

## **Exhibition on women in science, technology, and innovation for sustainable and inclusive development**

7 – 9 April 2025

Gallery space, 3rd Floor of the E-Building, Palais des Nations

**Name of Exhibitor:** École Polytechnique Fédérale de Lausanne

**Country:** Switzerland

### **Introduction of the Exhibitor**

The Limestone Calcined Clay Cement (LC3) Project is a not-for-profit entity with a vision to transform the way cement is made all over in the world.

LC3 technology saves 40% of CO2 emissions in comparison to conventional cement. Scaling its adoption will have a huge impact in carbon emission savings in the cement industry.

To facilitate an industry-wide shift, the LC3 Project team is active all over the world with a focus on the Global South – where demand for cement will increase in the next decades – and collaborates internationally with public and private sectors, professional associations and NGOs. Dr. Alice Titus Bakera is a civil and structural engineer and postdoctoral researcher at EPFL, Switzerland. She leads Kijani Impact Company Ltd., a social enterprise promoting LC3) for sustainable and affordable housing in Tanzania. She is also a lecturer at the University of Dar es Salaam, Tanzania. She combines academic research with practical applications, empowering women and youth through innovative construction solutions. Her work reflects a deep commitment to climate action, social equity, and capacity building in Africa's built environment sector.

### **Description of the Initiative/Proposal**

The initiative showcases LC3 as a low-carbon, cost-effective cement alternative developed at EPFL. Through Kijani Impact, Dr. Bakera is piloting an LC3 production plot in Tanzania, focusing on empowering women in construction. The project integrates academic research, industrial application, and community engagement, and contributes to climate change mitigation through materials innovation and knowledge sharing. It emphasises local capacity building, including free pre-conference training and national standards reform.

### **Potential Collaboration:**

We seek partnerships with academic institutions, development agencies, construction firms, and government bodies to scale LC3 use, support local production, and jointly develop sustainable construction standards and practices across Africa.

**Website:** [lc3.ch](https://lc3.ch)

**Contact Information:** [lc3@epfl.ch](mailto:lc3@epfl.ch)



Figure 1: Prof. Karen Scrivener was awarded NIM- The Net-Zero Industries Mission's Female Innovator Global Winner Prize in COP 29.

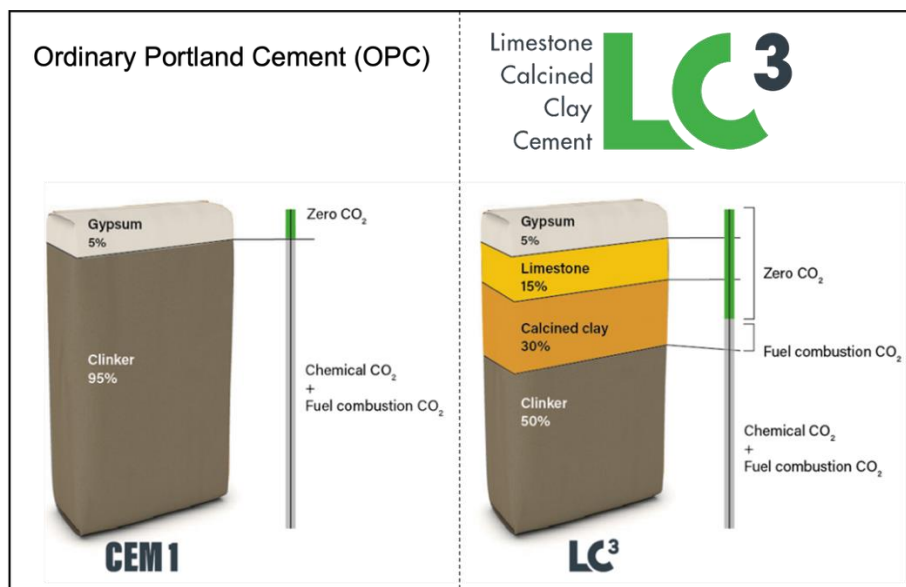


Figure 2: LC3 Vs. CEM I.

