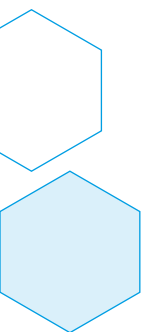




CODESYS®

Roadmap | October 2026

Hilmar Panzer | Managing Director & CTO

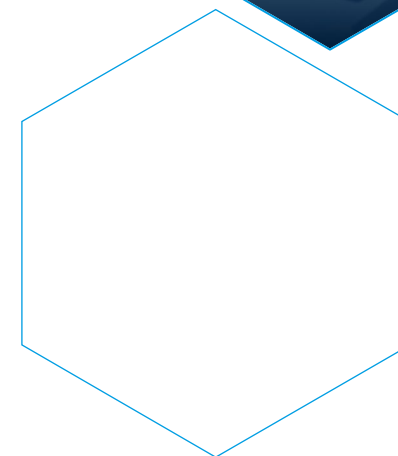


Disclaimer

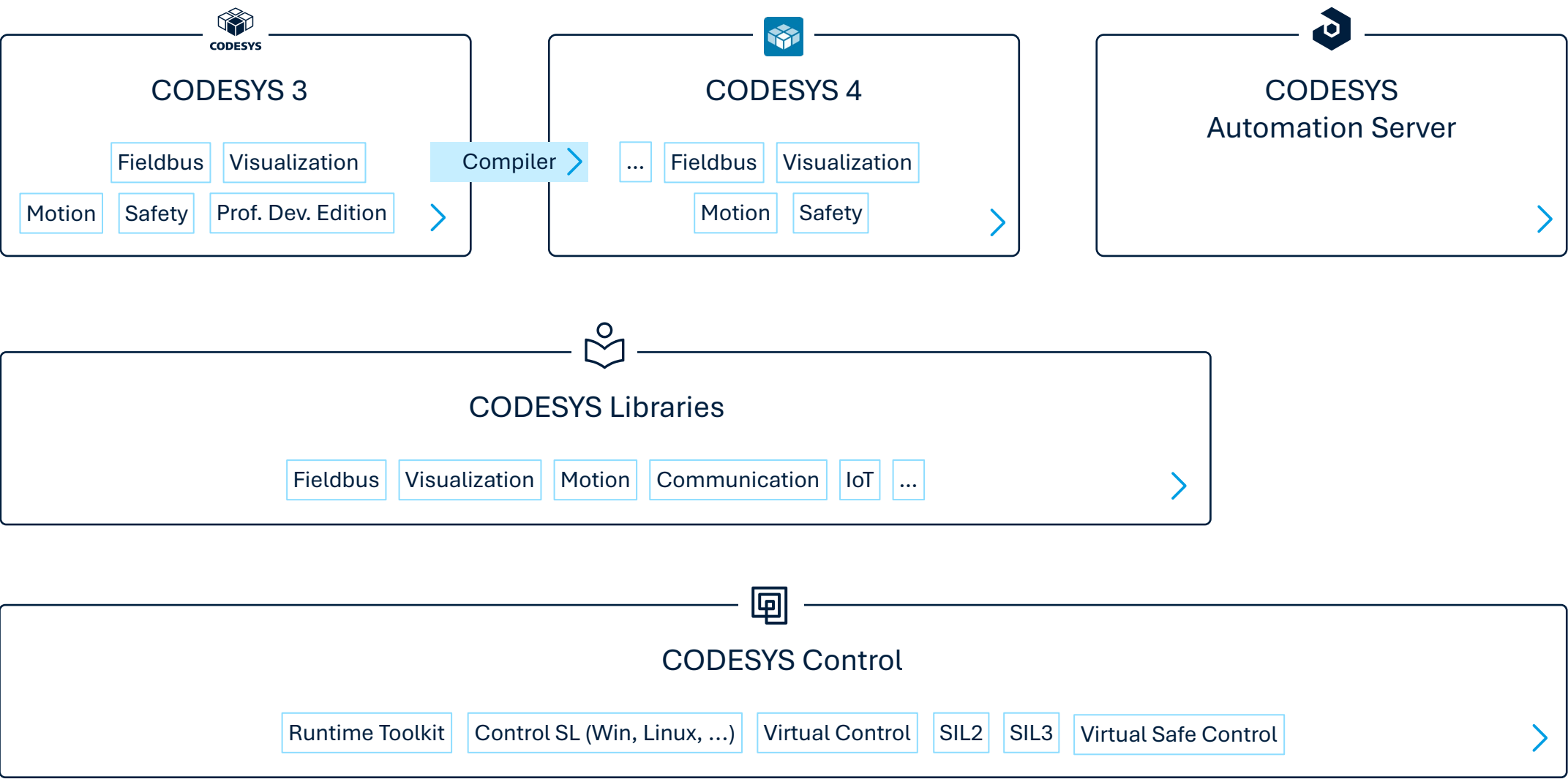
This presentation contains our product planning schedule defined at the time this presentation was created.

