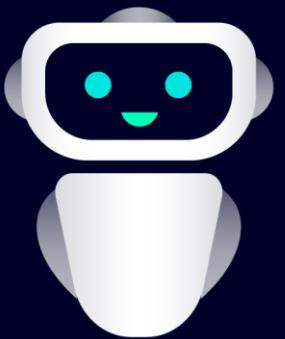


Engineering Copilot TIA

Your generative AI-powered assistant





Industrial Copilots will support humans along the **industrial value chain**

Design

Break new ground in creativity

Planning

Plan more efficiently than ever before

Engineering

Engineering without repetitive tasks

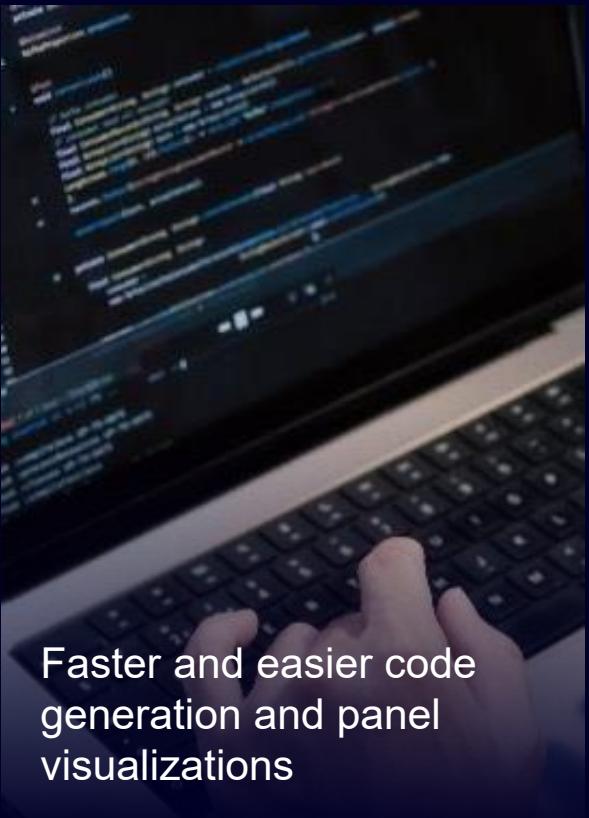
Operations

Transparency at your fingertips

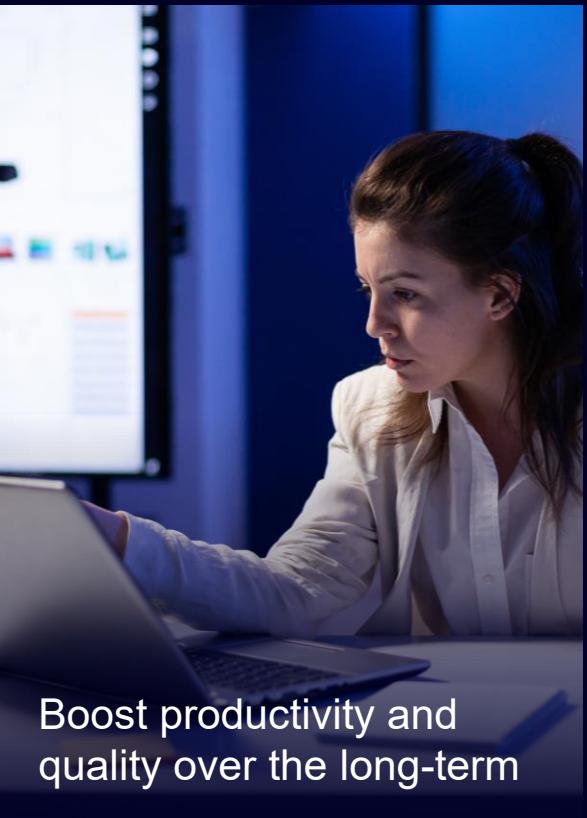
Services

Know it all – before it happens

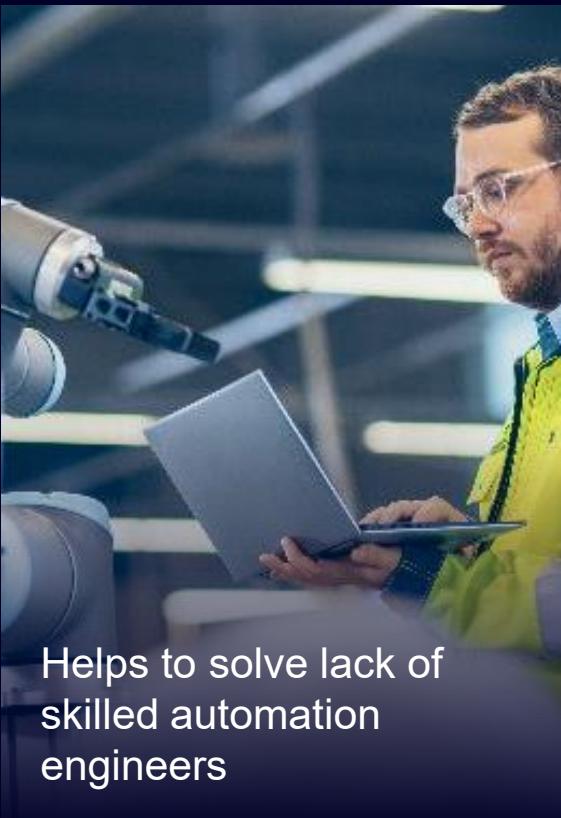
Benefits



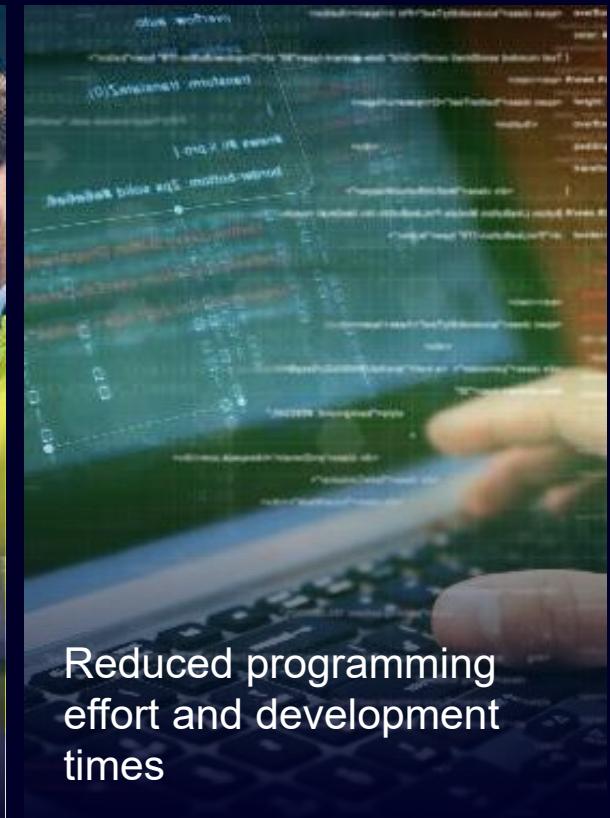
Faster and easier code generation and panel visualizations



Boost productivity and quality over the long-term



Helps to solve lack of skilled automation engineers



Reduced programming effort and development times

Engineering Copilot TIA

What can I do with it? Some Examples...



SCL Code Generation for PLCs

No more tedious manual programming: Create SCL Code, Test Code, Document Code within seconds.



JavaScript Creation for WinCC Unified

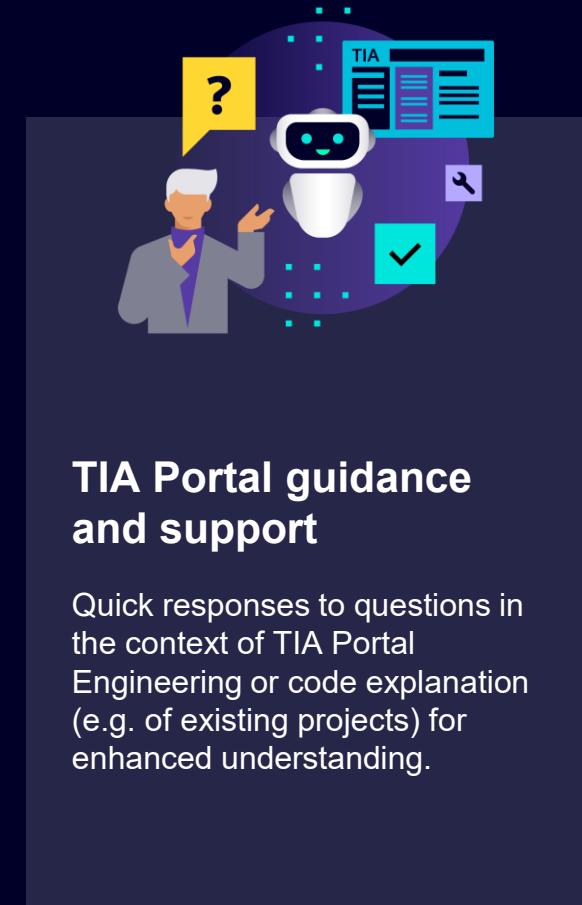
Bring your WinCC Unified HMIs to life: effortless creation & integration of JavaScript and smooth migration of your classic VBScripts.



Project Creation & Configuration

Hardware Creation: Automatic device configuration using Excel and prompting.

Creating PLC Project structure based on a given automation standard, e.g. SICAR.

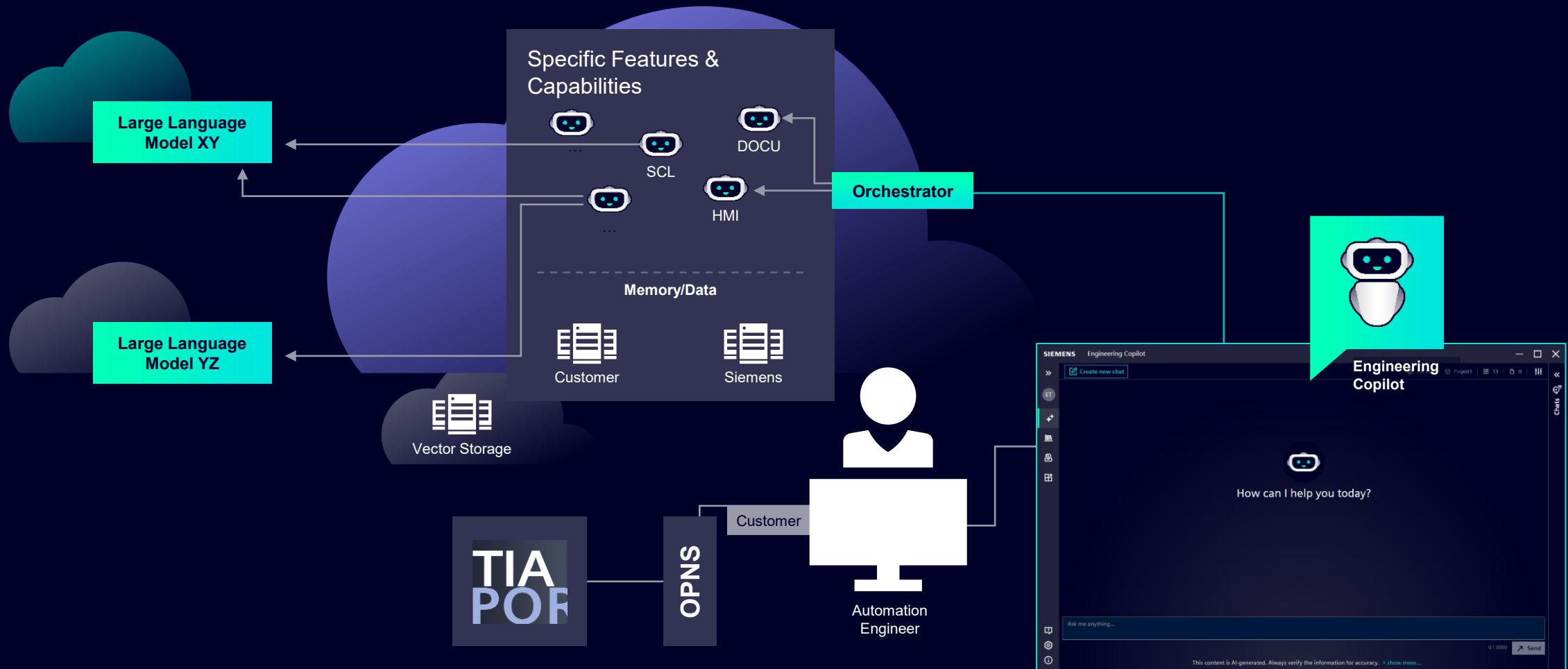


TIA Portal guidance and support

Quick responses to questions in the context of TIA Portal Engineering or code explanation (e.g. of existing projects) for enhanced understanding.

Engineering Copilot TIA

How it works ...



At Siemens, we turn AI into industrial-grade AI solutions

Robust, democratized and with purpose

Robust

Ensuring AI is reliable, trustworthy, and secure, and meets the most stringent industrial standards



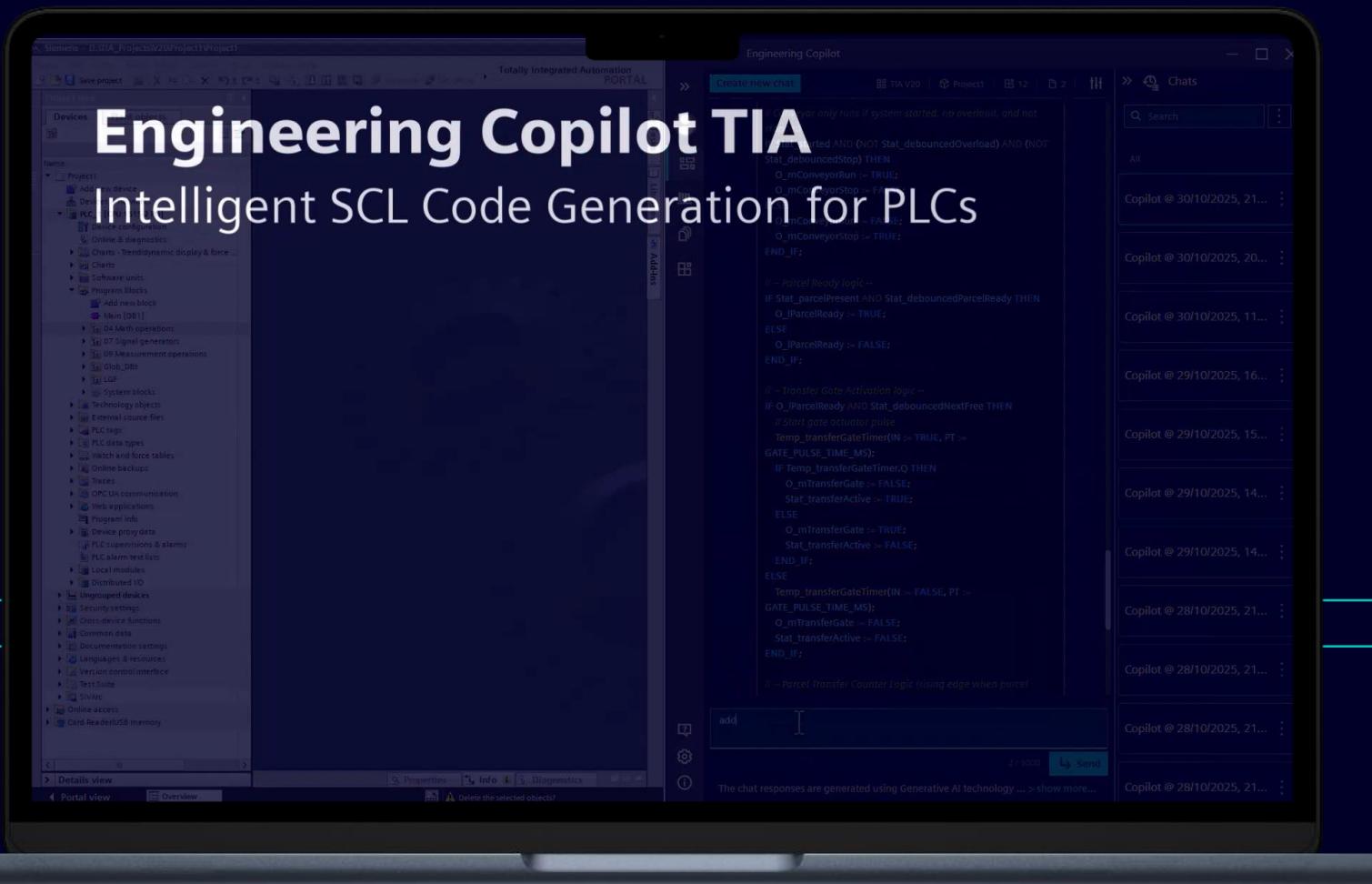
Data security of Engineering Copilot TIA

- The Engineering Copilot TIA is **tailored for professional use in industrial environments**, ensuring that your data is handled securely and in accordance with industry standards.
- Siemens will not persist customer input data in the cloud, only process customer input in the Engineering Copilot to answer the questions of the user.

