SIEMENS
Ingenuity for life

THINK neo.

Welcome to the Future of Process Automation

Unrestricted © Siemens AG 2019

siemens.com/simatic-pcs-neo

The journey begins with SIMATIC PCS 7

SIMATIC PCS 7
State-of-the-art Process Control System, future-proof and fit for digitalization

- More than 20 years experience and understanding of customer needs
- Efficient Engineering with libraries and reuse of flexible controls
- Innovative I/O periphery and controller hardware with PROFINET communication

Unrestricted © Siemens AG 2019

The journey begins with SIMATIC PCS 7

SIMATIC PCS 7 V9.0 opens up new opportunities
with its new hardware platform based on PROFINET standard:

With SIMATIC PCS 7 V9 Siemens has recently introduced such an **innovative hardware** …

… that we can build the most innovative system software on it.
The Process Control Innovation in 2019.

With PCS 7 V9.0 users are very well prepared for a Digital Future.

The Process Control Innovation that saves your Know-How and protects your invest!

Introducing a Process Control Innovation in a market struggling between innovation and continuation with 30+ years of plant lifecycle!

Unrestricted © Siemens AG 2019

Riding the wave of innovation in Process Automation

SIEMENS
Ingenuity for life

SIMATIC PCS 7 Version 8.x
System Software Innovation

2011-2016

SIMATIC PCS 7 Version 9.0
Hardware Innovations

2017

SIMATIC PCS neo
New System Software

Software Evolution: Application Architecture
Control Module Types, Advanced Process Library, …

Saves your know-how!

Hardware Evolution
PROFINET for Process Industry, SIMATIC ET 200SP HA, SIMATIC CFU, …

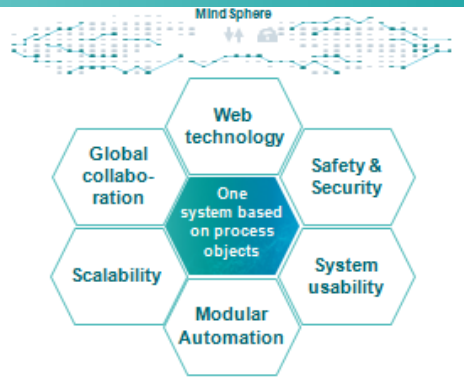
Protects your HW invest!

Unrestricted © Siemens AG 2019

What is “Process Control Innovation”
Simplified Schema

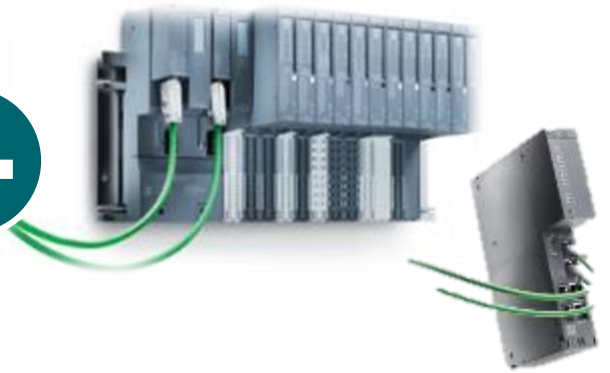
SIEMENS
Ingenuity for life

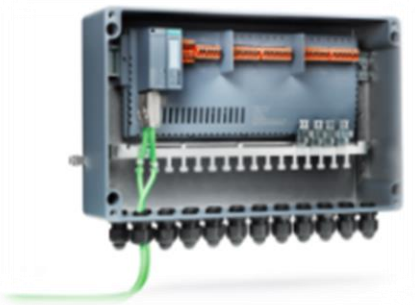
New System Software



… using the same application architecture as SIMATIC PCS 7 …

Hardware SIMATIC PCS 7 V9.0



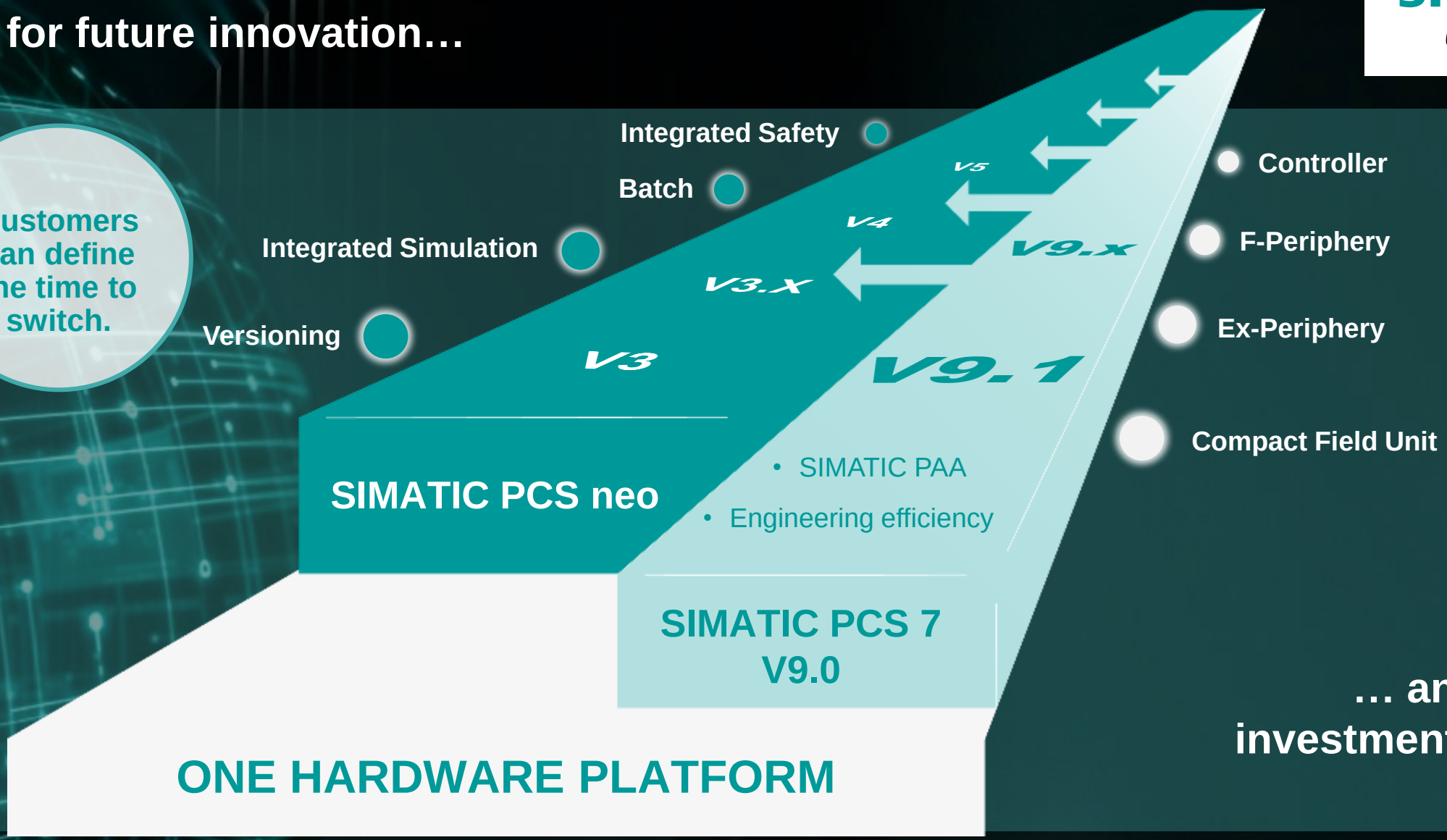


Unrestricted © Siemens AG 2019

The common hardware basis for future innovation…

SIEMENS
Ingenuity for life

Customers can define the time to switch.



