optiSLang – recent developments

… optiSLang 4.2

version 4.1.0 – Nov. '13 (WOST)

version 4.1.1 – Dec.'13 (WB15)
version 4.1.2 – Apr. '14
version 4.1.3 – Jul. '14

version 4.2.0 – Nov.'14 (WOST)
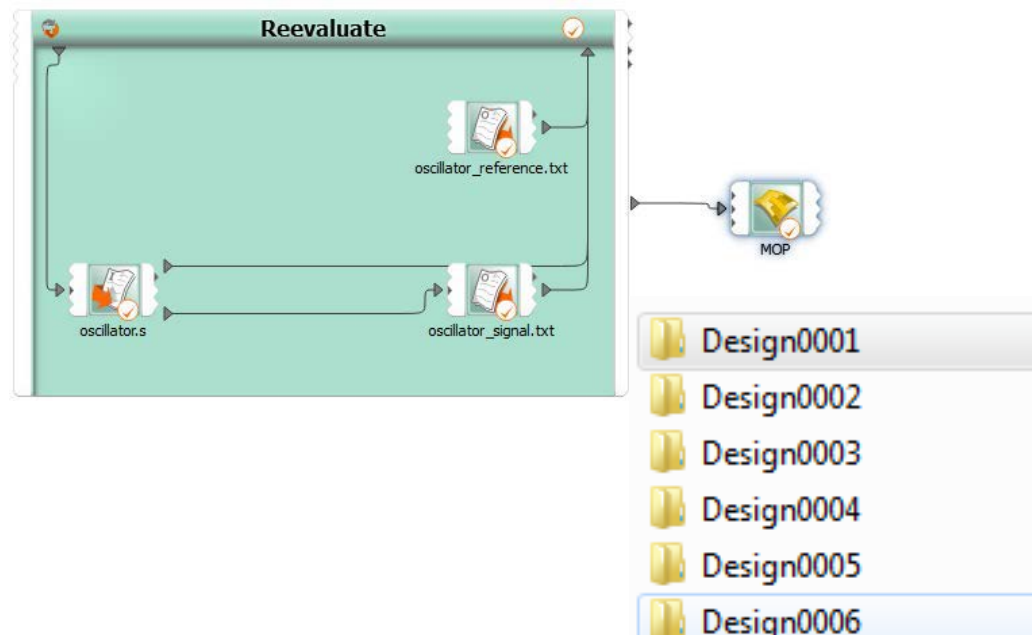
More than 1500

enhancements, stability fixes, …

Re-evaluate

Read designs from directories

- Inputs and Outputs
- Add Postprocessing/MOP
- Merge with previous analysis results

In 4.1.2

- Wizard
- Gaps in Directories
- Solver in „read mode"

