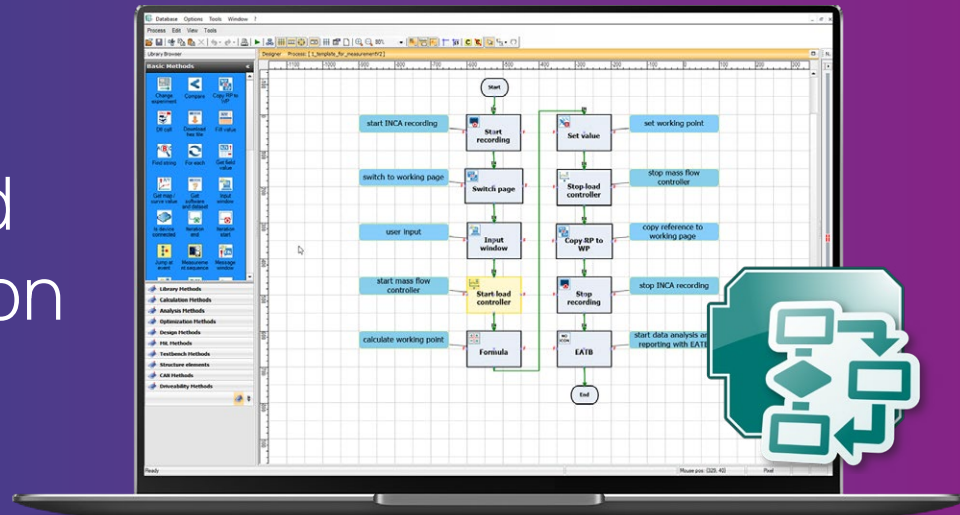


Guided Calibration and Test Automation for ECUs INCA-FLOW



Optimization of complex calibration tasks without coding knowledge

ETAS supports and facilitates the development of software-defined vehicle (SDV).
INCA-FLOW comes with the following features:

Areas of application

- For use in vehicle, on test bench, and in XiL (HiL, MiL, SiL) environments and in Co-Simulation platforms
- Automation of ETAS INCA
- Automated and guided calibration of ECU functions
- Validation and documentation of calibration workflows
- Standardization of calibration tasks
- On-line and off-line evaluation and analysis of measurement data

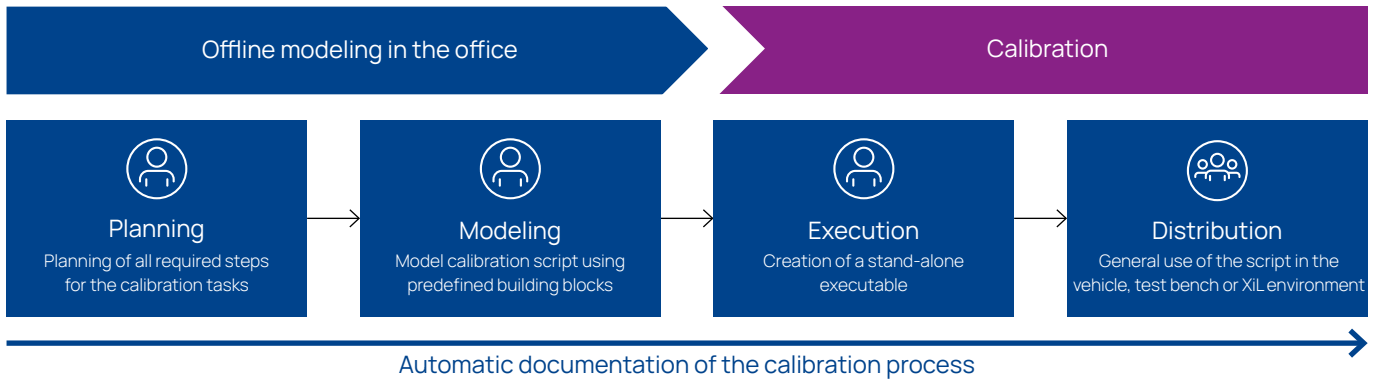
Functions

- Graphical editor for intuitive modeling of calibration tasks
- Built-in libraries for common and customer-specific model building blocks
- More than 200 ready-to-use calibration methods
- Automated documentation of calibration routines
- Creation of stand-alone executables
- Interfaces to the ETAS toolchain and third-party tools