… and maximum investment protection!

Unrestricted © Siemens AG 2019

There are four possible situations for your Plant … in the starting phase …

SIEMENS
Ingenuity for life

Greenfield and brownfield projects

Evaluation of User Requirements

Greenfield Projects with requirements covered by Process Control Innovation

Projects with requirements not yet covered by Process Control Innovation

Select SIMATIC PCS 7 V9

Keep „Ready for future switch“ criteria –

Evolution of SIMATIC PCS 7 systems

There is no need to switch now

Plant with SIMATIC PCS7 V9

Operate SIMATIC PCS 7 V9

You can already adapt to „Ready for future switch“ criteria.

Plant with SIMATIC PCS 7 older than V9

Operate SIMATIC PCS 7

If you want to modernize now, go to SIMATIC PCS 7 V9.0

SIMATIC PCS 7 V9

You define when you switch! … with the lowest effort conversion/ evolution*

SIMATIC PCS neo

* Tool based switch from PCS7 to PCS neo (the switch is an upgrade and not a migration)

Unrestricted © Siemens AG 2019

reThink Process Automation

SIEMENS
Ingenuity for life

reThink System Access

Imagine your experts have immediate access to your engineering projects and operation processes from anywhere using only a secure web connection.

reThink Scalability

Whether you supply small units or managing an entire production site – imagine a system that can be seamlessly upgraded and expanded during operation.

reThink Digitalization

Envision a system that enables plant design and engineering, simulation and automation seamlessly.

rethink Usability

Interaction with the system will take place clearly and easily via a highly intuitive user interface – so you can focus on what really matters in your business.

reThink Collaboration

Think to count relying on a system that enables a secure connection of all users and external suppliers at the same time.

reThink Cyber Security

“Security in Depth” because security is top priority. Plant security, Network Security, Web Security, System Integrity, TÜV Certification 62443, IACS Security Standards, Charter of Trust

Unrestricted © Siemens AG 2019

Starting to “reThink” Process Automation
to accelerate the digital transformation

