

Session 3: AI and Smart City / Smart Home

Digital Twin Cities Centre

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Abstract

Digital Twins are digital replicas of physical things. They help to make better-informed decisions, lowering costs and the chances of failing in the real world. Recent advances in technology have already enabled the creation of digital twins of cars or airplanes that can now be modelled, simulated and optimised before they even leave the drafting table.

This progress is about to become reality for something as complex as whole cities. Digital Twins can simulate and visualize the pulse of the city in real time with layered data sources of buildings, urban infrastructure, utilities, businesses, movement of people and vehicles. Utilising this technology in the right way has enormous potential for tackling some of the most pressing urban challenges, such as segregation, flooding, pollution, traffic congestion, spreading of fire & diseases.

In this talk, I will present an overview of our activities at the Digital Twin Cities Centre, a Vinnova Competence Centre hosted by Chalmers University of Technology in Gothenburg, including some preliminary results of city model generation, simulation and visualization.