

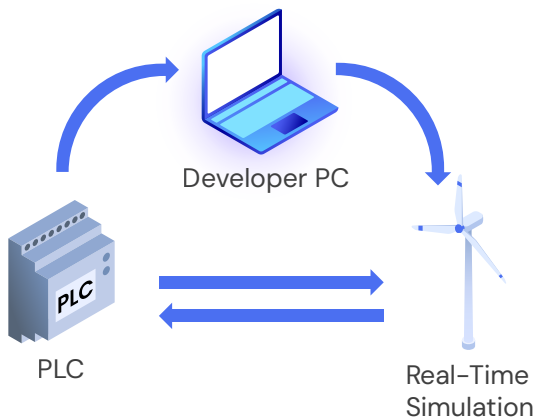
Sokratel is the competent partner for testing your software on the real hardware.

- ✓ **Technical consulting & expertise** in selection and conception of your HiL system, HiL set up & verification through proof of concept
- ✓ **Professional implementation & execution** of your HiL testcases
- ✓ **Implementing digital twins** to enable excellent test environment simulations
- ✓ **Support** in setting up and implementing a test concept

We support our customers in different fields, from Hardware in the Loop (HiL) **conception, setup** and **commissioning** to **implementation of tests.**

HiL Concept

Hardware in the Loop testing is an advanced testing step that verifies control software on a PLC against a real time simulation (digital twin) of the plant, rather than the actual hardware, saving time and costs. As a result, you can **test your software without having to connect sensors to your PLC** or install complicated, expensive test setups. The controlled environment allows you to test the communication and interaction of different software components on the PLC and to the simulated plant.



If you are faced with the challenge of designing an HiL setup, we will support you in both concept consulting and in selecting the appropriate components.

HiL Setup

In cooperation with you, we adapt your HiL system to your needs. In various projects in automation, automoti-

ve and green energy, Sokratel has already gained extensive experience with the use of different PLCs. Our portfolio of **PLC** systems includes **Beckhoff, Phoenix Contact, Bachmann** and **Siemens**, among others.

We have also gathered relevant knowledge with various **real time applications** such as **Speedgoat** or **DSPACE**. With our expertise in Model-Based Design using Simulink®, we assist in integrating your models into the HiL setup. This includes developing individual solutions for communication protocols and optimising controller software performance.

Further, we provide support for creating custom targets in Simulink, specifically tailoring the workflow and code generation from models for the used hardware.

HiL Testing

HiL Testing is an advanced testing step of a test concept individually adapted to your project. We support you in defining and implementing this concept.

Tools like **Exam, ECU Test** or **AutomationDesk** are commonly used for this purpose. Due to our several years of experience with the different test development environments, we can also support you in the implementation and execution of your test cases.



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You want to learn more?

Scan the QR code to explore our website or contact us!