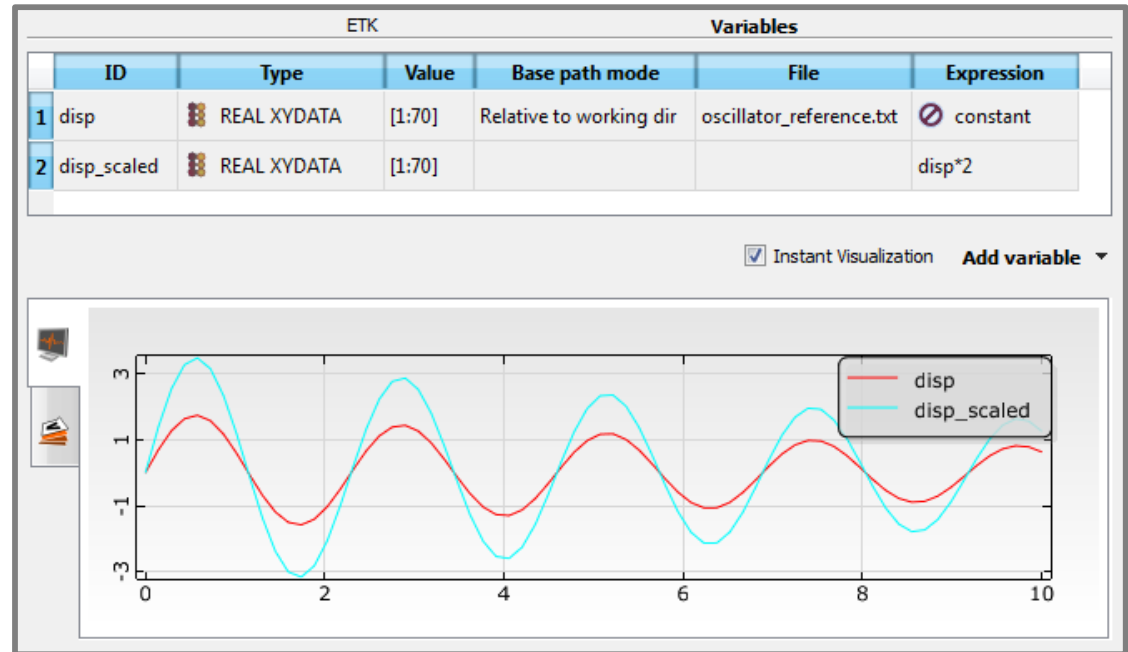# Instant visualization

In 4.1.3

• Quick visual feedback

Plot for Vectors, Signals, Matrices
Tables for Scalars, Vectors,
Signals and Matrices

• Parametrized values

Show reference value in Output,
Python, Matlab nodes

• Multiple values

Show and compare values of
registered outputs and derived
variables

ETK inside ANSYS Workbench

In 4.2.0

- ETK module

Access output parameters which are not "built-in" Workbench – e.g. arbitrary data in text or .rst files

- Nonscalar Data

Use functionality of Extraction nodes inside ANSYS Workbench to work with data which is not supported via ANSYS, i.e. vectors, signals, matrices

- Register response values

Use powerful optiSLang calculator functionality to derive scalar values and register them in Workbench Parameter Set