The specified contents and timeframes may change or be rescheduled for various reasons.

They should therefore be regarded as a statement of intent, but are not binding.



Product structure and document content



DevOps Tools

Add-ons
(with functionality independent from the Engineering System)

Controller

IEC61131-3 language editors



CODESYS LD/FBD

3



4.8.0.0 | 11.2026

Maintenance version



CODESYS CFC

3



4.6.0.0 | Q2 2027

Textual storage format
(support for CODESYS File-Based Storage)



Professional Developer Edition



Git

3



V2.0.0.0 | 11.2026

- File-based storage as backend
- Support for Safety SIL3 applications



File-Based Storage

3



V1.1.0.0 | 11.2026

- Final optimizations for CODESYS Git 2.0
- Load external modifications
- FBS-Format for Project Settings



Professional Developer Edition



Test Manager 3

 11/2026

- Usable in the CI/CD workflow without UI
- Requires SP22



Simulation interface 3

 1.0.0.0 | 12.2026

- Enables virtual commissioning and automated HW/SW testing of CODESYS-controlled machines.
- Integrates CODESYS applications in third-party simulation tools (Software-in-the-loop).
- Standard interface based on OPC UA Pub/Sub and information model
- Switches easily between simulation and real target without project changes.
- A preview version for evaluation is already available.



Artificial Intelligence (Professional Developer Edition)



Model context protocol MCP Server

3

- Online operations for debugging (monitoring, ...)
 V1.2.0.0 | 11.2026
- Fieldbus support  V1.2.0.0 | 11.2027
- Visualization support  Q2 2027



Agentic coding

3

4

 Q2 2027

- Enables the possibility for agent coding of CODESYS project sources (e.g. by Claude code)
- Requires File-Based Storage 1.0



Visualization



File-Based Storage support

3



V4.11.0.0 | 11.2026

Visual objects with all elements can be stored and read with File- Based Storage.



AI support

3



V4.12.0.0 | Q2 2027

MCP Server generates visual objects



Fieldbus

Online change support* 3 in IO configuration

Extended online change support
of MODBUS

 12.2026

Ethernet/IP 3 4.10.0.0 | 01.2027

- UI configurator support to add, delete, and edit connections
- Usability improvements
- Planned: Support for new conformance test version CT23

Maintenance versions 3

EtherCAT

 4.13.0.0 | Q1 2026

* Requires additional license "CODESYS Connectivity Redundancy"



