

UPSIM – EXPLANATORY MOVIE

DOCUMENT TYPE: **DELIVERABLE**
DELIVERABLE N°: **D5.2**
DISTRIBUTION LEVEL: **PUBLIC**
DATE: **30/10/2020**
VERSION: **FINAL**



AUTHOR(S): **MARTIN BENEDIKT (VIRTUAL VEHICLE)**
KERSTIN DREXLER (VIRTUAL VEHICLE)

REVIEWED: **OLAF V. D. SLUIS (PHILIPS)**
ANDREAS SOPPA (VOLKSWAGEN)

FORMAL REVIEWED: **KERSTIN DREXLER (VIRTUAL VEHICLE)**

APPROVED: **MARTIN BENEDIKT (VIRTUAL VEHICLE)**

PROJECT ACRONYM: **UPSIM**
PROJECT TITLE: **UNLEASH POTENTIALS IN SIMULATION**
ITEA PROJECT N°: **19006**
CHALLENGE: **SMART ENGINEERING**
PROJECT DURATION: **01/10/2020 - 30/09/2023**
PROJECT WEBSITE: **WWW.UPSIM-PROJECT.EU**
COORDINATION: **VIRTUAL VEHICEL RESEARCH GMBH**
PROJECT LEADER: **DR. MARTIN BENEDIKT**

Executive summary

Next to the UPSIM project website the consortium decided to produce and to provide an explanatory movie for enabling a quick introduction into the UPSIM project.

The movie is available in two form:

- embedded into UPSIM projects website landing page: www.upsim-project.eu
- shared via YouTube channel: <https://www.youtube.com/watch?v=PsjGh9X9DPo>

UPSIM Movie Storyboard



One thing is obvious ...



... systems are getting more complex...



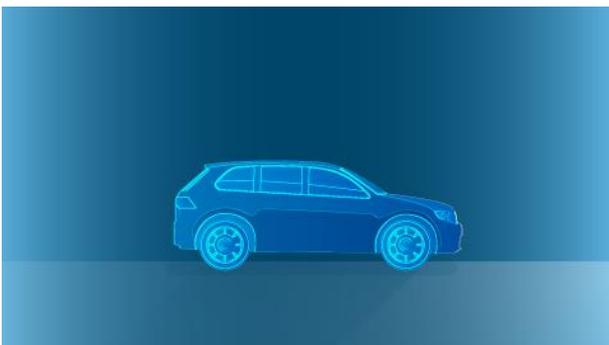
...and the automotive industry is developing fast.



When it comes to innovation, simulations are essential – and the advantage is pretty clear:



simulations reduce real tests, are reusable and lead to early decisions on how to improve designs without spending a lot of money.



Despite that, simulations can never accurately represent the reality



And the consequences of false results can be horrendous.



Additionally, the development and optimization of cross-domain system functions ...



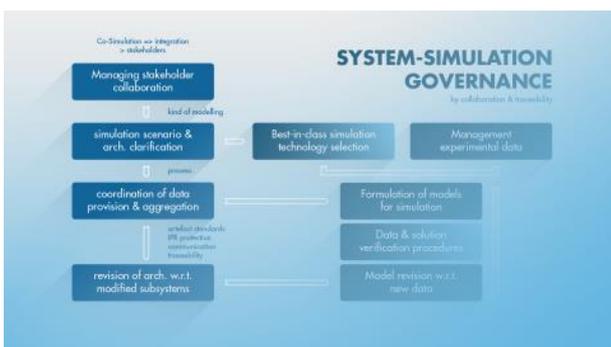
... require a coordinated collaboration between relevant stakeholders - demanding for processes, roles and data quality measures.



We at UPSIM know these challenges.



Therefore we have developed a structured top-down strategy...



...from defining collective simulation targets to simulation quality assurance to provide right-sized simulations for design and testing.



May we introduce: System Simulation Governance – extending Simulation Governance by collaboration and traceability aspects.



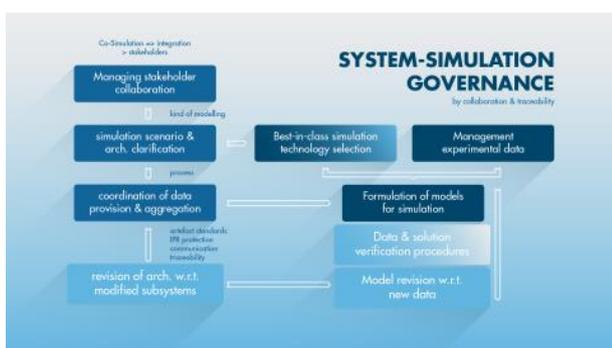
We keep important factors in mind during implementation: Most of all it is important to clarify simulation targets and relevant stakeholders.



From targets simulation scenarios and architectures are derived,...



