

Who are we?

“International Center for **NUMERICAL METHODS** in **ENGINEERING**”

We work on

- Application Development
- **Theory** of Finite Elements
- Mathematical Analysis of Algorithms

We have HPC expertise but we are not **computer engineers** → **We complement your expertise, do not Compete with you!!**



Vision

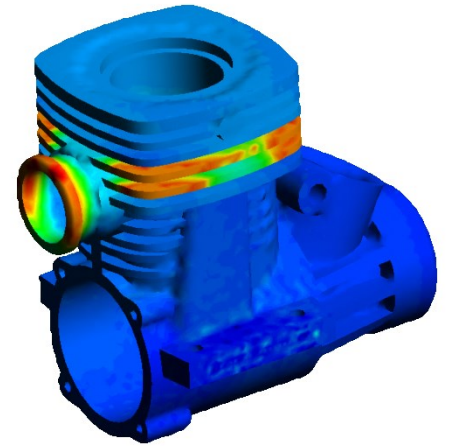
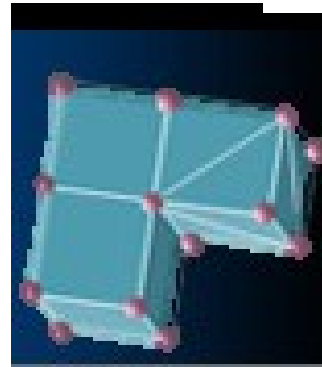
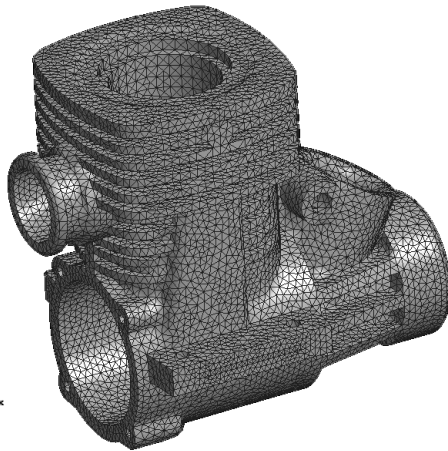
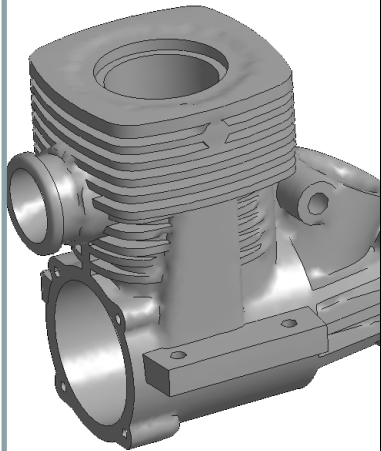
“CLOUD”



CastInCloud

FORTISSIMO

Read it as “democratize”
The results of the other projects



VELaSSCo

“BIG DATA”
For post-processing

Nu exas

“HPC”

how we can contribute: Building Up from EC projects

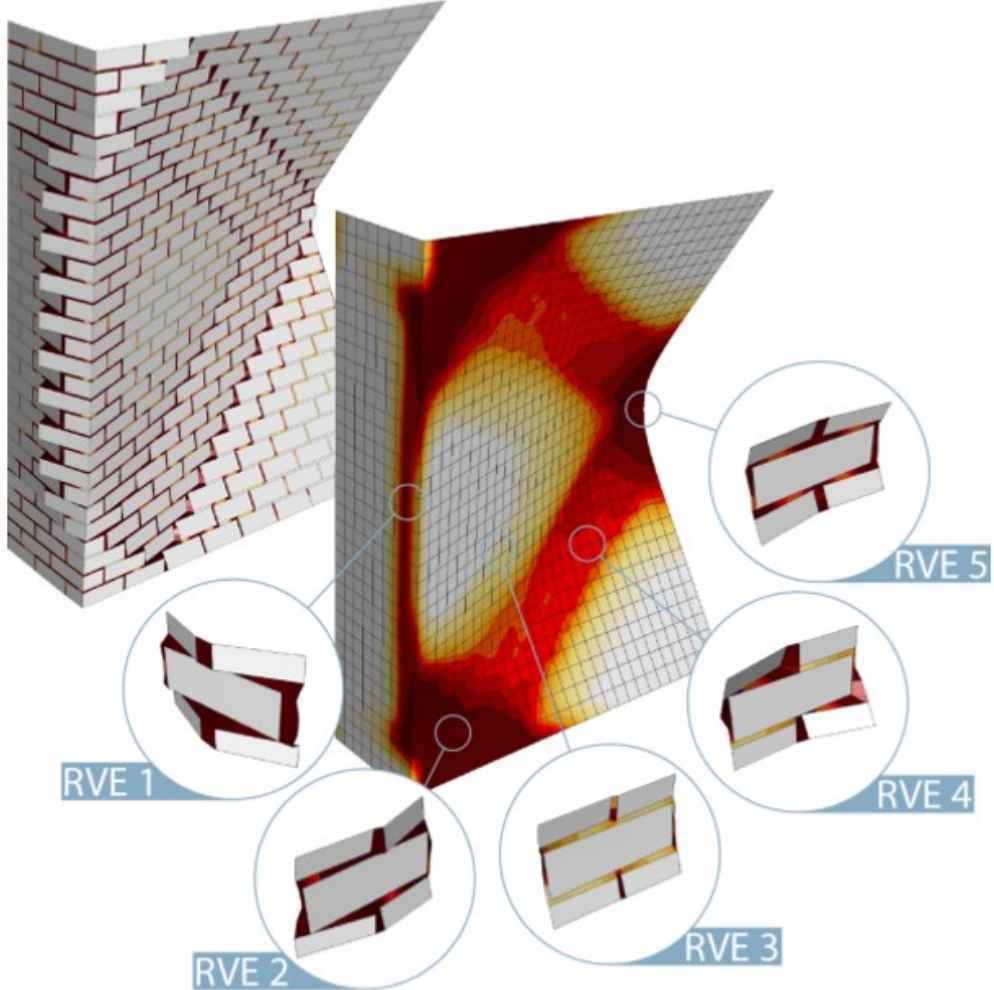
- Developments within **NUMEXAS**.
 - Scalable production-ready CFD/CSM
 - Advanced Meshing Algorithms for model preparation
- Developments within **VELASSCO**
 - Using Big-Data analytics for Post-Processing & Visualization

KEY FACTORS:

- **We architect our codes** and we steer their development
- We have experience with industry requirements regarding HPC usage (we also have experience with Cloud usage)



A proposal which can scale to any size: Micro-Macro Multiscale modelling



What do we expect:

- Further Improving the performance of our codes basing on the HW people feedback. (read it as “co-design” our software together with the HW team)
- Commitment from the HPC infrastructure designers/owners to adapt their operation models to the need of engineering simulation end users.



Thank you!

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