Engineering Copilot TIA

Code Creation: SCL Code in Seconds

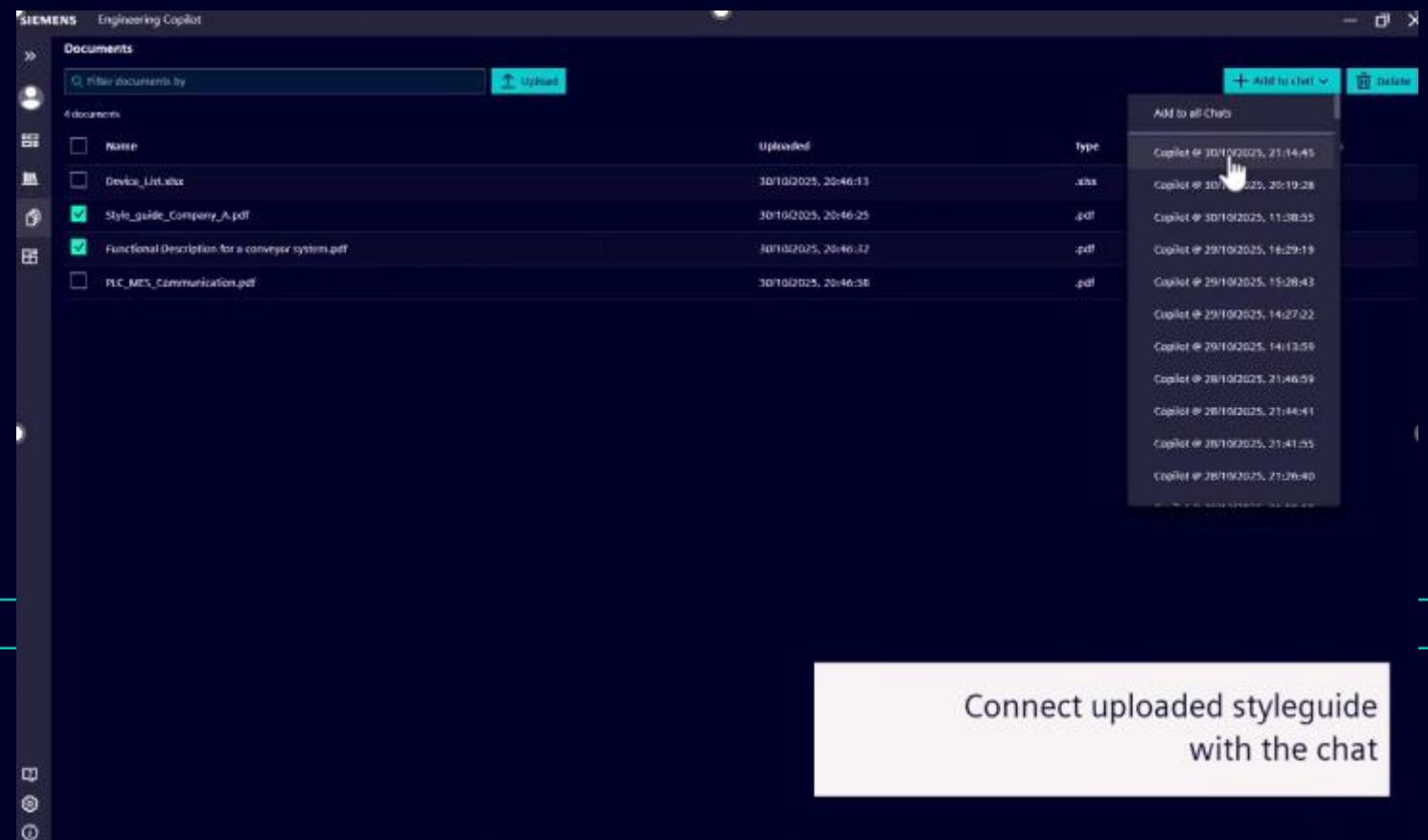
- No need to be proficient in SCL
- Focus on other priorities by letting the Engineering Copilot TIA handle routine coding



Engineering Copilot TIA

Code Creation: SCL Code in Seconds

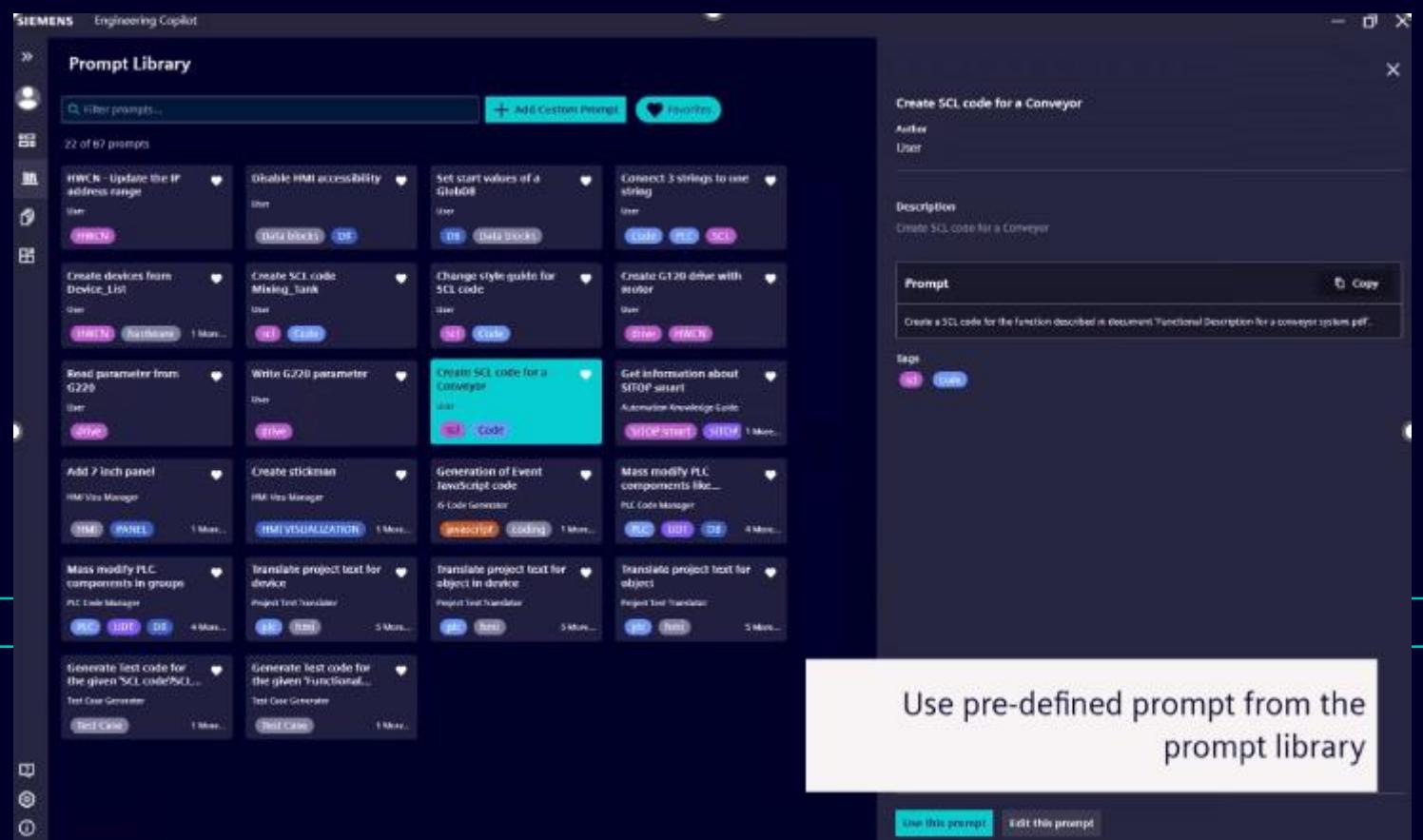
- No need to be proficient in SCL
- Focus on other priorities by letting the Engineering Copilot TIA handle routine coding



Engineering Copilot TIA

Code Creation: SCL Code in Seconds

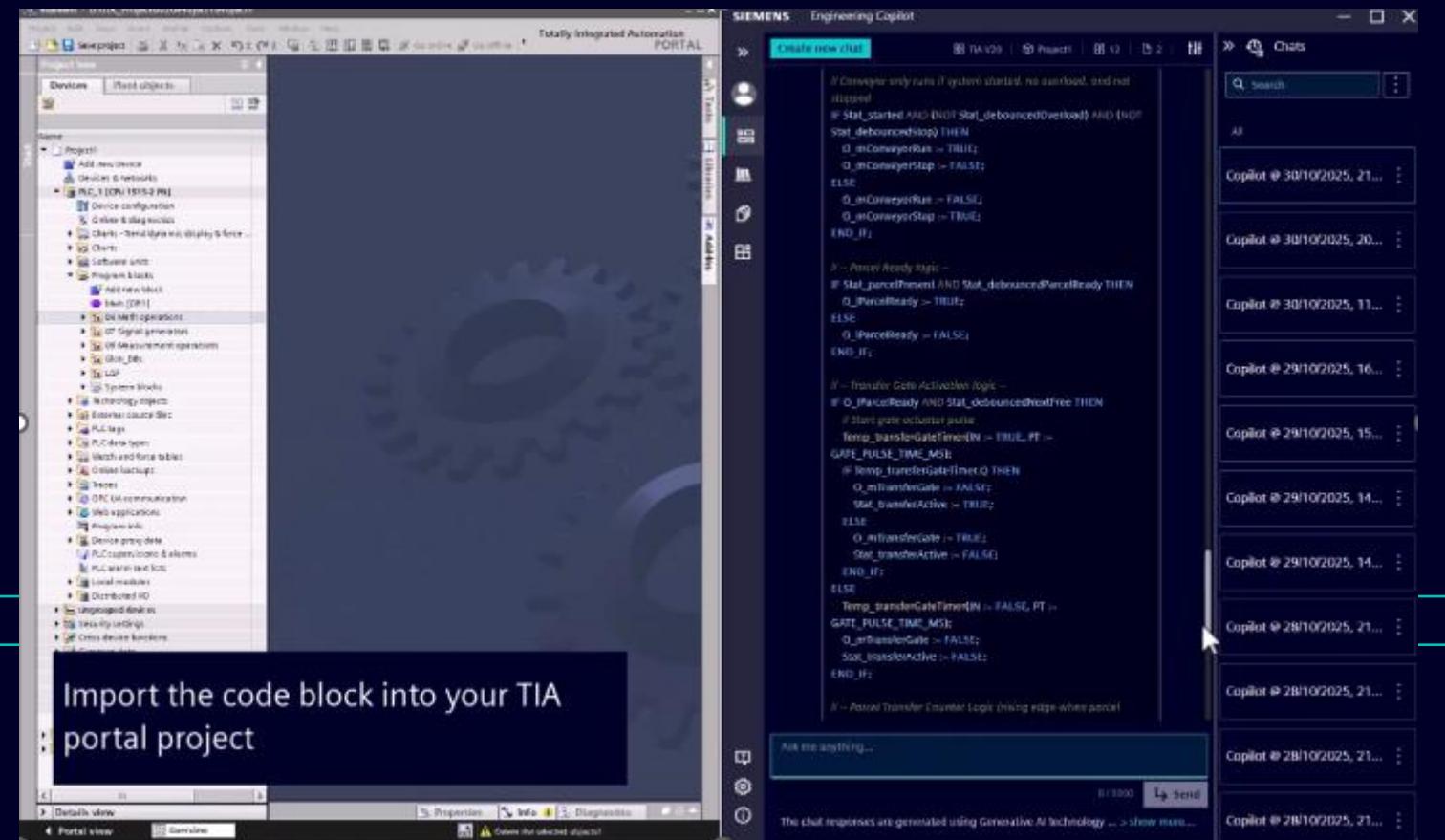
- No need to be proficient in SCL
- Focus on other priorities by letting the Engineering Copilot TIA handle routine coding



Engineering Copilot TIA

Code Creation: SCL Code in Seconds

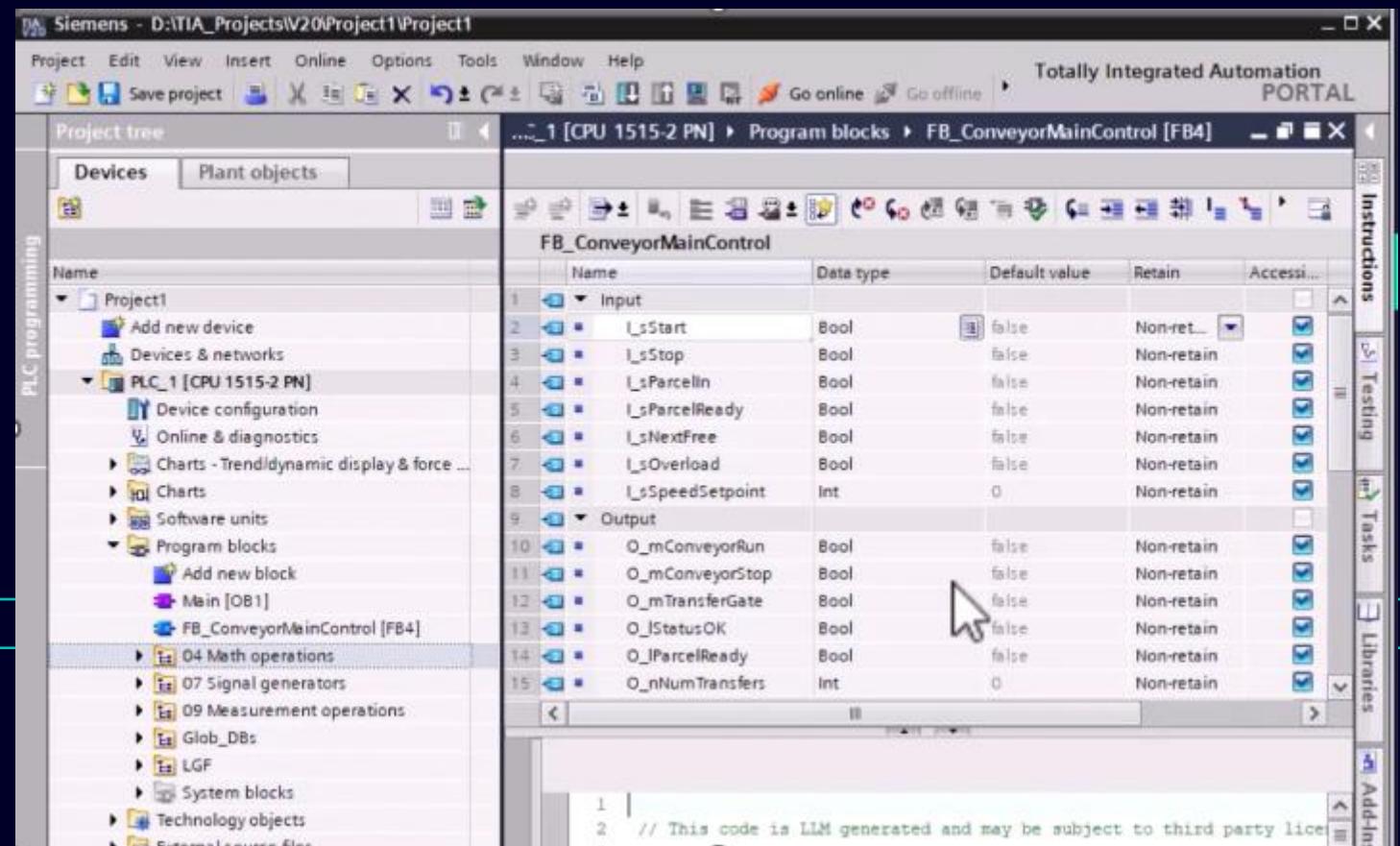
- No need to be proficient in SCL
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Engineering Copilot TIA