We need **reduce carbon emissions** from cement to mitigate the impact on the climate.

There are different ways to do this.

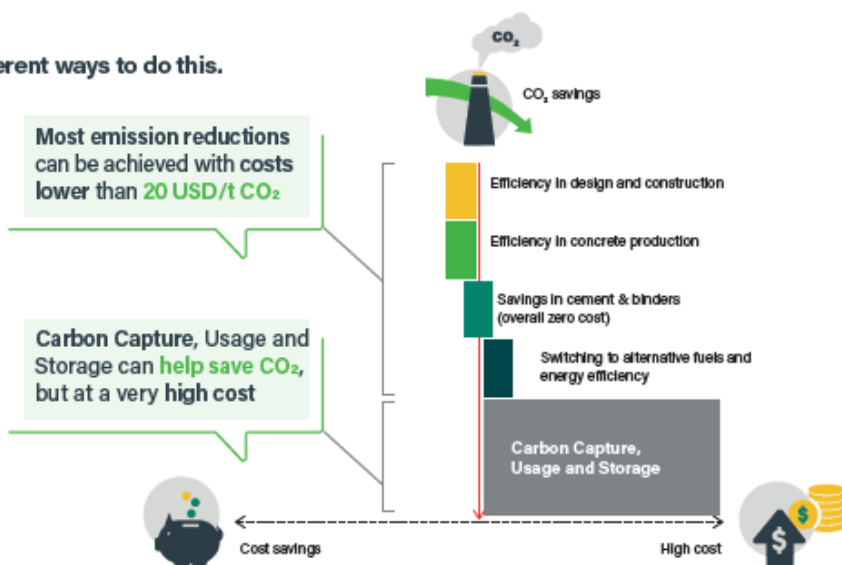
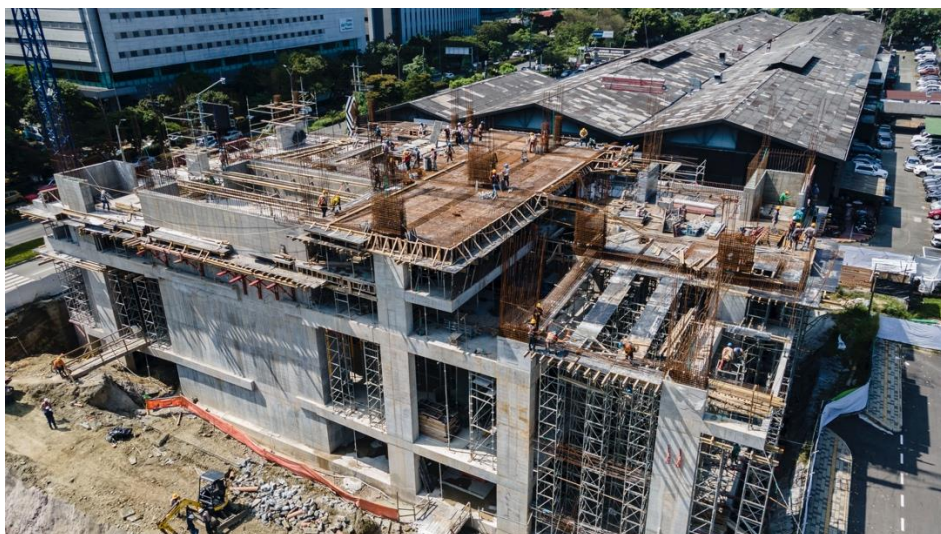


Figure 3: Levers to decarbonize the cement industry.





*Figure 4: LC3 is already used in large-scale building and infrastructure projects. In Columbia, shopping malls and the Puente Cauca Viaduct on the Pacifico 2 road is built with LC3. Courtesy photo of Cementos Argos*