- Parameter identification

Use parameterized values to set up calibration task through optiSLang inside ANSYS Workbench
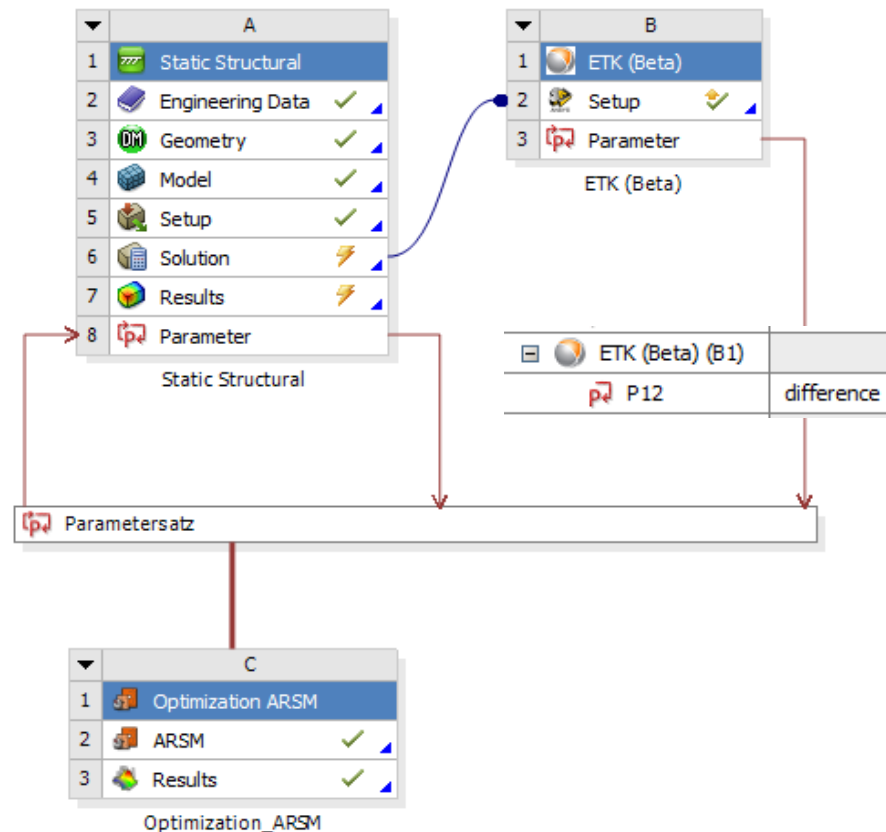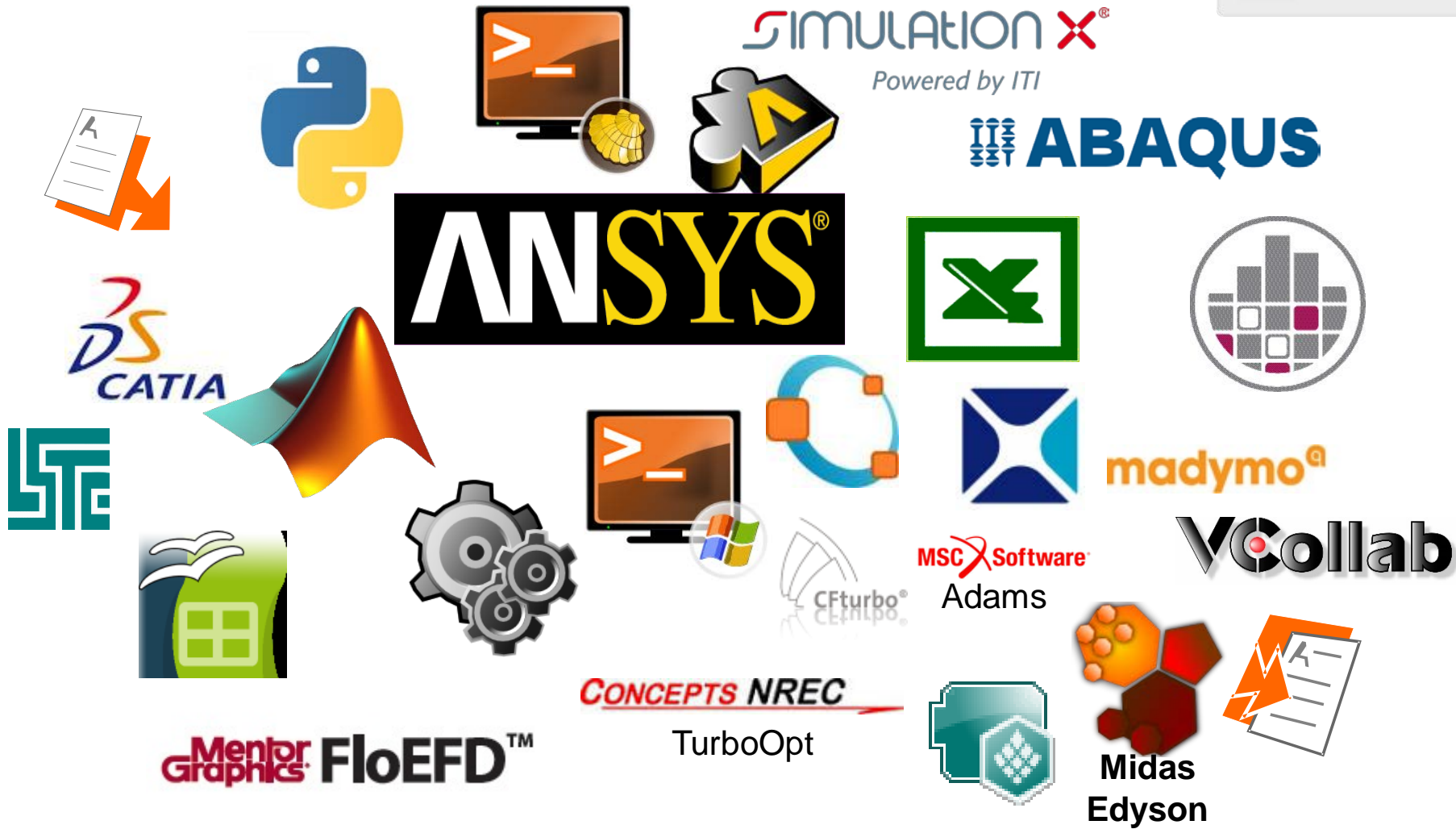
Integrations v4.0
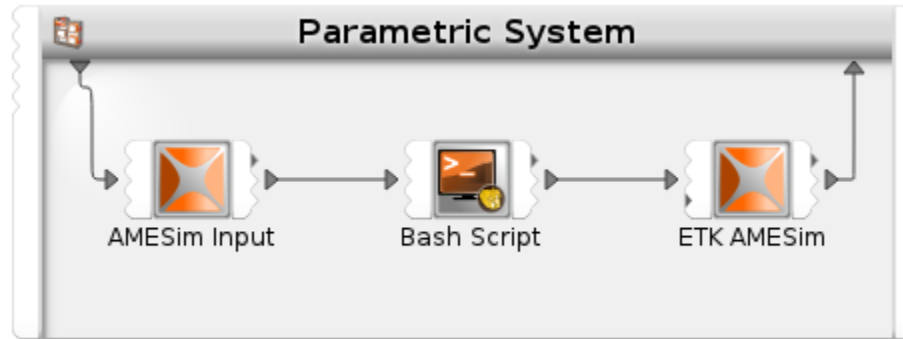
Integrations v4.1

