OCTOBER 25, 2023

# AVEVA - ETAP integration

## A great step towards Power & Process Engineering Efficiency

Jacques Philippe

# Agenda

1. Schneider Electric
2. Overview
3. Zoom in Context & Challenges
4. Zoom in Solutions: ETAP + Use-case (video)
5. Benefits & Conclusion
6. Q&A

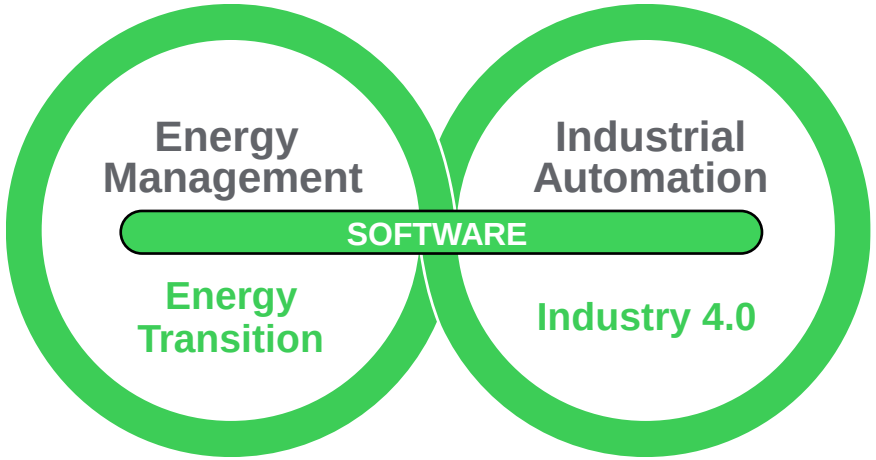
# Schneider Electric

**€34bn**

Group FY 2022 revenues

**135k+**

Employees in
over 100 countries




**Two Businesses**

Electrification **SUSTAINABILITY** + Digitization **EFFICIENCY**

**BALANCED**

**Revenues** (by Group)


**End Markets**


**Revenues** (by Geography)


AVEVA

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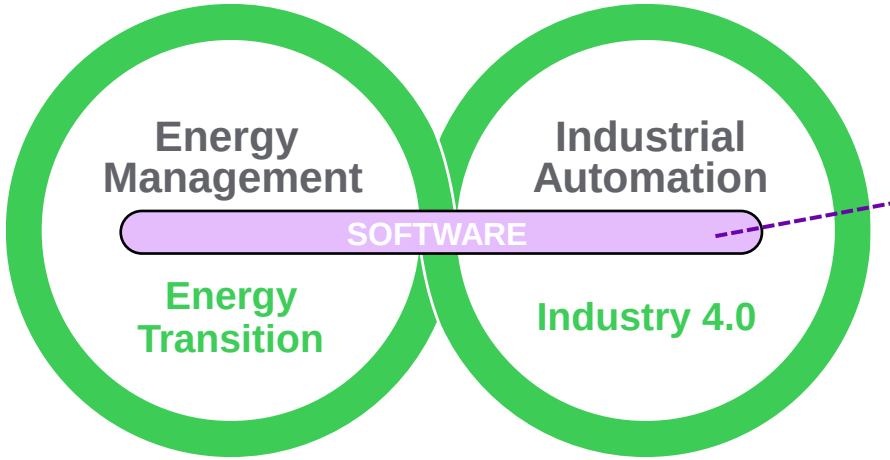


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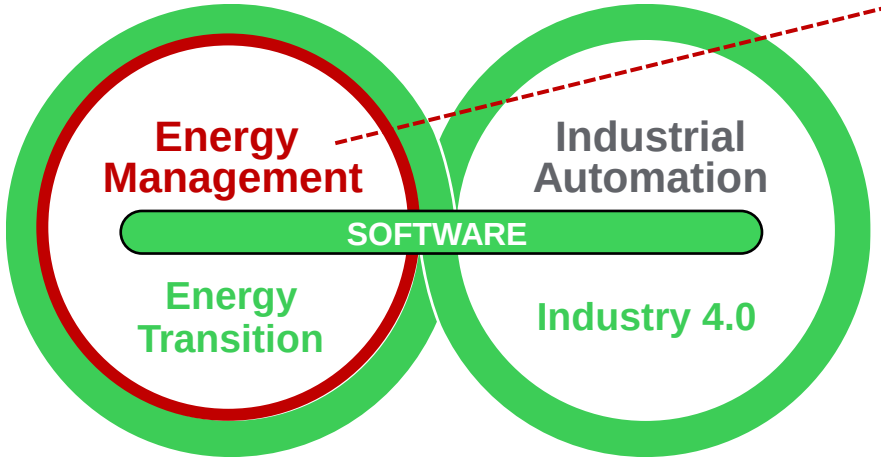


