

29.9. TUESDAY

REDEFINING SUSTAINABILITY FOR URBAN FUTURE

VIRTUAL WDBE 2020



All times shown are EEST

09:00 **LOGIN AND MATCHMAKING**

10:00 **HELSINKI WELCOMING SHOW**

10:30 **KEYNOTE SESSION 1:
REDEFINING SUSTAINABLE ARCHITECTURE AND DIGITAL INTERACTION**

WORKING TOGETHER TOWARDS REAL-TIME ISSUES WITH UNREAL ENGINE David Weir-McCall (UK), AEC Strategic Business Development, Epic Games
STAY CURIOUS! WHY RESEARCH MATTERS IN ARCHITECTURE Jakob Strømmand-Andersen (DEN), Partner and Head of Sustainability Engineering Department, Henning Larsen

11:30 **EXPLORING THE "ILLUSION CITY"
SHOWROOM AND MATCHMAKING**

13:30 **PARTNER SESSIONS**



Smart Otaniemi



Digital twins of the built environment: Seven metaphors to explain a buzzword



Circular Building Solutions from the Netherlands

14:30 **KEYNOTE SESSION 2:
REDEFINING SUSTAINABLE QUALITY OF LIFE**

HOW CAN A VIRUS DRIVE A HEALTHIER BUILT ENVIRONMENT? Marta Fernandez (ESP), Executive Director, RMIT Europe
RESILIENT SPACES – URBAN FORM DESIGNED FOR HEALTHY LIVING Annalise Johns (UK), Housing Lead, Connected Places Catapult

15:30 **TWINMOTION WORKSHOP 1:
A CRASH COURSE INTRODUCTION**

This workshop is aimed at archviz designers who have some knowledge of 3D content creation using apps like SketchUp, Revit, or 3ds Max. 2nd day Twinmotion workshop will deepen the themes of the first workshop. Workshop 1 is with Amer Yassine.

Attendees in this session will:

- learn how to import 3D content into Twinmotion – a fast and easy real-time visualization tool built on Unreal Engine
- find out how to enhance a project using Twinmotion's built-in tools and assets, including PBR Materials and lighting
- learn how to show off designs with images, panoramas, videos, or BIMmotion files

16:00 **COMMUNITY SESSIONS**

**SESSION 1:
REDEFINING SUSTAINABLE DESIGN**

Future buildings - Green & Smart?

Mika Kovanen, Ramboll Finland

Virtual Energy Urban Community as an enabler of clean energy urban transformation

Francesco Reda, VTT

mySMARTLife – Open Energy Data Ecosystem as a Driver for Carbon Neutrality

Maria Viitanen, City of Helsinki

Sustainable Design: From Bioclimatic to Regenerative Digital Design

Arlind Dervishaj, BIM A+

Lean2Cradle® Material Passport - Digitizing Buildings to activate their circular value

Gemma Canals, Eco Intelligent Growth

Utilizing the LCA calculations using BIM Ahmed Hussein, Metropolia University

**SESSION 2:
REDEFINING VIRTUAL DESIGN PROCESS**

Proof of Concept for a BIM based permit checking environment in Estonia

Rick Klooster, Future Insight

Integrated 3D digital city publisher & data collector for companies & municipalities

Petri Kokko, Sova3D Oy

BIM for massive wood, straw bale, and clay

Conor Shaw, Shaw Architectural Solutions

Co-creating and collaborating with partners to increase the efficiency and transparency

Mika Kupila, HEAL / Trä Digital Oy

Rethinking structural engineering process

Petteri Karjalainen, A-Insinöörit

Case Large complex builds: How BIM and VR are critical in building sustainable collaboration

Kasey Snyder, Tridify

**SESSION 3:
REDEFINING URBAN WELL-BEING**

Principles of a sustainable city: platform + transparent + data-driven

Natalia Rincón, CHAOS

Smart Communicative City Planning: Towards People-Centered Built Environment with Digital Methods

Pilvi Nummi, Aalto University

Redefining the citizen engagement as an ecosystem of data linked to locations

Maarit Kahila, Maptionnaire

How to achieve inclusive sustainability, case Espoo

Elina Wanne, City of Espoo

Virtual co-creation platform for urban planning

Petri Kangassalo, Aalto University

Future of Work

Tom Lindholm, YIT

**SESSION 4:
REDEFINING HEALTHY HOUSING**

How does the megatrend of individualism effect the behavior of real estate customers