Code Creation: SCL Code in Seconds

- No need to be proficient in SCL
- Focus on other priorities by letting the Engineering Copilot TIA handle routine coding



Engineering Copilot TIA

Code Creation: SCL Code in Seconds

- No need to be proficient in SCL
- Focus on other priorities by letting the Engineering Copilot TIA handle routine coding



MAIN [OB1]

FB_ConveyorMainControl [FB4]

04 Math operations

07 Signal generators

09 Measurement operations

Glob_DBs

LGF

System blocks

Technology objects

External source files

PLC tags

PLC data types

Watch and force tables

Online backups

Traces

OPC UA communication

Web applications

Program info

Device proxydata

PLC supervisions & alarms

PLC alarm text lists

Local modules

Distributed I/O

Ungrouped devices

Security settings

Cross-device functions

Common data

Documentation settings

Languages & resources

Version control interface

Test Suite

46 DEBOUNCEETIME_MS Time T#500MS

46 GATE_PULSE_TIME_MS Time T#500MS

IF... CASE... FOR... WHILE... OF... TO DO... DO... (*...) REGION

```
1 // This code is LLM generated and may be subject to third party license
2 // Safe state on initial scan: ensure all outputs go to their default
3 #0_mConveyorRun := FALSE;
4 #0_mConveyorStop := TRUE;
5 #0_mTransferGate := FALSE;
6 #0_iStatusOK := FALSE;
7 #0_lParcelReady := FALSE;
8 #0_nNumTransfers := 0;
9
10 // -----
11 // Step 1: Debounce all digital inputs
12 // -----
13 // Step 1: Debounce all digital inputs
14 // -----
```

Properties Info Diagnostics Plug-ins

General Cross-references Compile Test results Syntax

Show all messages

Path	Description

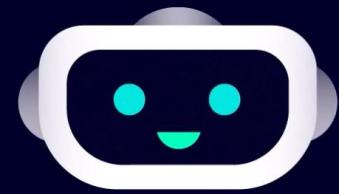
HMI Engineering

Generating WinCC

Unified HMI

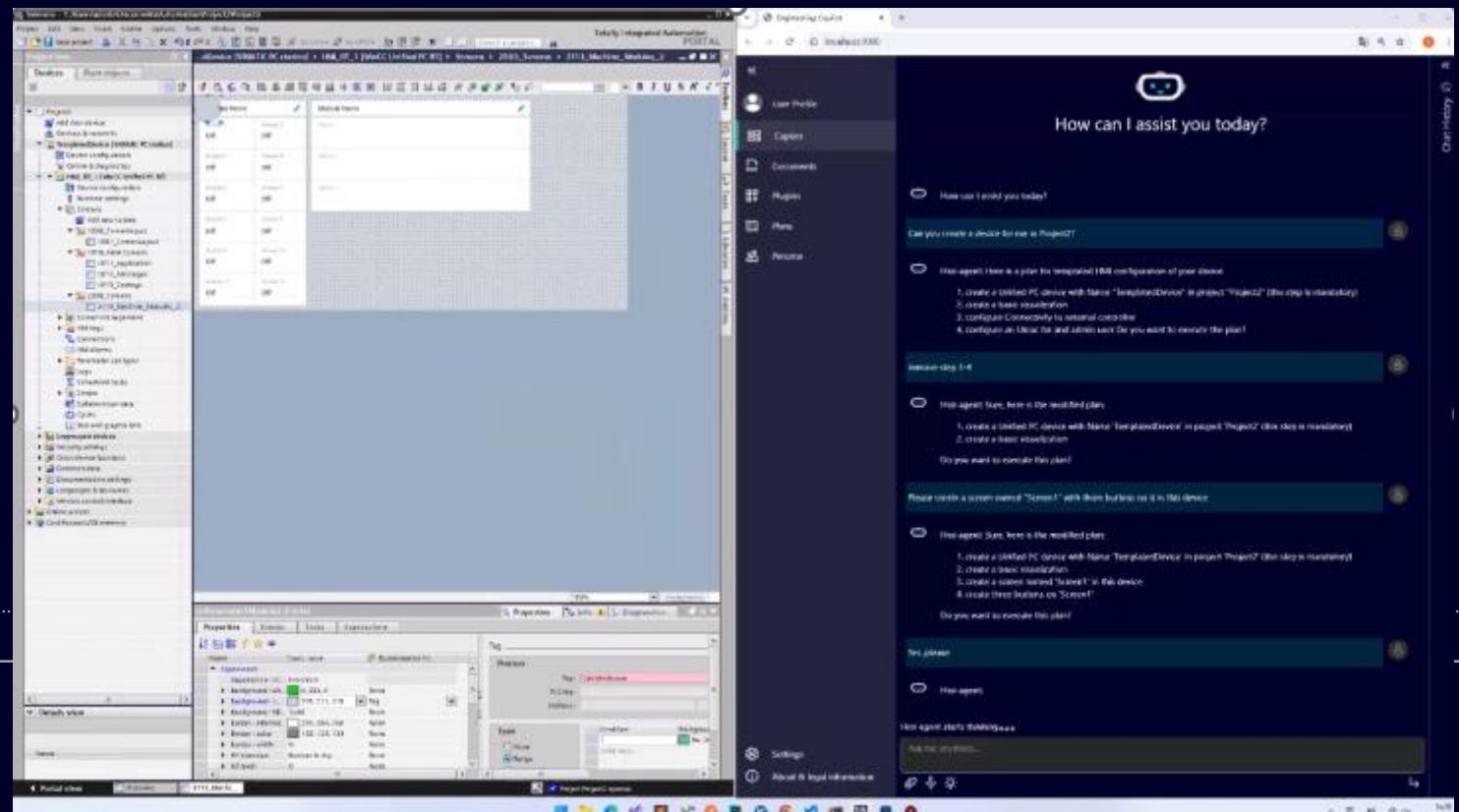
-
-
-

SIEMENS

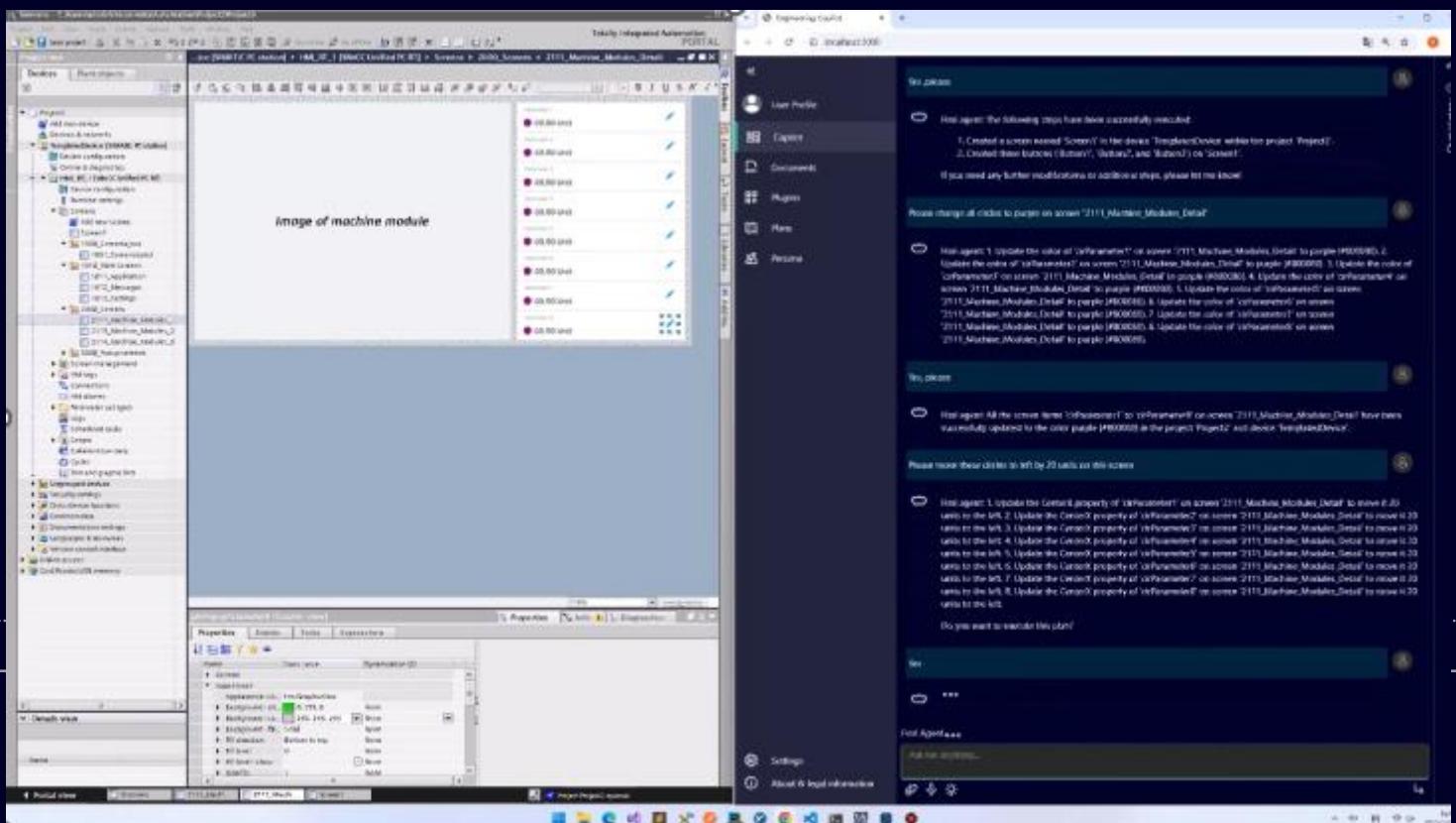


What if you could create HMI panel visualizations within seconds?

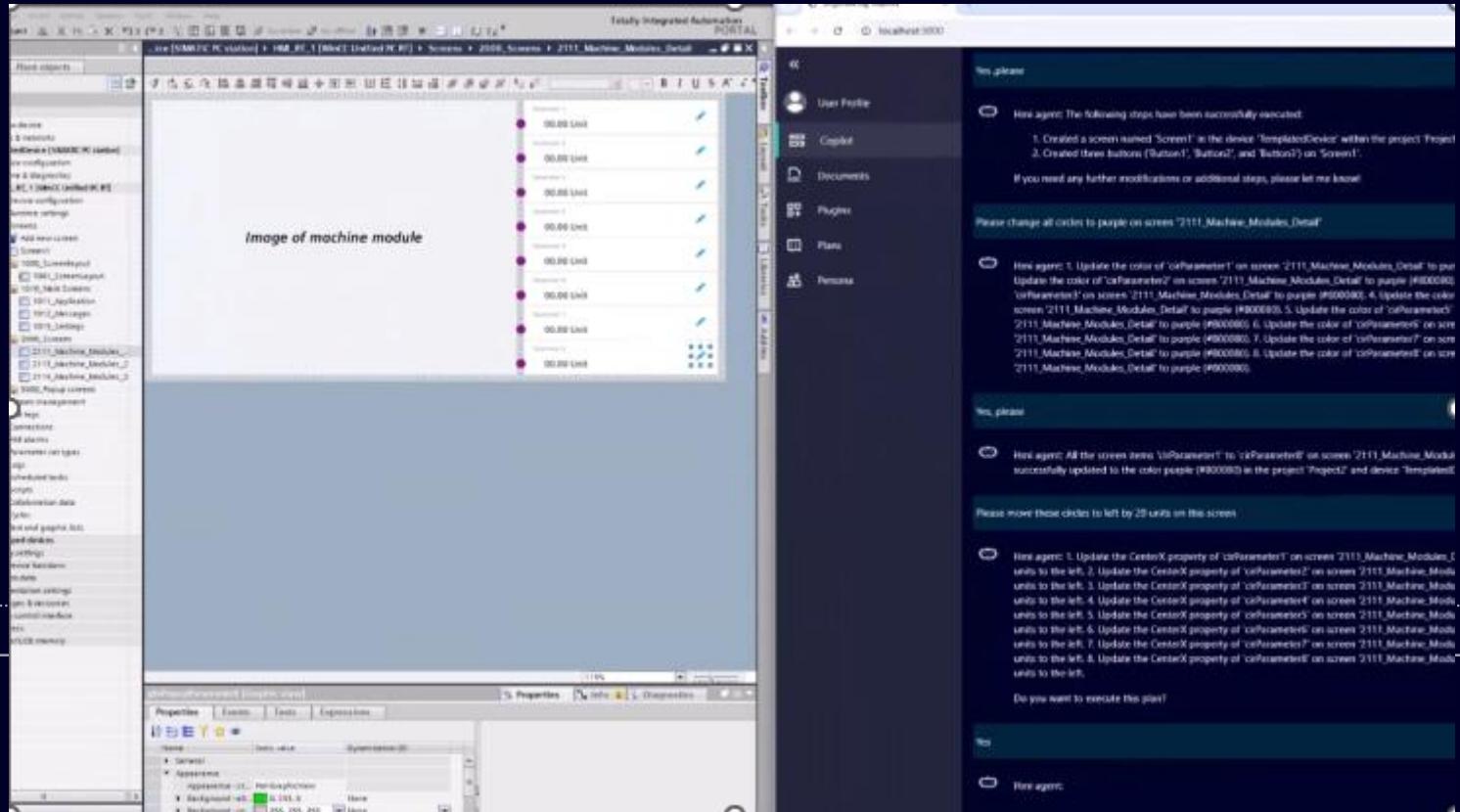
HMI Engineering Generating WinCC Unified HMI



HMI Engineering Generating WinCC Unified HMI



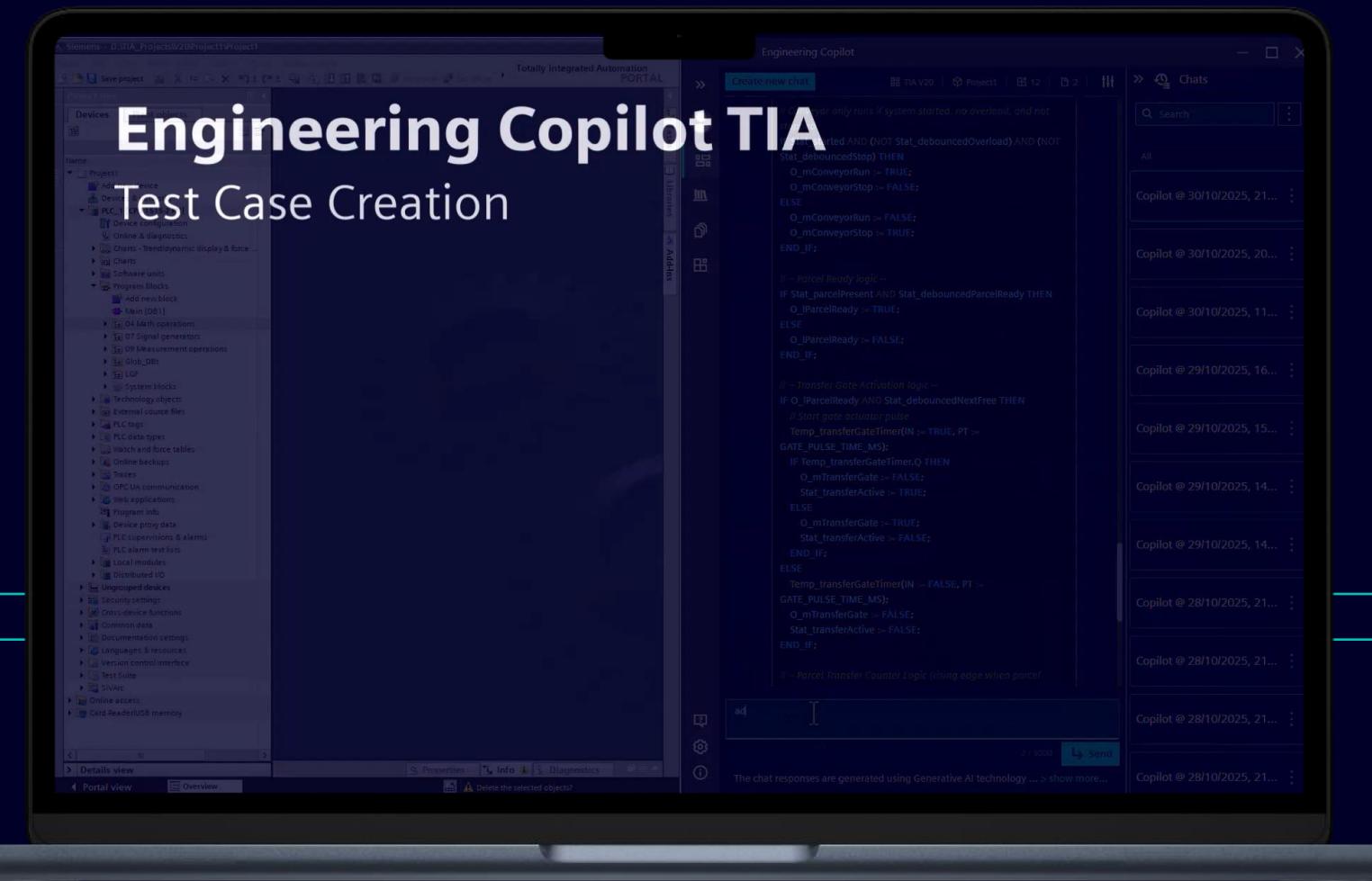
HMI Engineering Generating WinCC Unified HMI



Engineering Copilot TIA

Code Creation: Test Code in Seconds.