**Two Businesses**

**Jacques PHILIPPE**
Head of Global Expertise and Engineering for Customer Projects Business

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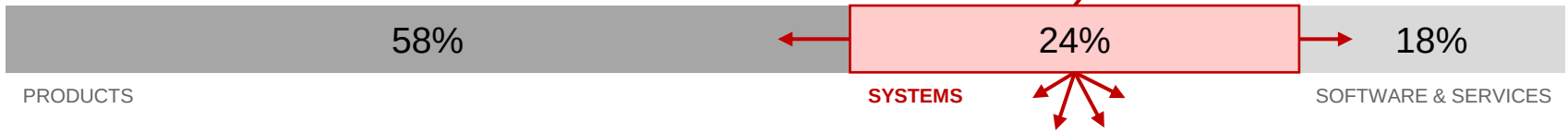



**End Markets**


**Revenues** (by Geography)


AVEVA

ELECTRICAL & MECHANICAL DESIGN

# Enhance our Project Engineering Quality, Efficiency, Reactivity

## Challenge

- Lack of robust technical data management especially during large and complex deals: many disciplines, many teams, many locations involved
- No Electrical Systems Advanced Engineering capabilities in AVEVA™ Electrical and Instrumentation
- Lack of internal Efficiency to react to changes: technical feasibility, time, cost impacts

## Solution

- Helped develop then tested the integration of ETAP® Design, AVEVA™ Engineering (E&I), AVEVA™ E3D Design solutions

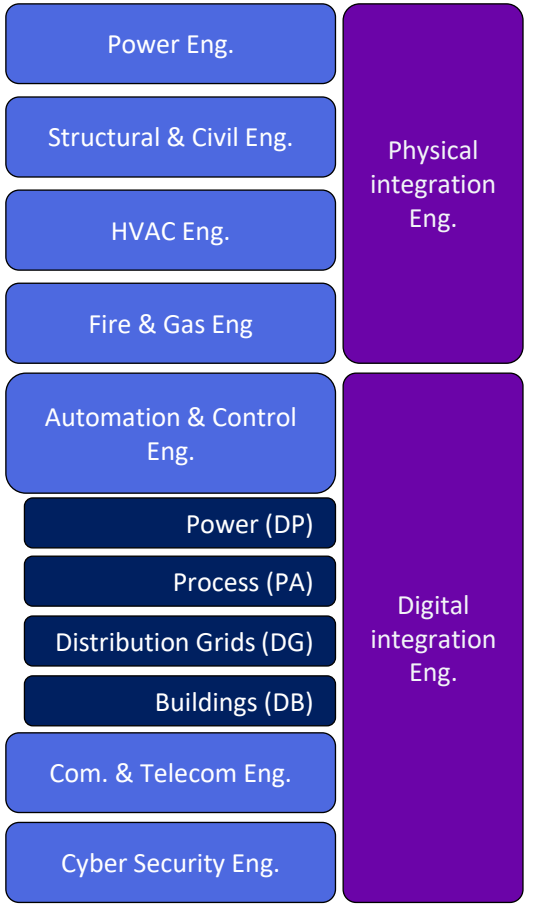
## Results

- **Improved our data management & administration process**
- **Tested smooth and configurable data exchange capabilities between ETAP® Design and AVEVA™ Engineering**
- **Increased our effectiveness (time and accuracy) to react to change requests**

# Context and Challenges

## Multi-System integration Engineering

- Electrical Design Engineer
- Mechanical Design Engineer
- Electrical Management & Control System Engineer
- Power System Engineer



# Context and Challenges

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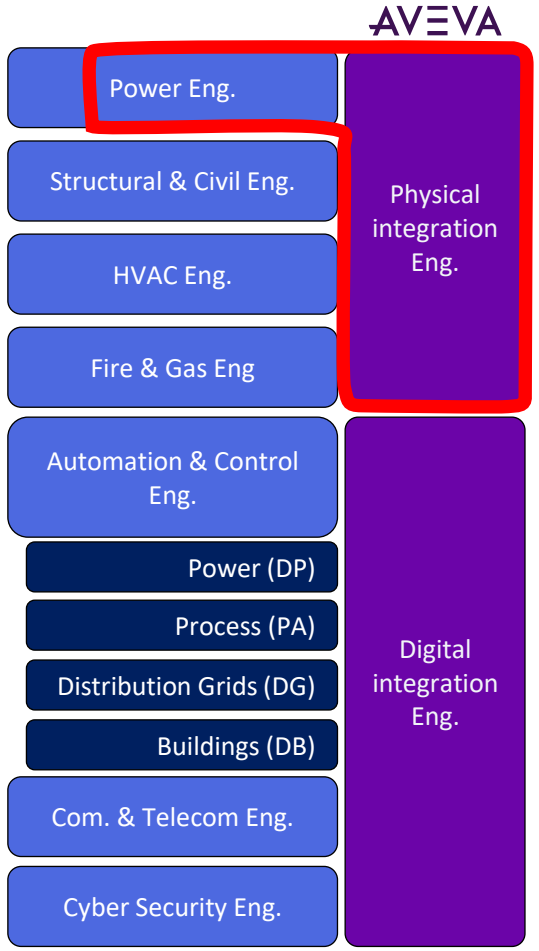
**Data & Change Management**
Unicity, Access, Ownership, Rework