Fieldbus

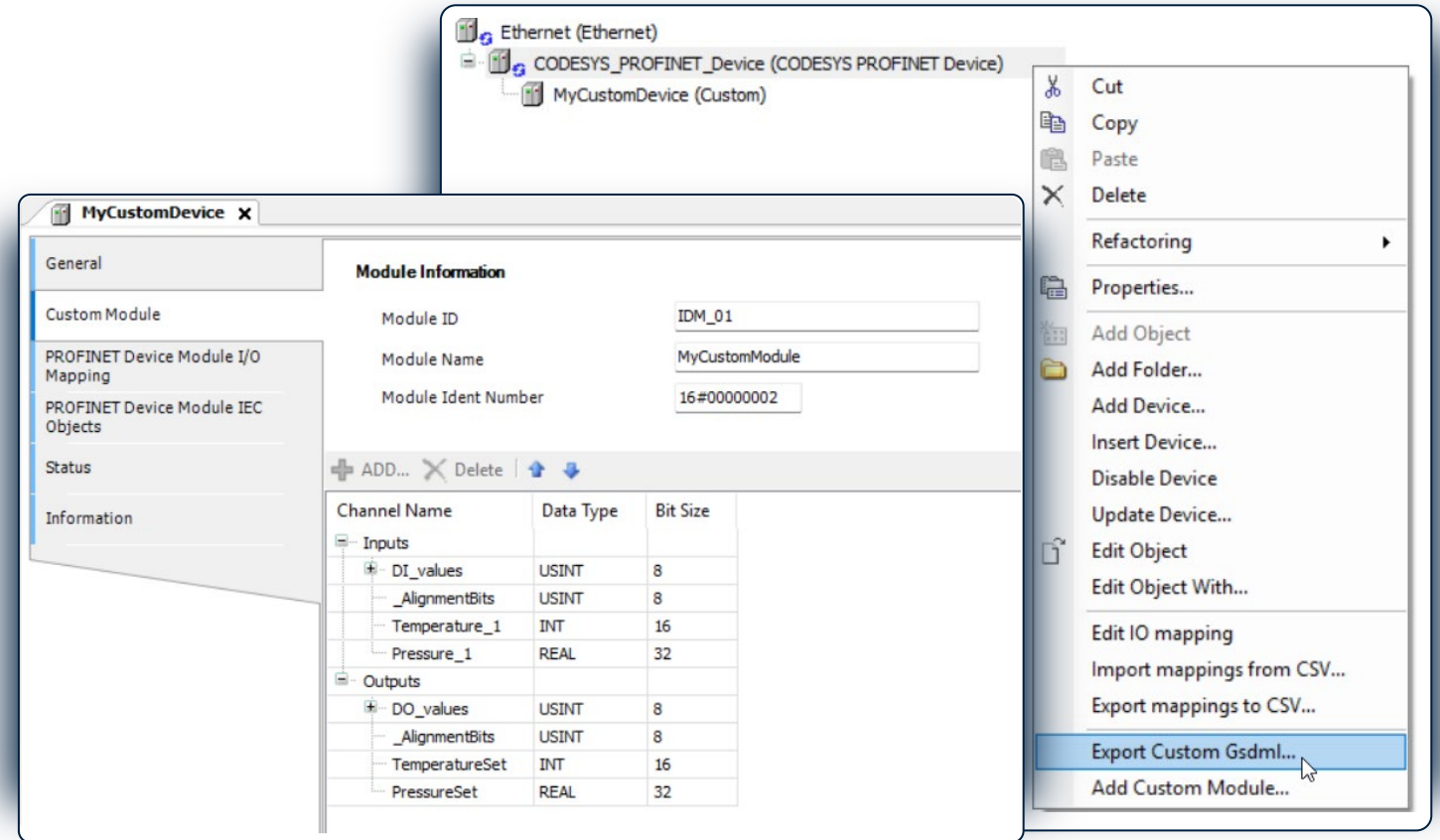


PROFINET

3

V4.9.0.0 | Q1 2027

- The Profinet Device configurator is able to generate a GSDML file that contains the current configuration.
- Profinet Security Extensions (SC1)
 - Signing of gsd files to prevent them from illegal manipulation



Communication

OPC UA Server Information models 3

 4.9.0.0 | Q4 2026

- The OPC UA Core model implemented in the firmware is usually older than the latest model.
- Many companion specifications reference the latest OP UA Core model.
- Application download only refused if unavailable parts are actually referenced by currently used information model.

OPC UA Server: GDS support 3

 V3.5 SP23 | 03/2027

Supports OPC UA certificate management by connecting to a third-party global discovery server.

Safety

Safety extension

3

 04/2027

Safety applications can be managed
by CODESYS Git.





G-Code for Robotics

3



4.21.0.0 | Q4 2026

- Use existing G-Code functionality (interpreter, path preprocessors) to program an axis group.
- Combine powerful CNC path preprocessing with robotics trajectory planning and configuration.
- G-Code is connected to the axis group using MC_MovePath.



CNC

3



4.21.0.0 | Q4 2026

Improved additional axes

The additional axes A/B/C/P/Q/U/V/W can now all be used in a uniform way. They all support higher order interpolation (quintic by default, can be set to cubic or linear).



