Ecobuilder: Providing information about economic and ecological buildings at the fingertips whilst saving time

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The Co-Innovation Lab at the Munich University of Applied Sciences enabled an interdisciplinary team of students from Munich and Tampere to work together on a project for the Bavarian Environment Agency. As part of this project, they developed a webtool application that portrays the 19 optimization approaches for affordable and energy-efficient buildings in an interactive, convenient and time-saving way. It also allows users to share their own solutions.

One does not exclude the other – Economic and ecological efficiency coming together:
Not being able to afford energy-efficient buildings is a frequent opinion of architects and planners. However, there are plenty of cases of existing buildings that prove this wrong. Until now, researching to find these examples was very time-consuming and based on traditional literatures like books. The Bavarian Environment Agency (LfU) has compiled these practical examples into one pdf document to decrease the information overload that exists online and to help reduce the lack of knowledge.

Increase audiences with interactive tools:
To make the compiled information more engaging and appealing, an interdisciplinary team of nine students in the fields of business administration and computer science at the Munich University of Applied Sciences and the Tampere University of Applied Sciences tackled this challenge and developed a user-friendly and interactive prototype.
The Webtool is called Ecobuilder - Building economically & ecologically and provides users with all solutions about existing approaches for affordable and energy-efficient construction. Information is presented in an intuitive and descriptive way, making researching more time efficient.

Engaging audiences and encouraging taking action:
The Webtool starts with an overview of the three main topics: technical, planning and organizational solutions. Each subject continues with an overview of a house and by clicking on a specific part, users get all information about benefits, cost-saving opportunities, tips, possible challenges and much more. With this application users are also provided with an opportunity to share their own ideas and solutions. Additionally, users can save solutions in their personal libraries and find more information in the literature section.