- Cut manual testing and documentation overhead



Engineering Copilot TIA

Code Creation: Test Code in Seconds.

- Cut manual testing and documentation overhead



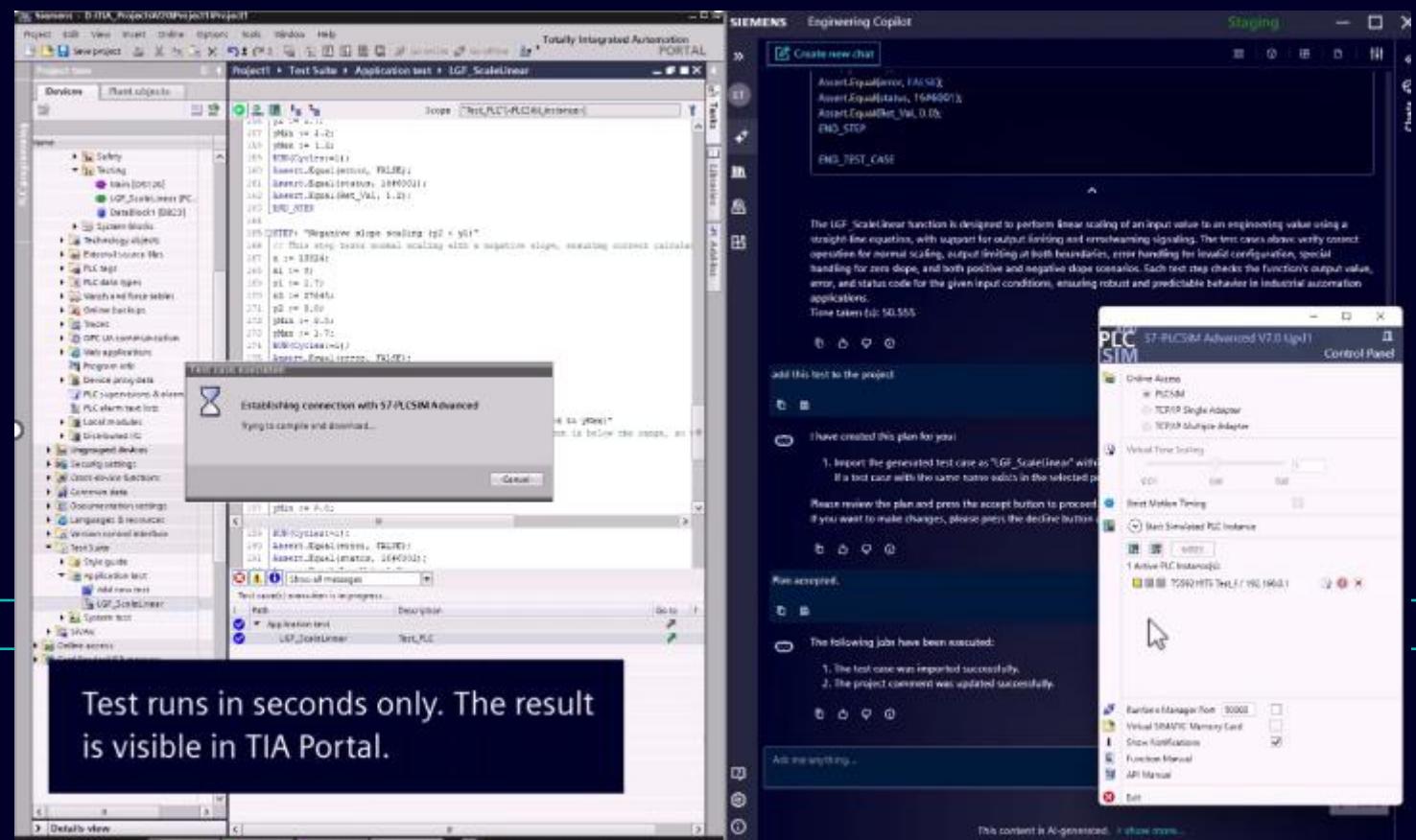
```
variable (IReal) via a linear straight-line  
slope (e.g. an analog input value) to a specific  
value. A linear equation is used in the function  
block. You specify the points P1 and P2. You specify the points P1 and P2. You specify the points P1 and P2.  
x2 := 27648;  
y2 := 1.7;  
yMin := 2.0;  
yMax := 1.0;  
RUN(Cycles:=1);  
Assert.Equal(error, TRUE);  
Assert.Equal(status, 16#8200);  
Assert.Equal(Ret_Val, 0.0);  
END_STEP  
  
STEP: "Special case - x1 approximately equals x2 (zero slope, output y1)"  
// This step tests the special case where x1 and x2 are nearly equal, so the output should be y1.  
x := 5000;  
x1 := 1000;  
y1 := 5.5;  
x2 := 1000.000001;  
y2 := 10.0;  
yMin := 0.0;  
yMax := 10.0;  
RUN(Cycles:=1);  
Assert.Equal(error, FALSE);  
Assert.Equal(status, 16#0000);  
Assert.Equal(Ret_Val, 5.5);  
END_STEP  
  
STEP: "Special case - x1 approximately equals x2, y1 below yMin (output limited to yMin)"  
// This step tests the special case where x1 = x2 and y1 is below yMin, so the output is limited to yMin and a warning  
is set.  
yMax := 10.0;  
RUN(Cycles:=1);  
Assert.Equal(error, FALSE);
```

Generates test code that can be automatically imported into TIA Portal.

Engineering Copilot TIA

Code Creation: Test Code in Seconds.

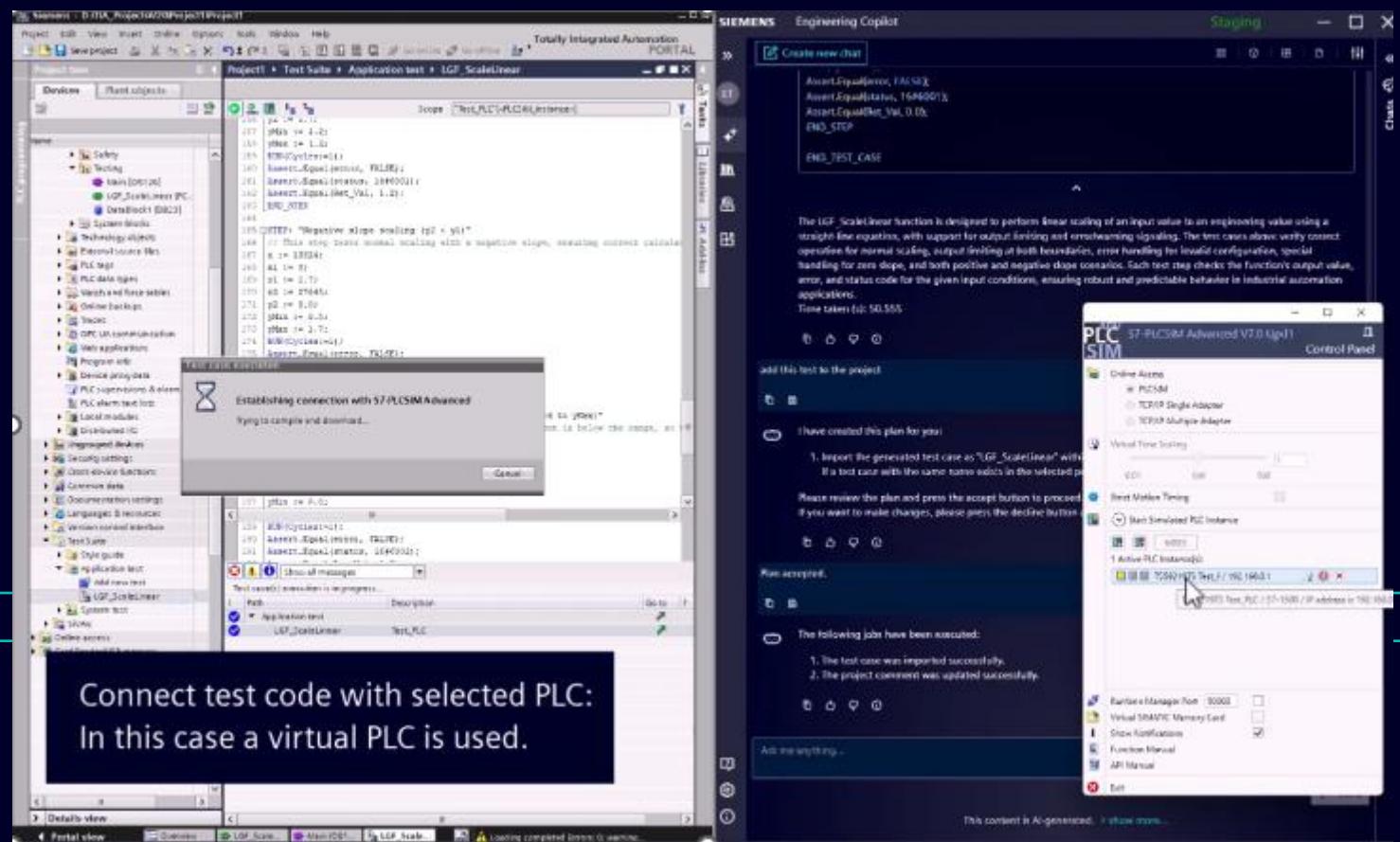
→ Cut manual testing and documentation overhead



Engineering Copilot TIA

Code Creation: Test Code in Seconds.

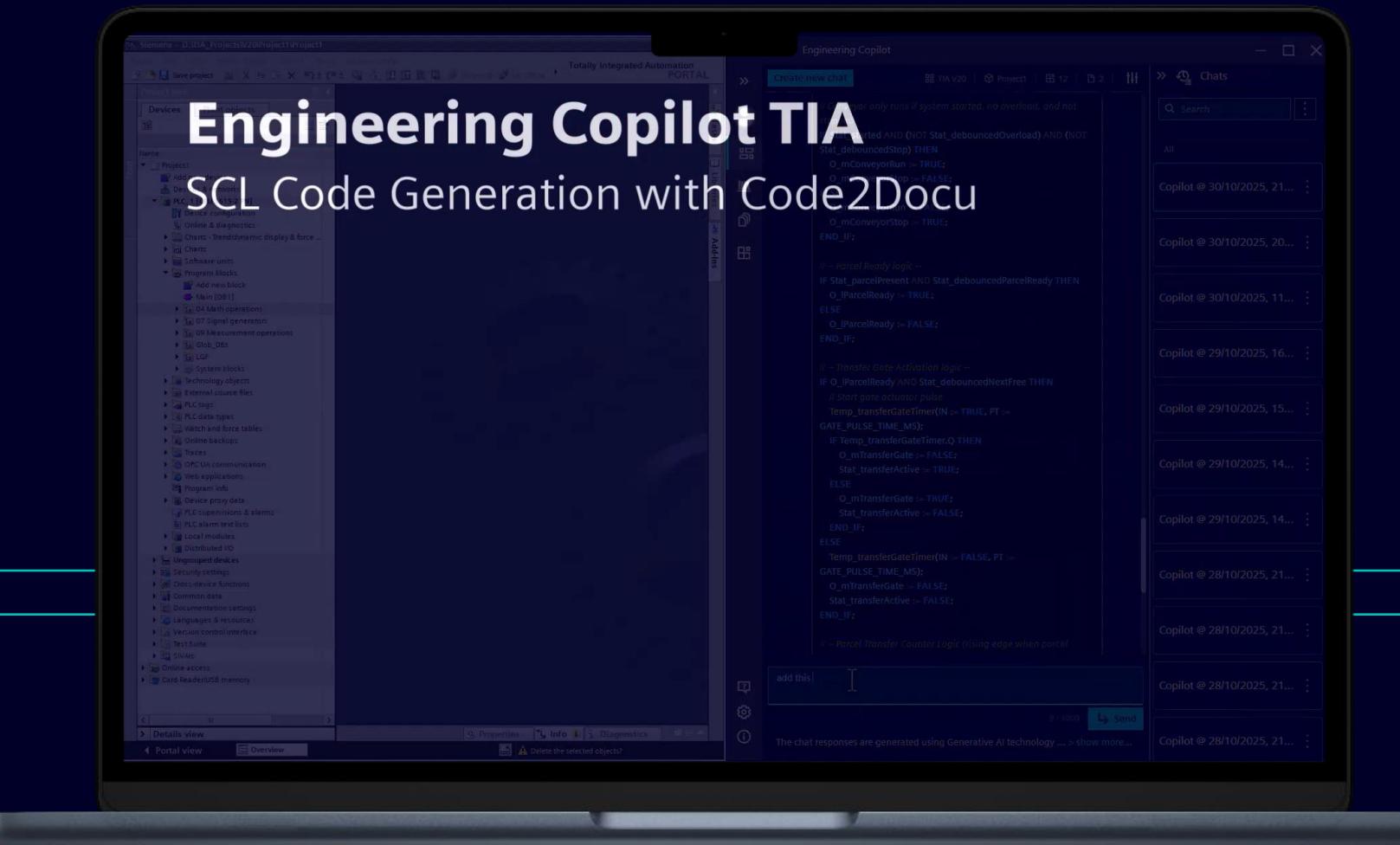
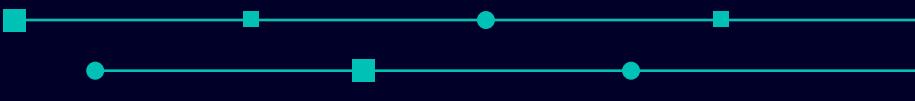
- Cut manual testing and documentation overhead



Engineering Copilot TIA

Code Creation:
Document Code with Tia Portal
'Code2Docu' Add-In.

