

About UPSIM

UPSIM will lead to a **paradigm shift from real to massive virtual testing within system development**. It stands for the unleashing of Modelling & Simulation potentials in the virtual development through process- and maturity models, continuous collaboration and certified artifacts – and will save development effort, time and costs.

The project consortium consists of 31 leading European manufacturers, suppliers and research institutes, which are jointly working on increasing trust in **Modelling & Simulation** for virtual development.



Watch Video!



UPSIM

UNLEASH POTENTIALS IN SIMULATION



www.upsim-project.eu

The Challenge

Due to increasing **innovation and cost pressure**, modelling and simulation play a crucial role for companies today. However, numerical simulation is no longer an essential and competitive differentiator between companies and industries, and real testing of currently envisioned smart systems will be temporally, practically, and economically impossible.

The situation becomes significantly more serious taking the related **CAX costs** into account. Additionally, there is a need to consider **virtual sub-systems** provided by suppliers over the product life cycle, and there are essentially no approaches to assess maturity and quality of Modelling & Simulation at system level anytime soon.

Expected Impact

The ultimate goals of the project are to standardize reference processes and reference quality metrics for the quantifiable, collaborative development and the broad uptake of system simulation.

- Modelling & Simulation reference processes and a reference metric for determining the Digital-Twin Readiness Levels
- Collaboration Patterns for effective and efficient Digital Twin development
- AI-enriched Hybrid Simulations for ensuring simulation to reality convergence
- An infrastructure for the 'chained' identification of virtual development artefacts

Digital Twin

UPSIM shall enable companies to ensure reliable system-simulation development and utilization in a broadly collaborative and distributed manner, and for implementing simulation in a **Credible Digital Twin** setting as a strategic capability to become an important factor in quality, cost, time-to-market, and overall competitiveness.

Project Facts

Duration: October 2020 – September 2023 (36 months)
 Budget: 16 Mio EUR
 Coordination: VIRTUAL VEHICLE Research GmbH (German subsidiary)
 Partners: 30 Partners from 6 Nations

Contact

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