



Customer In the Loop FOR Systems Engineering

Agile Model Based System Engineering

CIL4Sys has created Sim4Sys, a method and toolchain proposing agile systems engineering to accelerate the development of products, services and production lines.

Skills

System
Architecture

Design with
executable
models

Simulation &
Visualization

Validation in
short loops

Automatic
generation of
documents

Model-based
systems
engineering
(MBSE)

Offers

Tool-supported design services
MBSE Consulting/expertise
Software provider
Software customization/dev.
Training & support
Digital tests

Team

≈ 25
employees

Turnover

2 M€
2023

Localization

Paris
Tunis

Partners



CLUSTER
MECATRONIC
TUNISIA



CentraleSupélec



AFIS

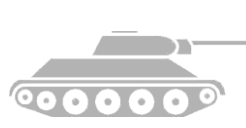


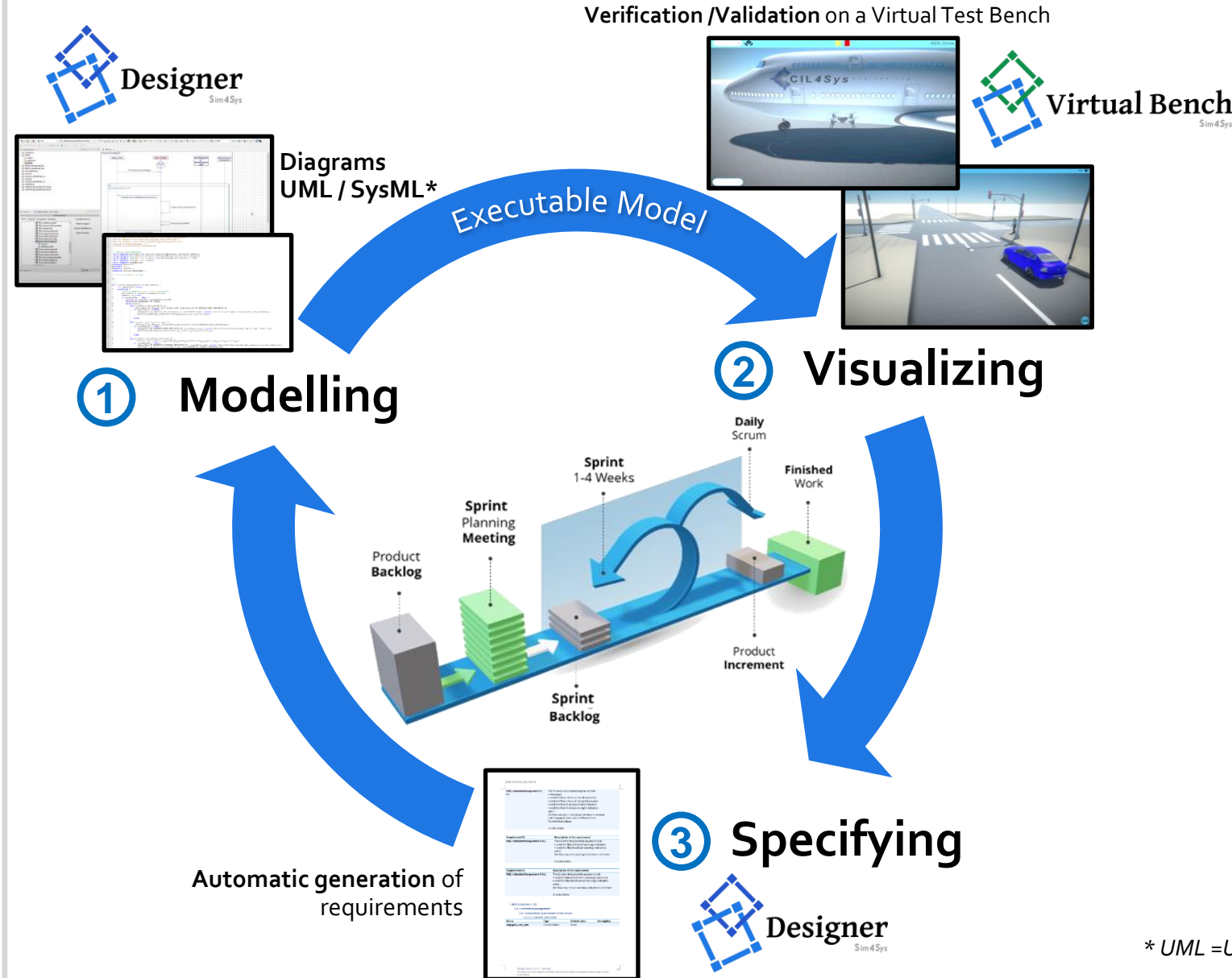
STARTUP
VILLAGE



next
move
collaboration is the driver

Industries





Functional digital mockup

Digital verification and validation during the design phase.