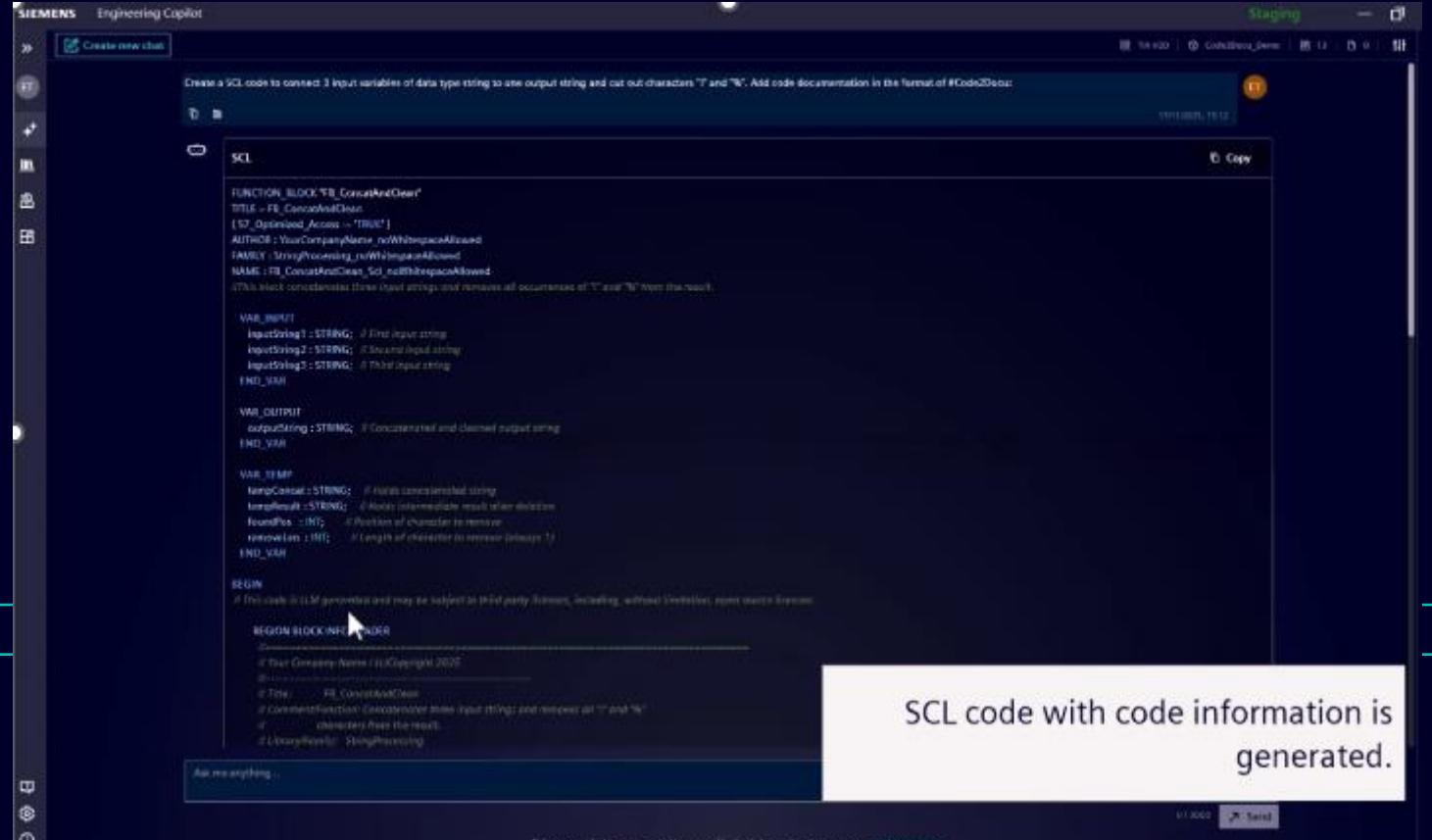
→ Cut manual documentation overhead.



Engineering Copilot TIA

Code Creation: Document Code with Tia Portal 'Code2Docu' Add-In.

→ Cut manual documentation overhead.



```
FUNCTION_BLOCK FB_ConcatAndDelete
TITLE = FB_ConcatAndDelete
LS7_Optimized_Access = "TRUE"
AUTHOR = YourCompanyName_noWhitespaceAllowed
FAMILY = StringProcessing_noWhitespaceAllowed
NAME = FB_ConcatAndDelete_SCI_noWhitespaceAllowed
//This block concatenates three input strings and removes all occurrences of "T" and "W" from the result.

VAR_INPUT
    inputString1 : STRING; // First input string
    inputString2 : STRING; // Second input string
    inputString3 : STRING; // Third input string
END_VAR

VAR_OUTPUT
    outputString : STRING; // Concatenated and cleaned output string
END_VAR

VAR_TEMP
    tempConcat : STRING; // Holds concatenated string
    tempResult : STRING; // Holds intermediate result after deletion
    foundPos : INT; // Position of character to remove
    removeLen : INT; // Length of character to remove (always 1)
END_VAR

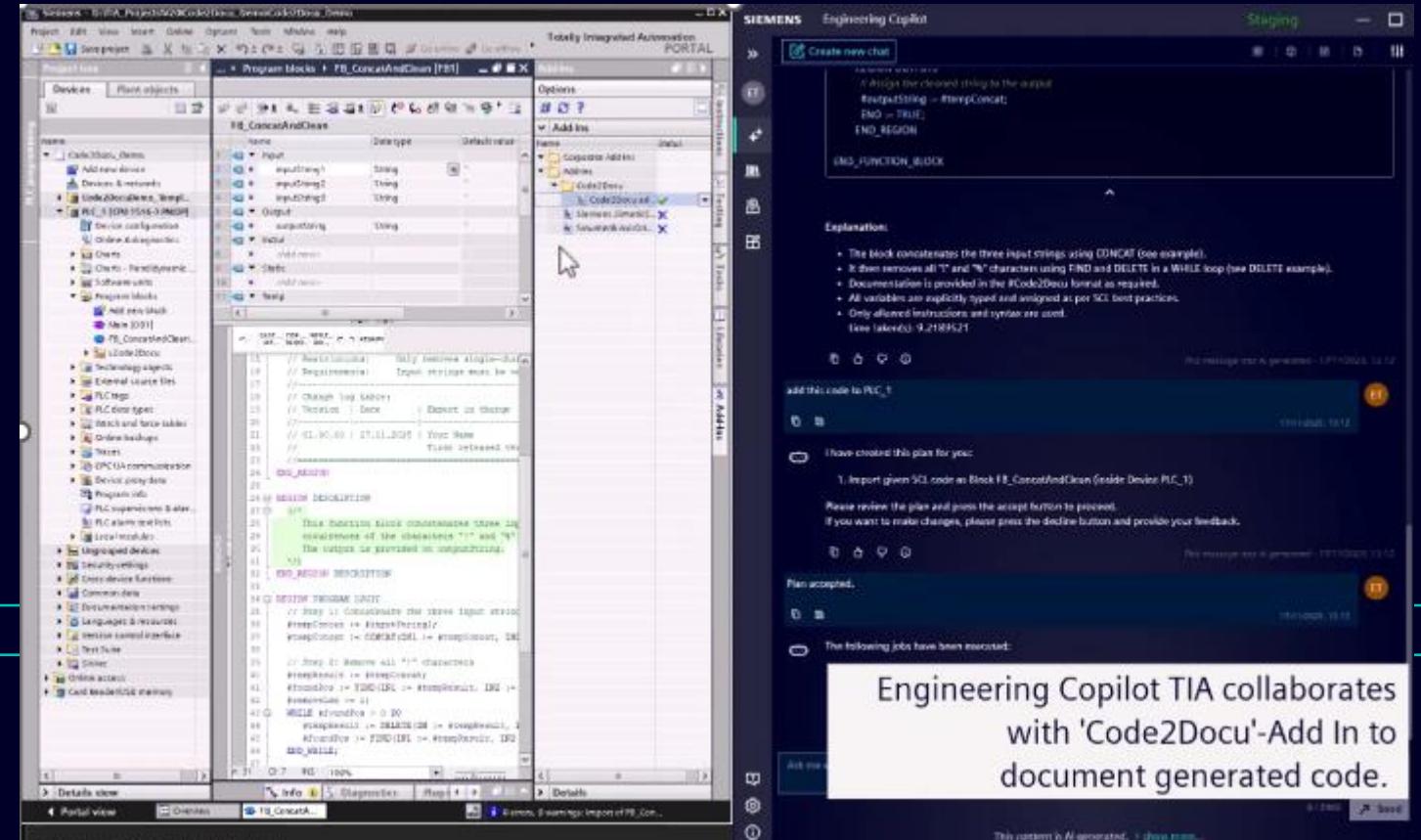
BEGIN
    // This code is SCL generated and may be subject to third party licenses, including, without limitation, open source licenses.
    REGION_BLOCK_IN_RULER
        // Other Generated Code //Copyright 2026
        // FB_ConcatAndDelete
        // Concatenates three input strings and removes all "T" and "W" characters from the result.
        // License: NoStringProcessing
    END_REGION_BLOCK_IN_RULER
    outputString := tempConcat;
END
```

SCL code with code information is generated.

Engineering Copilot TIA

Code Creation: Document Code with Tia Portal 'Code2Docu' Add-In.

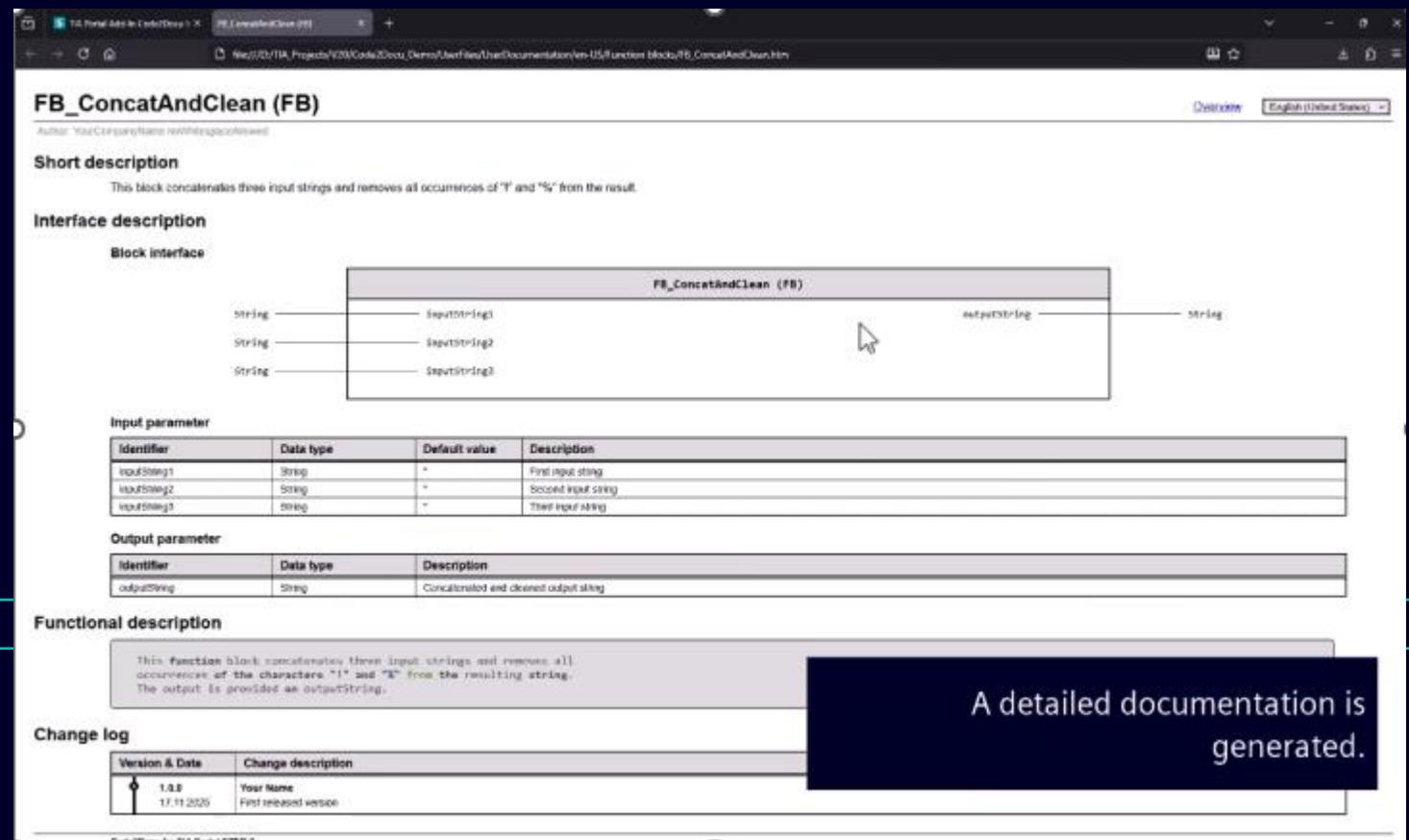
→ Cut manual documentation overhead.



Engineering Copilot TIA

Code Creation: Document Code with Tia Portal 'Code2Docu' Add-In.

→ Cut manual documentation overhead.



The screenshot shows the TIA Portal Code2Docu documentation interface for the **FB_ConcatAndClean (FB)** block. The interface includes:

- Short description:** This block concatenates three input strings and removes all occurrences of ";" and "%" from the result.
- Interface description:**
 - Block interface:** A diagram showing the block with three input ports labeled `inputString1`, `inputString2`, and `inputString3`, and one output port labeled `outputString`.
 - Input parameter:**

Identifier	Data type	Default value	Description
<code>inputString1</code>	String	" "	First input string
<code>inputString2</code>	String	" "	Second input string
<code>inputString3</code>	String	" "	Third input string
 - Output parameter:**

Identifier	Data type	Description
<code>outputString</code>	String	Concatenated and cleaned output string
- Functional description:** This Function block concatenates three input strings and removes all occurrences of the characters ";" and "%" from the resulting string. The output is provided as `outputString`.
- Change log:**

Version & Date	Change description
1.0.0 17.11.2025	Your Name First released version

A dark blue callout box on the right side of the interface contains the text: **A detailed documentation is generated.**

Engineering Copilot TIA

Hardware Creation:
Streamline your device setup –
automatic device configuration using
Excel and/or Prompting.

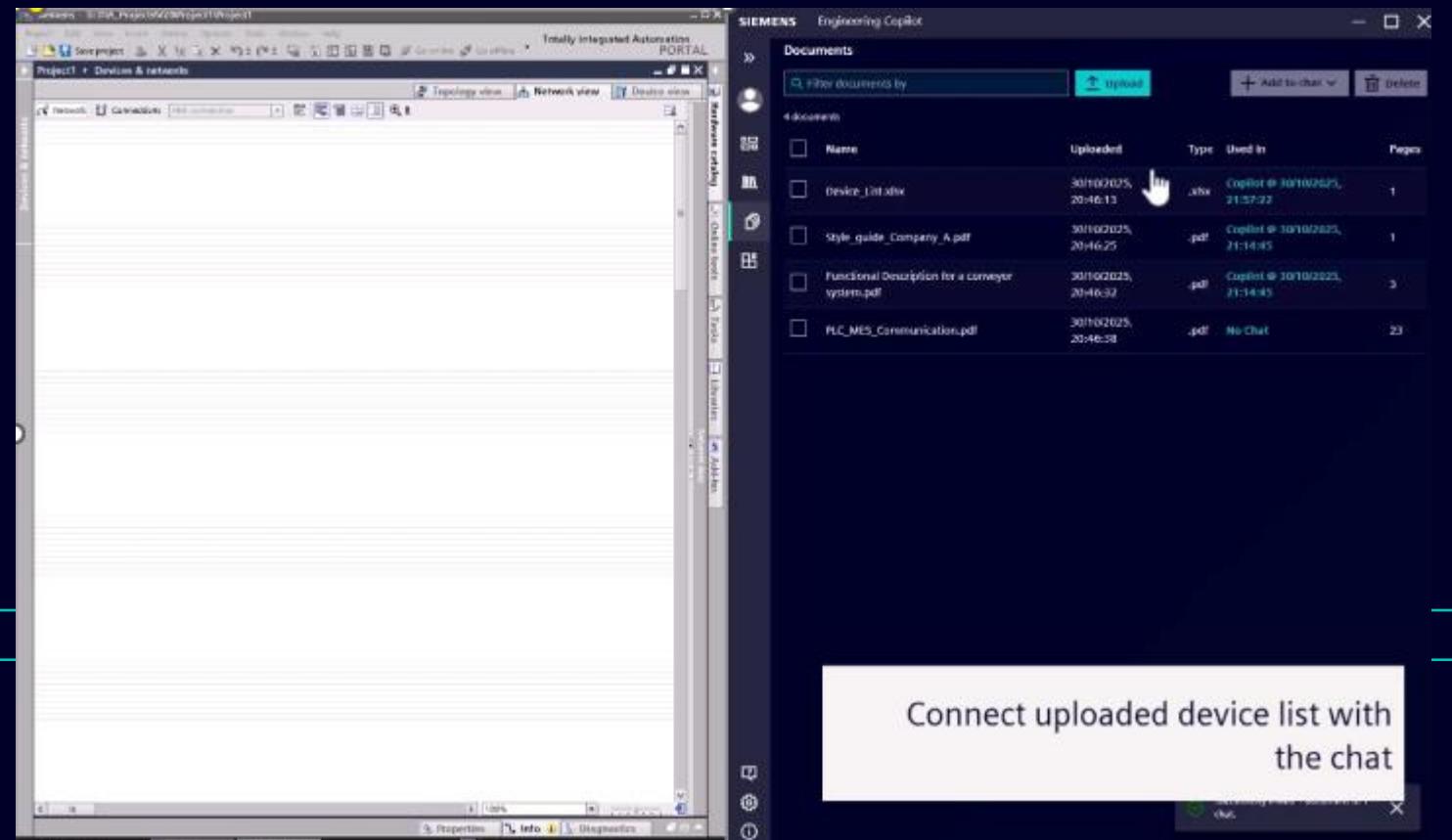
→ No longer waste time while creating devices manually



Engineering Copilot TIA

Hardware Creation:
Streamline your device setup –
automatic device configuration using
Excel and/or Prompting.