# Context and Challenges

## Multi-System integration Engineering

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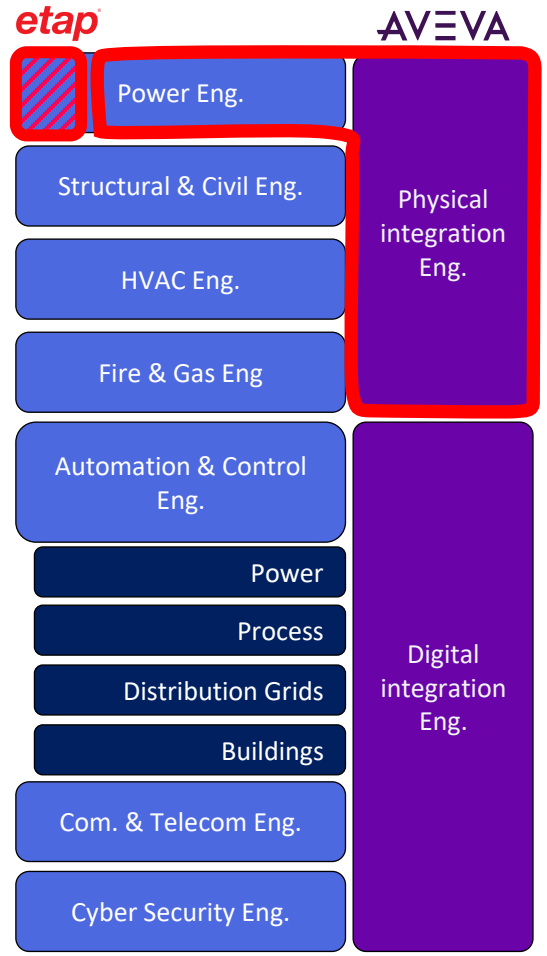
calculation results **can impact the** Electrical & Physical integration **Design**

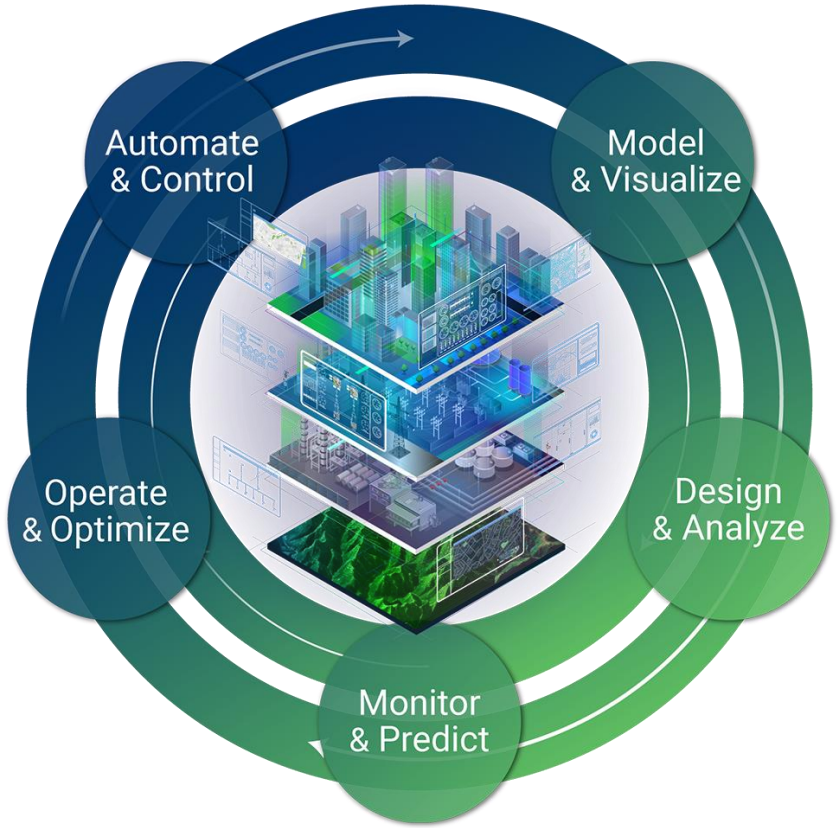


# Solution: AVEVA - ETAP integration

## ETAP Solutions

etap®

Market-leading
**Electrical Systems**
Model-driven Software Solutions, from Design & Engineering to Operations and Maintenance