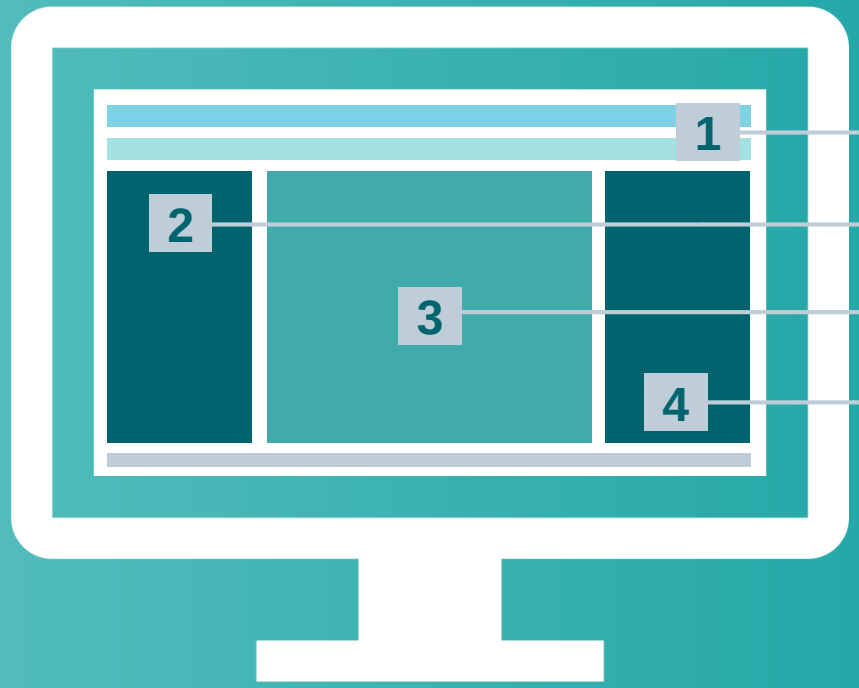
SIEMENS
Ingenuity for life

reThink
Usability

Unrestricted © Siemens AG 2019

reThink Usability
The new Workbench Concept

SIEMENS
Ingenuity for life

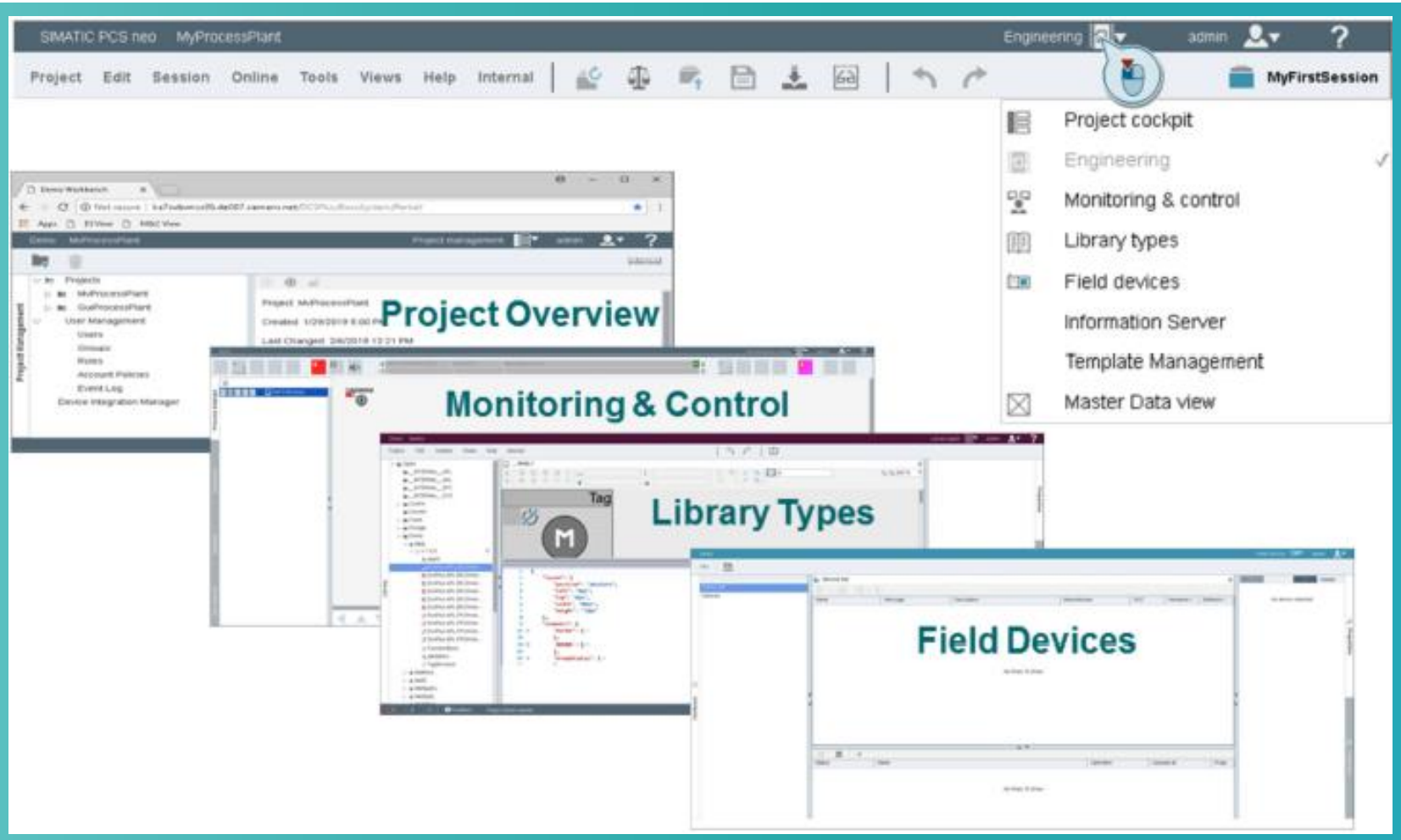


1 Header
2 Navigation
3 Content
4 Sidebar

Unrestricted © Siemens AG 2019

reThink Usability
The new Workbench Concept

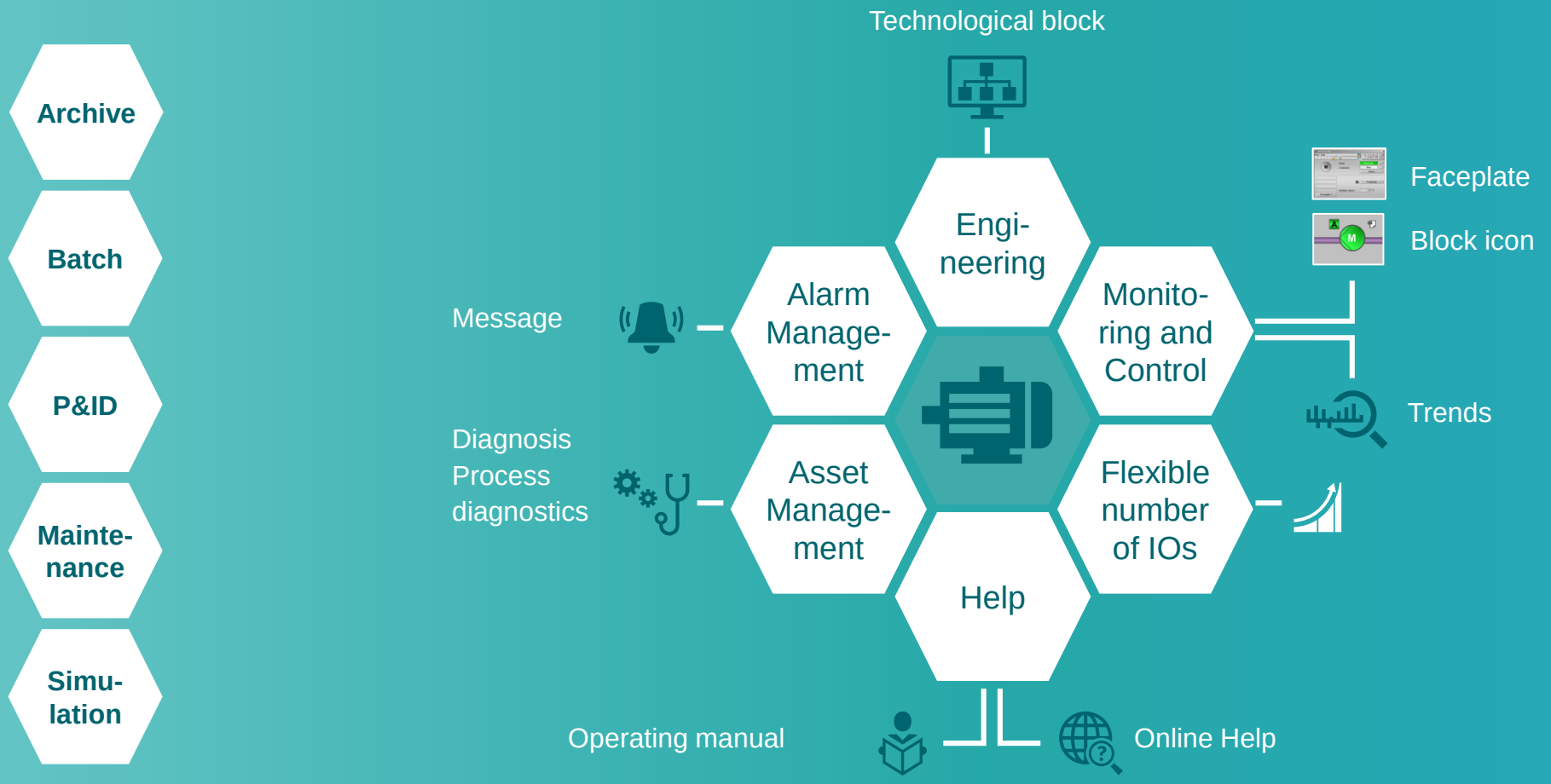
SIEMENS
Ingenuity for life



Unrestricted © Siemens AG 2019

reThink Usability
One object-oriented system platform

SIEMENS
Ingenuity for life



Unrestricted © Siemens AG 2019

Starting to “reThink” Process Automation
to accelerate the digital transformation