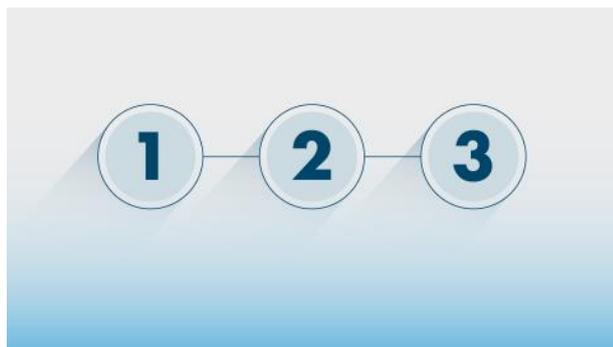
...serving as input for low-level Modelling and Simulation.



Quantification of Quality for all Modelling & Simulation artefacts is introduced by manual or automated assessment.



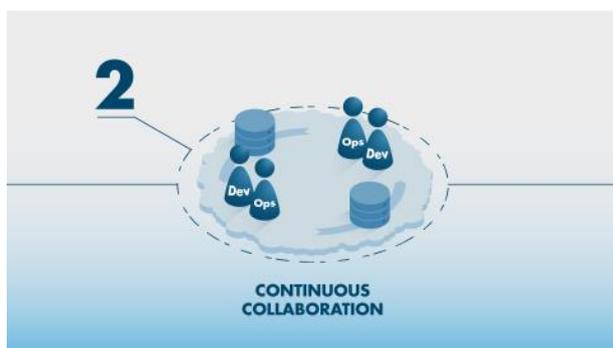
The essential brick is then represented by the coordinated provision and aggregation of artefacts during simulation development and utilization.



We realized this in three steps:



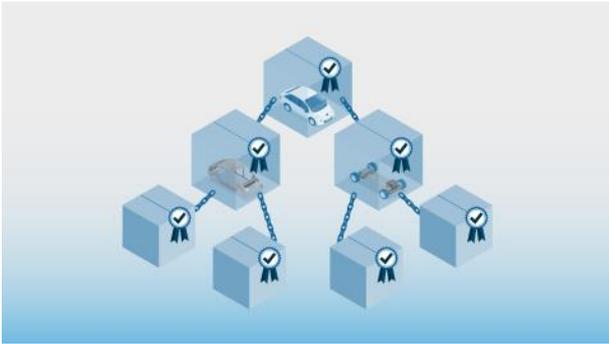
First, we define a simulation readiness level and the according collaboration process.



Second, we continuously collaborate by exchanging agreed data quality...



...and third,...



we present robust artefact traceability via a chained digital signature.



However, we can only achieve the real value of simulation when



we can prove the quality via a kind of DNA. This DNA ...



...enables the IPR-protected distribution ...



of development artefacts, ,...



...unleashing distributed and collaborative virtual system development.



You see: with the UPSIM approach models and simulations becomes of real value and thus represents a competitive differentiator between companies and industries.



Finally, the key factors for success are



how smartly collaboration is done and simulation is being used by companies, in a convincing and traceable way, providing sufficient evidence.



So let's get started. Find out more at the UPSIM project website ...



... and get in contact with the project consortium partners.



1 Acknowledgment



Innovation Fund Denmark



PROJECT PARTICIPANTS:

Virtual Vehicle Research GmbH (AT)
Virtual Vehicle Research GmbH (DE)

Aarhus University – DK
Agro Intelligence ApS – DK
3D Mapping Solutions GmbH – DE
Audi AG – DE
Automotive Solution Center for Simulation e.V. – DE
Infineon Technologies AG – DE
Deutsches Zentrum für Luft- und Raumfahrt (DLR) – DE
iCONDU GmbH – DE
LTX Simulation GmbH – DE
Robert Bosch GmbH – DE
Technische Universität Berlin – DE
University of Augsburg – DE
Virtual Vehicle Research GmbH – DE
Volkswagen A.G. – DE
softwarehelden GmbH & Co. KG
Eindhoven University of Technology – NL
In Summa Innovation b.v. – NL
KE-works BV – NL
LifeTec Group BV – NL
NLR - Royal Netherlands Aerospace Centre – NL
Philips Electronics Nederland BV – NL
Philips Consumer Lifestyle B.V. – NL
Reden BV – NL
Sioux LIME BV – NL
Unit040 Ontwerp B.V. – NL
University of Groningen – NL
BEIA Consult International – RO
Lucian Blaga University of Sibiu – RO
NETCheck S.A. – ES
The Manufacturing Research Centre (MTC) – UK

DISCLAIMER

This ITEA3 Project has been made possible by a financial contribution by the German Federal Ministry of Education and Research (BMBF), by the Austrian Research Promotion Agency (FFG), by the Rijksdienst voor Ondernemend Nederland (RVO), by the Innovation Fund Denmark (IFD) and by the Centre for the Development of Industrial Technology (CDTI). The Publication as provided reflects only the authors' view.

Every effort has been made to ensure complete and accurate information concerning this document. However, the author(s) and members of the consortium cannot be held legally responsible for any mistake in printing or faulty instructions. The authors and consortium members retrieve the right not to be responsible for the topicality, correctness, completeness or quality of the information provided. Liability claims regarding damage caused by the use of any information provided, including any kind of information that is incomplete or incorrect, will therefore be rejected. The information contained on this website is based on author's experience and on information received from the project partners.