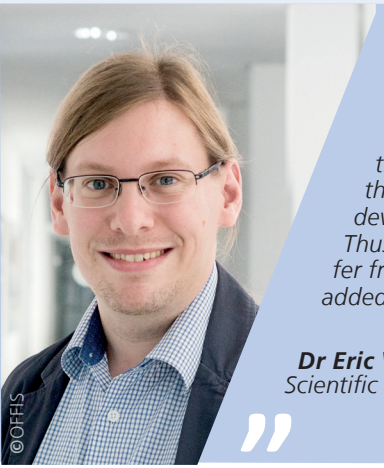
Project Results Summary: RenovAIte

What results were achieved?

The construction industry is responsible for around 38 percent of CO_2 emissions worldwide – an enormous potential for savings. The aim of the RenovAIte project was to develop data-driven and AI-based technologies that help the industry to reduce CO_2 emissions. To this end, eight prototypes were developed for road and residential construction. These range from IoT sensors that recognise road damage at an early stage and enable targeted renovations to AI algorithms that suggest renovation measures for buildings. The latter also take possible future climate developments into account – an important step towards factoring climate risks into construction decisions from the outset and strengthening the resilience of buildings.



"The RenovAIte project has allowed us to evaluate our AI method developed at OFFIS – Institute for Computer Science, named „Adversarial Resilience Learning", at the application case of renovation projects. Based on this, we developed a solution that takes future climate developments into account when making decisions. Thus, we contribute an important knowledge transfer from research to practice – and create sustainable added value for the industry."

Dr Eric Veith
Scientific director

What is the benefit for the industry?

The prototypes developed in the project support businesses in making informed decisions about renovation measures and implementing them efficiently. This not only reduces CO_2 emissions, but also allows climate risks to be recognised at an early stage and costly damage to be avoided. The digitalisation of previously analogue processes also creates more transparency in a traditionally less digitalised area. An accessible demo platform for the public makes the solutions easier to experience for businesses and other interested parties.

What are further plans after the project ends?

The project partners are working on further developing the prototypes for market maturity – in some cases, commercialisation is planned immediately after the end of the project. Due to the partners' strong position in their respective fields, there is great potential to attract further industry representatives to the solutions. In addition, the publication of a White Paper is planned, which will summarize the key project results and provide impulses for the broader use of digital and climate-conscious solutions in the construction industry.

5 Partners

Germany:
OFFIS e.V. – Institute for Information Technology
VIA IMC GmbH

France:
Leonard
Action Logement
ALEIA

Duration

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Contact

Dr Eric Veith
OFFIS – Institute for Information Technology

E-mail: eric.veith@offis.de
Web: https://renovaite.eu/

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DLR Projektträger