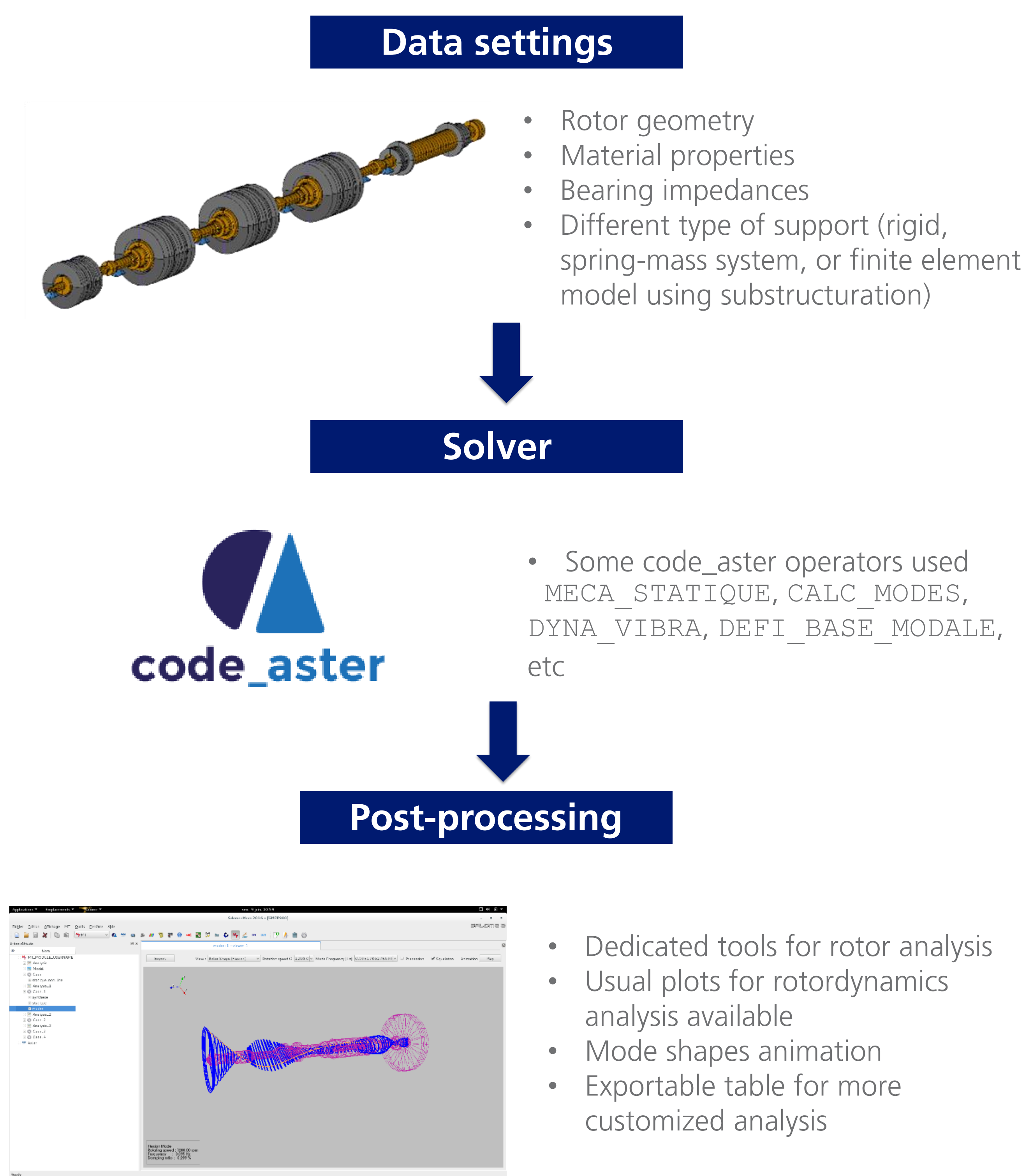


# Salome\_meca integrated software : Outil MT