Harri Majala, GBuilder

Spaces configurator to facilitate environmental and health requirements

Berit Virtanen-Thewlis, Trä Digital Oy

Digital analysis of residential architectural qualities

Kaj Granath, Chalmers University of Technology

Climate wise housing cooperatives

Visa Kivisaari, Green Building Council Finland

Prefabricated modular insulation elements for the deep energy renovation of existing building stock

Targo Kalamees, Tallinn University of Technology

How Artificial Intelligence can save energy and increase indoor comfort at the same time

Imre-Gustav Vellamaa, R8tech

18:00 **DAY 1 CLOSING WORDS**



30.9. WEDNESDAY

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09:00 **LOGIN AND MATCHMAKING**

10:00 **TALLINN WELCOMING SHOW**

10:30 **KEYNOTE SESSION 3:
REDEFINING SUSTAINABLE ROLE OF TECHNOLOGY**

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CREATING GRAVITY AND INCREASING THE TALENT DENSITY – MEGA PROJECTS AS A PLATFORM FOR IMPLEMENTING NEW WAYS OF WORKING
Peter Vesterbacka (FIN), Founder, FinEst Bay Area Development
HUMAN-ROBOT FUTURES IN ARCHITECTURE AND DIGITAL FABRICATION Kathrin Dörfler (GER), Assistant Professor, TU Munich



11:30 **EXPLORING THE "ILLUSION CITY"
SHOWROOM AND MATCHMAKING**

13:00 **PARTNER SESSIONS**

DiCtion Digitalising construction workflows Unlocking the investment potential for resilient low-carbon building stock
platform of trust Comprehensive approach to data utilization

14:00 **COMMUNITY SESSIONS**

**SESSION 5:
REDEFINING TECHNOLOGY ADOPTION**

Blockchain in real estate and construction
Alireza Khalafi, Swiss Association Of Crypto Investors
AI transformation in engineering – building the right competencies after COVID-19 crisis Janne Liuttu, Ramboll Finland
Co-creation of Digital road map – step by step from vision to practice
Suvi Nenonen, University Properties of Finland Ltd
Dynamic systems view on built environments and their digitalization across the globe Pekka Huovinen, Business Management PJH
BIM-Futures – Capacity-building professional development
Mark Kelly, Galway-Mayo Institute of Technology
How Datahub enabled COVID-19 impact follow-up on construction sites
Heikki Sulonen, YIT
Reasons that slow down Nordic proptech growth
Risto Kankaanpää, Pontos

**SESSION 6:
REDEFINING DIGITAL INFRASTRUCTURE**

Automation of city asset management process with computer vision technology
Markus Melander, Vaisala Oyj
Bottlenecks of creating digital infrastructure in Finland
Maiju Örmä & Kaisu Laitinen, Tampere University
How should we structure information so we can reuse it tomorrow and in 50 years from now Göran Samuelsson, Swedish Transport Agency and Mid Sweden University
Creating a national framework for easier information exchange in road construction projects Erling Onstein, NTNU
Benefits of digital twinning in creating a user-centric and sustainable built environment Jarkko Männistö, Sitowise

**SESSION 7:
REDEFINING DIGITAL CONSTRUCTION**

Cost-efficient documentation of buildings and technical installations with photogrammetry Adrian Merkel, Framence GmbH
Synchronizing construction activities with takt platform
Marco Binninger, TAKT.ing
Experience and challenges of digital development from general contractor's perspective Miina Karafin, Nordecon AS
Using digital sticky notes for communicating from office to field
Heikki Halttula, Topcon Technology Finland Oy
Superior communication is a key factor in order to improve construction project performance Otto Laurila, Homerunbynet Oy
Virtual timber construction factory
Raiko Gustavson, Estonian Woodhouse Association
Concrete 3D Printing: Accelerating the transition to Sustainable and Automated Construction Fernando De los Rios, Hyperion Robotics

**SESSION 8:
REDEFINING DIGITAL LIFECYCLE**

Smart Maintenance of University Campus Facilities – Case Tampere University
Jani Hämäläinen, Siemens & Ville Kautto, University Properties of Finland
Key elements in building trust in data ecosystems
Vesa Ilmarinen, Platform of Trust
Augmented Reality for Facilities Management
Francisco Forns-Samsó & Mao Lin, Granlund
Social extended reality for construction and FM business
Henri Pirkkalainen, University of Tampere
Utilizing 3D city model to predict the heat demand of buildings
Enni Airaksinen, City of Helsinki, Helsinki3D+
Sensorized ETICS for LCA performance assessment
Angelo Ciribini & Lavinia Chiara Tagliabue, University of Brescia
KEKO Innovation Ecosystem, first results and focus areas
Mikko Kuusakoski, YIT

