DIGITAL TWIN
TECHNOLOGY

Smart Futures: Digital Twins

Reshaping Construction, Manufacturing, Semiconductor, and Smart Cities

(through) Research & Innovation

Presenter

Dr. Tariqul Islam

EU R&D Project Manager

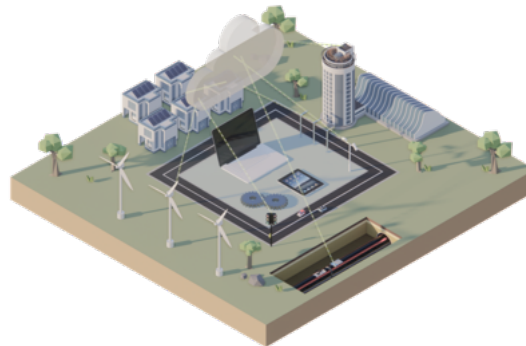DigitalTwin Technology

Company Introduction
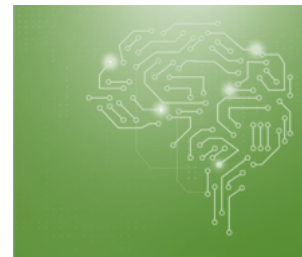

DigitalTwin Technology GmbH

- **Founded in 2018**, an SME headquartered in Cologne, Germany

- **Our vision :**
  Create advanced, open-source & tailored
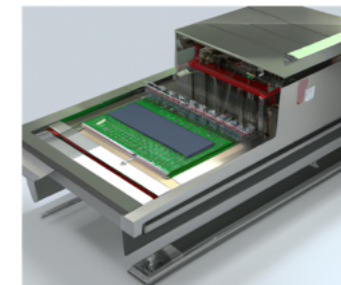 Digital Twin ecosystem for

  - Construction
  - Manufacturing
  - Semiconductor
  - Smart Cities

Digital Twin

Artificial Intelligence

3D Modeling of Machine

Sensor and Control

- **Our Digital Twin (DT) solutions**
  - leverage **AI, 3D Modeling and Game engines** to develop IoT-driven DT platforms
  - have **USP** of intergrating **multi-physics simulation** leveraging **reinforcement learning**

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Expertise

Our Team

- Digital Twin Engineers
- AI Engineers
- Physics Simulation Engineers
- Civil Engineers

RAHUL TOMAR
MANAGING DIRECTOR AND CO-FOUNDER

JENS PIESK
CO-FOUNDER

HOLGER SPRENGEL
CO-FOUNDER

TARIQUL ISLAM
EUROPEAN R&D PROJECT MANAGER

JESUS MORALES
SENIOR UNITY DEVELOPER

REHAN KHAN
DIGITAL TWIN DATA MANAGER

JYOTHI PUDOTA
MAHINE LERANING ENGINEER

MOHIT BHARGAV
DIGITAL TWIN SIMULATION ENGINEER

GUARNER GONZALO
UNITY DEVELOPER ENGINEER

MARC GALVEZ
UNITY DEVELOPER

RUCHA KATHE
DIGITAL TWIN SIMULATION ENGINEER

RIA MATAPURKAR
CARLA DEVELOPER ENGINEER

PRIYA CHAUDHARY
INTERN IN ROBOTICS

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Research Projects & Results

Construction Projects

ASHVIN — Funded by: EU Horizon 2020

RoBetARME — Funded by: EU Horizon Europe

mastermine — Co-Funded by: EU

CIRCUIT — Funded by: EU Horizon Europe

Manufacturing & Semiconductor Projects

ENERGY ECS — Funded by: EU and ECSEL Joint Undertaking

iMOCO4.E — Funded by: EU and ECSEL Joint Undertaking

DIGITBRAIN — Funded by: EU Horizon 2020

Smart City Projects

DIDYMOS XR — Funded by: EU Horizon Europe

SCENE — Funded by: EU Horizon Europe

Project Results

- Digital Twin for Semiconductor Manufacturing process

- Digital Twin of Smart cities and construction sites
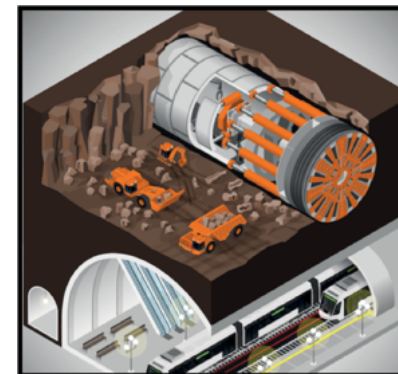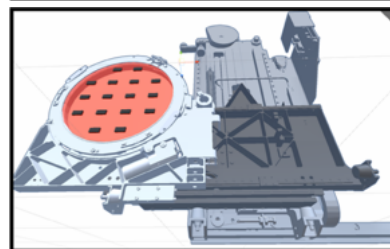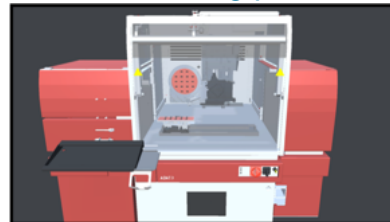

Tunnelware:

Digital Twin of Construction Sites
(https://www.tunnelware.io/)

Cityware:

Digital Twin of smart cities
(https://www.cityware.io/)

DIGITAL TWIN TECHNOLOGY

Project Results and Future Partners

Project Results

- Sensor Behaviour Analysis (FEM-based solution) in different Scenario

- Robot Navigation system at Warehouse - Path generation and obstacle avoidance using AI

- AI based image anomaly detection for Manufacturing process
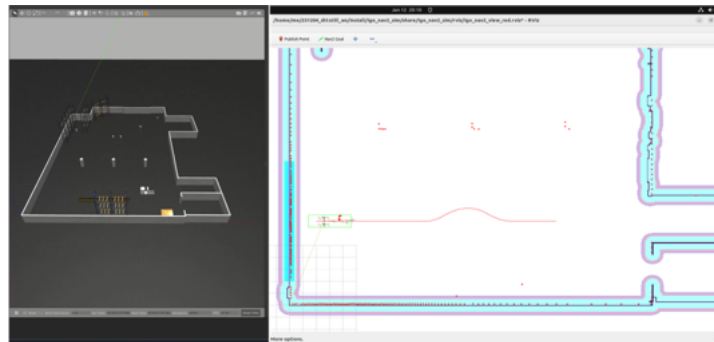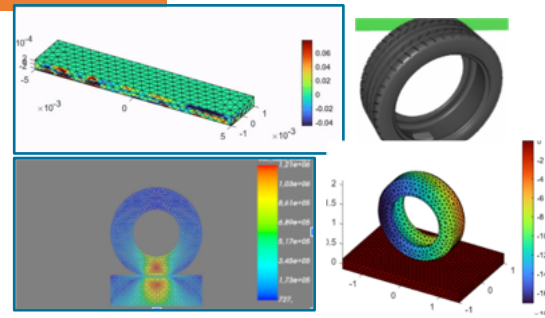
Project Partners

We are seeking project partners from:
- Industry (SME/RTO/LE)
- Academia

In Sectors:
- Construction, Semiconductor, Manufacturing, ICT, Smart City

Partner roles:
- Project partner
- Project coordination

To develop proposal and implement research activities.

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Conclusion

Thank you, hope we got your attention

CONNECT WITH US

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