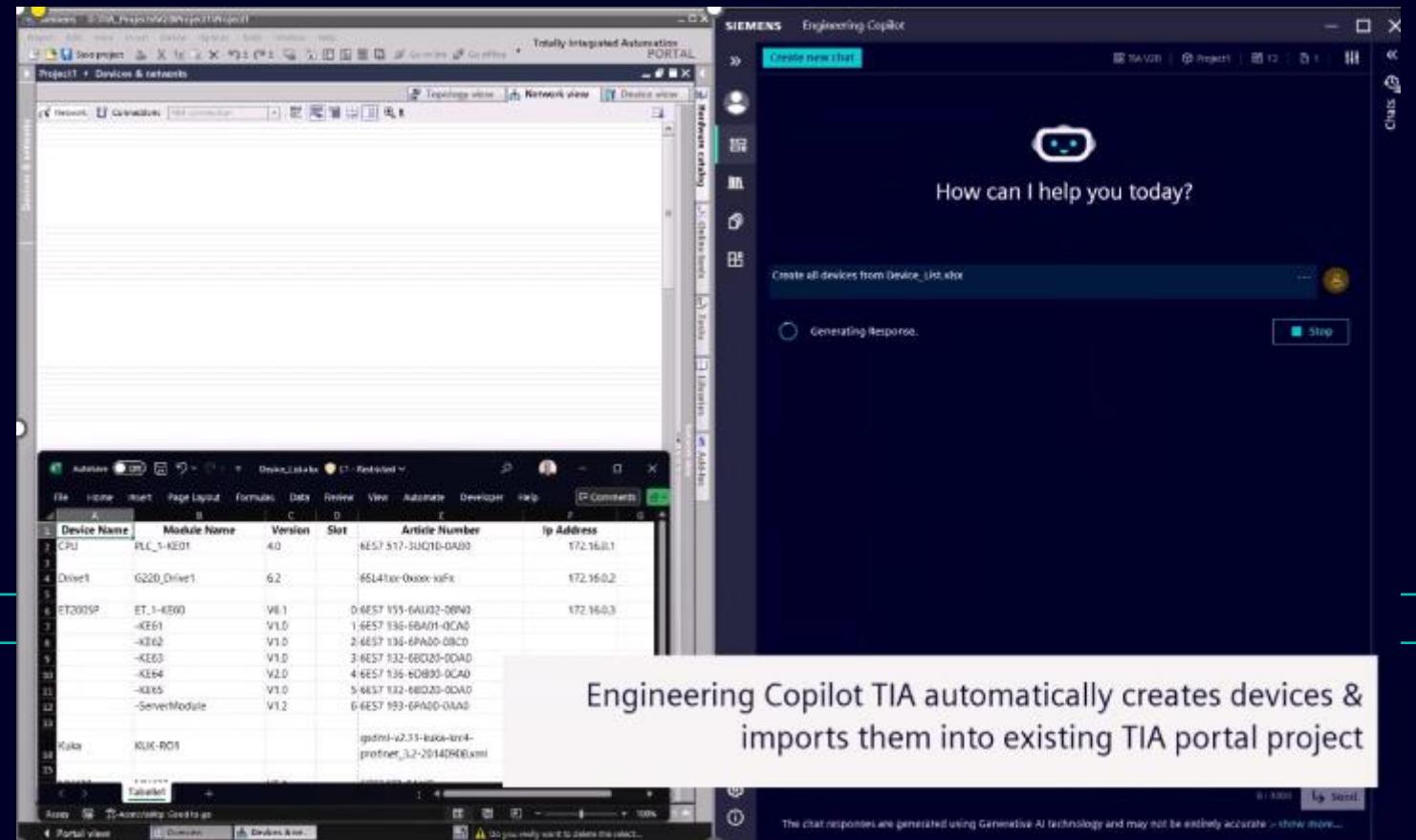
→ No longer waste time while creating
devices manually



Engineering Copilot TIA

Hardware Creation:
Streamline your device setup –
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Excel and/or Prompting.

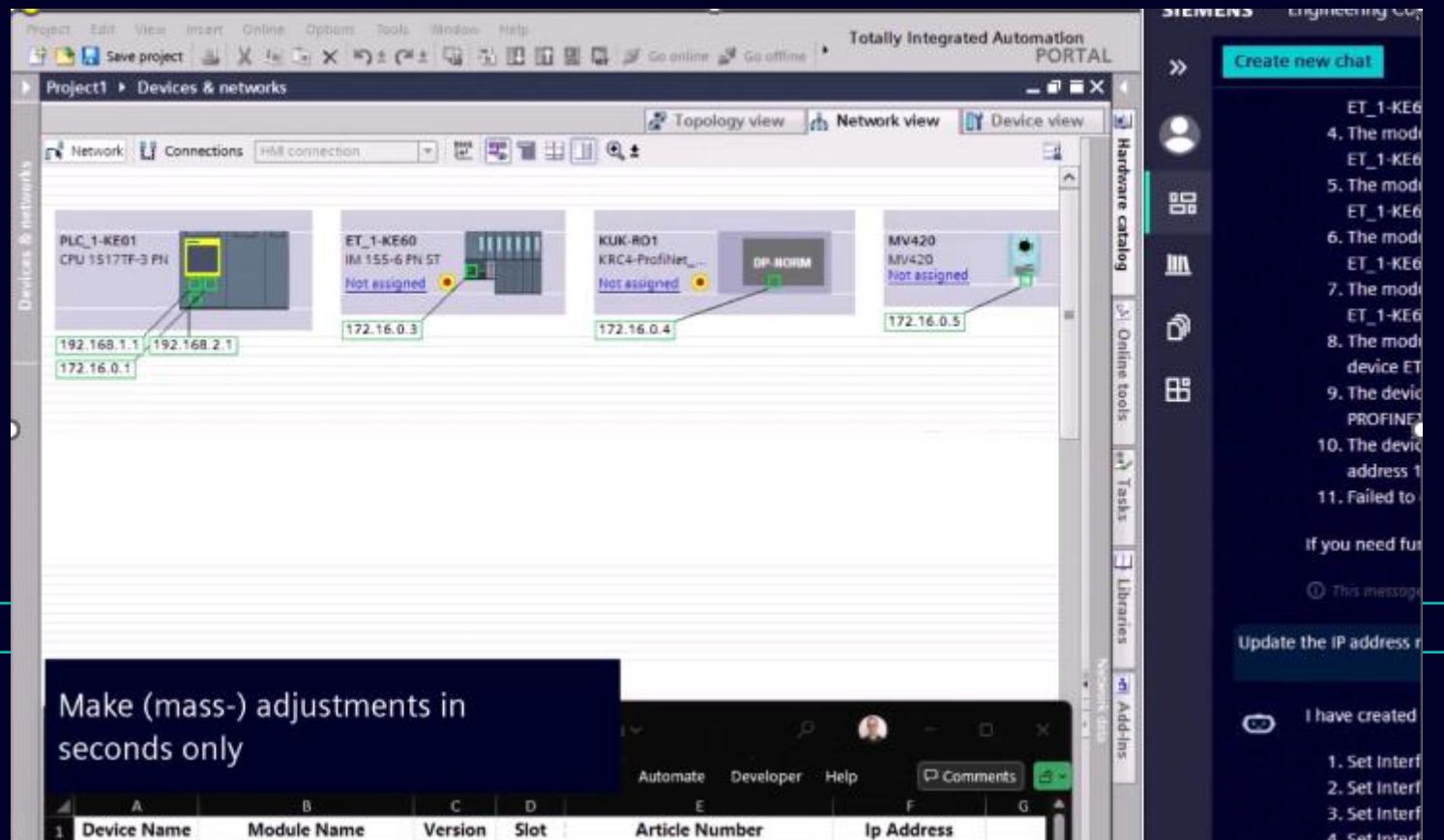
→ No longer waste time while creating
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Engineering Copilot TIA

Hardware Creation:
Streamline your device setup –
automatic device configuration using
Excel and/or Prompting.

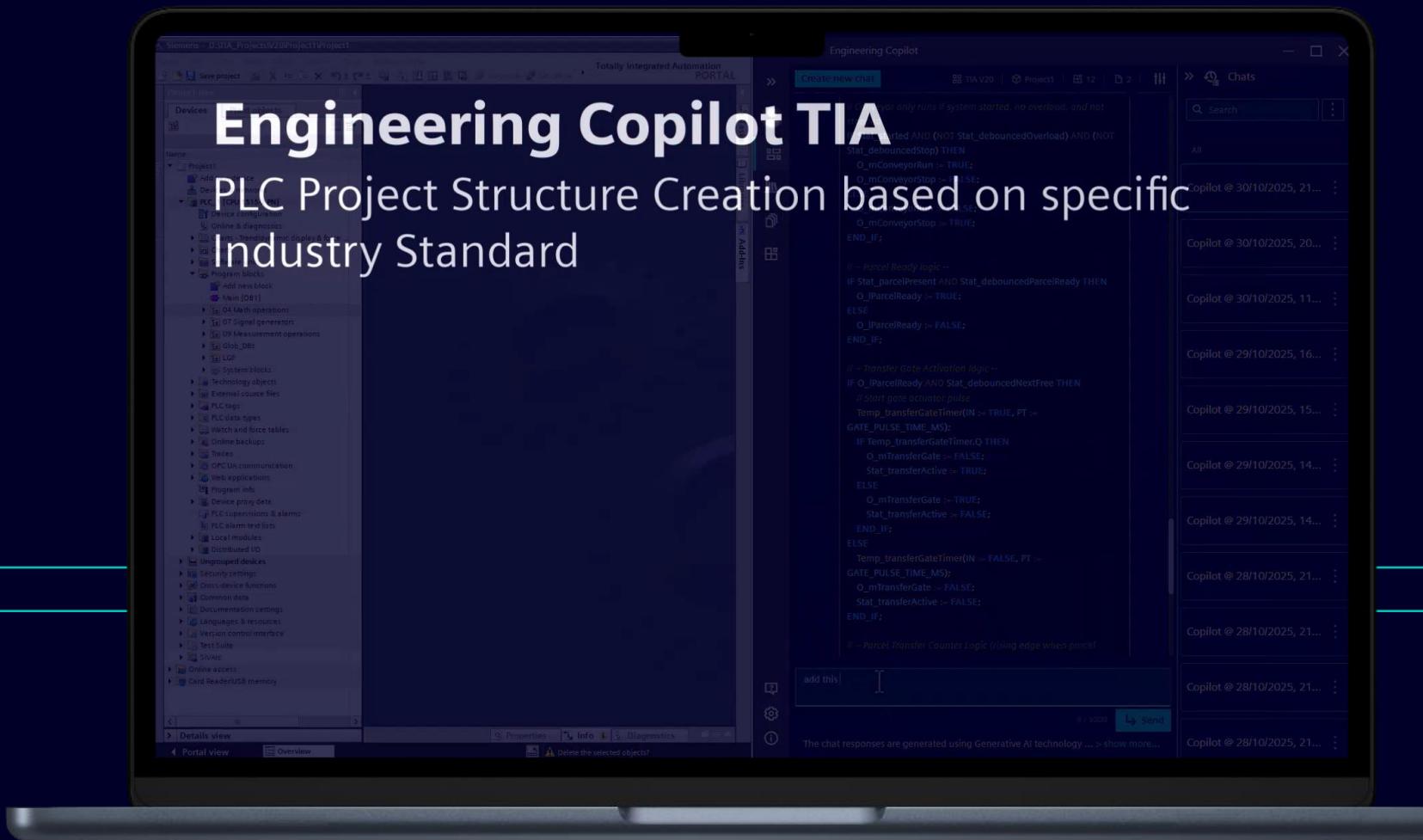
→ No longer waste time while creating
devices manually



Engineering Copilot TIA

Comprehensive TIA Portal Projects:
Creating PLC Project Structures
based on specific Industry
Standard

→ Reduce time-to-operation

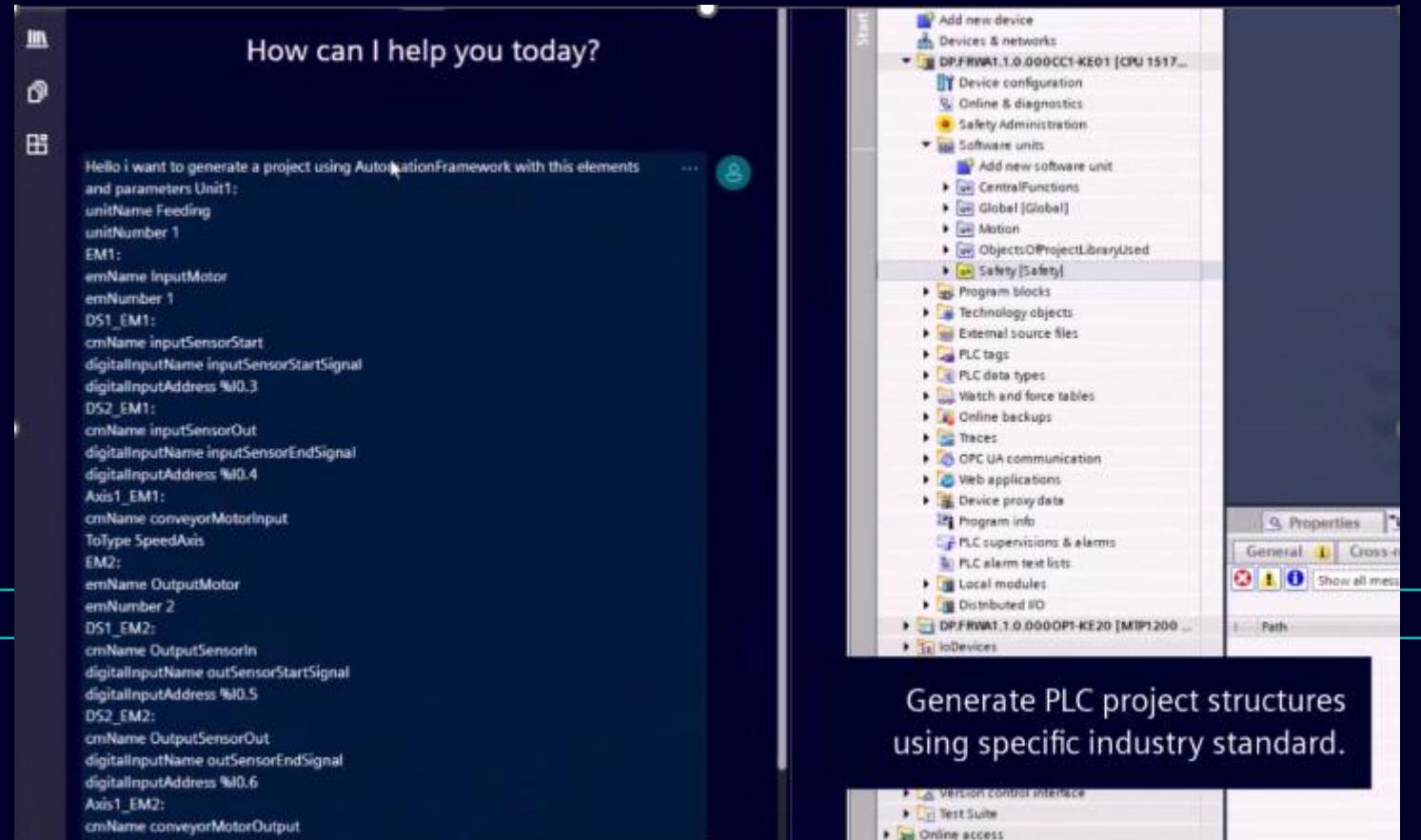


Engineering Copilot TIA

Comprehensive TIA Portal Projects:

Creating PLC Project Structures
based on specific Industry
Standard

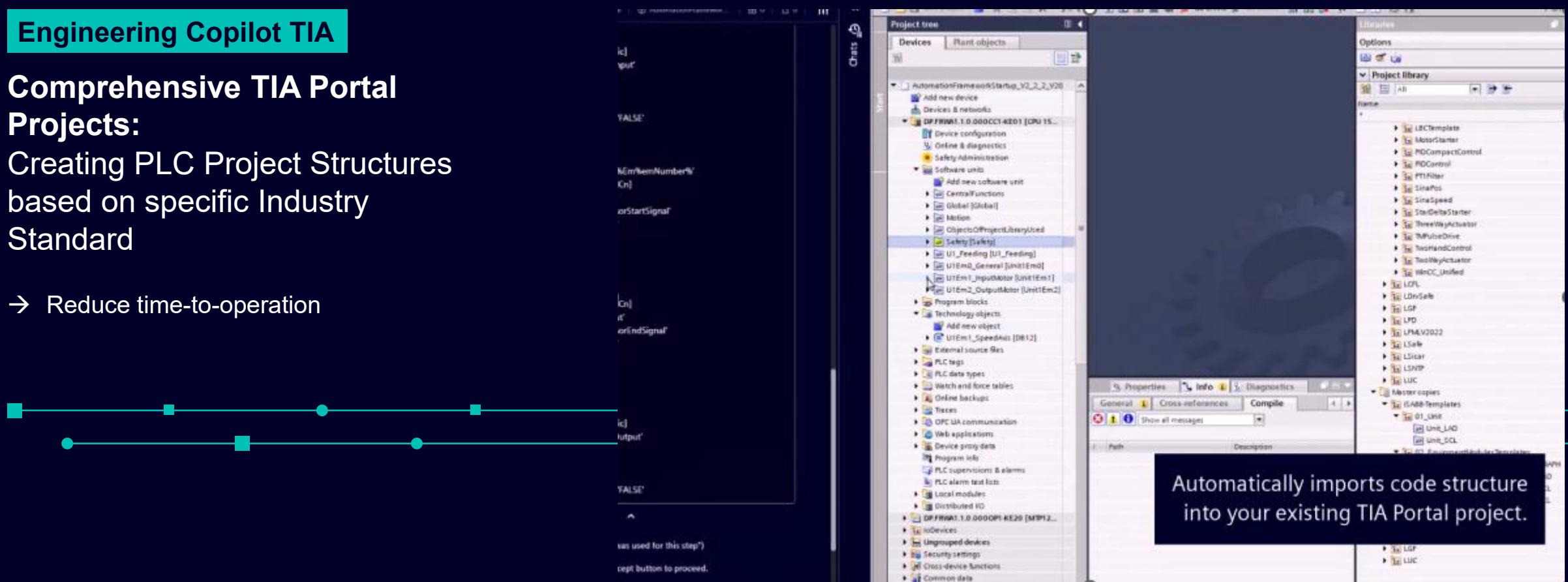
→ Reduce time-to-operation



Engineering Copilot TIA

Comprehensive TIA Portal Projects: Creating PLC Project Structures based on specific Industry Standard

→ Reduce time-to-operation



Engineering Copilot TIA

TIA Portal Guidance & Support:
Quick responses to questions in
the context of TIA Portal
Engineering.

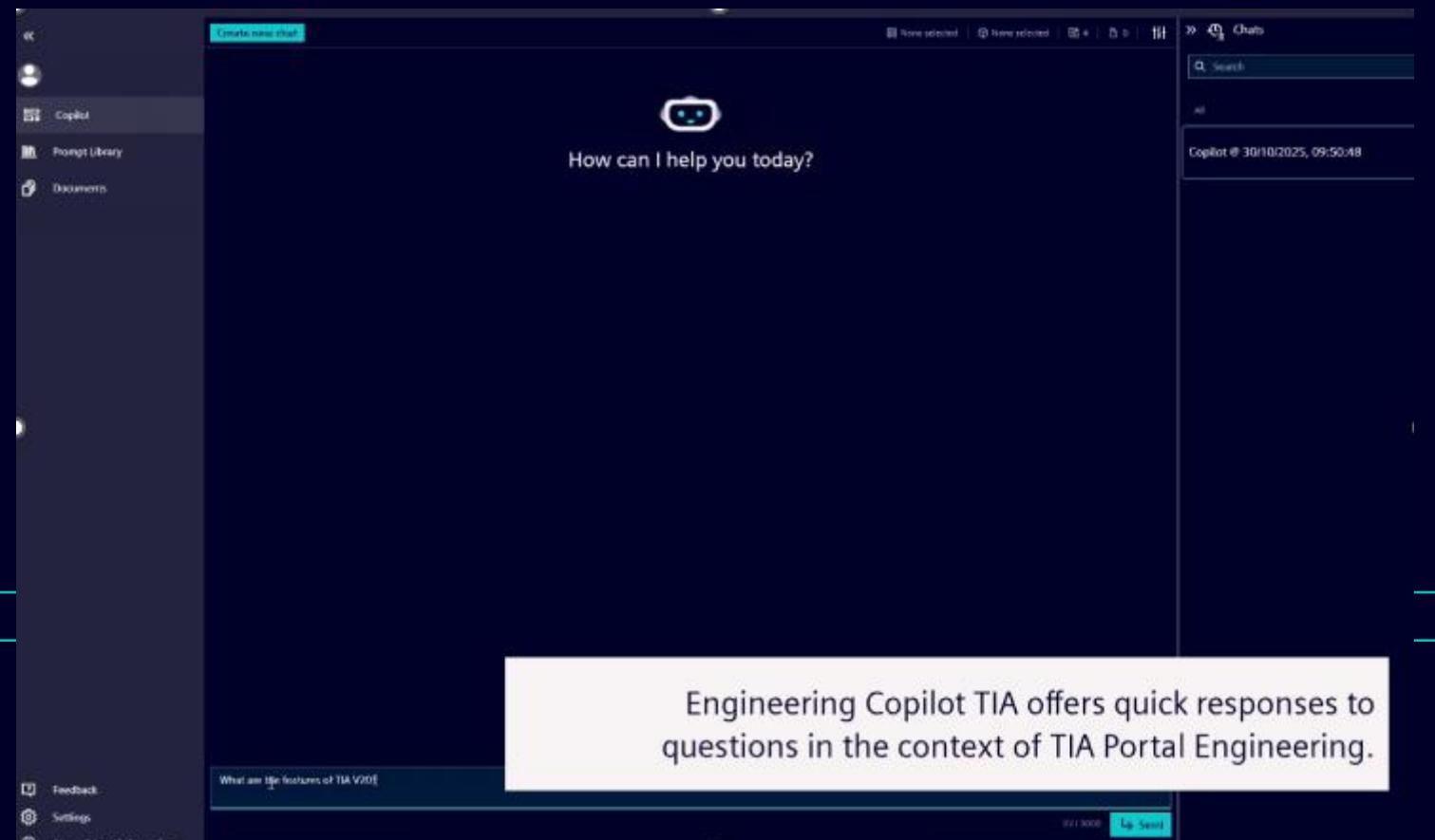
→ Easy access to relevant expert know-how



Engineering Copilot TIA

TIA Portal Guidance & Support:
Quick responses to questions in
the context of TIA Portal
Engineering.

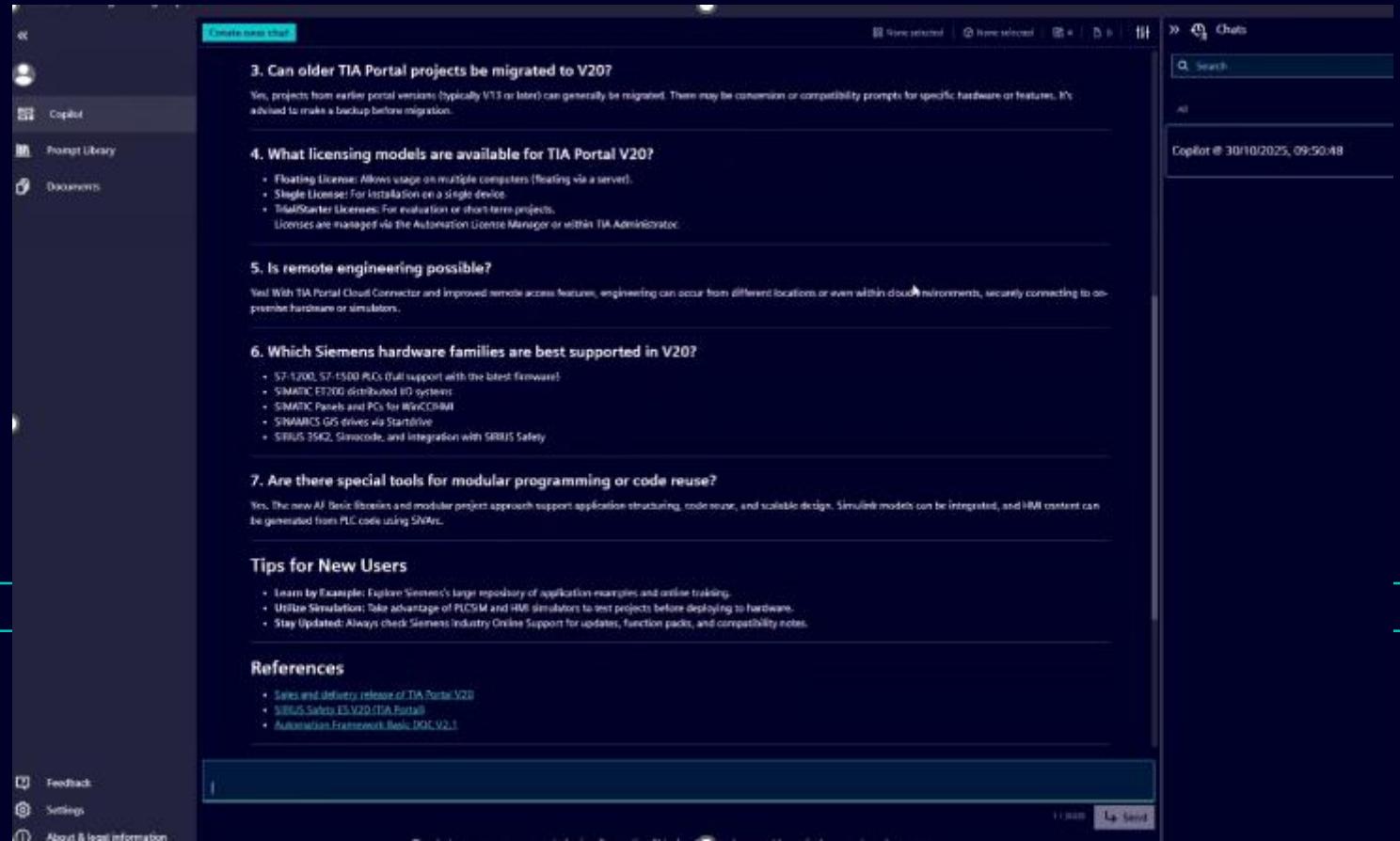
- Easy access to relevant expert know-how



Engineering Copilot TIA

TIA Portal Guidance & Support: Quick responses to questions in the context of TIA Portal Engineering.

→ Easy access to relevant expert know-how



The screenshot shows a dark-themed user interface for 'Engineering Copilot TIA'. On the left, a sidebar lists 'Copilot', 'Prompt Library', and 'Documents'. The main content area displays a knowledge base article with the following sections:

- 3. Can older TIA Portal projects be migrated to V20?**

Yes, projects from earlier portal versions (typically V13 or later) can generally be migrated. There may be conversion or compatibility prompts for specific hardware or features. It's advised to make a backup before migration.
- 4. What licensing models are available for TIA Portal V20?**
 - Floating License: Allows usage on multiple computers (floating via a server).
 - Single License: For installation on a single device.
 - Trial/Starter Licenses: For evaluation or short-term projects.

Licenses are managed via the Automation License Manager or within TIA Administrator.
- 5. Is remote engineering possible?**

Yes! With TIA Portal Cloud Connector and improved remote access features, engineering can occur from different locations or even within cloud environments, securely connecting to on-premise hardware or simulators.
- 6. Which Siemens hardware families are best supported in V20?**
 - 3G-1200, 3G-1500 PLCs (full support with the latest firmware)
 - SIMATIC ET200 distributed I/O systems
 - SIMATIC Panels and PCs for HMI/CR/IM
 - SIMATIC GS drives via Startdrive
 - SIRIUS 3SK2, Simocode, and integration with SIRIUS Safety
- 7. Are there special tools for modular programming or code reuse?**

Yes. The new AI Basic Libraries and modular project approach support application structuring, code reuse, and scalable design. Simulink models can be integrated, and HMI content can be generated from PLC code using SWArC.

Tips for New Users

- Learn by Example: Explore Siemens's large repository of application examples and online training.
- Utilize Simulation: Take advantage of PLSIM and HMI simulators to test projects before deploying to hardware.
- Stay Updated: Always check Siemens Industry Online Support for updates, function packs, and compatibility notes.