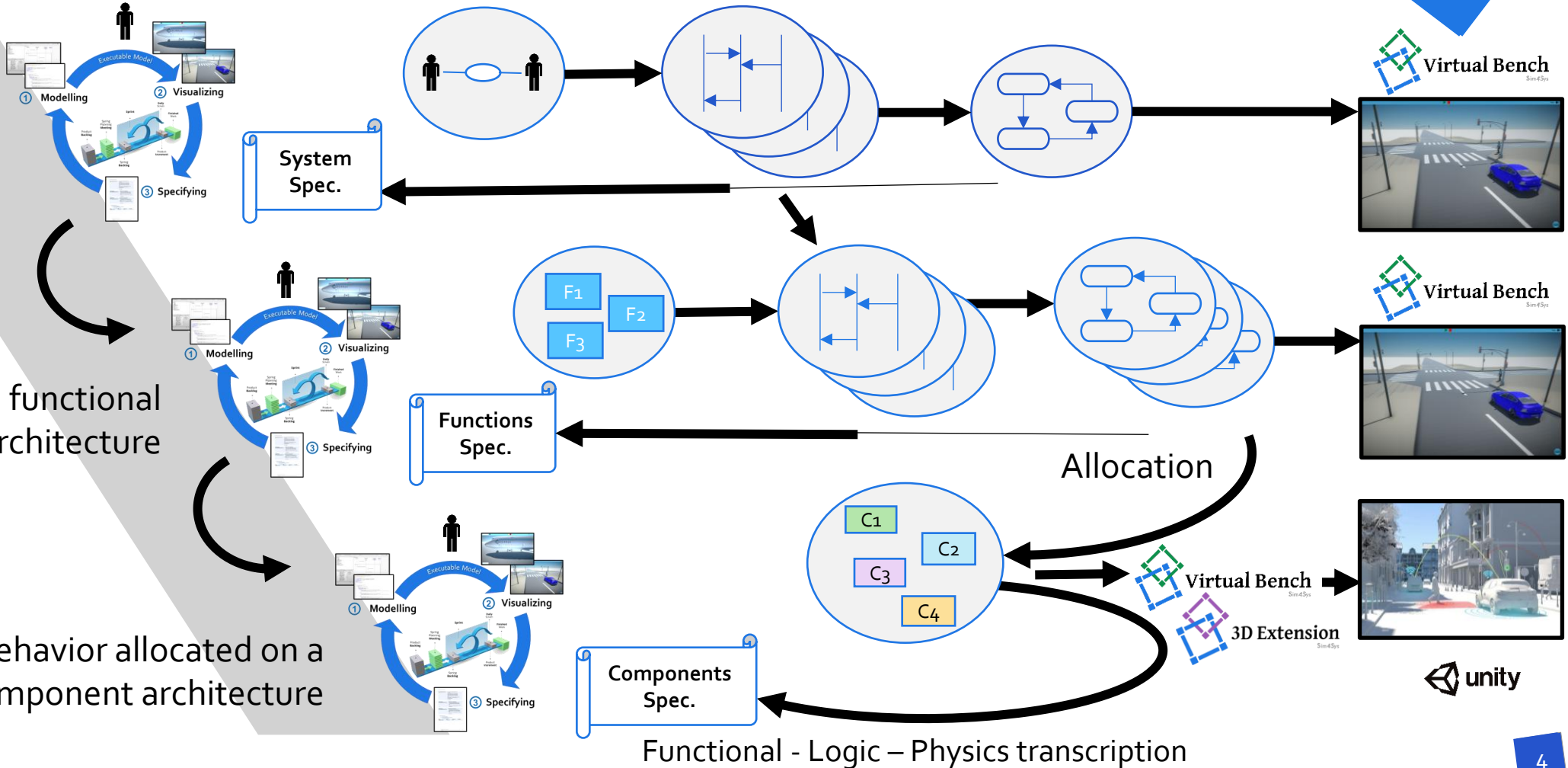
Digital continuity from operational scenarios to the digital twins in operation.