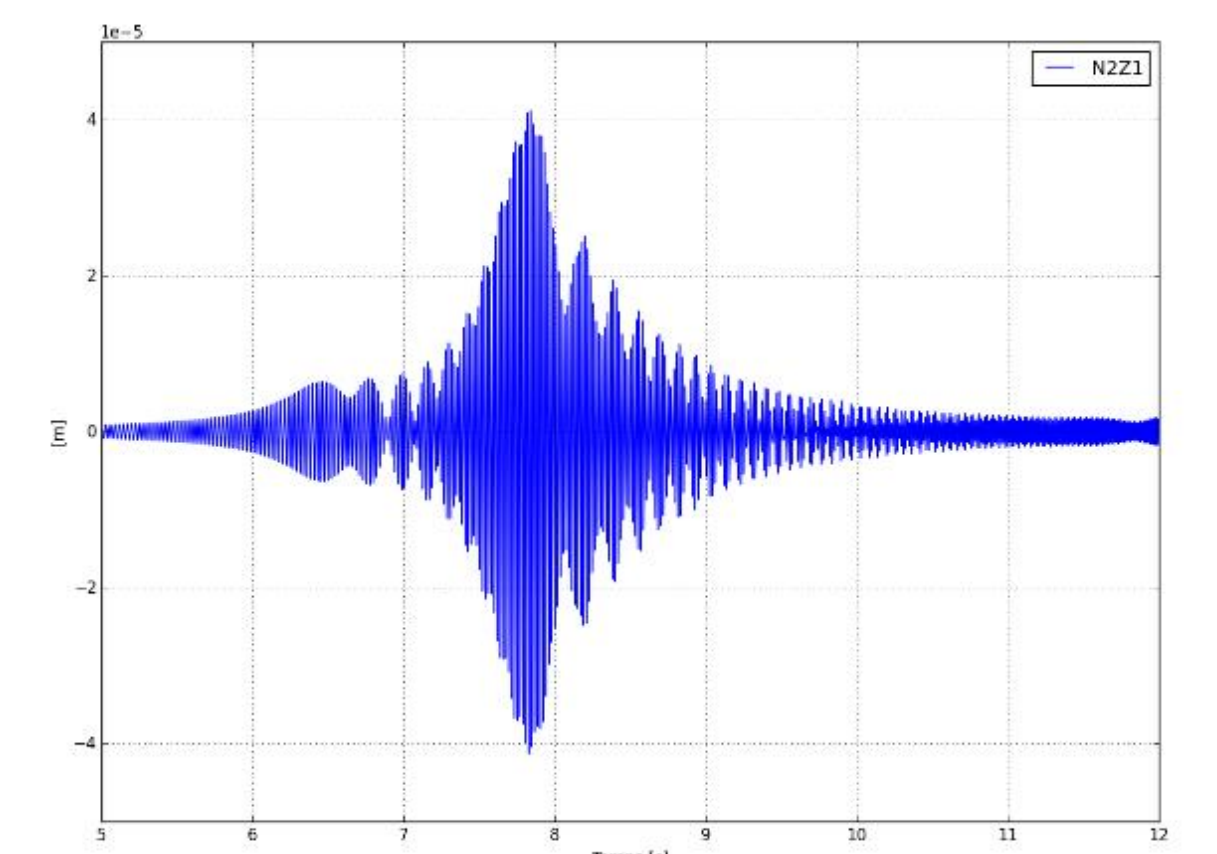
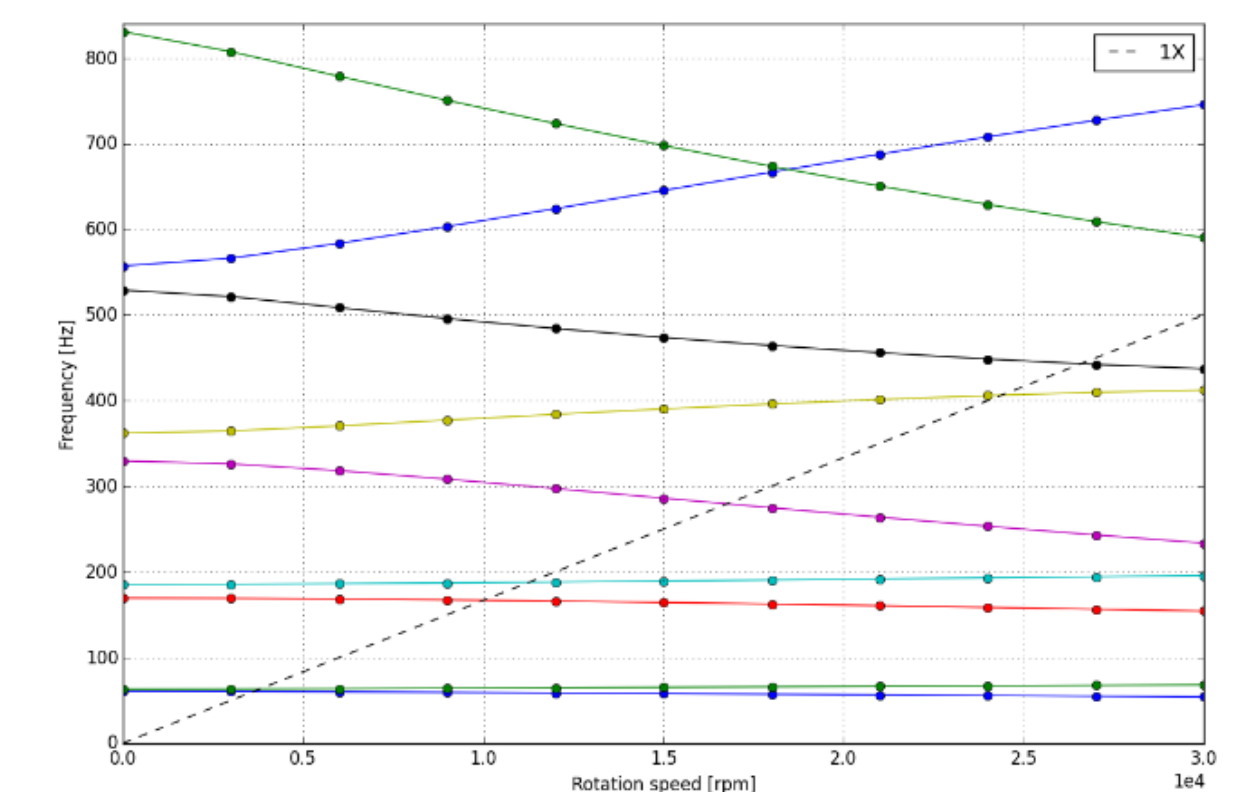
