



Find out more about EcoStruxure for Energies and Chemicals **se.com**

Schneider Electric

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EcoStruxureTM for Energies and Chemicals

Sustainability, efficiency, resilience along the value Chain





The Oil, Gas & **Petrochemicals industries** mega trends reinforced by the latest crisis...

What is on top of your mind

Improve ROI

(capex, time to 1st Oil, opex, uptime & yield) Social and increasingly financial license to operate

Sustainability (in operations)

& energy transition (new business)





8% of scope 1 GHE emissions come from oil & gas industry.2

Younger generation more environment conscious

Digital transformation

Key to transformation

Evolving workforce



75% of the available workforce will be millennials by 2025.4

72% of oil and gas companies plan to invest more in digital transformation.3

¹Deloitte, "Tracking the Trends 2022"

2https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-future-is-now-how-oil-and-gas-companies-can-

3https://www.accenture.com/ acnmedia/PDF-117/Accenture-Trends-Digital-Investment-Oil-Gas-Infographic.pdf



EcoStruxure delivers on four key integrations

Eco & truxure

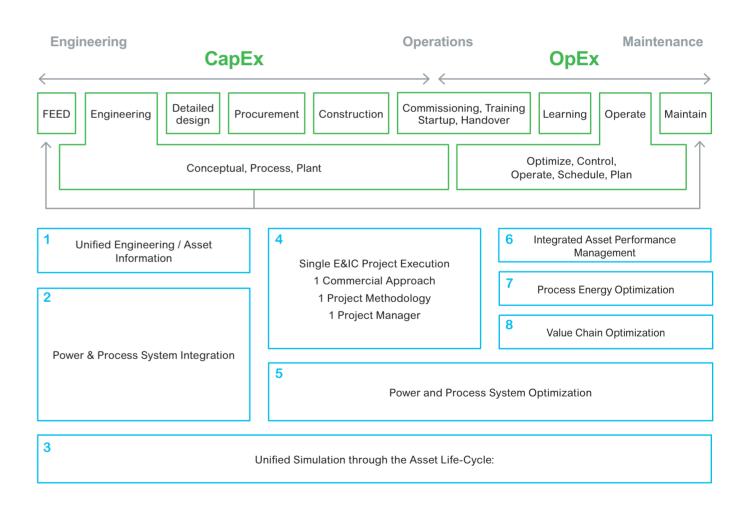
Innovation At Every Level for Energies and Chemicals

- 1 Energy + Automation
- 2 End Point Cloud
- 3 Design & Build Operate & Maintain
- From site by site Integrated management

Eight Integrated Power and Process Strategies, from Start to End of Life

To make the digital integration of power and process systems possible, Schneider Electric teamed up with strategic partner AVEVA to deliver EcoStruxure™ Power and Process. By combining our extensive expertise in energy management and automation with AVEVA's industry-leading industrial software expertise, we are revolutionizing power and process management for our customers.

Taking a TOTEX approach for industrial facilities to deliver a lifetime of value with Eight Integrated Power and Process Strategies, from strat to end of life.



Electric makes energy green.
Digital builds a smart future.
Automation makes the process efficient.

20%

Energy + Automation

EI&C CapEx reduction

10%

Process Energy usage improvement

15%

Downtime reduction

3 pts

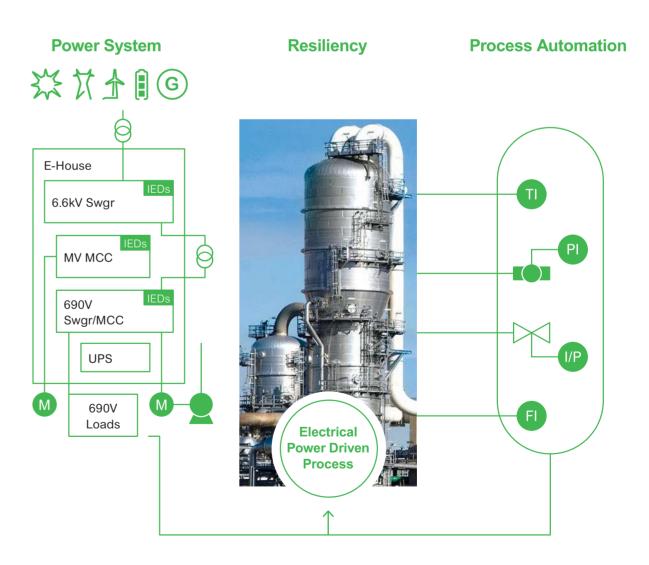
Profitability improvement

Power and process integration

Working with our customers, we have brought together the power of the Schneider Electric and AVEVA portfolios into EcoStruxure Power and Process.

