

**BUILD
SMARTER.
CLEANER.
CHEAPER.**



BIMprove Technology Demonstrators

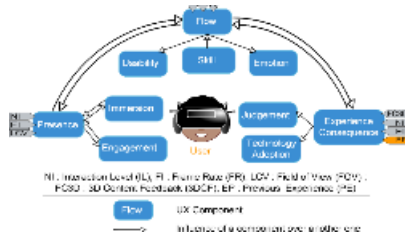
BIMprove project has released its exciting demonstrators covering stationary, ground- and **UAV-based data acquisition systems**; **augmented reality** (AR) visualisation of BIM model; application of **multi-user virtual reality** (VR); **computer vision** model for detection of safety structures in the construction site; **mapping of point clouds** to IFC elements; and **BIMprove** web front end.

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Data-capturing drones



Our News: What we have been doing



Usability and UX in mobile and XR applications

The general usability and **UX design principles** can be utilised broadly for all kinds of devices and human-technology interactions. However, in the context of **BIMprove**, the mobile devices and solution usage on the move play an important role.

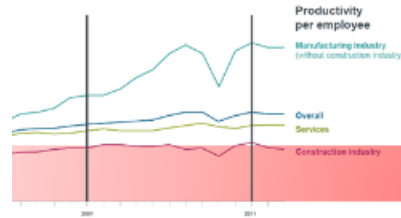
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Requirements analysis and engineering in the AECO sector

Digital Twin development requires **harmonious communication** between two groups of stakeholders: **1)** AECO professionals and other non-software engineers, and **2)** software engineers. The former knows what problems they want to solve, the latter knows how to solve them.

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Digital twins in the AECO sector

All industrial sectors would like to achieve higher levels of efficiency, less idle time, and better performance. While most sectors are currently enjoying the benefits of automation and digitalization, the **AECO sector continues to struggle with this transition.**

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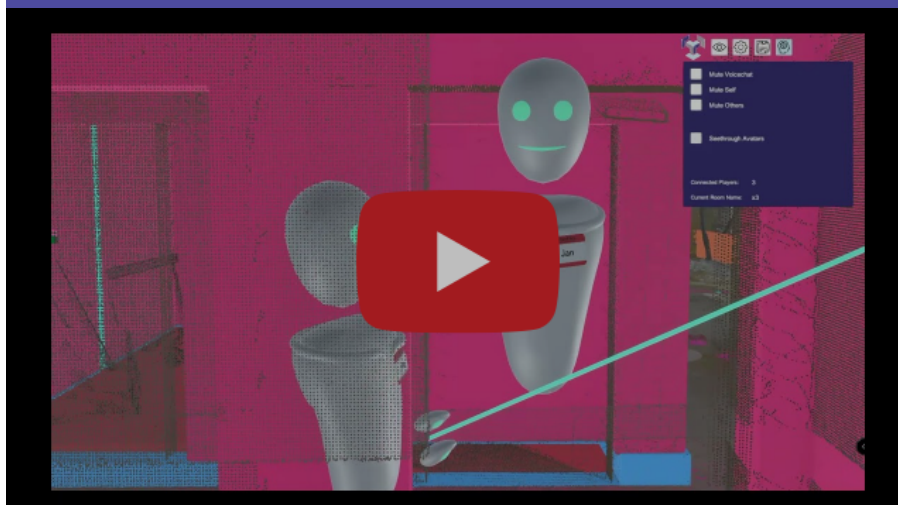


Computer Vision Model Creation

The **automated detection of safety factors and risks** is based on **detecting from the visual material the conditions and situations which may contribute to formation of a risk.** The digital visual material, photographs or video, collected from the work site may be analysed to detect the potential risks and related factors with a suitable deep learning based computer vision solution.