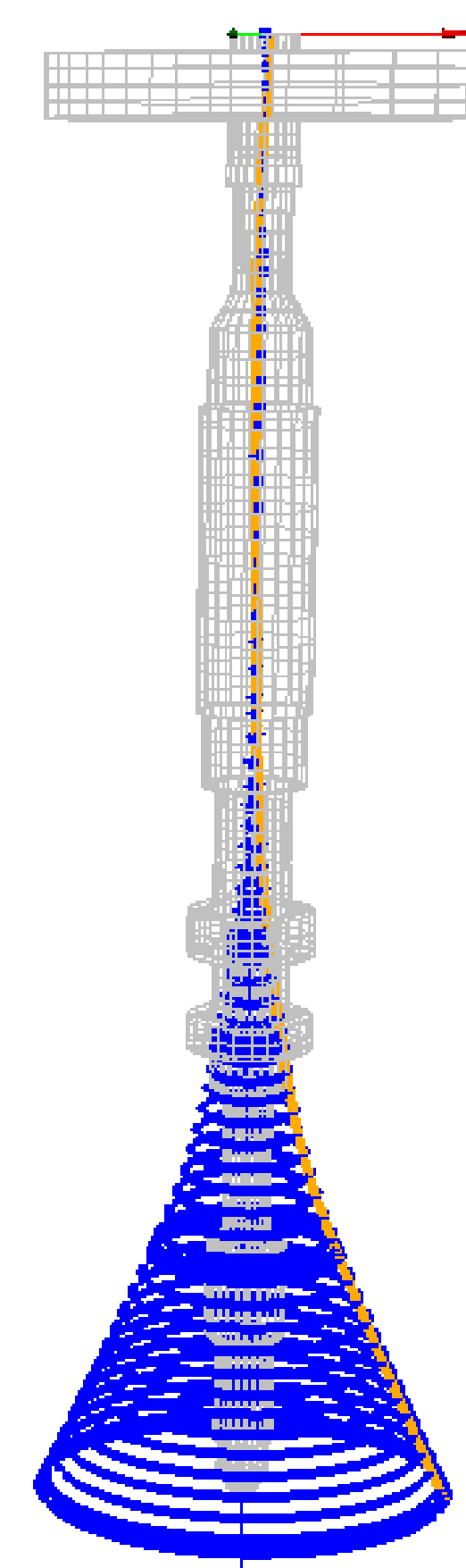
## An engineering tool for rotating machines simulation