Compiler



Code generator for RISC-V (64 Bit)

3



1.0.0.0 | Q3 2026



Performance improvements

3



V3.5 SP23 | Q1 2027

- Investigate and implement potential performance improvements
- E.g. support of Fast Online Change for visualizations

Introduction CODESYS 4

- Alternative programming tool based on web technology
 - Proven compilers from CODESYS 3 are reused.
- Compatible with CODESYS 3 Control – no separate runtime for CODESYS 4
- Add-ons programmed as libraries are reused from CODESYS 3.
- Platform-independent engineering tool for CODESYS PLCs
 - Backend running on desktop, server, cloud, or on the PLC itself; Windows- and Linux-based
 - Frontend running on any device with web browser support
- Textual project storage
- V1.0.0.0 will provide limited functionality compared to CODESYS 3.
- Currently we focus on the following use cases:
 - Library development and CI/CD integration
 - Applications for which the current set of objects is sufficient
 - Edge applications (ST, MODBUS, IIoT libraries, libraries)
 - Simple applications



Release plan for CODESYS 4

After 2028, CODESYS 4 will require a license fee.

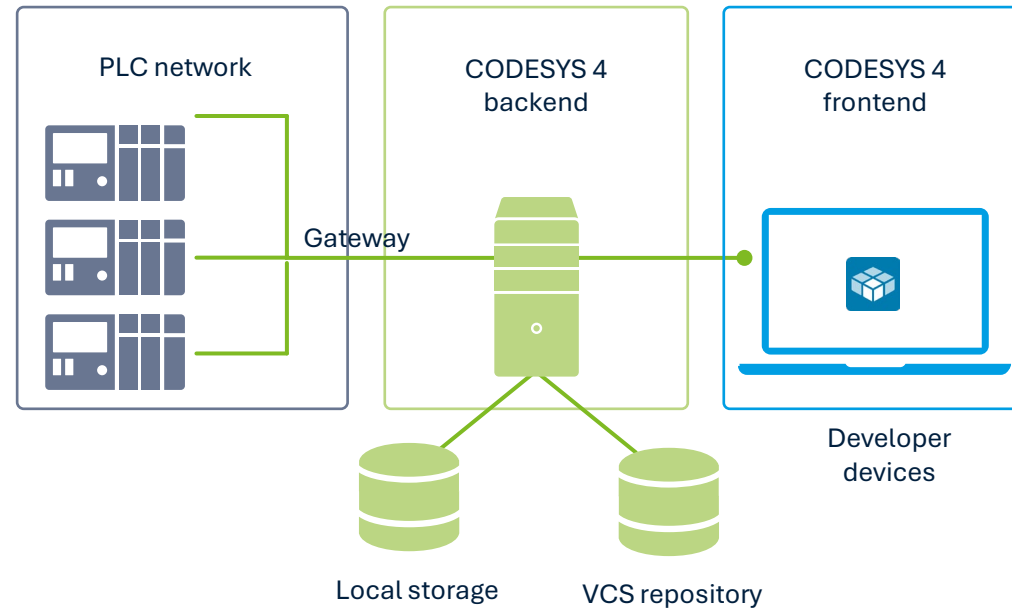
There will be frequent updates (6 – 8 weeks) for CODESYS 4, bringing new functionality step by step.

Linear end-of-line versions, no official regular patches (as in CODESYS 3) planned.

New functionality, current status, and modules under development will be announced in this roadmap and in the CODESYS Feature Briefing.

