



Dynamic Digital Twins:
Pioneering Sustainable Innovation in
Construction, Manufacturing, Smart Cities, & Semiconductor

Presenter

Dr. Tariqul Islam

R&D Project Manager

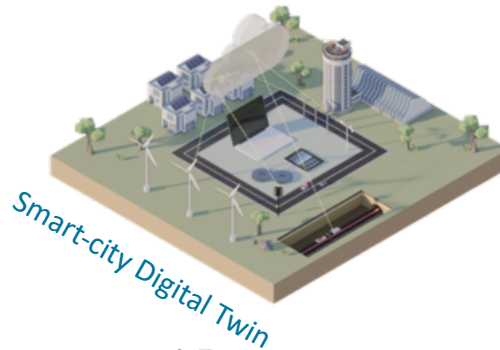
DigitalTwin Technology GmbH

Company Introduction

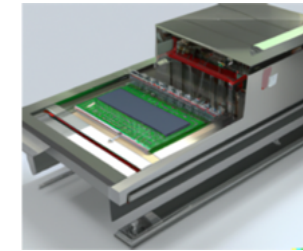


DigitalTwin Technology GmbH

- **Founded in 2018**, an SME headquartered in Cologne, Germany
- **Our vision:**
Create advanced, open-source & tailored Digital Twin ecosystem for
 - Smart Cities
 - Construction
 - Manufacturing
 - Semiconductor
 - ICT



Smart-city Digital Twin



3D Modeling of Machine



Artificial Intelligence



Construction Digital Twin

- **Our Digital Twin (DT) solutions**
 - leverage **AI, 3D Modeling and Game engines** to develop the DT platforms
 - integrates **multi-physics simulation** and **reinforcement learning**



Sensor and Control



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
Dr. TARIQUL ISLAM R&D PROJECT MANAGER	DR. SAJID MOHAMED LEAD SYSTEMS ARCHITECT	REHAN KHAN DIGITAL TWIN DATA MANAGER
JYOTHI PUDOTA MACHINE LEARNING ENGINEER	MOHIT BHARGAV DIGITAL TWIN SIMULATION ENGINEER	CHRISTIAN MARTINEZ UNITY DEVELOPER ENGINEER
MARC GALVEZ UNITY DEVELOPER	RUCHA KATHE DIGITAL TWIN SIMULATION ENGINEER	FRANCESCO MARCIA UNITY DEVELOPER
	Deepti Desai INTERN IN Digital Twin	

Research Projects & Results



More than 10 ongoing R&I project

Construction Projects










 Funded by:  EU Horizon 2020


 Funded by:  EU Horizon Europe







 Co-Funded by:  EU

 Funded by:  EU

Manufacturing & Semiconductor Projects


 Co-Funded by:  EU


 Funded by:  EU and  ECSEL Joint Undertaking

 Funded by:  EU Horizon 2020

Smart City and Smart Health Projects



 Funded by:  EU Horizon Europe


 Funded by:  EU

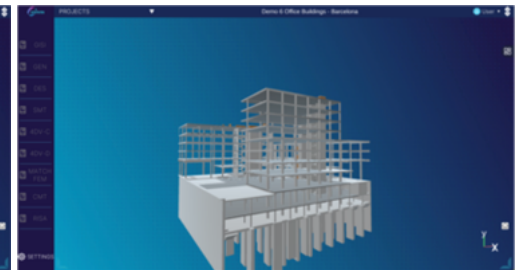
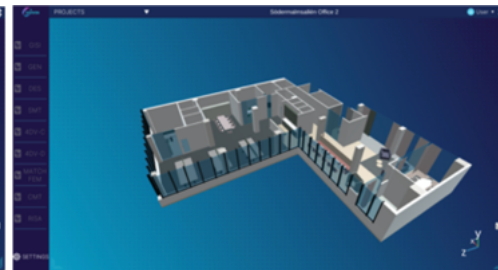
Project Results

Digital Twin of Smart cities

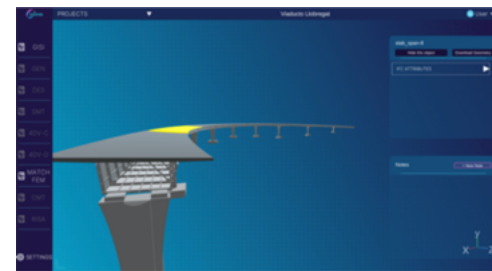


Dynamic City-scale digital twin: Digital Twin of a city, Traffic Simulation, Weather (rain, flood) simulation

Digital Twin of Construction Sites



Smart Office building Digital Twin



Bridge Digital Twin



Tunnel Digital Twin:

<https://www.tunnelware.io/>

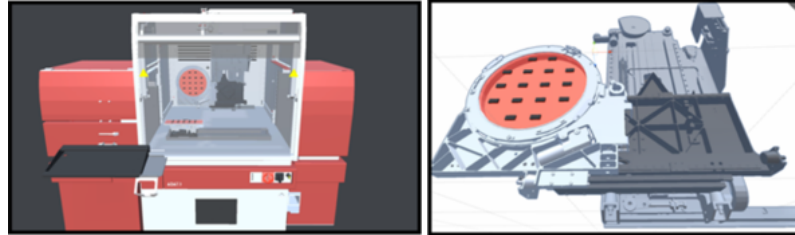


Project Results and Future Partners

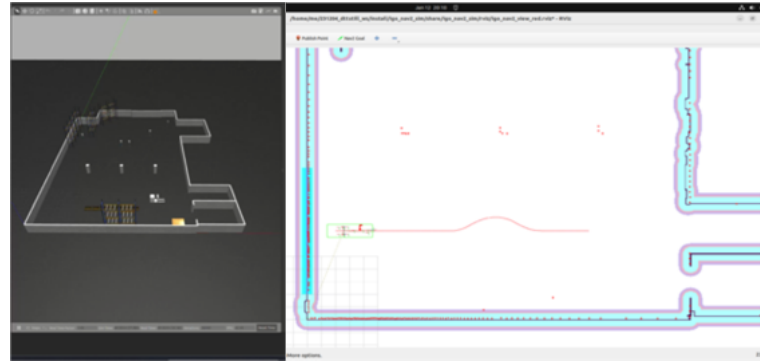


Project Results

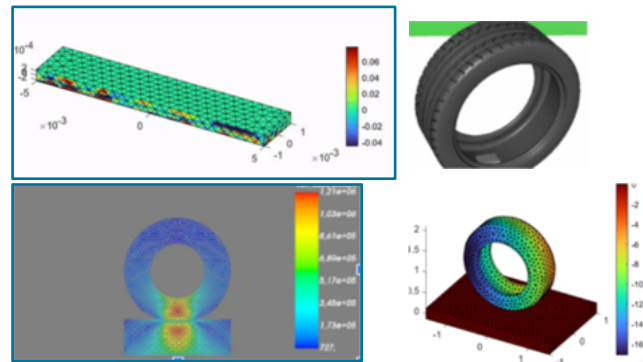
- Digital Twin for Semiconductor Manufacturing process



- AI based- Robot Navigation system at Warehouse



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



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.



Conclusion



Thank you, hope we got your attention

**CONNECT
WITH US**



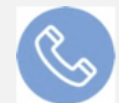
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