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Transforming Economies in 5G Era
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VIRTUAL GOTENBURG
A DIGITAL TWIN OF THE CITY

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CITY OF GOTHENBURG
THE SECOND CITY OF SWEDEN
600,000 INHABITANTS
(1,000,000 IN GOTHENBURG REGION)
Challenges
Over the next decades, development is planned over an area spanning five million m² on either side of the river; The RiverCity. Central Gothenburg will double in size. There are plans to build 25,000 new residences and 45,000 new workplaces.
Gothenburg is a segregated city divided in 10 districts with clear differences. Therefore integration is a key challenge in urban planning and social development.
No 3

Climate change - Higher sea levels.
IPCC predicts scenarios of 1.5 m average sea level rise in 150 years.
In combination with storm occasions on additional 1.5 meter rise we have a worst case scenario with up to + 3 m sea level.
Rapid growth of the amount of data
Open data
New data synergies
Internet of things
New business models (public/private)
How do we face these challenges?
Virtual Gothenburg
a digital twin
Virtual Gothenburg will go public just in time for the 400 years anniversary of the city of Gothenburg in 2021.
A digital twin is not just a replica of the visual reality, but also an interface of the information that is connected to it.
The development of Virtual Gothenburg - our future digital twin
Smart city
Planning
Maintenance

Open data
Shared data

STEERING
DIALOGUE

Digital Twin / Virtual Gothenburg
Information model

CONSTRUCTION
MONITORING

BIM
CIM (CityGML)

City data

SCENARIOS
ANALYS
WHY A DIGITAL TWIN?
Building a car is...
- Prototyping
- Modeling / Analysis
- Visualization
- Testing
Why don’t we do the same when we build our city?
The Virtual Gothenburg will serve all processes in the city with relevant information and act as a platform for planning and monitoring and a testbed for innovation.
VR-applications facing city challenges (examples)
Min Stad (My City)
Min Stad is a world unique arena for citizen dialogue and public participation.

The arena was released in May 2012. Since the beginning over 1300 suggestions have been recorded. In 2016 a mobile app was released.
Another example of citizen engagement regarding urban planning is our Minecraft model. 10 districts as separate Minecraft worlds. Totally 400 sq km of geo data available as open data in the Gothenburg platform.
Flooding
CITY OF GOTHENBURG

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