fmi.LAB

About fmi.LAB

- Development environment for creating MATLAB®/Simulink®-based real-time applications for Test-bed.CONNECT™ and FMUs (Functional Mock-up Units) for execution on Windows systems. AVL fmi.LAB contains all the tools required to develop MATLAB®/Simulink® -based real-time applica-tions (RTAs) for Testbed.CONNECT™. For office simulations, it is possible to create FMUs based on the FMI 2.0 (Functional Mock-up Interface) standard.

- This allows you to integrate MATLAB®/Simulink® models, e.g. your own vehicle and transmission models, driver and road simulation models, etc. on the testbed or in office simulation environments.

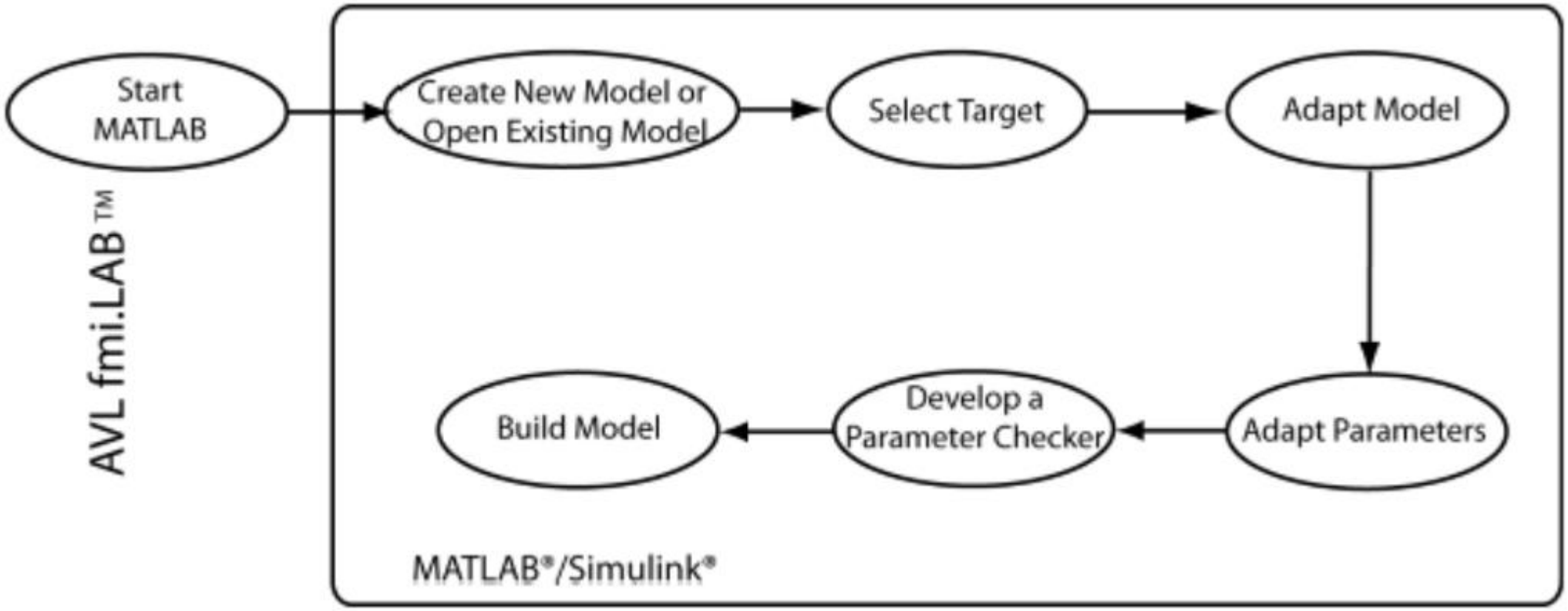
Requirements

For model development with AVL fmi.LAB the following additional components are required:

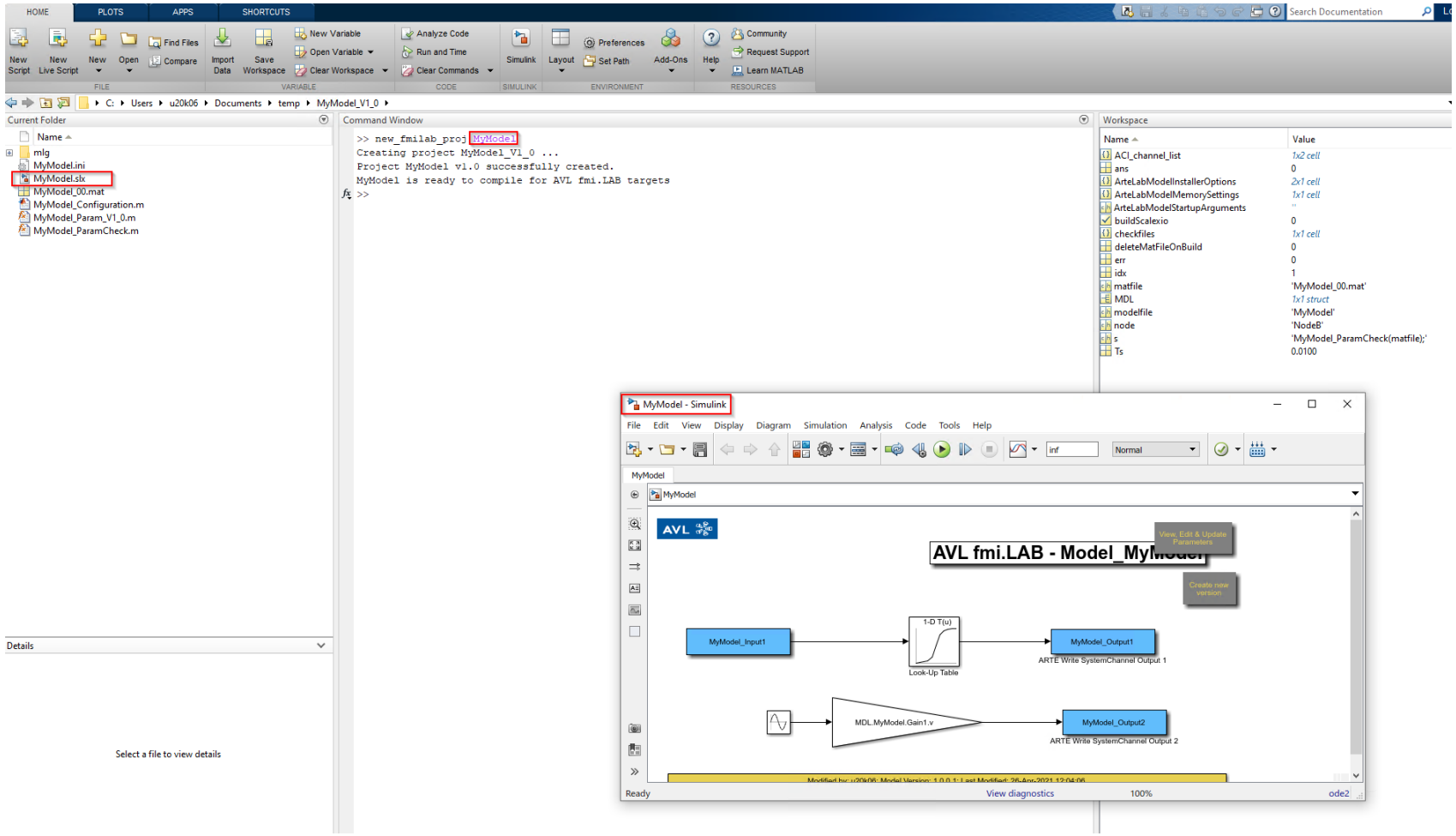
- MATLAB®/Simulink® development PC.
- MATLAB®/Simulink® Real Time Workshop® or Simulink® Coder with MATLAB® Coder
- MATLAB® Compiler (optional)
- Microsoft® Visual Studio Professional Edition or Microsoft® Windows SDK 7.1

The development of real-time applications and FMUs on 64-bit Windows 7 systems and 64-bit Win-dows 10 systems is supported. 64-bit versions of MATLAB® are supported.