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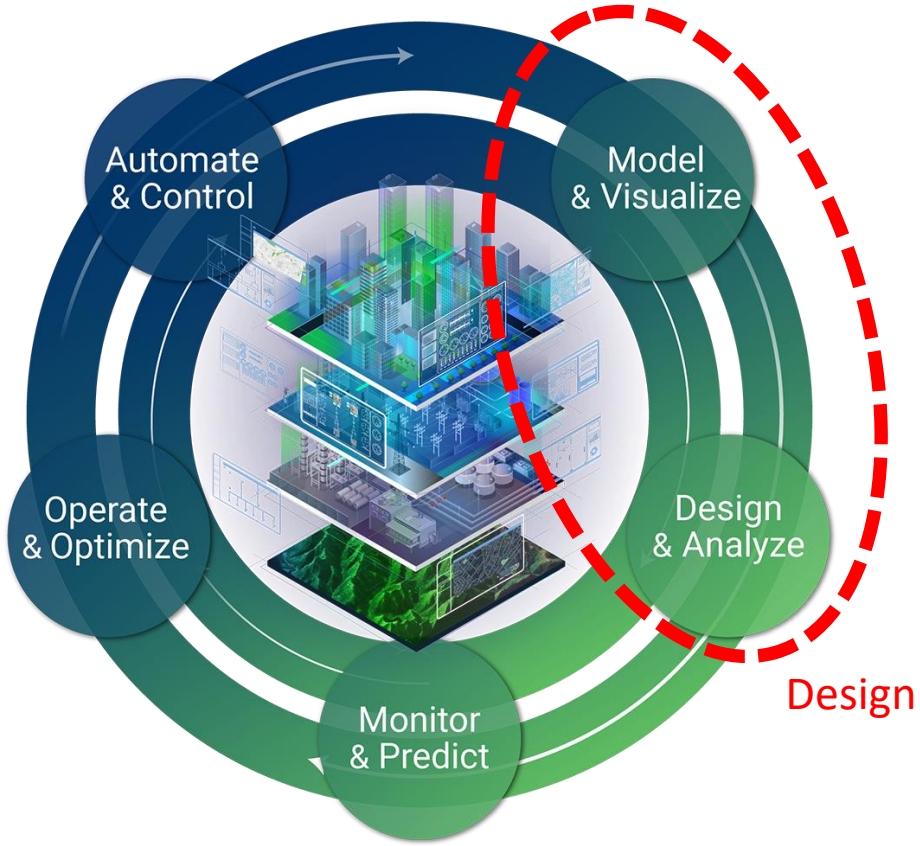
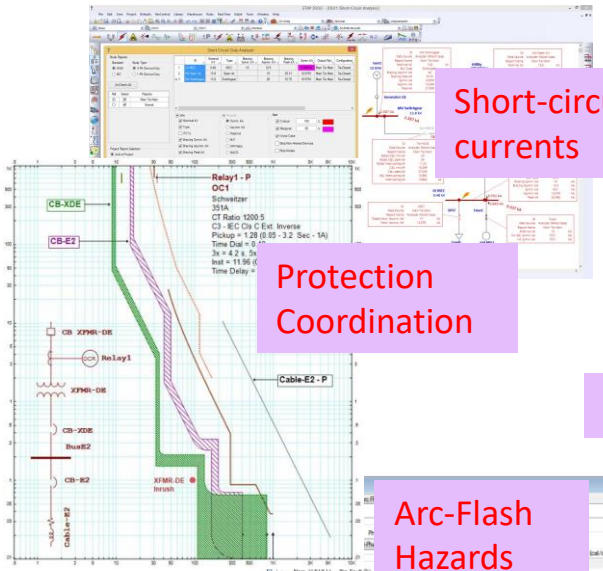