### OVERVIEW

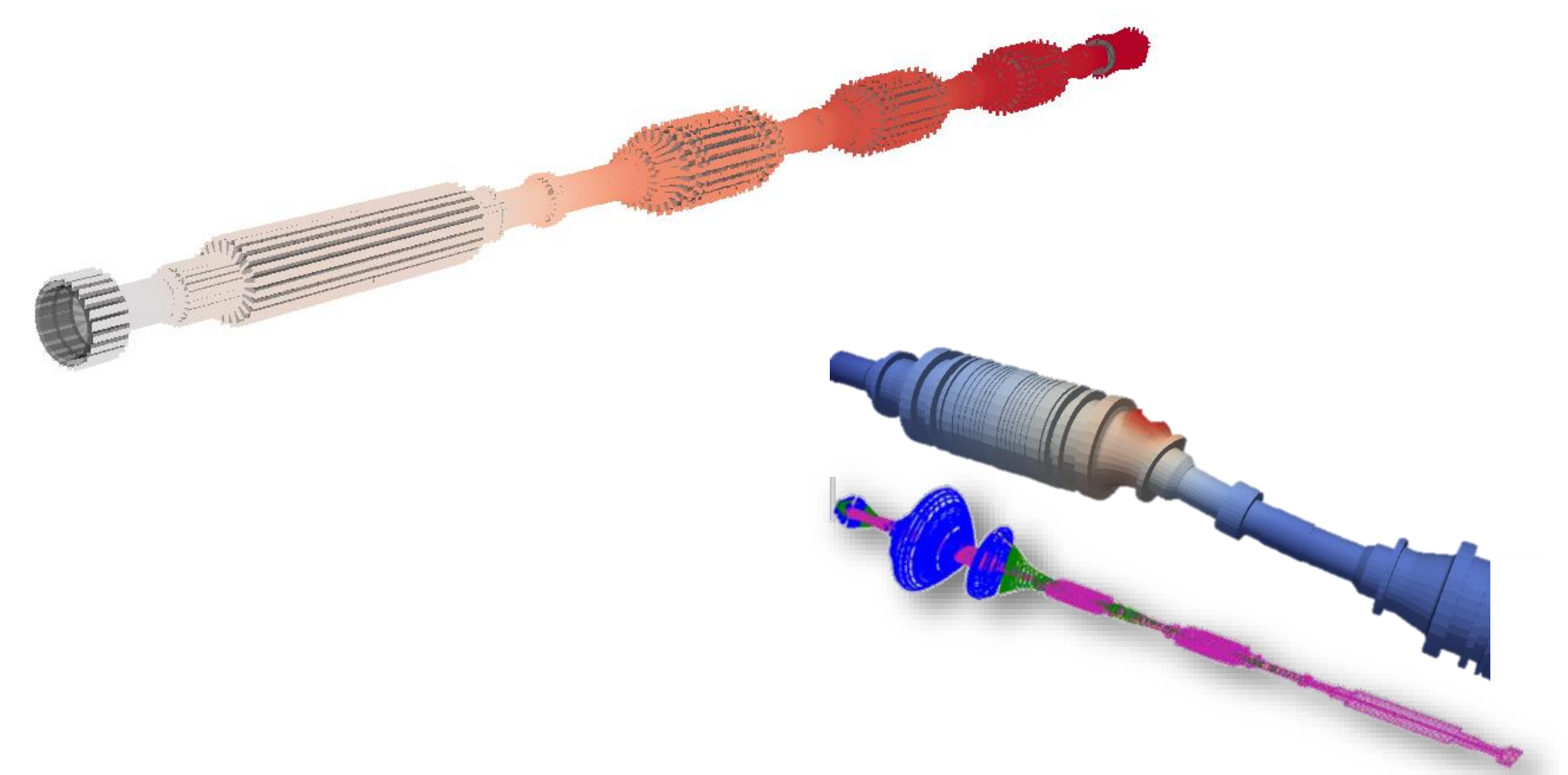
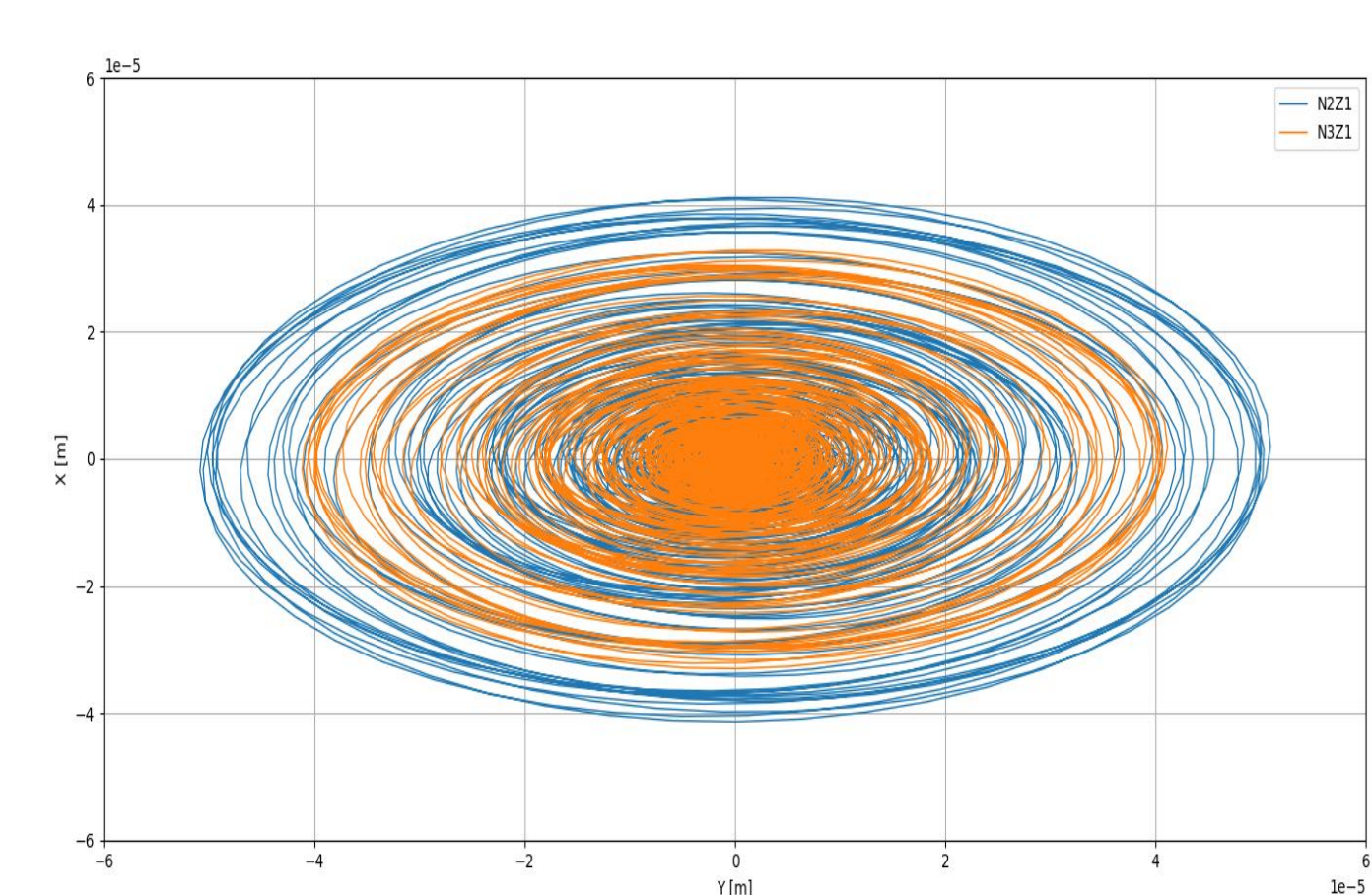
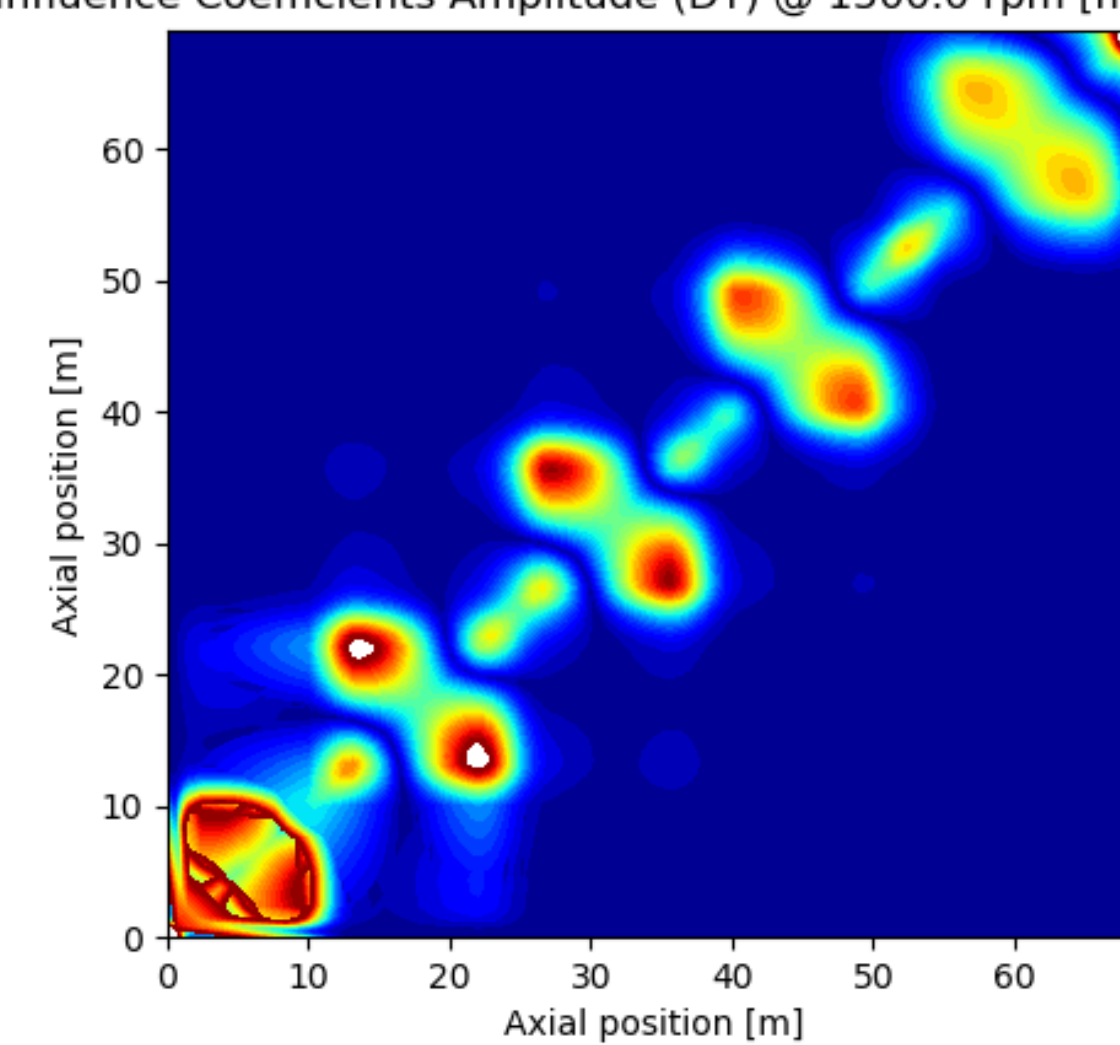
- A user friendly interface helping engineers to easily built their model, to run calculations (Outil MT launches code\_aster) and to post-process the results.
- Timoshenko beam theory is used for rotor dynamics analysis.