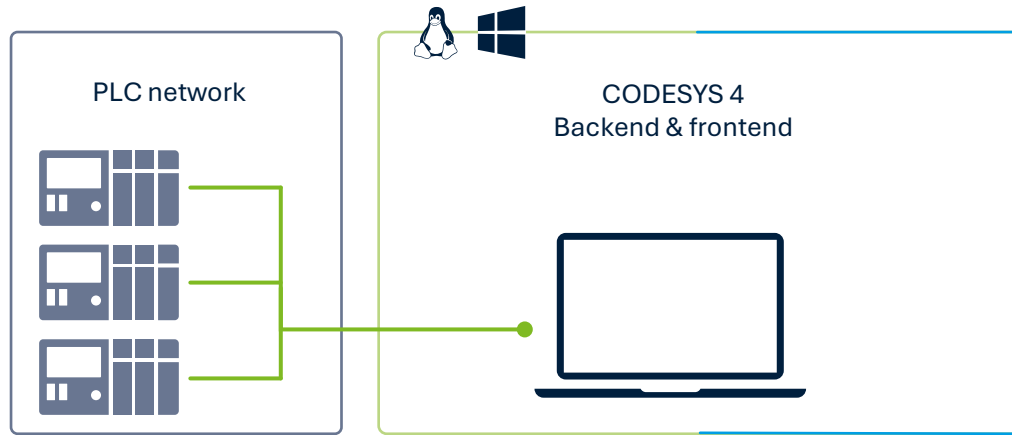


Architecture of CODESYS 4

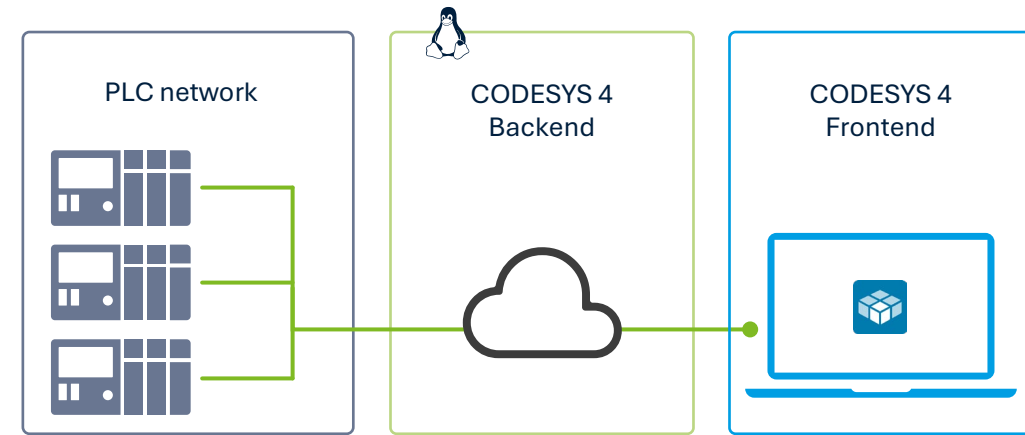


Operating options of CODESYS 4

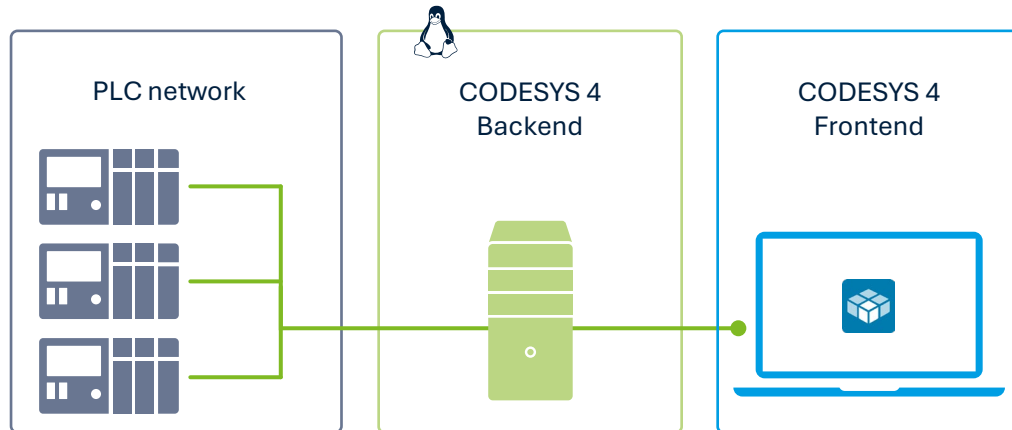
Desktop/Client



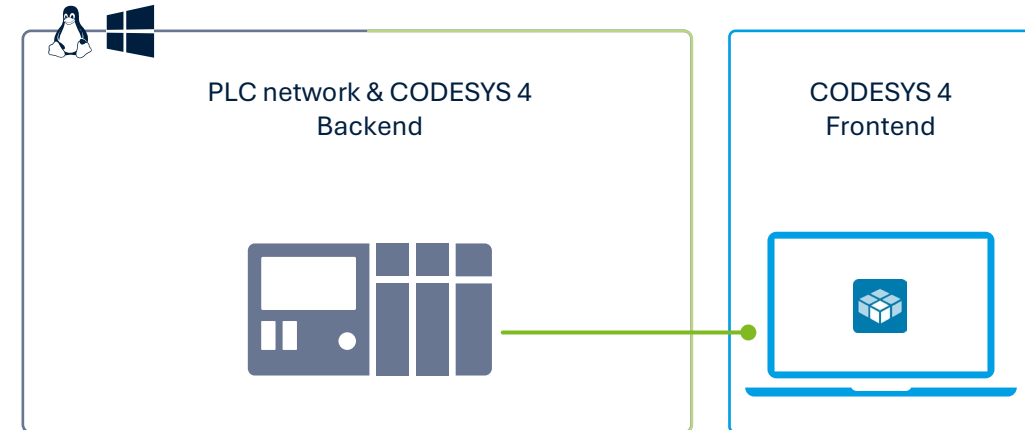
Cloud/Client



Edge/Client



PLC/Client



Essentials - architecture and currently provided deployment variants

☐☐ Desktop deployment

Install and run both frontend and backend server on a Windows desktop system.

☐☐ Controller deployment

Install and run the backend server on Raspberry Pi as proof of concept.
Other Linux systems can be provided.

☐☐ On-prem deployment

Install and run the backend server on a Linux-based server.



Essentials

SDK Release

 Q2 2027

- Allows third parties to develop their own components.
- After the first release, SDK will still be extended.

Library Manager

 1.1.0.0 | Q4 2026

- UI for library management
- Complementing the textual editing



IEC61131-3 programming language editors

Ladder editor 4

- Smart Coding  Q1 2027
- Inline Monitoring  2027

CFC editor 4

 2027

First milestone:
definition of textual storage format
⇒ will be used in CODESYS 3 FBS as well

Fieldbus

DeviceObject 4

 2026

- IO mapping dialog  11.2026
 - Support monitoring
 - Support code completion
- Device repository  Q2.2027
- New device description format
 Q2.2027
- Complete device pages
(logger messages, status page,
function block instances)
 2027

MODBUS 4

 Q1 2027

Serial

EtherCAT 4

 2027

- 1st version of configurator
- Stack identical with CODESYS 3



Visualization



Object support

4

- Possibility to use a Visualization object from CODESYS 3 stored with File-Based Storage in CODESYS 4 and include it in a library stored with CODESYS 4  Q4.2026