# Solution: AVEVA - ETAP integration

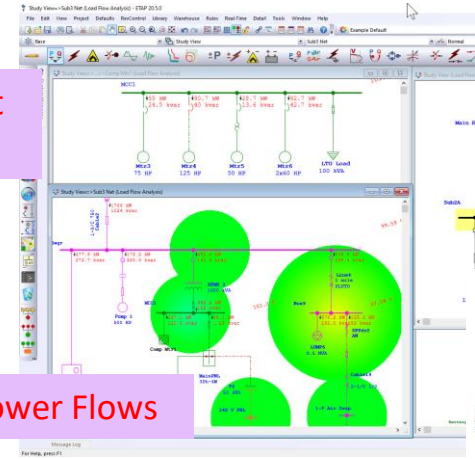
## ETAP Design: Data & Outcomes



Short-circuit currents



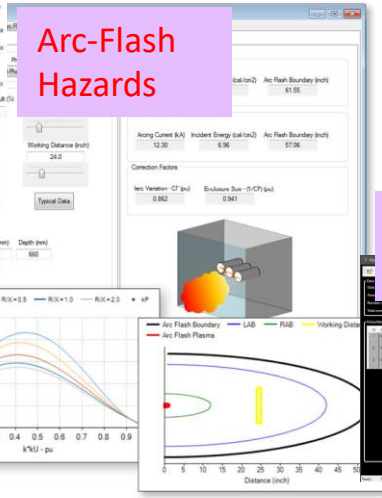
Protection Coordination



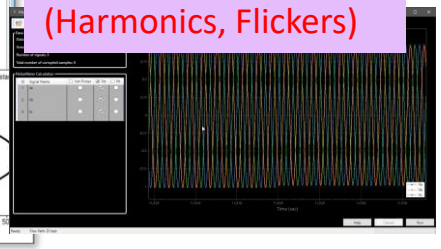
Power Flows



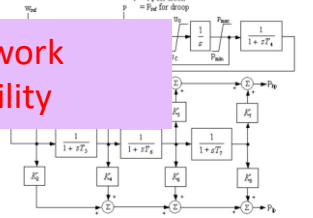
Motor starting



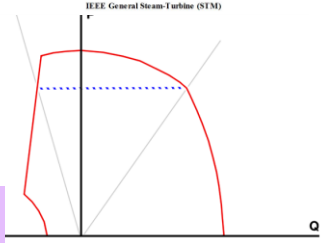
Arc-Flash Hazards



Power Quality (Harmonics, Flickers)



Network stability



Grid Code compliance (PQ diagrams, LVRT)

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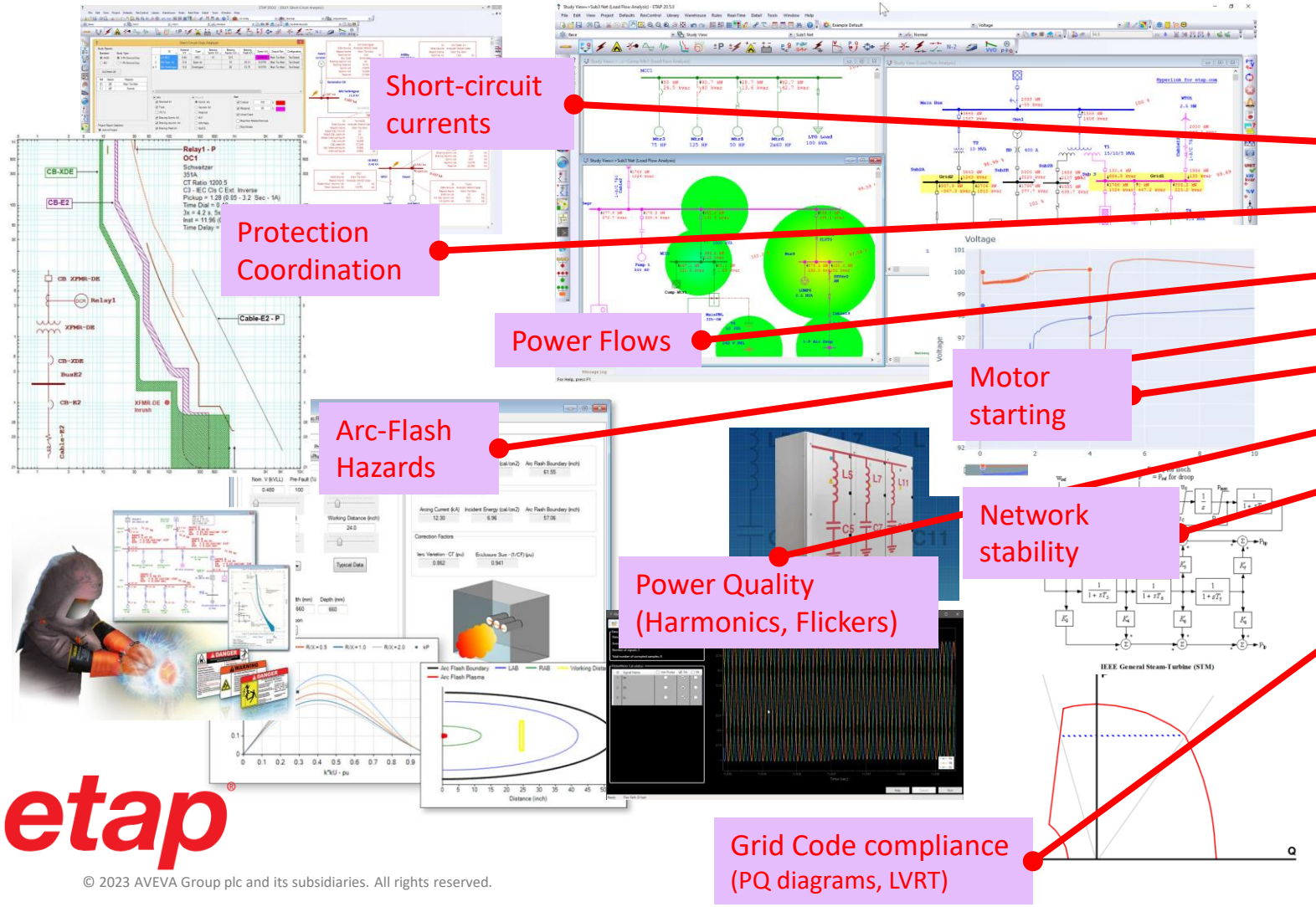
AVEVA

# Solution: AVEVA - ETAP integration

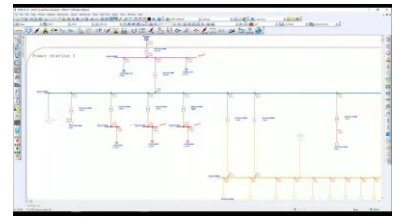
## ETAP Design: Data & Outcomes




Power System Calculations (iterative process) **<u>can impact the design</u> of Electrical Assets**: sizing, ratings, characteristics, etc.