Needs
definition

Behavior at
operational level

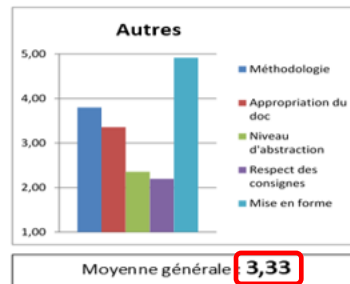
Behavior of a functional
architecture

Behavior allocated on a
component architecture



Benefits to use models to specify

Writing Requirements in traditional way,
natural language

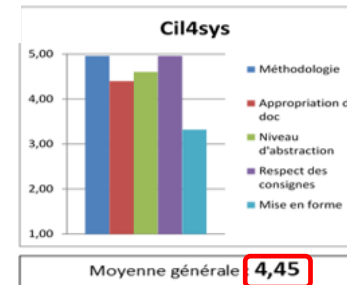


VS

Writing Requirements by using
Sequence diagrams

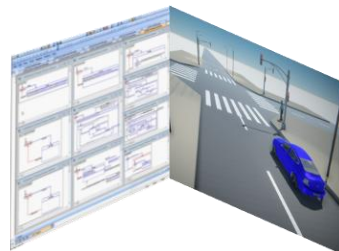


**2 times less
resources needed**



**30% better
quality of
deliveries**

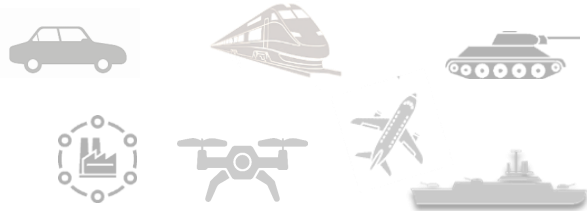
Early V&V in a functional digital mockup



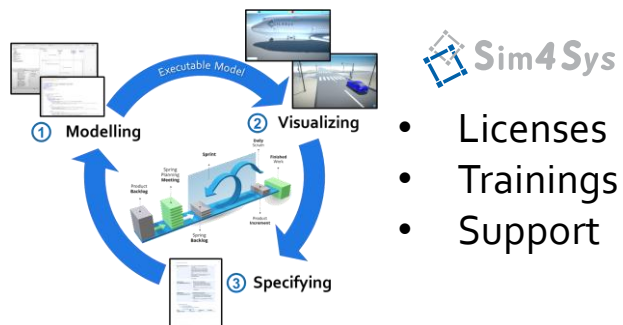
50% of defects avoided
on the first prototype

Design Services

Delivery of models and specifications using Sim4Sys or other modelling tools



Software Provider



Consulting on MBSE deployment & change management



- **Audit** of existing processes.
- Description of **design process architecture**, model of the engineering data and flows, including integration with IT env. (**PLM**, other tools).
- Key success factors identification and **change plan design** to deploy the **best practices**.
- Change plan implementation, including trainings and support.

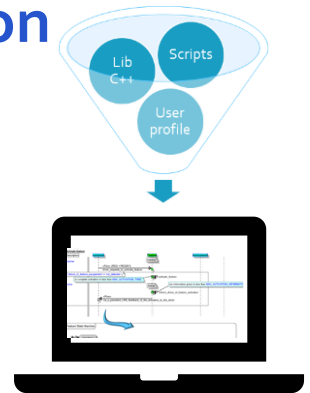
MBSE Trainings & support



Tools customization

Development of profiles, scripts, plugins, consistent with the metamodel.