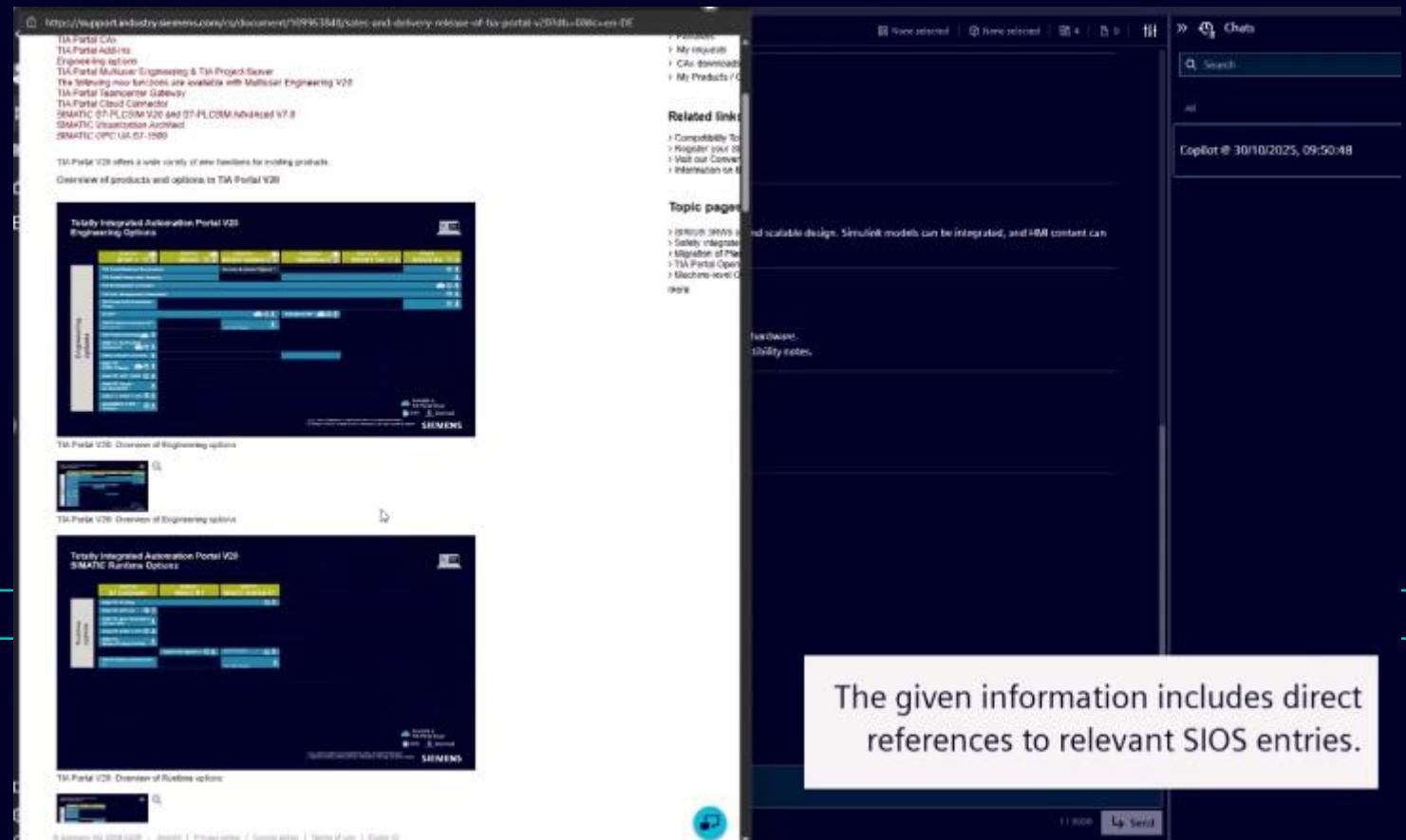
References

- Sales and Delivery release of TIA Portal V20
- SIRIUS Safety ES V20 (TIA Portal)
- Automation Framework Basic DOC_V2.1

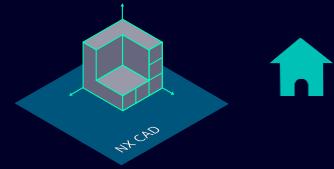
Engineering Copilot TIA

TIA Portal Guidance & Support:
Quick responses to questions in
the context of TIA Portal
Engineering.

→ Easy access to relevant expert know-how



The screenshot shows a web page from the Siemens Support Industry website. The URL is <https://support.industry.siemens.com/s/documents/10953848/sales-and-delivery-release-of-tia-portal-v20-mh-006c-en-DE>. The page title is "TIA Portal Guidance & Support". The main content area displays several screenshots of the TIA Portal interface, including "TIA Portal V20: Overview of Engineering options" and "TIA Portal V20: Overview of Runtime options". The right sidebar contains links for "My requests", "My downloads", "My Products", and "Related links" (Compatibility Table, Register your SIOS, Visit our Community, Information on the SIOS). A "Topic pages" section lists "SIMATIC HW Config", "Safety Integration", "Migration of Projects", "TIA Portal Options", and "Machine-level Configuration". A "Hardware" section is also present. The bottom right corner of the page shows a timestamp: "Copilot@ 30/10/2025, 09:50:48". A callout box in the bottom right corner states: "The given information includes direct references to relevant SIOS entries."

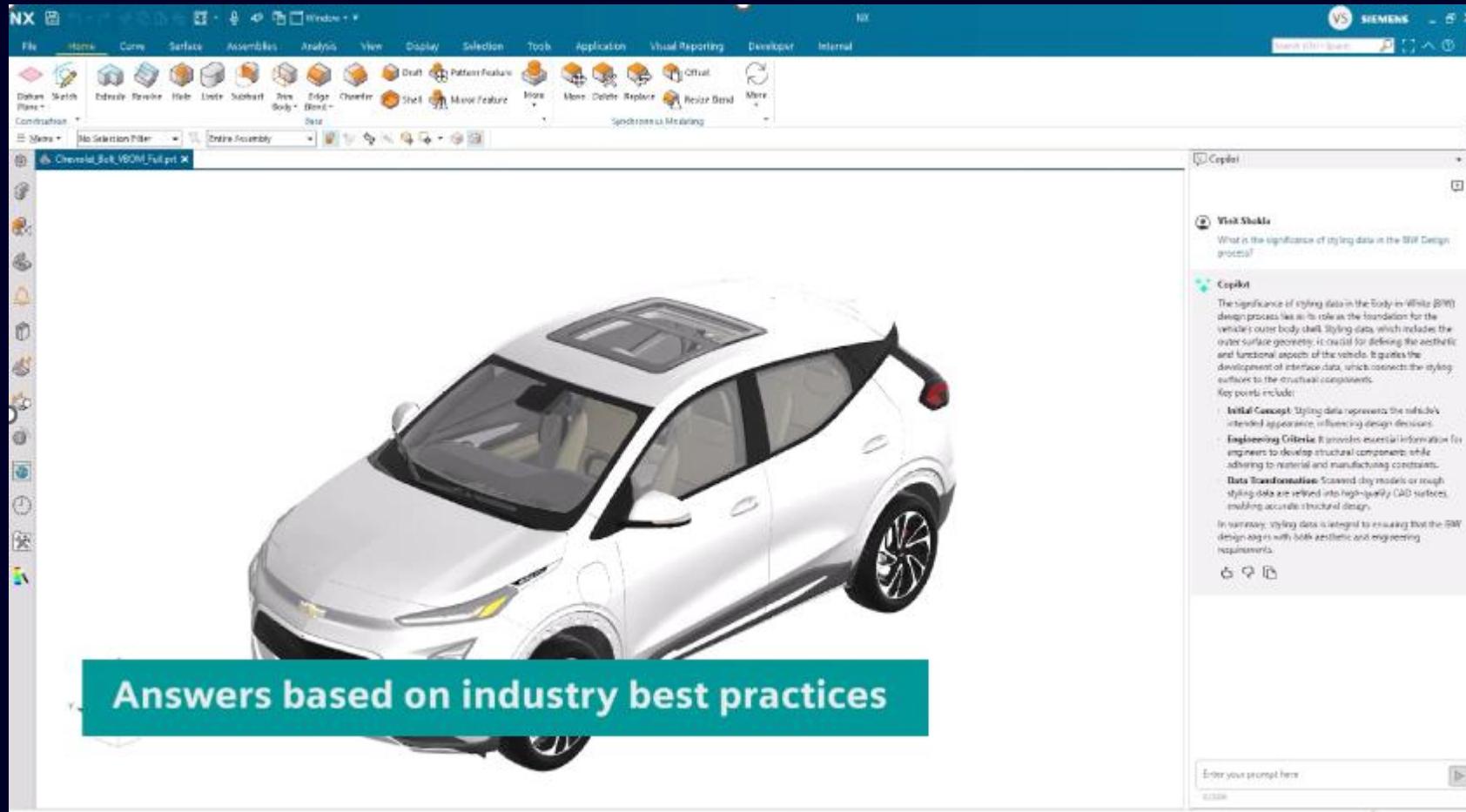
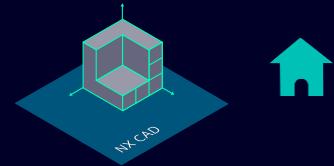


Transform engineering

Design Copilot NX delivers AI engineering assistance to enable users to ask natural language questions, quickly access detailed technical insights and streamline complex design tasks for faster and smarter product development. Design engineers can:

- Receive accurate design assistance
- Understand detail design context
- Make design changes quickly
- Enable more productive workflows and efficiency savings

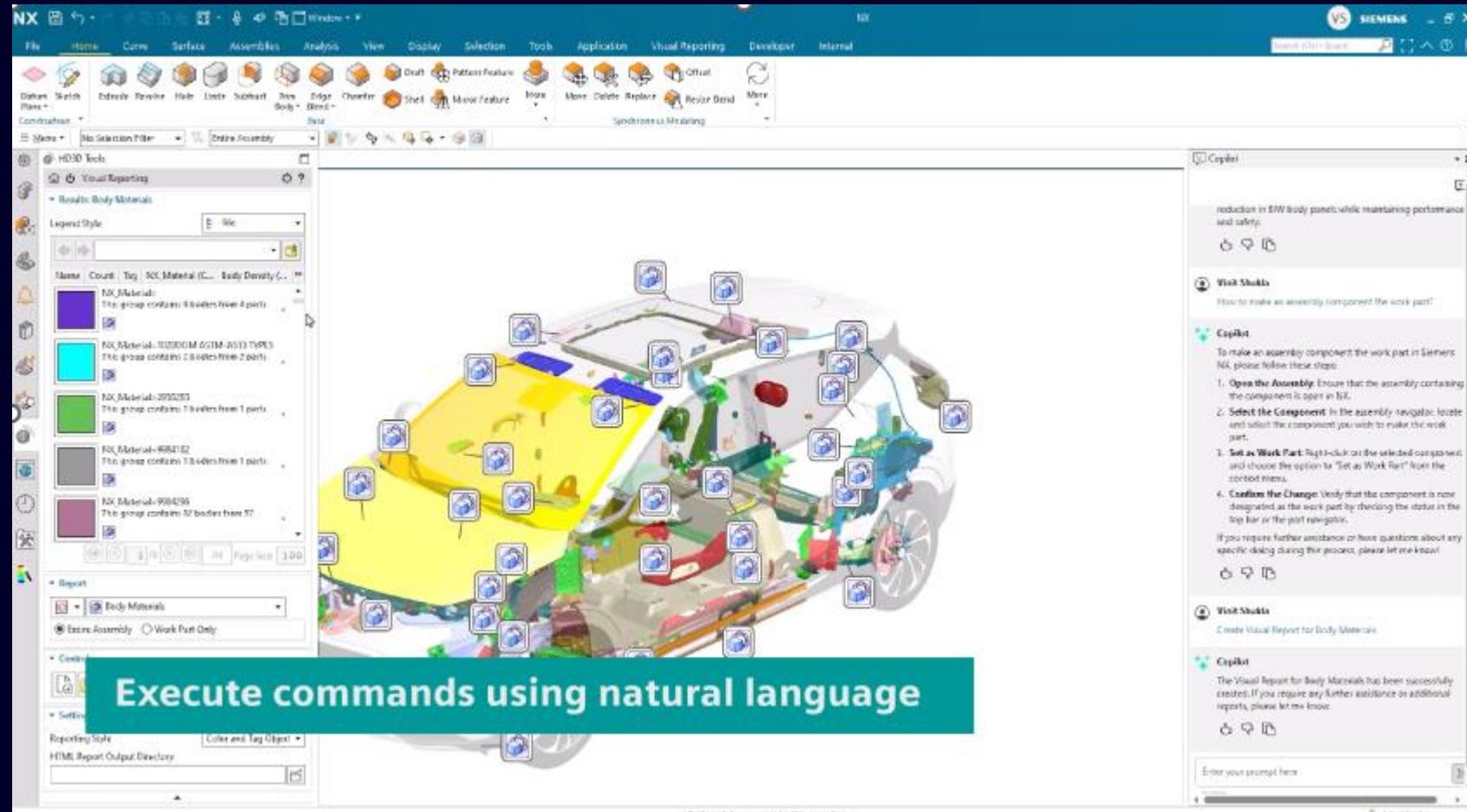
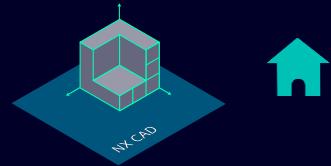
Design Copilot NX



Design Copilot NX delivers AI engineering assistance to enable users to ask natural language questions, quickly access detailed technical insights and streamline complex design tasks for faster and smarter product development. Design engineers can:

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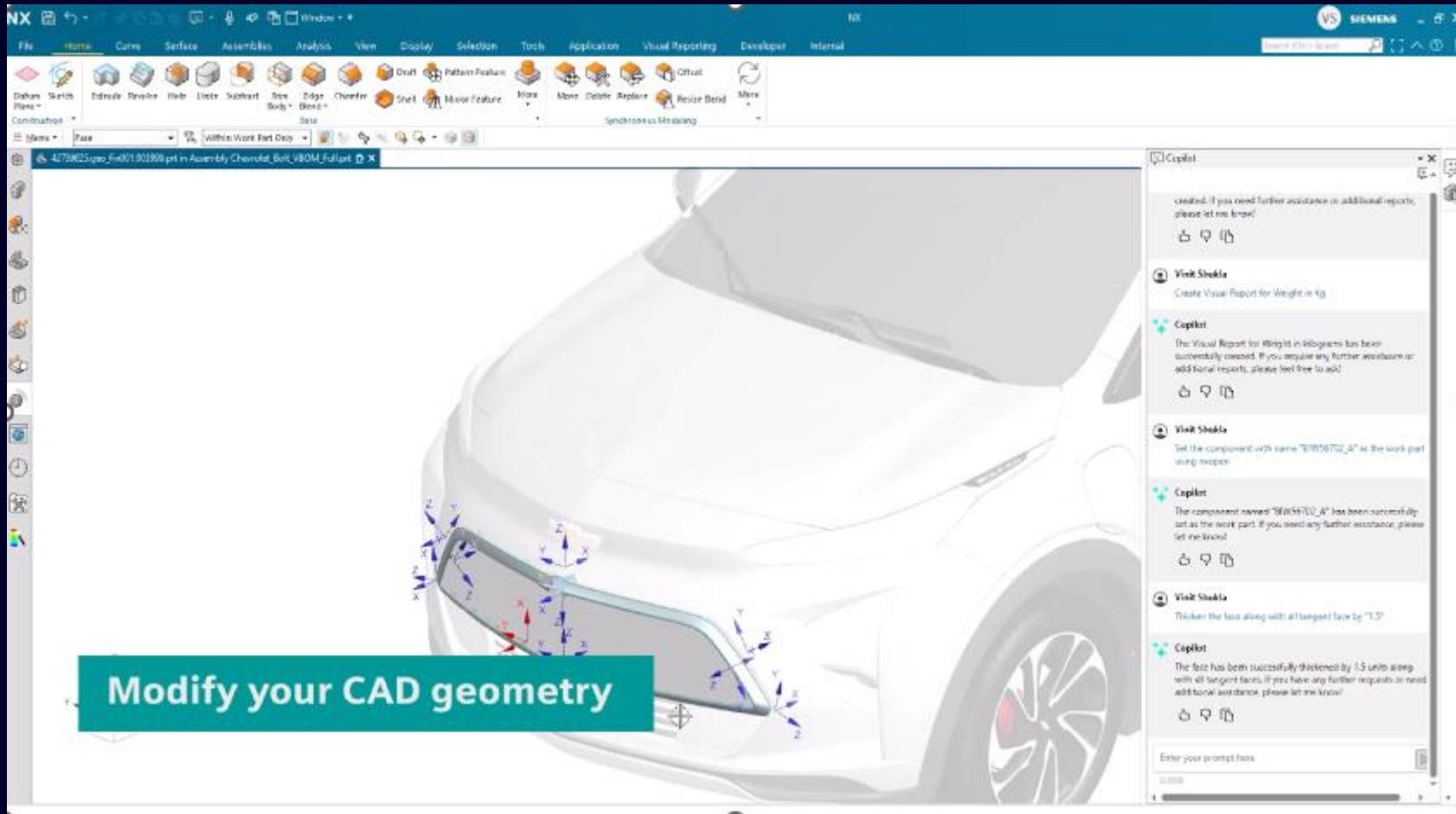
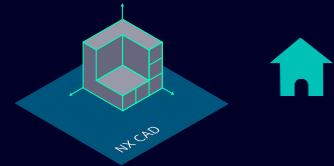
Design Copilot NX



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Design Copilot NX



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- Understand detail design context
- Make design changes quickly
- Enable more productive workflows and efficiency savings

IKiitos!



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Siemens Osakeyhtiö
Digital Industries

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