# Solution: AVEVA - ETAP integration

## Implementation – Use-case demo



from early design stages (FEED) to the end of project delivery

- **Step 1** SLD is being modeled in ETAP, then Power System Calculations are done (can be iterative) to reach the expected performance. When it looks sound and safe, an “AVEVA Engineering-compatible-data-export” file is generated

- **Step 2**

- **Step 3**

- **Step 4**

- **Step 5**

# Solution: AVEVA - ETAP integration

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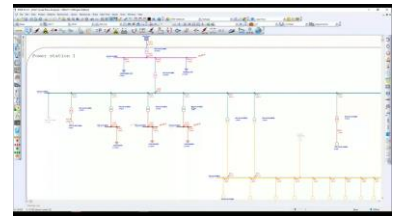

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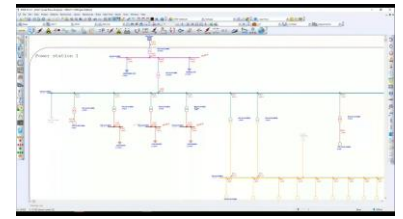

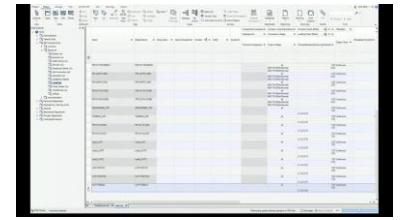

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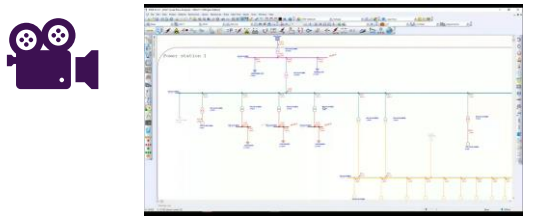

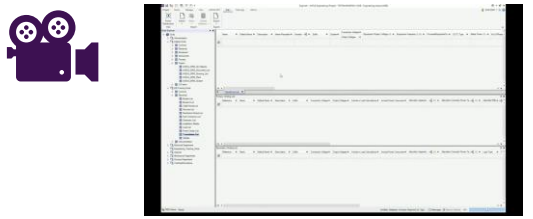

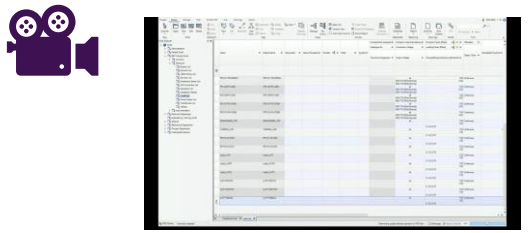

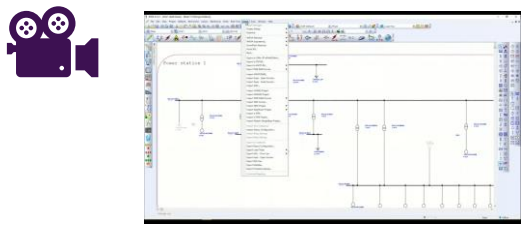

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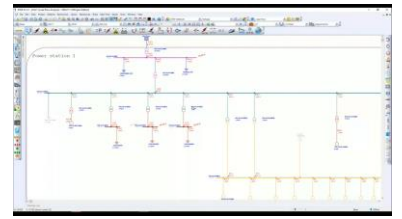
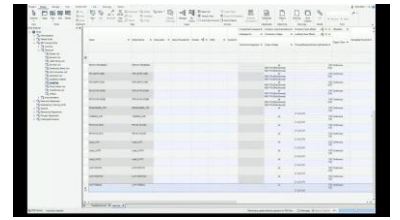
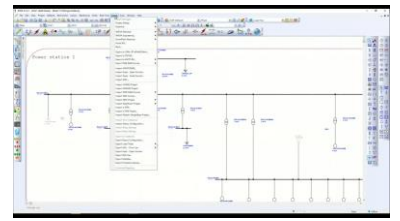
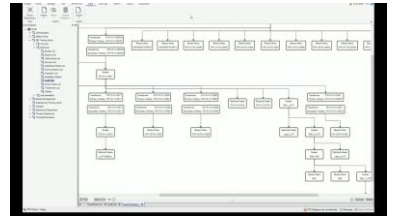
- **Step 5** Modification of equipment may be required: generation of a new data file, transferred back to AVEVA for further impact analysis