Integrations v4.2

AMESim

"Built-In" Customization

- Get/set parameter

- Get responses (ETK)

- Python based scripting interface provided by AMESim

optiSLang ®

- ✓ CFturbo® is fully integrated into optiSLang® for comfortable handling

- ✓ optiSLang® is master instance and controls the workflow

- ✓ Workflow consists of:

  - CFturbo®   (Turbomachinery Design)
  - ANSYS Workbench – TurboGrid   (Meshing)
  - ANSYS Workbench – CFX   (Simulation)

Sensitivity

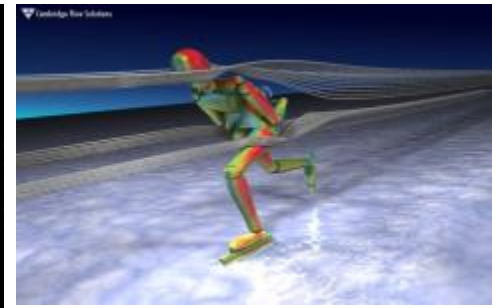CFturbo Input   CFTurbo   update.py - Modification   Ansys Workbench - TurboGrid and CFX
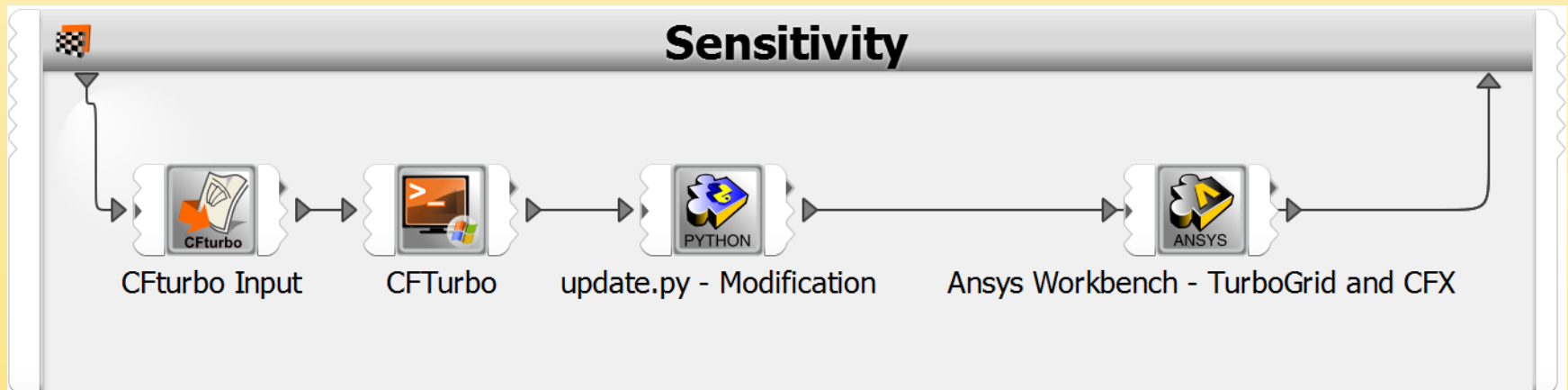
Mentor Graphics FloEFD™