SIEMENS
Ingenuity for life

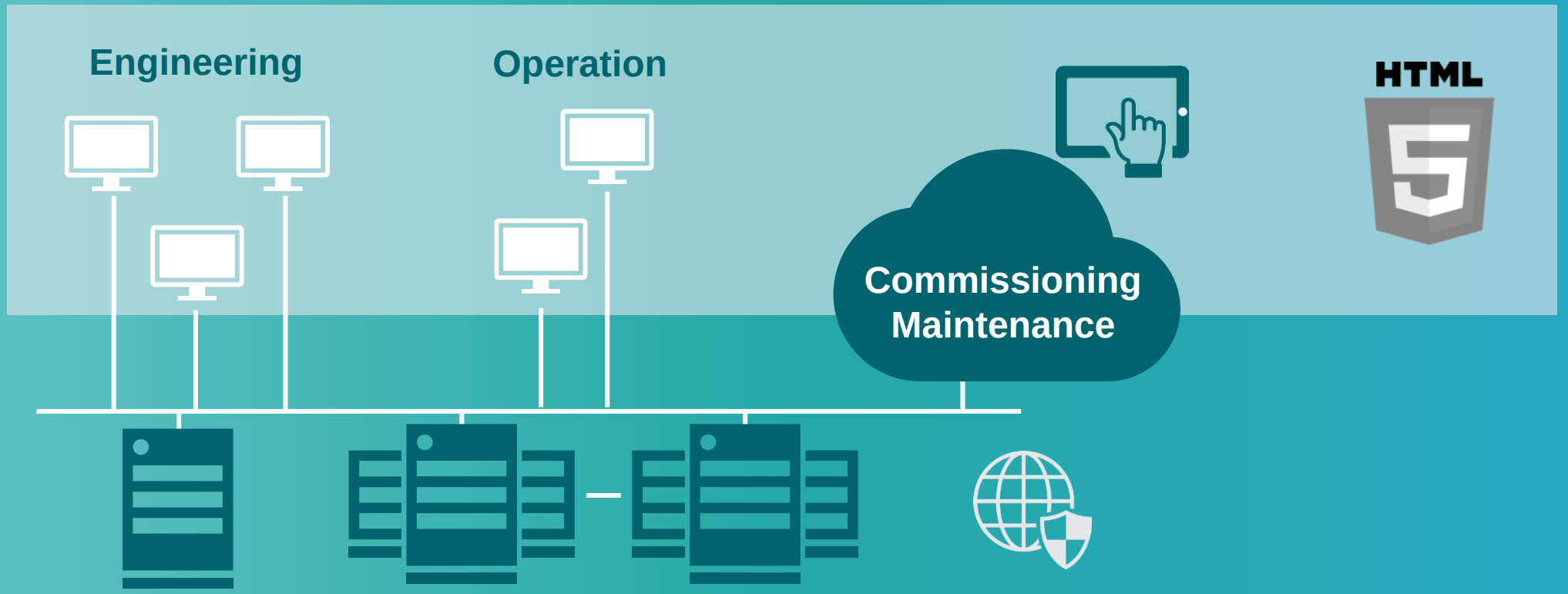
reThink
System Access

Unrestricted © Siemens AG 2019

reThink Digitalization

suitable for any device from desktop to mobile

SIEMENS
Ingenuity for life



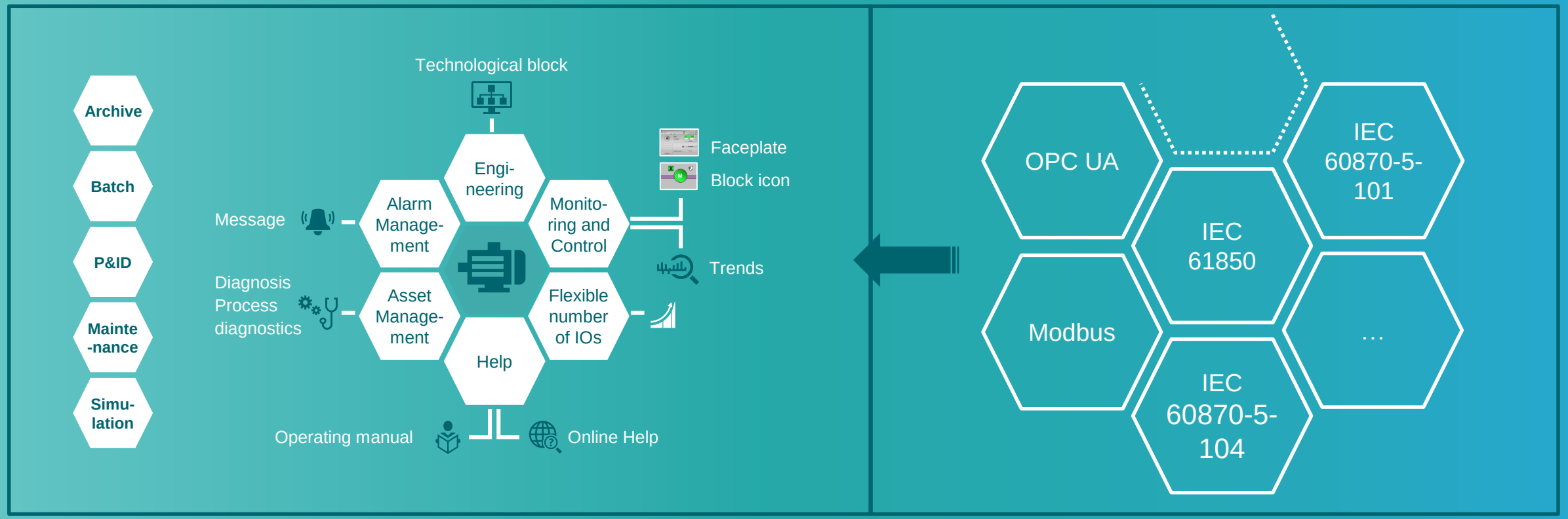
HTML 5 based full web-approach: System runs in Browser without software installation!

Unrestricted © Siemens AG 2019

System Access: Openness

Object-oriented system platform for communication

SIEMENS
Ingenuity for life



Unrestricted © Siemens AG 2019

Starting to “reThink” Process Automation
to accelerate the digital transformation

