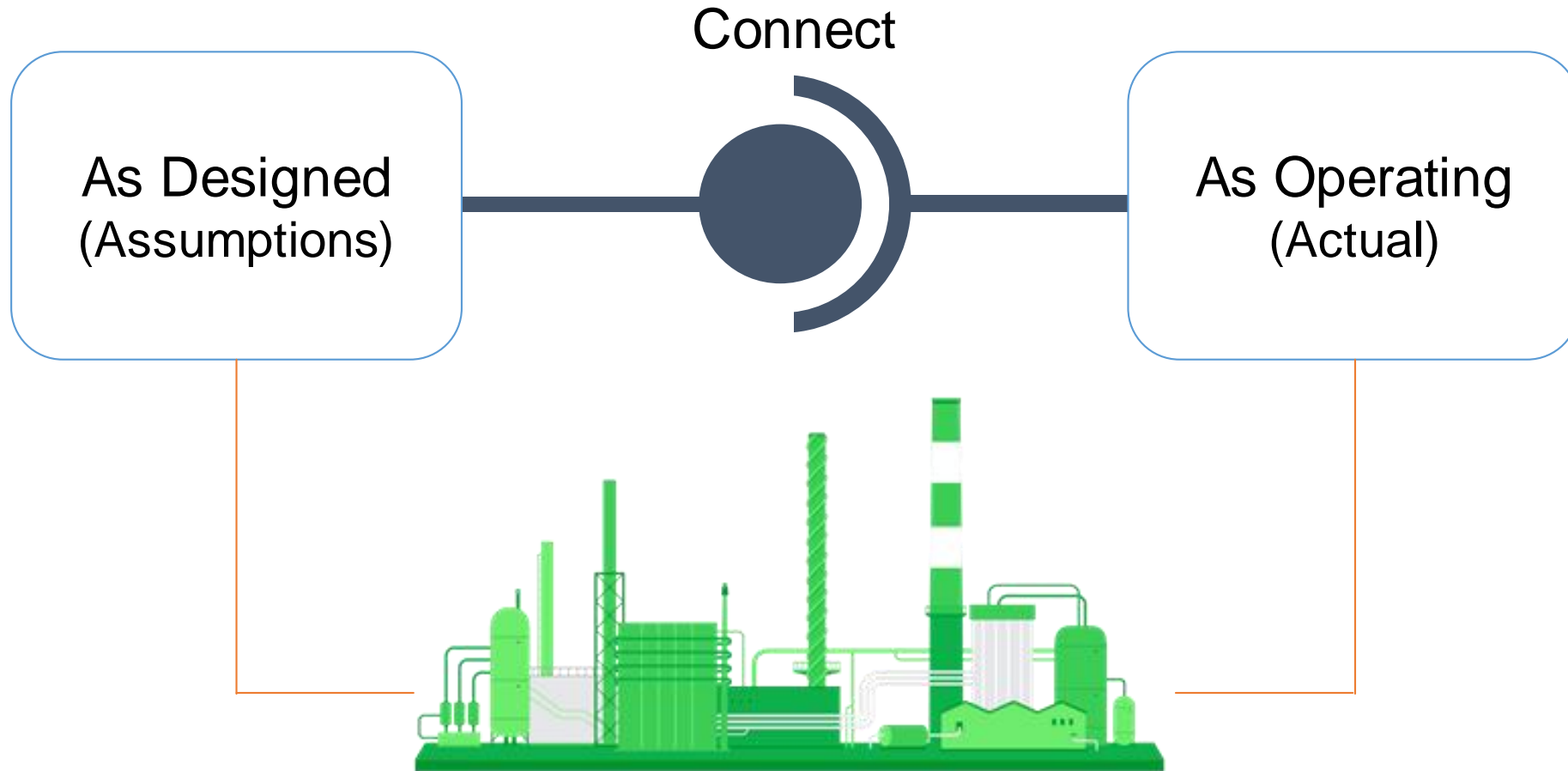
Digitize

Harness digitization



Connect

Leverage existing information, minimise data collection, complement existing reports



Digital Twin

Physical World



Cyber Physical World



Digital Twin



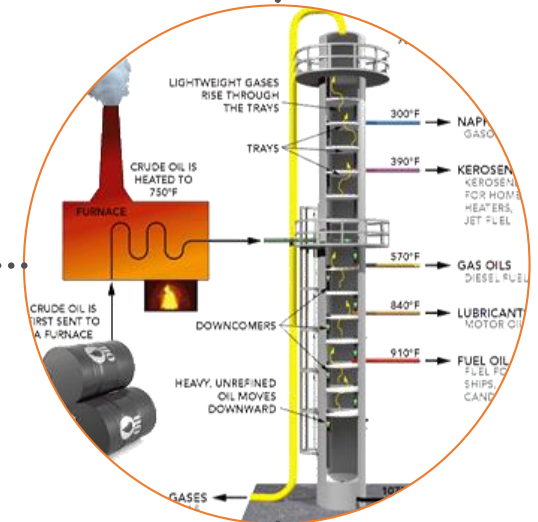
Define and Assess



Design and Implement



Operate and Maintain



Time slice the issues

Past

Present

Future

This screenshot shows a detailed report for a specific incident. The report includes fields for Name (23-T1-H1340C), Area (Hydrogen), Description (SIF 23-T1-32-194AL-8073), Demand Rate (0.000e+00), Demand Trigger (30271123_01 = 1), and Trigger Description. It also features a table for 'Demand & Process Safety Near Misses' with columns for Category, Date, Time, Equipment, Unit, and Details.

This screenshot displays a table titled 'Demands & Process Safety Near Misses report'. The table has columns for Category, Date, Time, Equipment, Unit, and Details. It lists several incidents, such as 'Reactor stopped because of IPL', 'Steam Machine Customer Boiler was overrunning', and 'Hydro Desulfurizer # Pump close to bypass'. The table also includes a 'Close' button for each entry.

Post trip / process safety near miss analysis

What happened?
Why did it happen?

How close did we come to an unexpected event?

This screenshot shows a 'Sites overview' section with a list of sites (Houston, Baton Rouge, Cates) and a 'Hazardous events with deviations' table. The table lists events with columns for Risk, Unit, State, IE consequence, IE cause, and IPLs impacted. It also includes a 'Severity of Hazardous Events' heatmap and a 'Supporting information' section with comments.

Dynamic risk visualization

What is happening?
What do I have to do?
How long have I got?

This screenshot displays an 'Advanced warning' table with columns for Risk, Type, Equipment, Consequence, and Cause. It lists several warnings, such as 'Possible implosion of Boiler', 'Possible implosion of Boiler', and 'Increase in risk, potential thermal shock and tube failure - Minor'. The table also includes a 'Close' button for each entry.

Advanced warning

Before I do something, what could happen?
What happens if I don't do something?
Have we seen this threat emerging before?

This screenshot displays an 'Operational risk assessment' table with columns for Risk evaluation, Identification of Mitigation Measures, Review, endorsement and Approval(s), and Review and Communication. It lists several assessments, such as 'Temperature transmitter' and 'Possible implosion of Boiler 23B001'. The table also includes a 'Risk Matrix' and a 'Supporting information' section.

Operational risk assessments

IIOT an opportunity

“Make better decisions based on actionable insight and years of experience placed at your disposal”

Steve Elliot

EcoStruxure™



Digitise



Connect



Analyse



Insight



Visual Clues



Cloud



Digital Twin



Collaboration

THANK You!

Please to offer you the associated white paper.



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