- Engineering Fluid Dynamics
  - Integrated in CAD
- Mathematical prediction of fluid flow and heat transfer
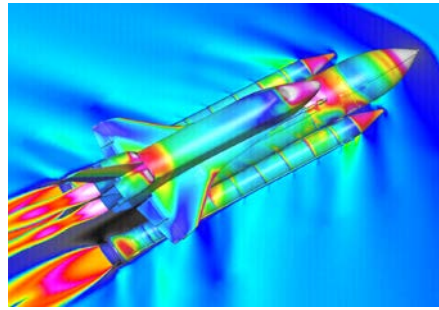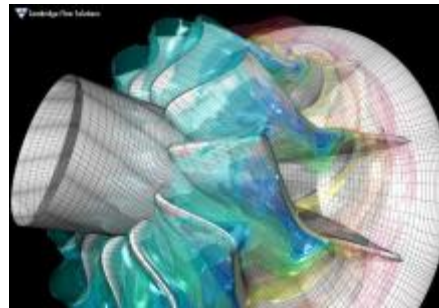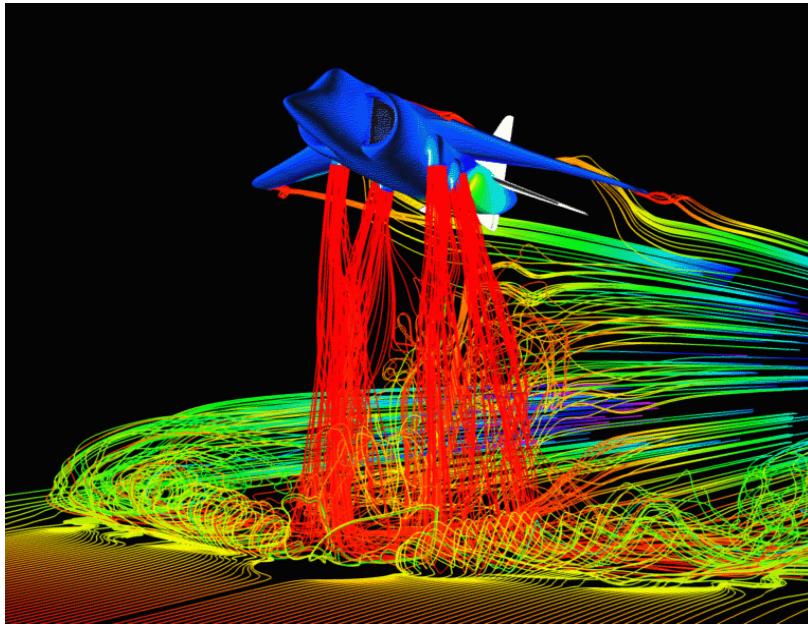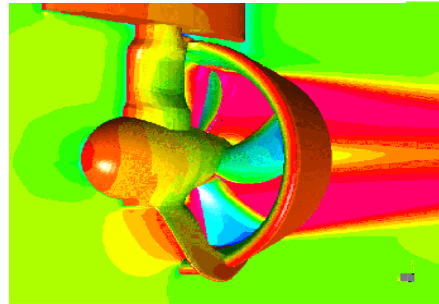
- Started with first project