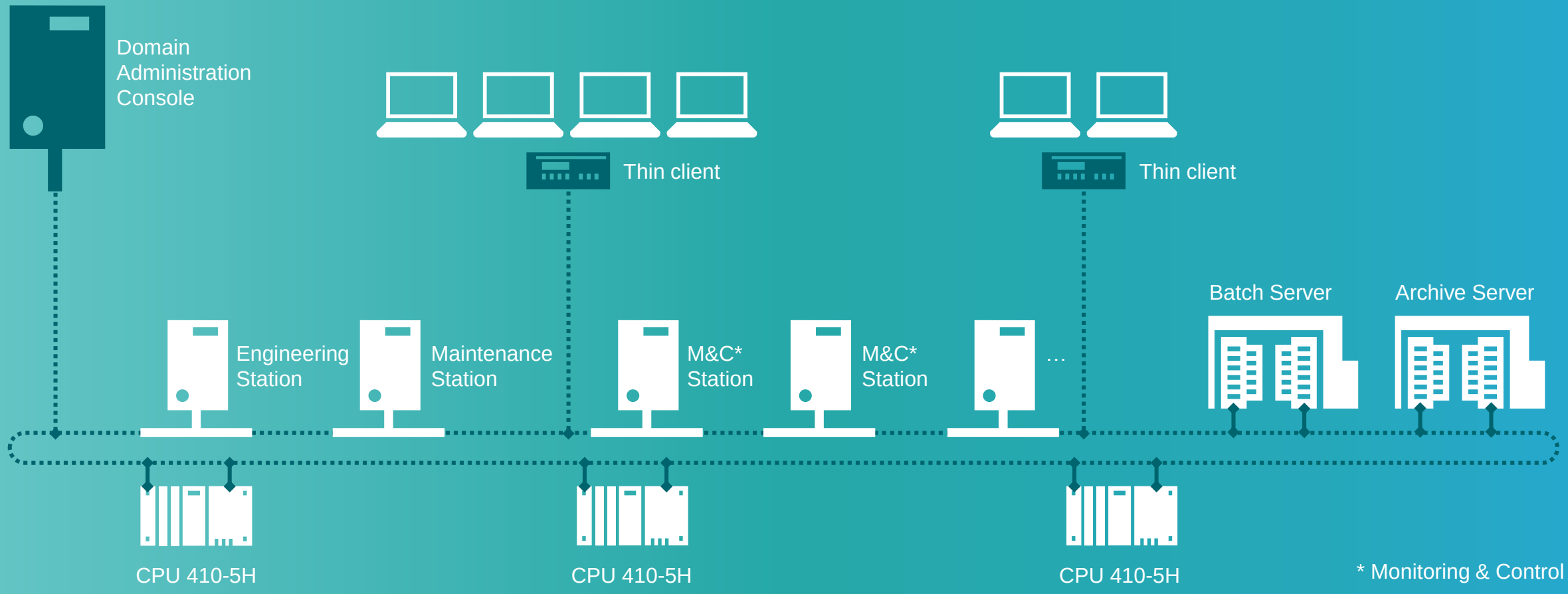
SIEMENS
Ingenuity for life

reThink
Scalability

Unrestricted © Siemens AG 2019

reThink Scalability –
Highly flexible plant architecture – one Example of many possible

