



Enabling innovation in the European construction sector: A Case Study in open Innovation

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first MSH construction site, Slovenia, 2018



timber interior, MSH, 2018



timber interior computer rendering, MSH

Innovation In The Construction Industry

- The construction industry has been consistently identified as lacking in innovation (Xue et al., 2014) and having little potential for improving its innovation performance (Blayse and Manley, 2004).
- Main barriers to innovation in the construction sector include: nature of the product ('product system innovation'), highly fragmented supply chain and conservative corporate culture.

The company: ALFA NATURA Ltd.

- SME specializing in timber construction (est. 2011)
- no R&D department, no history of innovation
- InnoRenew CoE Living Lab member

The Open Innovation Case:

The Modular Sports Hall (MSH)

- registered EUIPO Model Number 003053131-0001 (2016)
- Four Seal of Excellence Awards (European Commission, EU Research & Innovation Programme (Horizon 2020), SME Instrument, Phase 2)
- Case Study on Future Trends in Architecture & Construction Innovation, World Conference on Timber Engineering 2018 (Seoul, Republic of Korea)

References

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3. Gluchs, Pernilla, Mathias Gustafsson and Liane Thuvander. "An absorptive capacity model for green innovation and performance in the construction industry", Construction Management and Economics 27(2009): 451–464.
4. Rose, Timothy Michael and Karen Manley. "Adoption of innovative products on Australian road infrastructure projects", Construction Management and Economics 30(2012): 277–298.
5. United Nations, Sustainable Building and Construction Programme. UN Environment Programme, 2015.
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The Business Opportunity

- The construction sector's limited capacity for innovation has come into sharp focus following the identification of the central role of buildings in managing climate change, a key item on the global environmental agenda. (United Nations, 2015).
- The European Union (EU) public policy efforts to decrease the environmental impact of buildings have generated attractive business opportunities in the emerging competitive low-carbon economy (European Commission, 2012).
- However, the European construction industry is unable to take advantage of the business opportunities due to the sector's limited capacity for innovation (European Commission, 2012) also termed 'green innovation inertia' (Gluchs et al., 2009).

Future Work

- Open innovation in the construction industry: The level of complexity involved in 'product system' innovation differs to the extent that research related to product innovation is not considered applicable (Rose and Manley, 2012).
- Critical Success Factors in Open innovation: social networks & knowledge search strategy



apartment building, timber construction, 2017



apartment interior, timber construction, 2017



chapel, timber construction, 2014, Alfa Natura



Faculty of Biotechnology, timber construction 2016, Alfa Natura



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