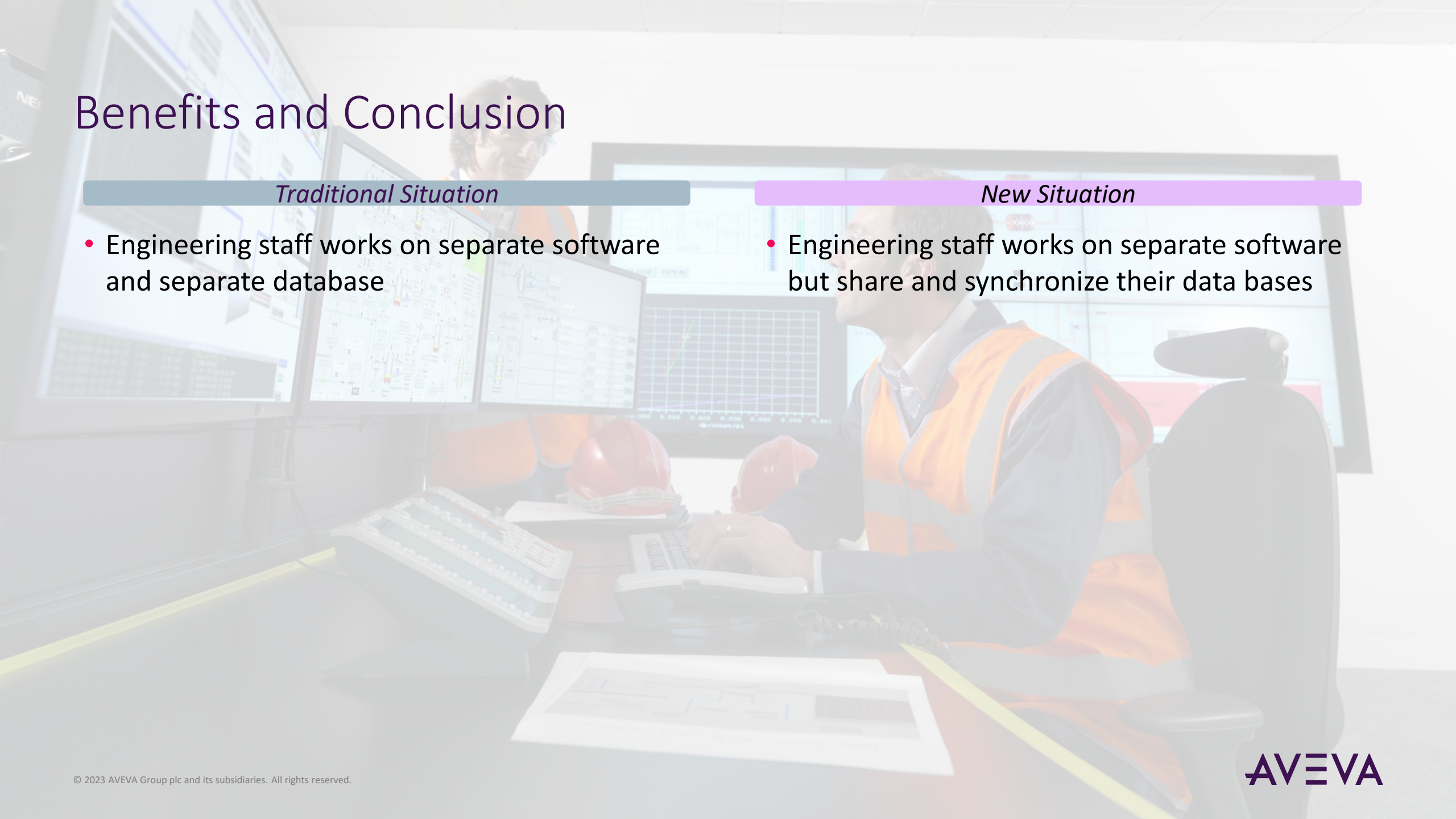








# Benefits and Conclusion



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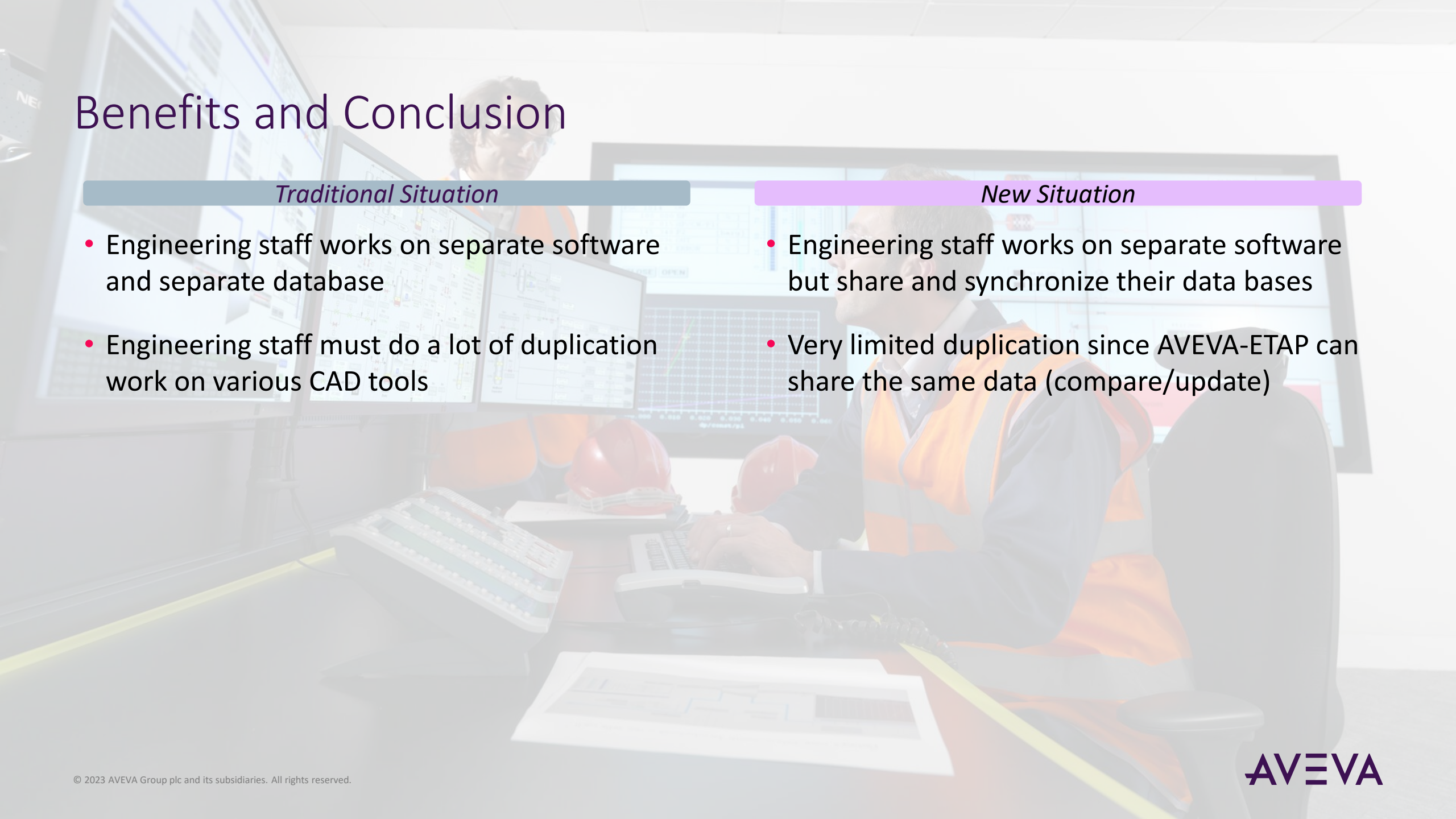
*New Situation*

- Engineering staff works on separate software but share and synchronize their data bases

# Benefits and Conclusion



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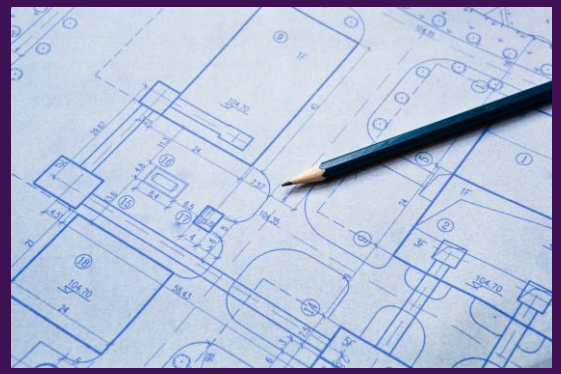
| • No central management of data, which increases the risk of mistakes, data integrity, lack or desync of information | • Risk of mistakes or wrong data usage is significantly reduced, and cross-team collaboration increased |
| • Heaviness to react in front of change requests in a qualitative and quantitative manner | • More agility and efficiency to react to change requests, both Electrical & Mechanical impacts can be quickly and better evaluated |

# Jacques Philippe

## Head of Global Expertise and Engineering
for Customer Projects Business


- Schneider Electric
- jacques.philippe@se.com



“**Engineering** is moving
from being document-centric
to become **data-centric**: more qualitative,
more efficient and more collaborative”

Yannick NICOLAS, Engineering Manager at Schneider Electric



Schneider Electric etap AVEVA

# Questions?

Please wait for the microphone.

State your name and company.

# Please remember to…

Navigate to this session in the mobile app to complete the survey.

# Thank you!

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Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

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