### MORE THAN 30 DEDICATED POST-PROCESSING TOOLS



Influence Coefficients Amplitude (DY) @ 1500.0 rpm [micron.kg]



### A LARGE PANEL OF ANALYSIS

#### Static analysis

- Gravity load
- Bearing load imposed position
- Loads on Bearings
- Shaft-line displacement

#### Modal analysis

- Mode shapes (flexion, torsion, compression)
- Dynamic substructuring
- Critical speeds
- Mode sensitivity

#### Linear harmonic analysis

- Unbalance response
- Influence coefficients
- Frequency histories
- Rotor displacement map

#### Linear and non linear transient analysis

- Variable rotating speed
- Unbalance response
- Blade loss large unbalance
- Cracked rotor

### EXAMPLE OF STUDIES PERFORMED WITH OUTIL MT

- Impact of thermal bows on vibrations measured on shaftline
- Morton effect analysis on steam turbine
- Robustness analysis of sensors for fault identification on shaftline
- Non linear analysis of blade loss event (coupling with lubrication model – code LEGOS)
- ...

#### Contacts:

Mohamed Amine HASSINI, EDF Lab Paris Saclay – R&D, 7,boulevard Gaspard Monge, 91120 Palaiseau, mohamed-amine.hassini@edf.fr, Tél. : +33 1 78 19 38 10