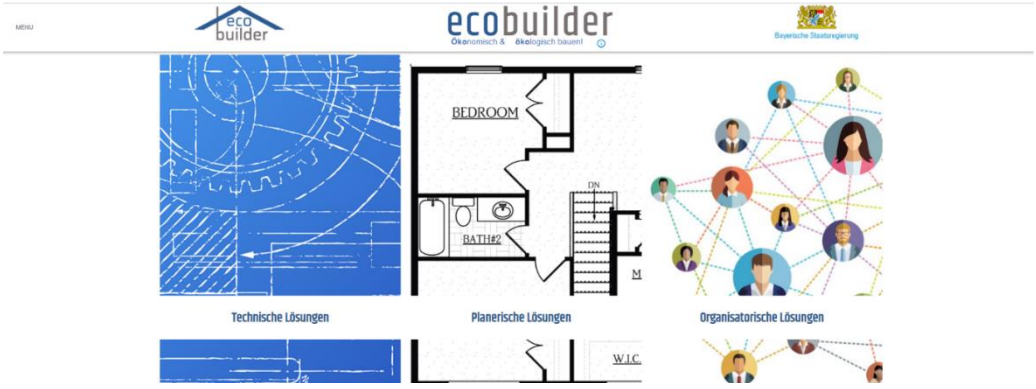

Figure 1: Front page of Ecobuilder presenting the three possible solution topics

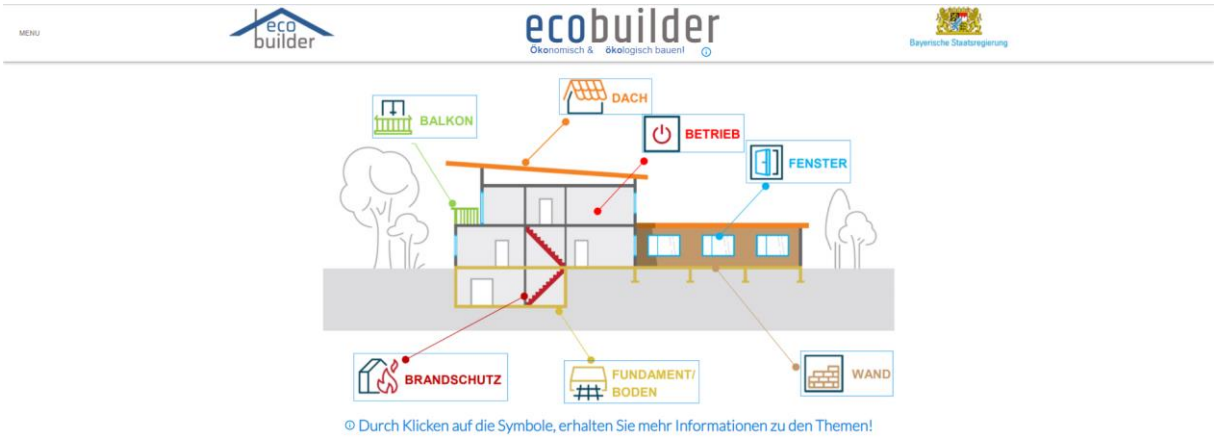

Figure 2: Clickable house for all the technical solutions

The Digital Transformation and Lab and Amazon Web Services:
This international project between Finnish and German students with also real-life stakeholders from the LfU was done in close cooperation with the Digital Transformation Lab. Amazon Web Services provided the technical and methodical support. The partners from AWS supported the students with state-of-the-art cloud technology and introduced them to the modern methodology called Amazon Working Backwards. Based on regular coaching sessions and using the scrum framework, they developed the prototype in small but quick iterations.

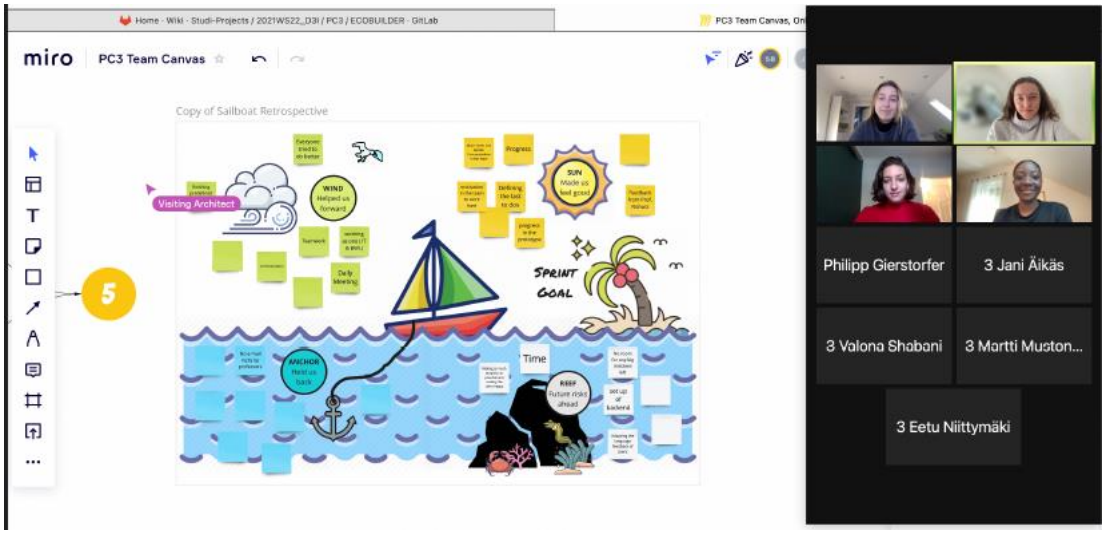

Figure 3: Example of a team meeting: Julia Sander, Sarah Bachsleiter, Paula Vogel, Nana Amanyame, Philipp Gierstorfer, Jani Äikäs, Valona Shabani, Martti Mustonen, Eetu Niittymäki

"With this overarching module, we were very motivated and engaged to realize good results and are very pleased with our final product the Ecobuilder. We learned a lot throughout this project about working together with clients and the steps of bringing an innovative idea to life.", states Valona Shabani a team member of the international team of students.

After presenting the results to the clients, Mr. Tobias Unger and Mr. Stephan Leitschuh, they were very enthusiastic about the finalized product. Considering the fact, the LFU is planning on integrating the prototype and the additional future features proves that the project fulfilled the needs and ended successfully.

"It was surprising that a functioning online tool was created in such a short time period. The collaboration was very pleasant and uncomplicated. Through the work of the study group we have now made a very big leap forward in offering our project results to the target audience in the best possible way.", states Mr. Unger from the LfU.

For further information about Ecobuilder and its benefits, click on the following link:
https://syncandshare.lrz.de/getlink/fi6tdUXzZLUgucRXY69HDayL/