SIEMENS
Ingenuity for life

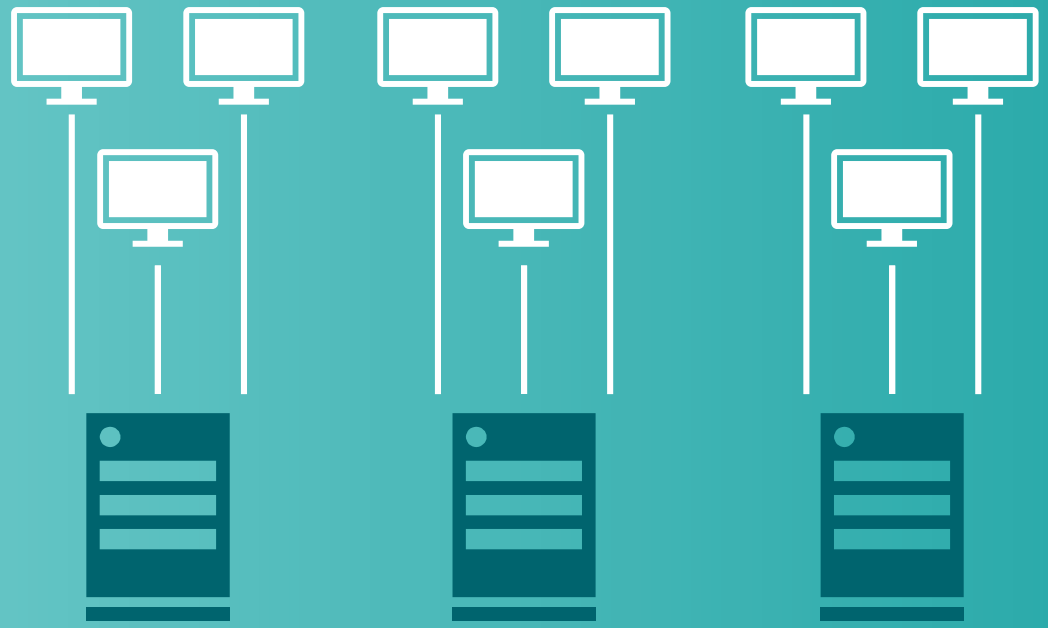


Unrestricted © Siemens AG 2019

reThink Scalability –
High flexibility to scale up the plant

SIEMENS
Ingenuity for life

Optimized for **reliability**

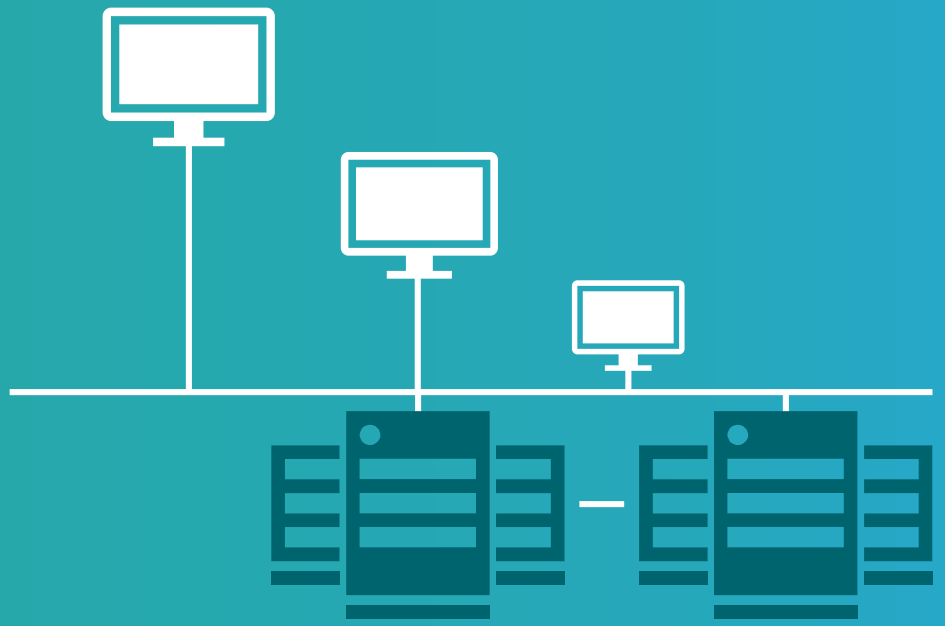


Multiple Single Stations

Multiple Replicated Servers

Single Station

Optimized for **scalability**



Server

Multiple Area-related Servers

Single Station

Redundant Server

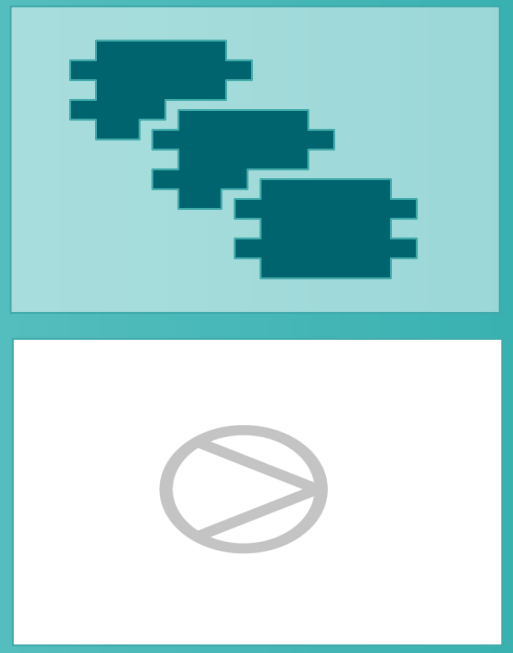
Unrestricted © Siemens AG 2019

reThink Scalability

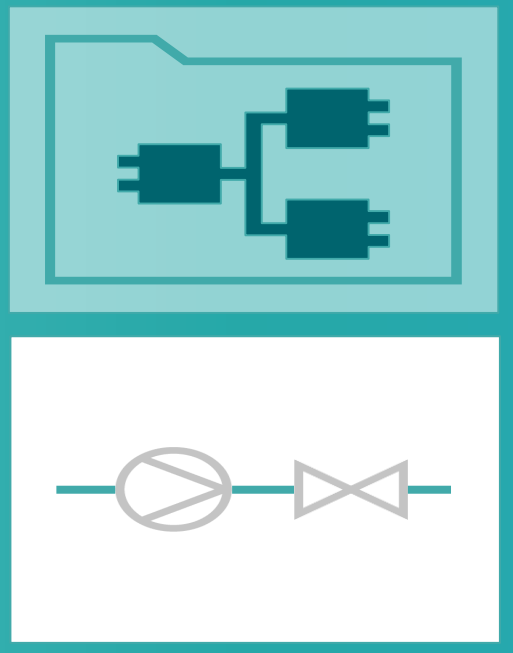
Global standardization from single Process Object to Unit

SIEMENS
Ingenuity for life

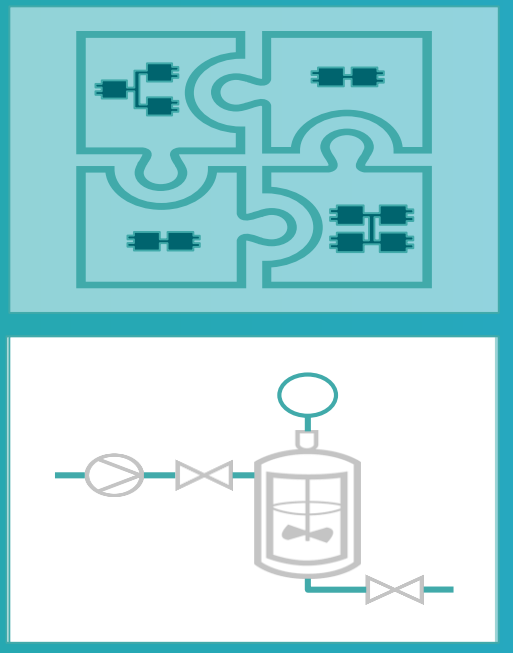
Process Object and Control Module Template



Equipment Module Template



Partial automation solution based on templates



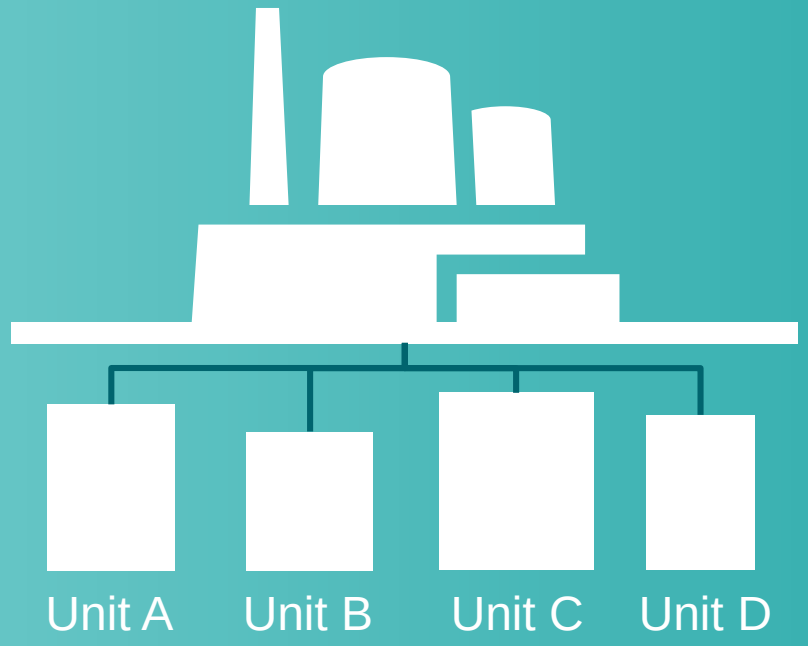
Unrestricted © Siemens AG 2019

reThink Sylability: Modular Automation

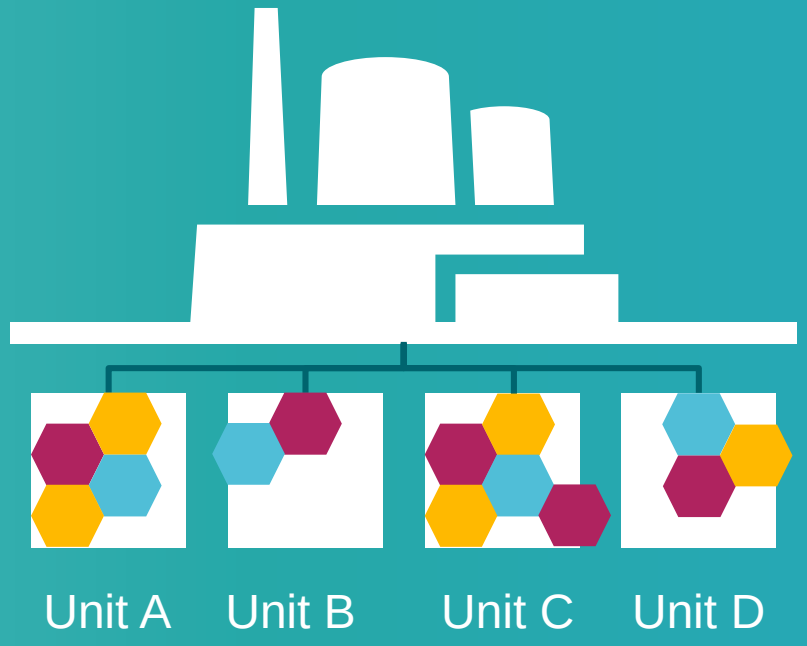
A major lever to boost engineering efficiency