16:00 **TWINMOTION WORKSHOP 2:
MORE THAN STUNNING VISUALIZATIONS**

This workshop is a follow on from the "Twinmotion: A Crash course introduction", and is aimed at archviz designers who have some knowledge of 3D content creation using apps like SketchUp, Revit, or 3ds Max. Workshop 2 is with **Joep VanDerSteen**. Attendees in this session will: • review how to use Twinmotion for collaboration between clients or co-workers • learn about VR workflows, phasing tools and options for working with BIM and BCF data



17:00 **KEYNOTE SESSION 4:
REDEFINING SUSTAINABLE CONSTRUCTION AND LIFECYCLE**

RESHAPING HOW WE CREATE THE BUILT ENVIRONMENT WITH DIGITAL TOOLS AND MULTI-DISCIPLINARY COLLABORATION
Martin Fischer (US), Professor, Stanford University, CIFE
FIXING THE PRODUCTIVITY PROBLEM OF CONSTRUCTION – THE ROLE OF IMPROVED SITUATION PICTURE Olli Seppänen (FIN), Associate Professor, Aalto University

18:00 **CLOSING WORDS**



PARTNER SESSIONS

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SMART OTANIEMI

This partner session is hosted by Smart Otaniemi (smartotaniemi.fi), an innovation ecosystem that connects experts, organisations, technologies and pilot projects. It brings the building blocks of a smart future together.



DIGITAL TWINS OF THE BUILT ENVIRONMENT: SEVEN METAPHORS TO EXPLAIN A BUZZWORD

This partner session is hosted by the TwinValue project (twinvalue.eu). The TwinValue project aims to clarify the business value and integration requirements for the digital twin of a building, or in other words, an integrated software solution that can manage and update both static and dynamic information of a building across its life-cycle phases (e.g. "as-planned", "as-designed", "as-built"), thus coupling the physical asset with its digital representation or counterpart.

Digital twins of the built environment: Seven metaphors to explain a buzzword

The term "digital twins" has been around for a couple of years, but its actual meaning and potential business impact are still a matter of debate. In this talk, TwinValue will summarize some results of the research, which has examined various organizations of the Finnish built environment over the last two years. What do these key actors mean or try to achieve when they talk about digital twins? Are digital twins just a fancy buzzword for user interfaces to visualize buildings, a re-branding of BIM, or is there more to this promising concept?



CIRCULAR BUILDING SOLUTIONS FROM THE NETHERLANDS

This partner session is hosted by the Netherlands Embassy in Helsinki in cooperation with Regional Business Development Team Nordics & Baltics and the delegation companies. The event is also an official side event of the World Circular Economy Forum (website) and streamed for free for the WCEF participants.

30.9. WEDNESDAY

13:00



DIGITALISING CONSTRUCTION WORKFLOWS

This partner session is hosted by the DiCtion project (www.aalto.fi/en/diction).

DiCtion is a research and development project that aims at a future in which every stakeholder in a construction project has access to real-time information about the past, present, and future events of a project. The shared situation picture is made possible by digitalising construction workflows and using common data models and ontologies.

DiCtion applies technologies from three domains: building information management (BIM), construction management (CM), and supply chain management (SCM). Until now, these technologies have been separated, with little data-level interaction between them. DiCtion creates connections between these application areas, which is a game-changer in construction information management.



UNLOCKING THE INVESTMENT POTENTIAL FOR RESILIENT LOW-CARBON BUILDING STOCK

This partner session is hosted by the WWF Finland's LIFE EconomisE project (wwf.fi/en/economise).

The project's objective is to influence the uptake of energy efficiency measures and to bring about a shift towards low-carbon investment, explicitly focused on decarbonisation of buildings and improved climate resilience. This session describes the big picture of the LIFE EconomisE project and showcases 5 solutions capable of ensuring that basically every real estate investment from now on would be 'future-proof'. The five companies were selected as winners of the KIRA-challenge competition.

The LIFE EconomisE project is coordinated by WWF Finland and implemented in partnership with the Finnish Environment Institute (SYKE) and SYKLI Environmental School of Finland. The project is co-financed by the EU LIFE Climate Governance and Information programme.



COMPREHENSIVE APPROACH TO DATA UTILIZATION

This partner session is hosted by Platform of Trust (platformoftrust.net).

Platform of Trust harmonizes incompatible data coming from various sources, enabling it to be merged and utilized. The platform reduces the need for integration significantly which does not only save time and money but reduces time-to-market span for services built on their platform.