- Textlist and ImagePool support  Q2.2027
- Support of library development use case



Communication

Communication Manager 4

 2027

First editor to enable easy publishing
of symbols as OPC UA Server

Professional Developer Edition CODESYS 4



Static Analysis CODESYS 4

4

 Q2 2027

Port static analysis to CODESYS 4 for enhancing CI/CD use cases.



Unit Test Framework for C4

4

 Q2 2027

Provide a unit test framework for CODESYS 4 to enable automated testing for library developers.



Automation Server

On-premises support

 First productive release
(based on version 1.40.0.0) | 11/2026

- Cloud-independent Automation Server on customer's own IT infrastructure
- Release candidate available since Q4 2025: Contact us at sales@codesys.com

Audit log

 Q3 2027

- Chronological, tamper-evident records that track system events, user actions, and security-relevant activities

File management

 11/2026

- Exchange files between PLCs and clients via browser (already released)
- Manage files and folders on PLCs (already released)
- Central file system on the Automation Server (already released)
- Deployment of additional files alongside applications (already released)
- Transfer of multiple files to multiple PLCs in one go (11/2026)
- Move and copy files and folders inside the Automation Server (11/2026)
- Drag & drop files and folders between PLCs, clients, and Automation Server (11/2026)

Application



Base Libraries



5.1.0.0 | Q1 2027

new *File_and_Dir library* for synchronous and asynchronous file and folder operations which improve CAA File and SysFile/SysDir.