SIEMENS
Ingenuity for life

From modularization of a plant …



… to modular production



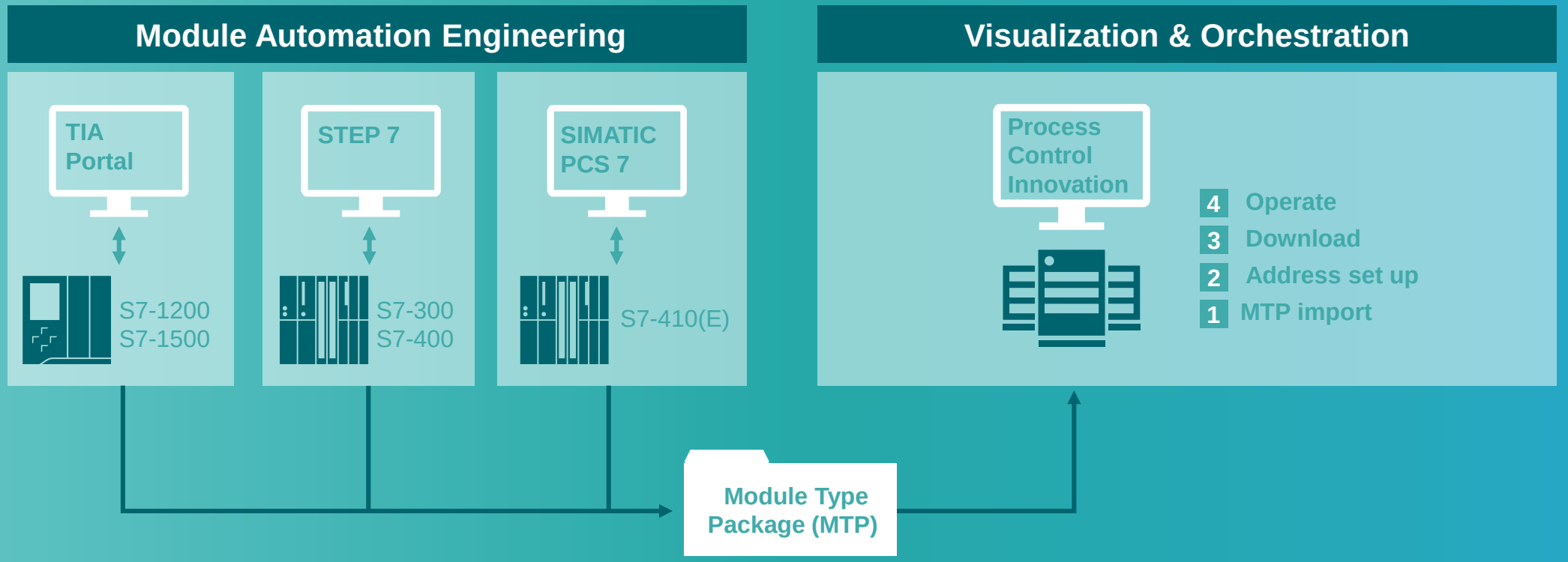
What is the benefit

- Better interoperability with easy and flexible integration of manufacturer independent process modules.
- Plug-and-Produce on the technological level.
- Supervisory control of large hierarchical systems, with the comfort of an integrated Process Control approach.

Unrestricted © Siemens AG 2019

reThink Scalability: Modular Automation
Integration based on open standards: Module Type Packages

SIEMENS
Ingenuity for life



Unrestricted © Siemens AG 2019

Starting to “reThink” Process Automation
to accelerate the digital transformation

SIEMENS
Ingenuity for life

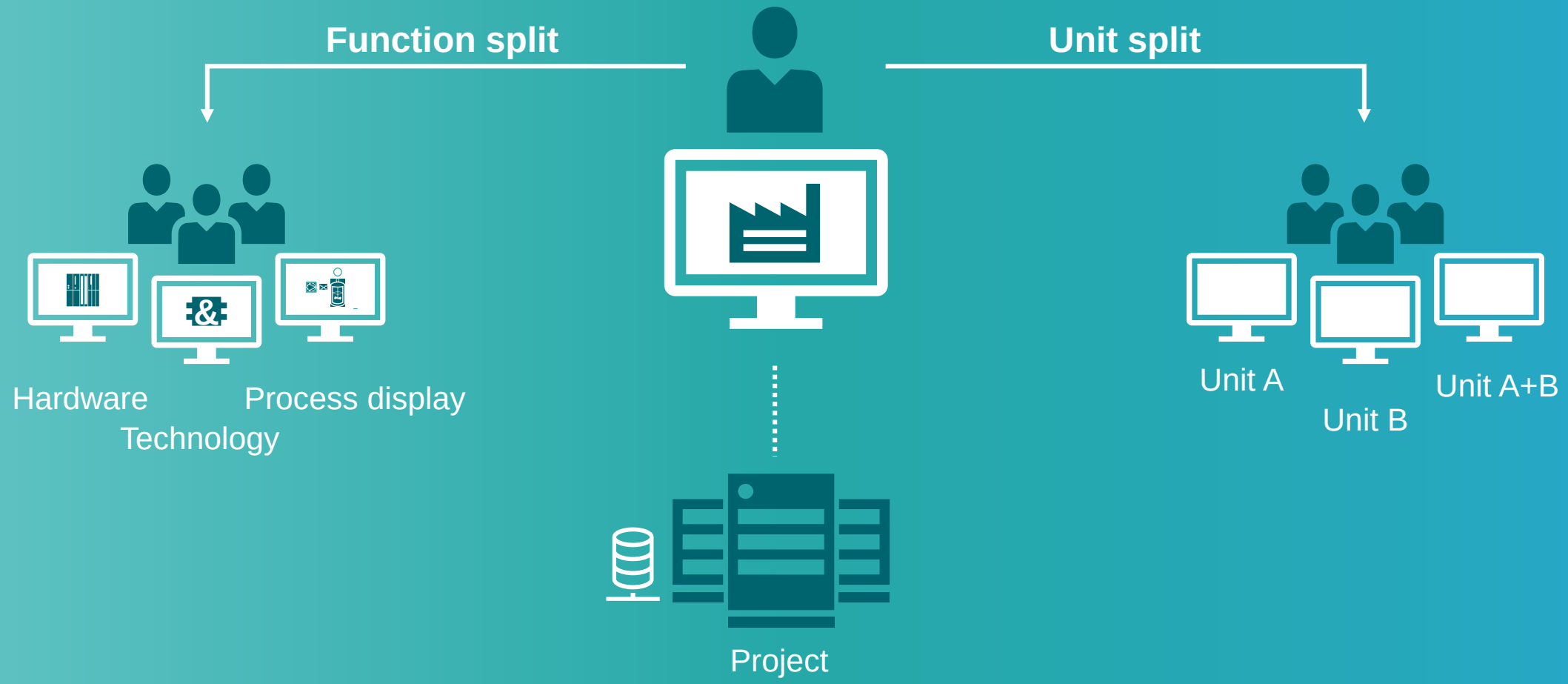
reThink
Collaboration

Unrestricted © Siemens AG 2019

reThink Collaboration

Flexible project engineering on one central data basis

SIEMENS
Ingenuity for life



Unrestricted © Siemens AG 2019

reThink Collaboration
Late hardware binding

SIEMENS
Ingenuity for life

Hardware Engineering (HW addresses)

ASo1.Module01.Channel01
ASo1.Module01.Channel02
ASo1.Module01.Channel03
...