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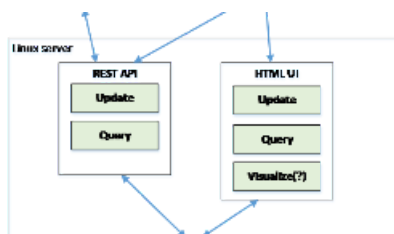
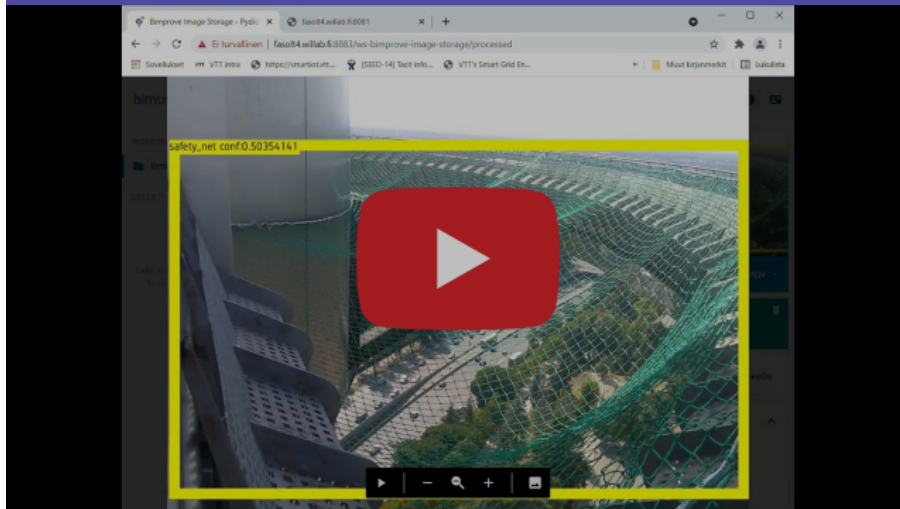
Multi User Virtual Reality



Over the last **six months** of our exciting project, **BIMprove** consortium has **released a number of public deliverables** highlighting all **major outcomes** of our work! **Visit our website** to access all documents and **read all about our recent work**.

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Detection of safety structures and untidy places in images



BIMprove's Risk Database



Risk ontology for the construction industry

BIMProve's data model defined for describing safety risks is highly connected. In other words, there exists **multiple relationships between identified concepts**, which sets specific requirements for a selected database technology to store this kind of data. During the recent years, the **limitations of traditional databases**, in particular the relational model, to cover the requirements

A **current trend in the construction industry** is that the **work is more often done by multidisciplinary and geographically dispersed teams**. However, **members of distributed teams may have difficulty establishing a shared context**. The **absence of shared context impedes the reaching of mutual understanding**, which may

technologies.

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Leica BLK 360 Point-clouds scans



BIMprove in Public Events



BIMprove as part of the “Digital twins and integration of AI in construction industry” webinar!

On **July 15th 2021**, **Dr Gabor Sziebig** from **SINTEF Manufacturing**, represented **BIMprove**, at the “**Digital twins and integration of AI in construction industry**” webinar. The webinar was organized by the **Artificial Intelligence Research, Development and Innovation Network for Sustainable Cities** and was funded by the **Royal Academy of Engineering** under the **Frontiers Champion** award.

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BIMprove at Sustainable Places 2021!

BIMprove joined forces with **COGITO**, **BIM2TWIN** and **ASHVIN** and organized a 120-minute hybrid workshop at the **9th annual edition of Sustainable Places (SP2021)** on “**Digital Twin for the Construction Phase**”. The hybrid workshop took place on the **30th of September 2021**, discussing about the challenges of creating digital twin for the construction.

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BIMprove at CIB W78 - LDAC 2021!



BIMprove participated in the joint conference **CIB W78 – LDAC 2021** that took place in Luxembourg at **11-15 October 2021**. Our partner **HRS** set up a **BIMprove corner**, highlighting our project's recent development and goals and attracted interest on our activities. Our coordinator, **SINTEF**, participated in the *"Linking EU H2020 projects on digitization in the construction and maintenance industries"* workshop, together with our **H2020 sister projects** **ASHVIN**, **COGITO** and **BIM2TWIN** and representatives from **BIM4Ren**, **BIM-SPEED**, **BIMERR**, **BIM4EEB**, **SPHERE** and **CBIM**, where the need of aligning effort when developing ontologies has been highlighted.

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Visit our new YouTube Channel!



We are thrilled to announce that we have launched our **YouTube Channel**! In this channel you will find videos from our **pilot sites** and **demonstrations of our exciting and innovative technologies**. Don't forget to **subscribe to stay tuned** for more content!

[Visit our Channel](#)

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