This approach presents an opportunity to rethink the synergies of converged operations from the enterprise to site accelerated by digital.

Unifying traditionally separate operating silos and driving synergies that were previously untapped delivers major benefits from design to build to operate and maintain.



Connecting field data to enterprise systems and a cloud-based integrated operations center

EcoStruxure[™] is IoT-enabled, open, and interoperable architecture that creates collaborative environments that connect field-enterprise





Onshore Production

Offshore Production



Rafinery and Petrochemicals

Pipelines and **Terminals**

New energies



Connected

Products





Asset Performance

and Industrial PC

MCSet



Advisor

Hybrid DCS

Field Devices



Safety Advisor





Profit Advisor



Maintenance Advisor





EcoStruxure

Profit Advisor





EcoStruxure Asset Advisor

Green Hydrogen





CCUS

Renewables



EV charging infrastructure

Planning & Operations Control and Information







TeSys

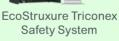




Prefabricated

IT, Power, Cooling









Okken & Blokset



EcoStruxure

SCADA Systems Power Monitoring Expert

Okken & Blokset

Magelis

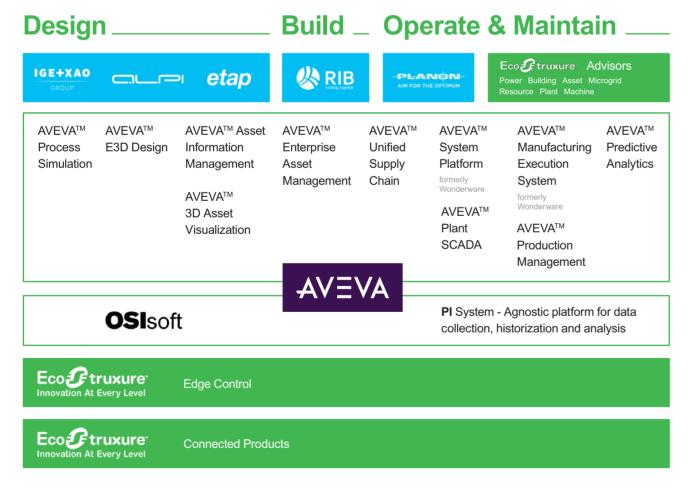
Modicon

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^{*} The Schneider Electric industrial software business and AVEVA have merged to trade as AVEVA Group plc, a UK listed company. The Schneider Electric and Life is On trademarks are owned by Schneider Electric and are being licensed to AVEVA by Schneider Electric.

An integrated software approach that leverages the electrical and process digital twin

We have today a unique portfolio of tools across the lifecycle to enable true efficiency gains from inception to design to operations to maintenance.



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One Model for Life

A model is an asset for the company and delivers value throughout the project lifecycle. A model once developed can be used, re-used, upgraded and adapted as necessary depending upon the needs of the client without changing software or underlying platform

Enter at any stage

Value from this approach can be derived at every stage and client can enter at any stage to realize value

Life time of applications

Applies from engineering design through full plant life cycle including operator training to RTO. Achieve faster on-spec design production by eliminating design errors and overdesign

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New energy transition business needs new integrated approach



Financial Context





Energy Management



Real-time Operational Displays



Context

Interface to specific applications (Operating window, HSE etc.)



Process Engineering Integration



P&ID Data (1D, 2D, 3D)



APM: Predictive Analytics

Schneider Electric is a sustainability role-model

Carbon Pledge 1.5°C climate objective

2025

Carbon neutral operations (with CO2 offsets)

2030

Supplier decarbonization Net-zero CO2 operations (no CO2 offsets) Innovation for lower induced CO₂

2040

End-to-end carbon neutral value chain (carbon neutral products, with CO2 offsets)

2050

Net-zero CO₂ supply chain (no CO₂ offsets)









Best-in-Class Companies

follow a 3-steps approach from strategy setting to execution to deliver results in line with climate ambition

3-steps approach covering 3 tiers of decarbonization measures

Low hanging fruits relying on energy efficiency, digitization

typical CO_a benefits up to 25%

Paradigm change in your design eg Electrification +PPA, unmanning tvpical

CO, benefits 25% to 100%

Major projects eg Green Ha, CCUS, deploy your own renewable farm+ storage

achieve your CO. reduction target