...

Signal Editor

Technological Engineering (Signals)

Valve001.IsClosed
Valve001.IsOpen
Valve001.CmdClose
Valve001.CmdOpen

...

...

Unrestricted © Siemens AG 2019

Starting to “reThink” Process Automation
to accelerate the digital transformation

SIEMENS
Ingenuity for life

reThink
Digitalization

Unrestricted © Siemens AG 2019

SIMATIC PCS neo
neo Digitalization

SIEMENS
Ingenuity for life

Beyond existing systems and architectures

Simulation
and Optimization
SIMIT

DCS Software
Innovation

Plant Design
COMOS

DCS Hardware
Innovation

Digital Twin Inside

MindSphere

Web technology

Global collabo-ration

Safety & Security

One system based on process objects

Scalability

System usability

Modular Automation

Process and Plant Design | Engineering and Commissioning | Operation | Service

Unrestricted © Siemens AG 2019

Starting to “reThink” Process Automation
to accelerate the digital transformation

SIEMENS
Ingenuity for life

reThink
Cyber Security

Unrestricted © Siemens AG 2019

Security as a top priority today and tomorrow

SIEMENS
Ingenuity for life

Plant security
- Physical access protection
- Process and guidelines

Network security
- Cell protection
- Firewall, VPN
- Inhouse network portfolio & know-how

Web security
- SSL, certificate

System integrity
- System hardening
- Process and guidelines

Security always matters

- TÜV certification of product life cycle process based on IEC 62443-4-1
- TÜV certification based on IEC 62443-3-3
- Product development is compliant with current IACS Security Standards
- Process Control Innovation will be compliant with current IACS Security Standards

Charter of Trust

Unrestricted © Siemens AG 2019

Security is a “built-in” element of PCS neo!

Optimized security in plant operation with lowest effort for our customers

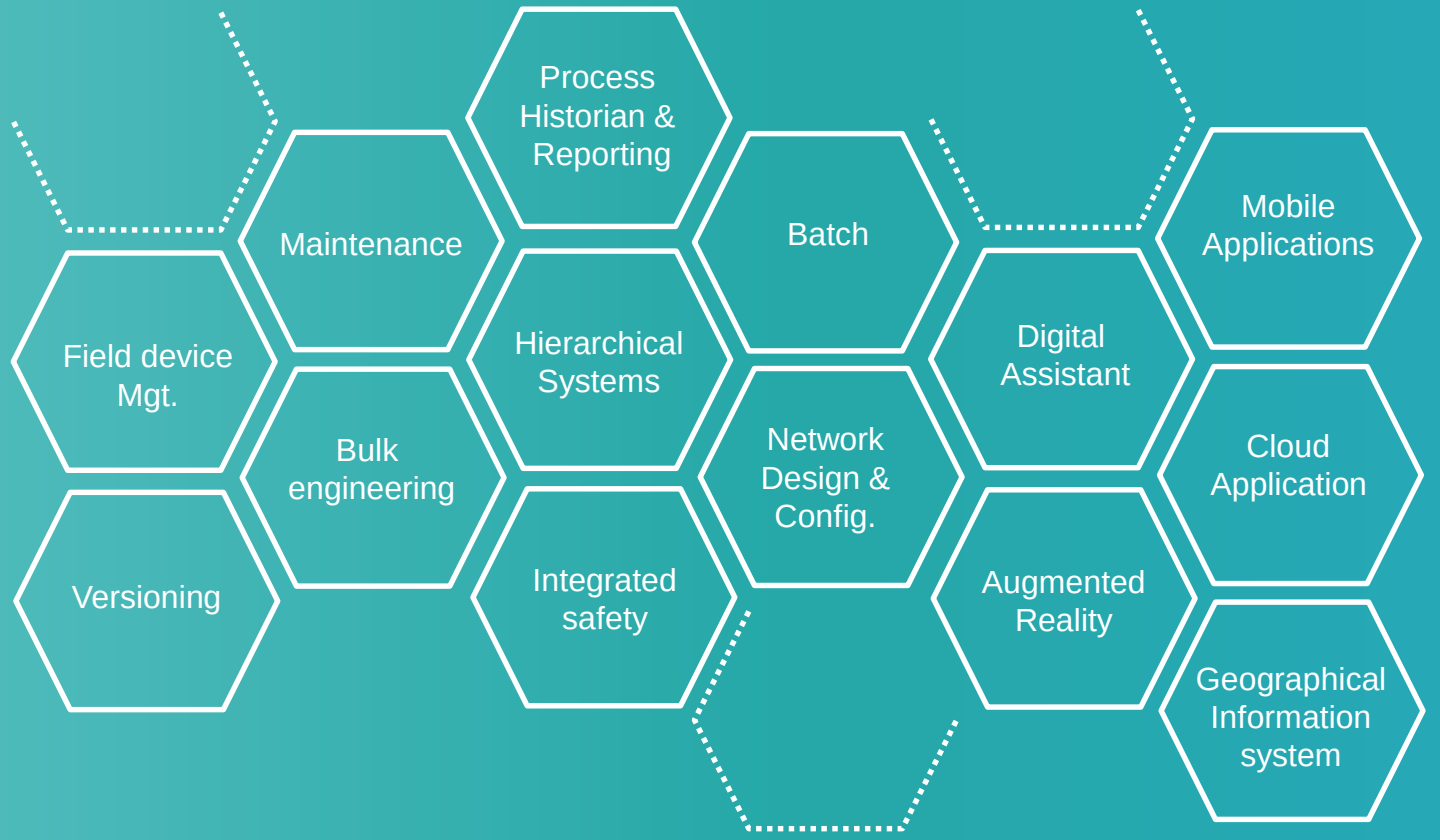
SIEMENS
Ingenuity for life

- **Security by Default**
  - PCS neo will provide full Security - right from the Installation
  - Security-features can be de-selected, to adopt customer needs
- **Secure Access**
  - All functions require Authentication and Authorization (single sign-on)
  - 2-factor Authentication for critical functions
- **Central Administration**
  - Full transparency on the Security Level and Security Events
  - Ease of Administration to maintain Protection-Level over the plant lifecyle
- **Security by Design**
  - Encrypted system communication based on Certificates
  - IEC 62443-conform development process, "Secure Coding" Guidelines
- **Defense in Depth**
  - Continue PCS 7-proven „bolted-on“ Security portfolio with Firewalls and Network Components, Virus Scanners and Anomaly Detection

Unrestricted © Siemens AG 2019

A comprehensive grows further …

SIEMENS
Ingenuity for life



….and the innovation will continue!

Unrestricted © Siemens AG 2019

Thank you –

Welcome to the Future of Process Automation at SPS Fair 2019

OR

PCS neo event in DK

29.10 Aalborg – Utzon

30.10 Horsens - Fængslet

31.10 Roskilde – Ragnarrock

Registration: www.siemens.dk/PCSneo-event