Benefits

- No coding knowledge required
- Excellent reproducibility of calibration results
- Increased calibration efficiency and quality
- Reduced user errors
- Reduced calibration workload
- Faster onboarding of new calibration engineers into existing workflows
- Comparability of goals and timelines across projects

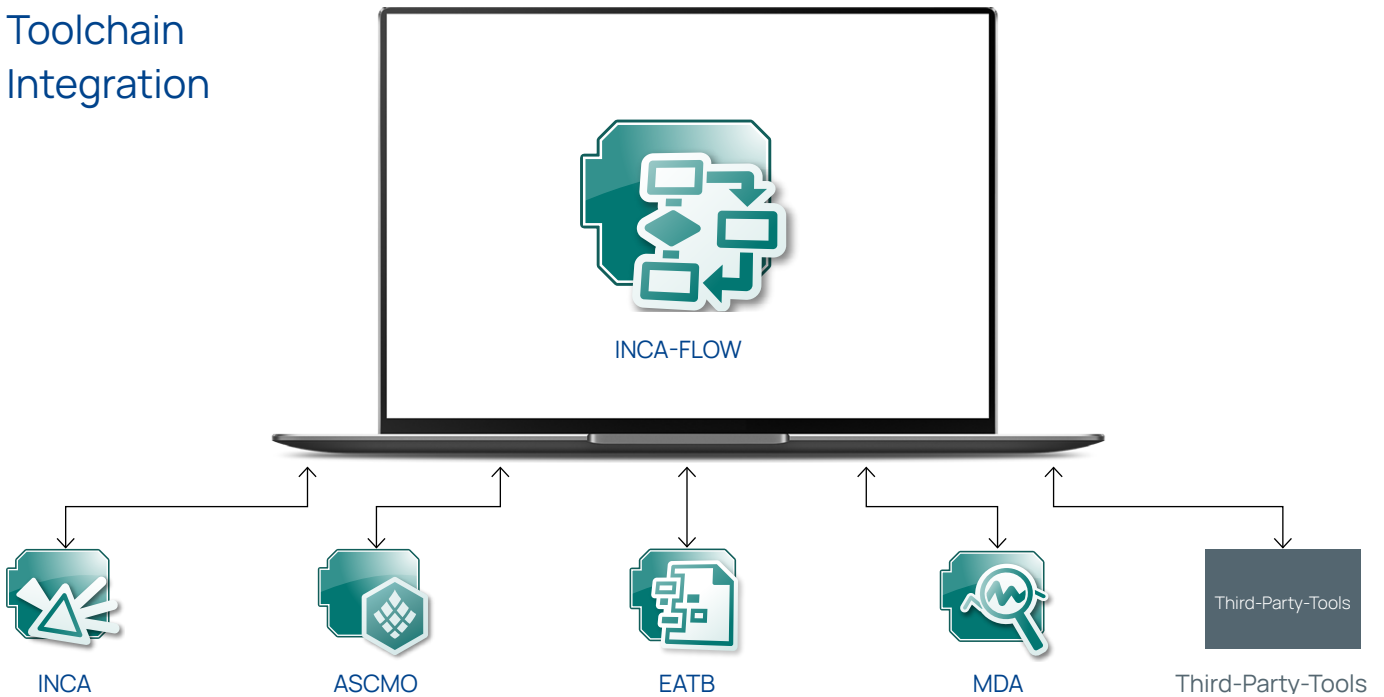
Workflow



INCA-FLOW helps to automate repetitive and manual steps in the calibration process. The calibration tasks can be prepared at the desk with a graphical editor and no in-depth coding knowledge is required. During the execution, INCA is controlled by INCA-FLOW and it guides the engineer or operator through

the calibration process. The created INCAFLOW executable also serves as documentation to others. This approach leads to an increased efficiency, reduced time in the vehicle and on the test bench, and reproducible, high quality results.

Toolchain Integration



INCA-FLOW and INCA: Enables the automation of ETAS INCA for ECU access, signal measurement and calibration of ECU parameters.

INCA-FLOW and ASCMO: Enables the automation of ASCMO applications for data-driven modeling, model-based calibration and (online) DoE.

INCA-FLOW and EATB: Connect to ETAS Analytics Toolbox (EATB) for automated analysis of measurement data and report generation.

INCA-FLOW und MDA: Enables the automatic creation of MDA configurations (.xda) for traditional measurement data analysis.

INCA-FLOW and Third-Party-Tools: Connect to third party-tools like ATI-Vision, MS-Excel, MATLAB® or CMS.