ASCMO

- from Bosch ETAS
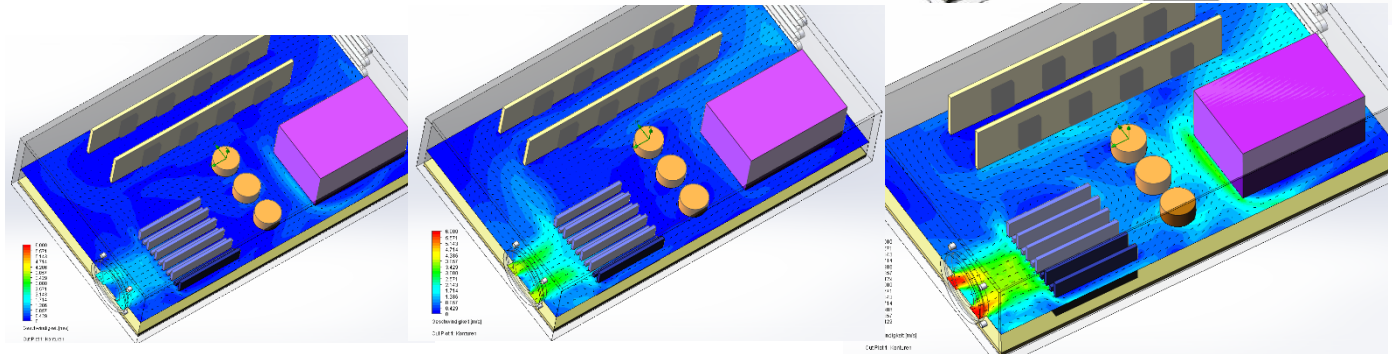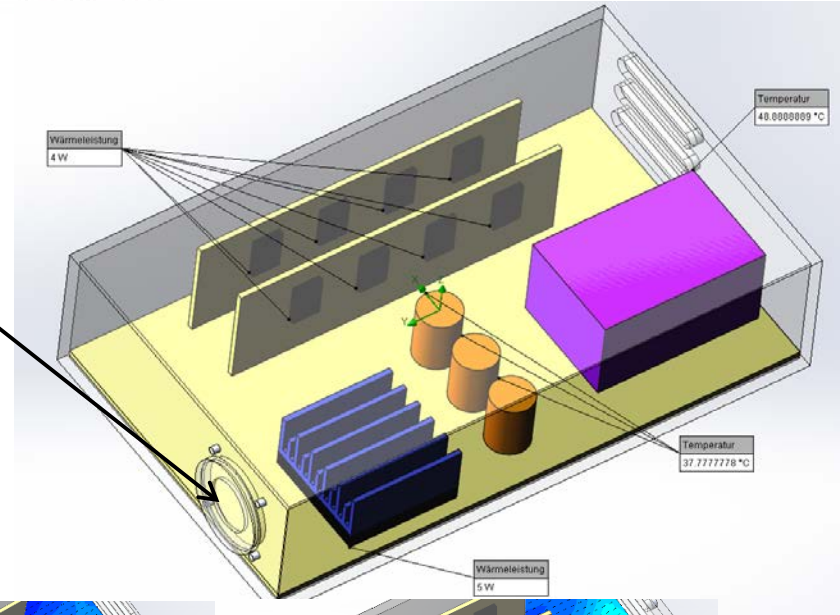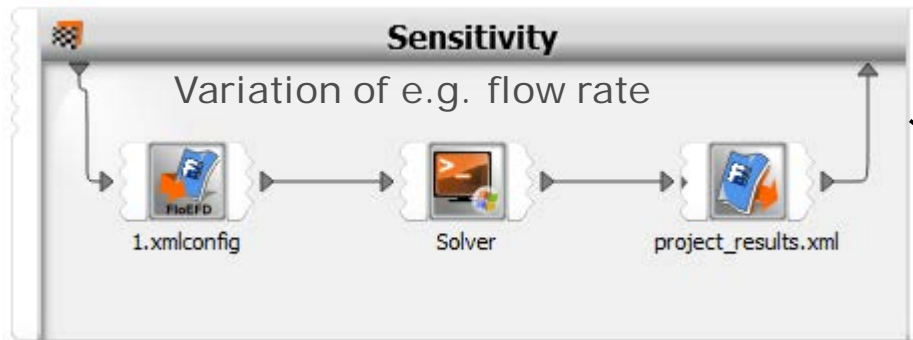- build very precise and robust data driven models
- based on Gaussian Processes