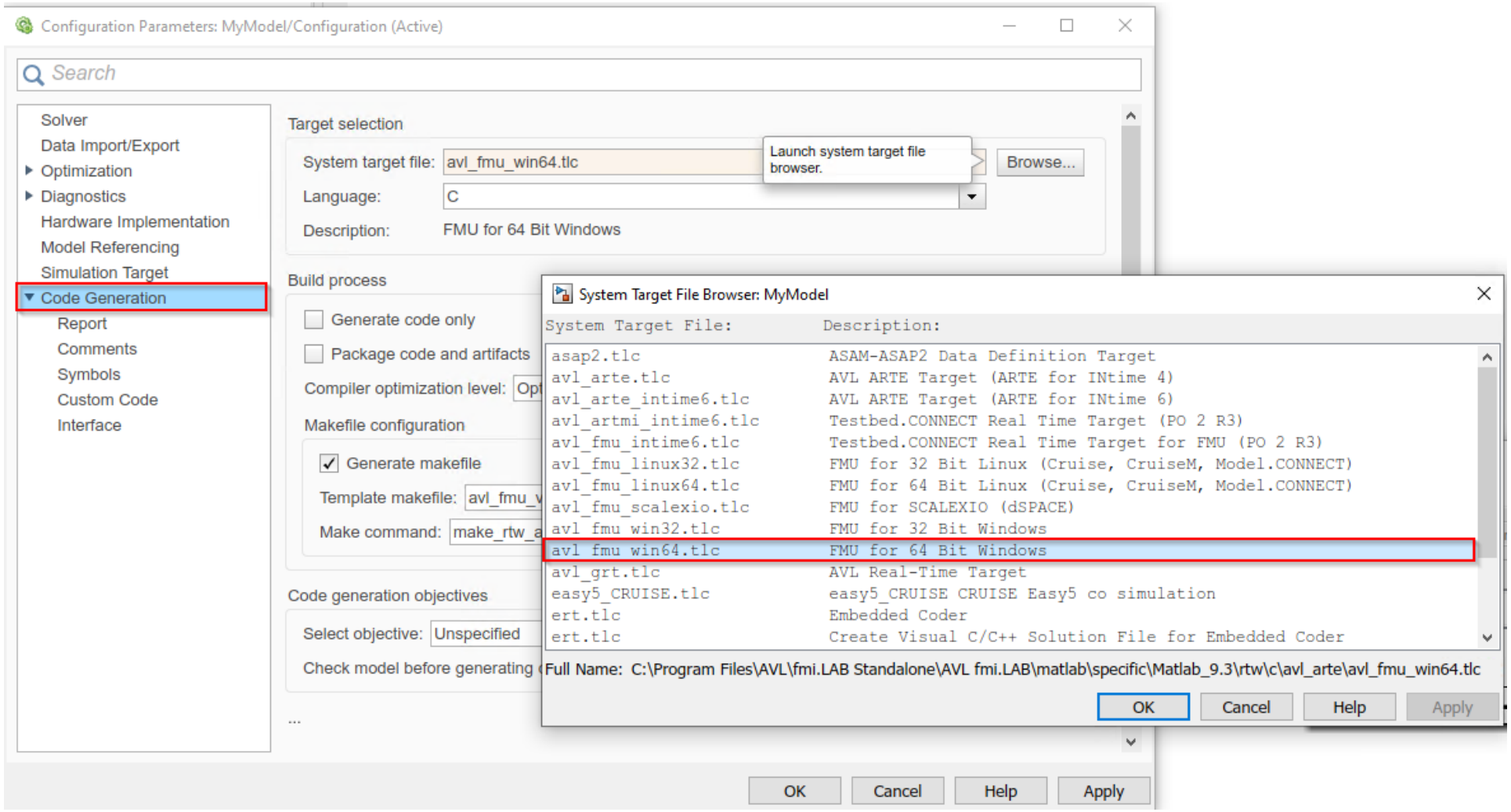
General Workflow



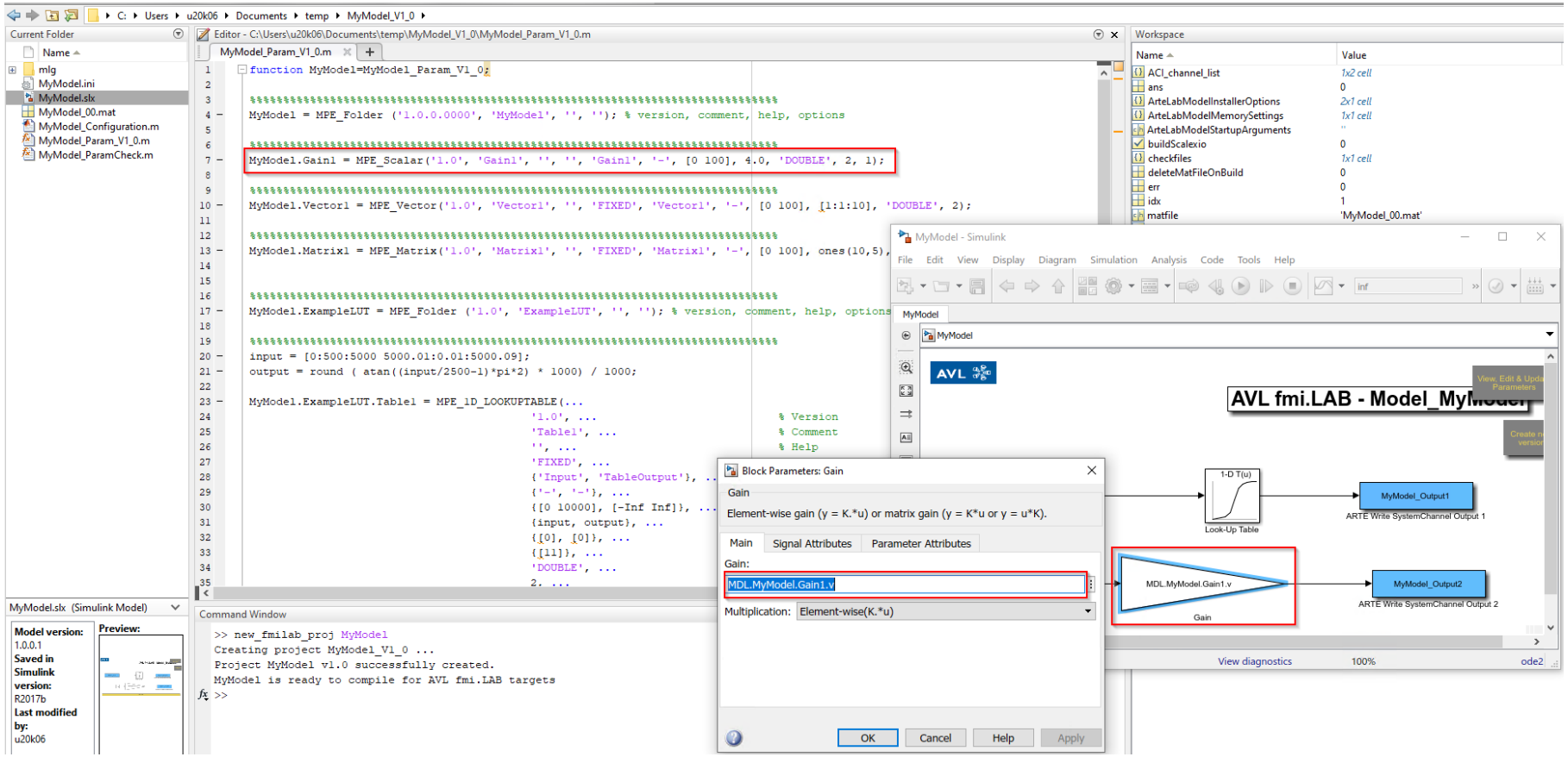
Create a new fmi.LAB project



Select the export target



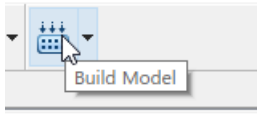
Parametrization using Model Parameter Editor (MPE) structure