SRCI



V1.0.0.0 | Q1 2027

Robotics interface library following PI SRCI specification



IIoT Libraries



1.14.0.0 | Q2 2027

Web Client will support the content-type "multipart/form-data"



Runtime Toolkit

CODESYS Control

- Independent release cycle for the runtime toolkits  3.5.100.0 | 01/2027
Instead of releasing the runtimes along with CODESYS 3 Essentials, they can be released in an independent cycle.
- Support of TLS1.3  3.5.100.0 | 01/2027
- Single device licensing for device vendors
 - Harden the CODESYS licensing mechanism.  Q1 2027
 - Binding extension for containerized applications
- CRA-compliant runtime  Q2 2027
 - Implement security features that are important for CRA.
 - Complete threat model for runtime system.
- Security Manual for the Runtime Toolkit  Q2 2027
- Management of certificates  2027
 - Possibility to provide different backends for certificate storage (e.g. TPMs)

Redundancy

CODESYS Control

Redundancy improvements  3.5.100.0 | 01/2027

- Improve startup behavior
- Avoid standalone/standalone scenarios
- Improve data consistence in conjunction with asynchronous events (e.g., alarms)
- Synchronize certificates, settings, and user management

Control for Windows

CODESYS Control RTE & Control Win

 4.0.0.0 | Q1 2027

- Independent release cycle from CODESYS 3 IDE
- New consistent retain mechanism using buffered file system

CODESYS Control RTE & Control Win

 4.1.0.0 | Q2 2027

User management backend support (e.g. IDAP)

RTOSVisor (Acontis)

New product in the CODESYS Store

Third-party hypervisor solution

RTS Hypervisor (Real-Time Systems):

 2027 | New product in the CODESYS Store

Third-party hypervisor solution



Control for Linux SL

CODESYS Control SL for Weidmueller u-OS

 Q4 2026

Standalone Deploy Tool

 2027

- No IDE necessary
- Headless CLI tool (UI also planned for later versions)
- Windows and Linux support

Control for Linux SL (Virtual Control)

Licensing in container

 Q1 2027

Support of containerized operation of license servers on TPM 2.0 systems

Cluster support

 2027

Provide runtimes with generic deploy mechanisms for cluster use cases.

Product development starting Q4 2026

- Margo  Q1 2027
- Kubernetes  2027

Docker compose

 4.23.0.0 | Q4 2026

Deployment solution for Virtual Control SL based on Docker compose

Support of Red Hat UBI (universal base image)