  - Use as option in PMOP
  - Use as Solver

VCollab

- Include as postprocessor in process chain
- Show data in optiSLang Postprocessing
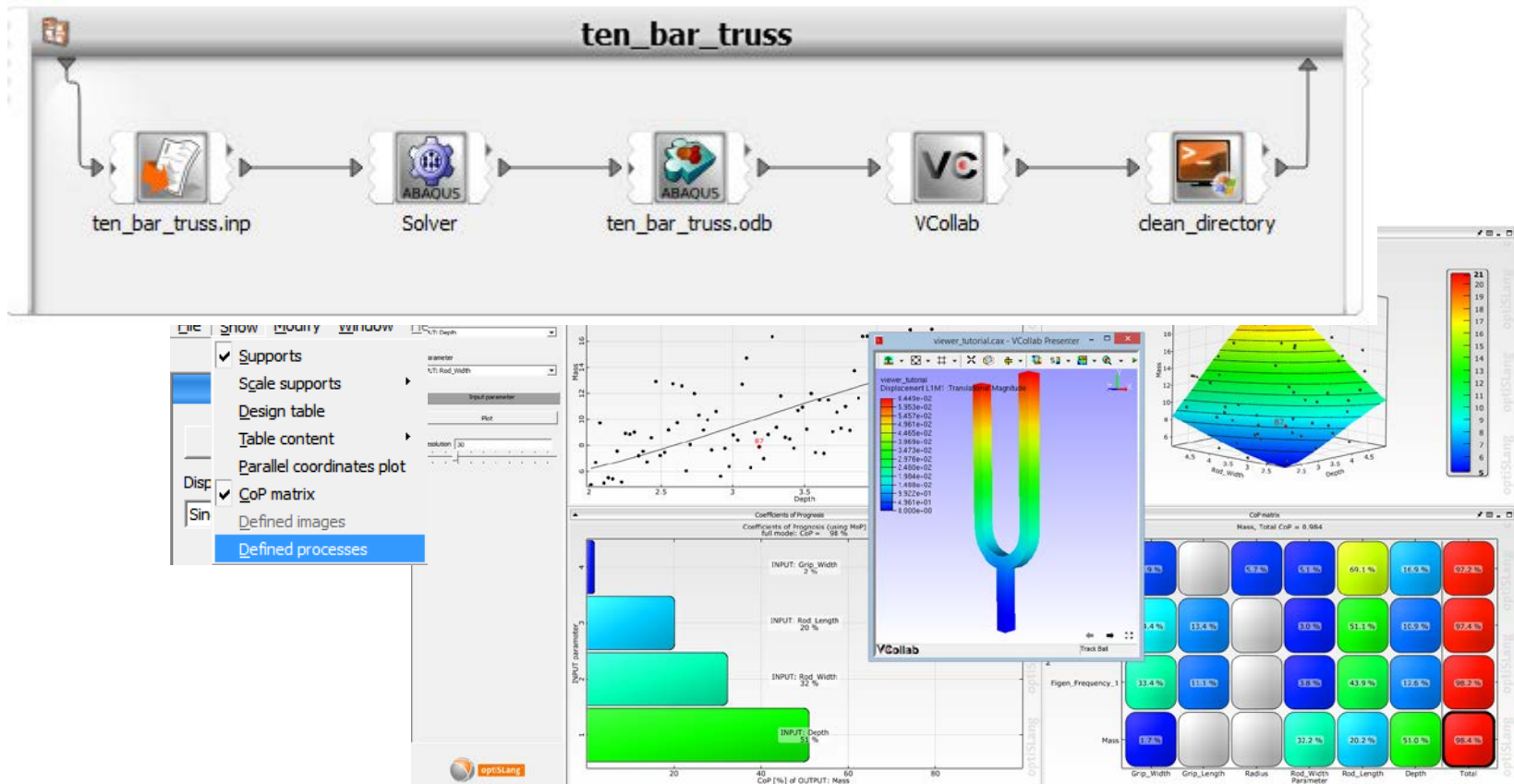
Next Releases

- Robustness / Reliability
  - Joint Wizard
  - Decision tree
- RDO wizard
  - Coupled
  - Iterative
- Datamining (beta in 4.2)
- Postprocessing (beta in 4.2 PMOP-PP)
- ...

Status quo

- Experts for

    - IT (Licensing, HPC, ...)

    - Models (CAD, FEM, CFD, ..., Excel)

    - Coupling (multiphysics, optimization)

    - ...