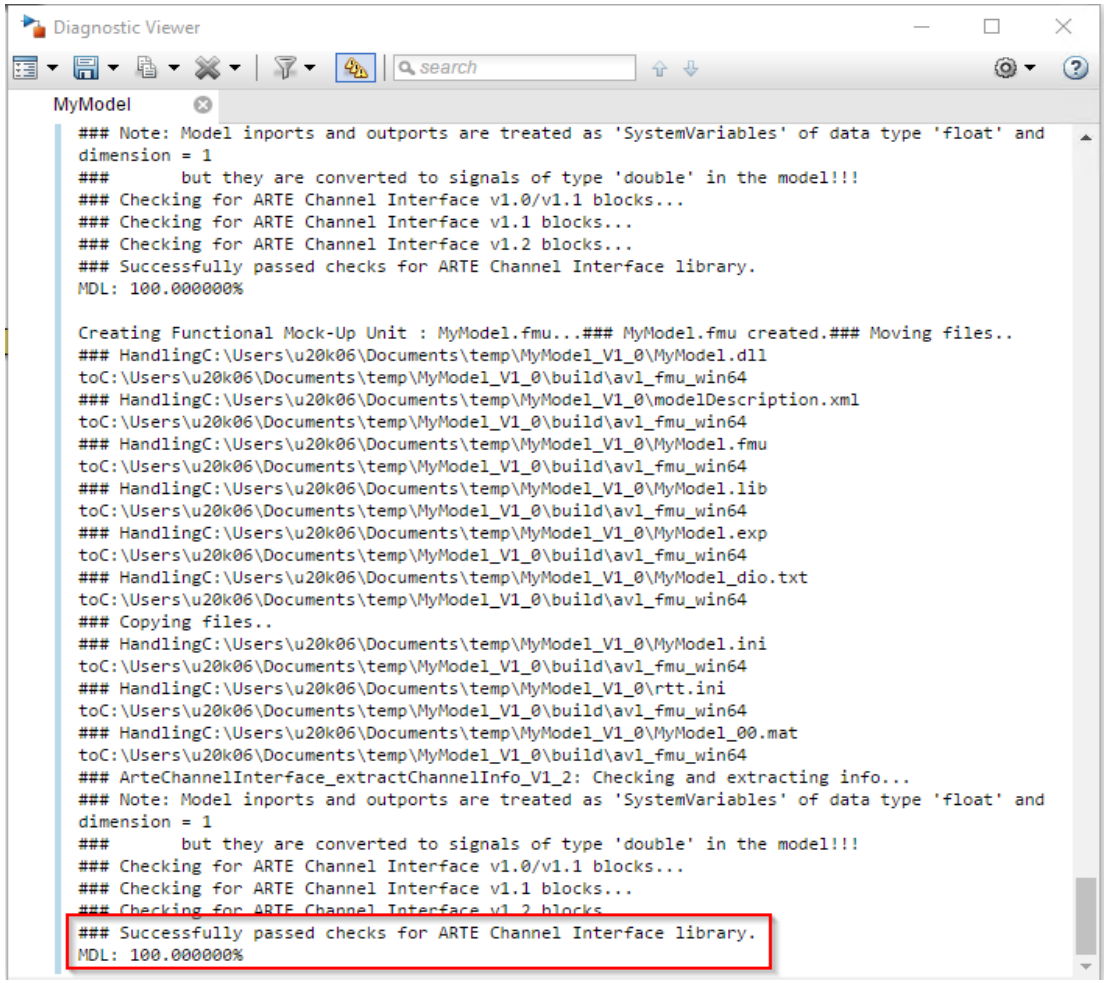


- Any time the user creates a new fmilab project there is a parametrization template script created where all the parameter types are demonstrated.

Compilation of the model

- Once the correct target is selected and the model is ready for compilation, build command can be called in order to compile the model to the corresponding target.
- Model export is available in the folder „build” in the project root folder structure.





Export location