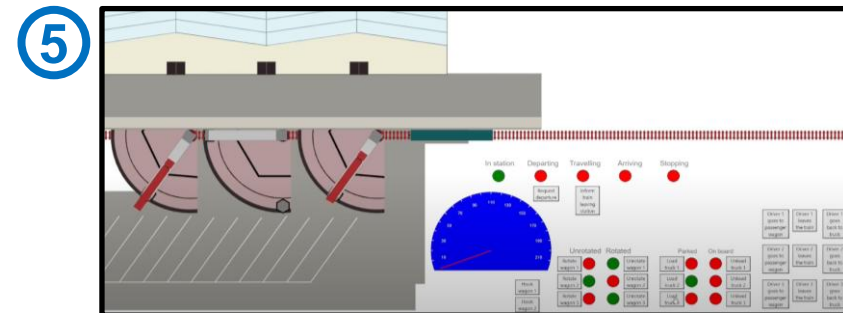
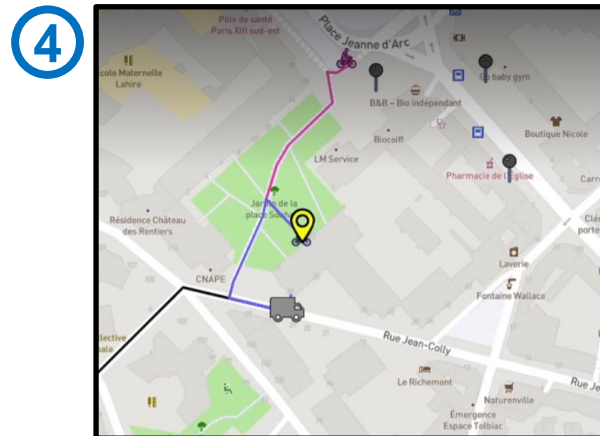
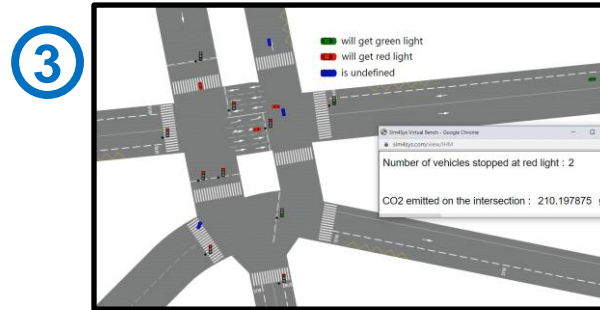
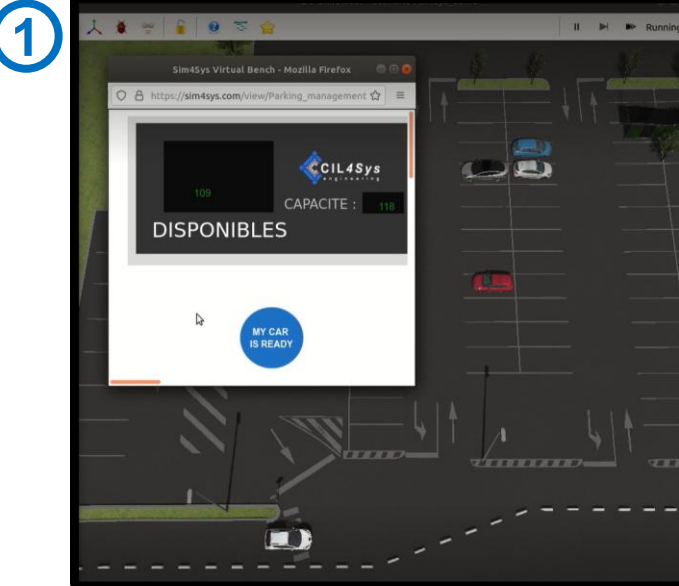
Usage of SW tools to **create other SW tools**



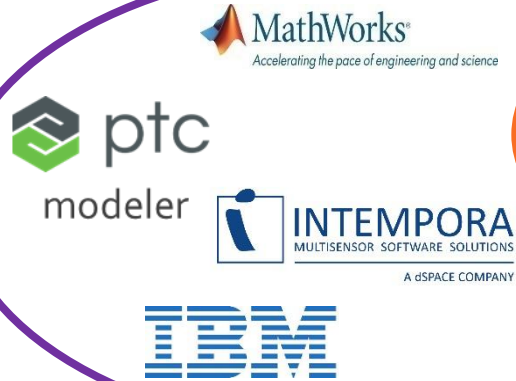
Test benches Sim4Sys

Use **models as placeholders** to test components.

- 1 Autonomous valet parking
- 2 Inspection drone
- 3 Intelligent Traffic management
- 4 Multimodal deliveries
- 5 Road / Rail Transportation System
- 6 A cobotic process
- 7 Many examples in Automotive, Railway, Defense, Energy, ...



Software Vendors



Institutions



Industrial



Engineering Partners