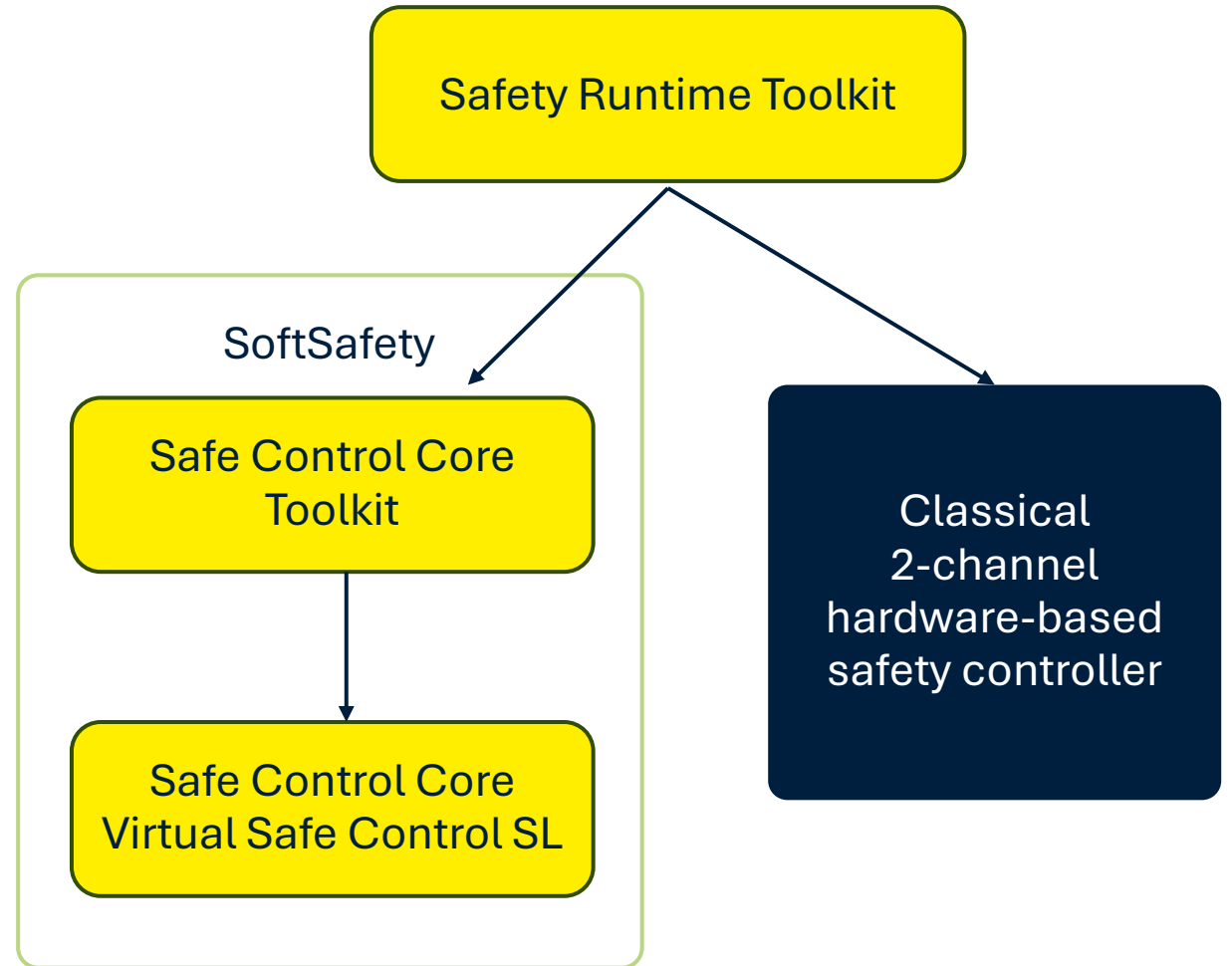
 Q1 2027



CODESYS Safe Control SIL3

Product overview:

- Safety Runtime Toolkit (two-channel hardware)
- Safe Control Core Toolkit (coded processing)
For device manufacturers
- Virtual Safe Control SL (coded processing)
 - Ready-to-use product for standard hardwares with Linux
 - Integrates and releases new functionalities of Safe Control Core with a short delay



CODESYS Safe Control Core Toolkit

Safe Control Core

- External library interface  4.4.0.0 | Q1 2027
 - Interface to extend Virtual Safe Control SL with own safety-related functionality as external function block
 - Including FLOAT support in external implementations
- Local Time Provider (Save Control Core)  4.4.0.0 | Q1 2027
 - New interface to receive the second time stamp from a local time source
- Safe Network Variables  4.5.0.0 | Q3 2027
- Profisafe F-Device V2.6 support  4.5.0.0 | Q3 2027



CODESYS Virtual Safe Control SL

64Bit support

 4.23.0.0 | Q4 2026

- ARM64 and x64 platform support

EU Machinery Regulation conformance

 Q1 2027

- Documentation templates

Integration of new Toolkit features

 2027

- External library interface
- Local second time source
 - API to use local oscillator on specific devices
 - Not yet Plug&Play on any hardware
 - Specific adaptation necessary either by user or as a paid service

Safety SIL2

SIL2

 Q1 2027

No more strict version binding

- SIL2 runtime versions may differ from IDE version.
 - Device manufacturers can qualify a new IDE version much easier for existing runtime versions.
- No runtime update required when the IDE is updated.

Security



Security

- Process certification according to IEC 62443-4-1 already received in Q2 2026
- Security Manual for the CODESYS Runtime Toolkit  Q2 2027
 - Provides device manufacturers with the security-relevant information needed to build, configure, and operate their derived runtime securely
- Product certification according to IEC 62443-4-2:  2028 Runtime Toolkit



Licensing

☐☐ Introduction of Wibu License Portal

📅 Q4 2026

- Self-service licensing
Users can independently activate, deactivate, and restore licenses, thus reducing support effort.
- Flexible business models
Management of B2C, B2B, B2E, reseller, and project-based licenses with detailed role and group structures.
- Workflow automation
Integration with ERP, CRM, and e-commerce systems via API for the creation, delivery, and reporting of licenses.