- Goals

    - Keep specialized (concentrate)

    - Share knowledge (benefit from teamwork)

    - Standardize & Automatize (QA + efficiency)
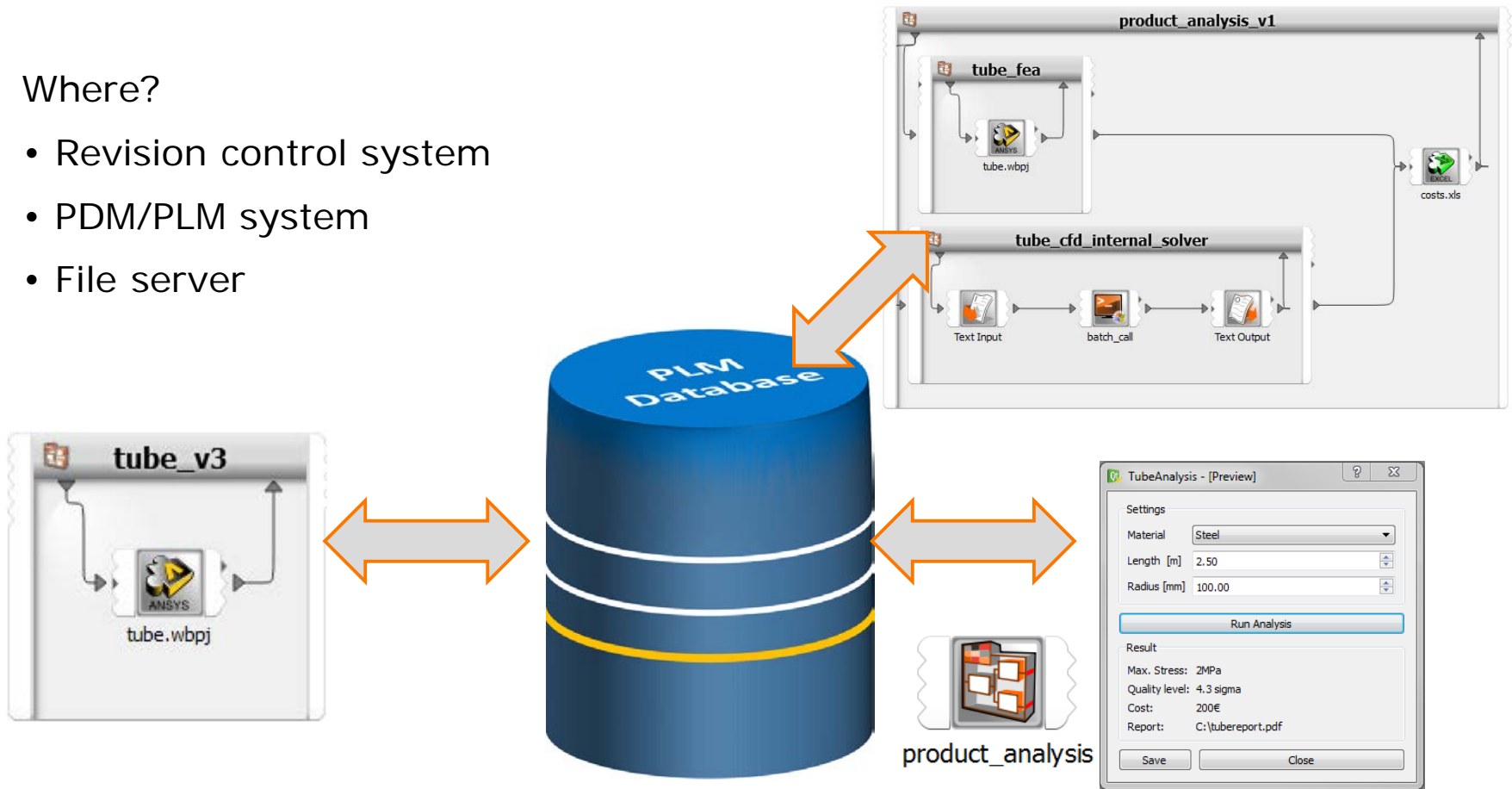
optiSLang 4 PLM

Database

Store optiSLang (template) projects

Where?

- Revision control system
- PDM/PLM system
- File server

Database

Store optiSLang (template) projects

What?

- Single system (CAE – Process)

- Combination of systems

- Settings

- Interface

    - Regarding permissions

    - Regarding user experience

    ➔ Project level has smallest setup work

PLM Database

Thank you

Need more information?

      Visit our stand

      Join the update workshop

      Join the plenary discussion

      Or contact support@dynardo.de

optiSLang is your tool

WOST is your user conference

So feel free to request, ask, propose ...

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