

E2

ECOLOGY + ECONOMY
A TIMBER DEVELOPMENT COMPETITION



PRELIMINARY INVITATION

Timber Development Competition - Towards sustainable and climate friendly development

Increased environmental consciousness and economic challenges reflect the current global concerns. Tackling the climate change, improving energy and cost efficiencies, and using the renewable resources raise questions about the environmental impacts of the construction cluster. The efficiency requirements of industrialized construction business parallel to the inevitable need to cut greenhouse gas emissions call for new approaches.

Timber provides an interesting climate friendly opportunity for large scale industrial production. The forthcoming competition searches for sustainable solutions and approaches to root a new culture of development and construction industry in Finland. Timber is the most significant natural resource in Finland. Adding the value of the forest cluster continues to serve the Finnish well-being in the future. Currently, only a fragment of multi-storey residential buildings has timber skeletons. The organizer of the Timber Development Competition aims to catalyze a change multiplying timber developments.

The construction cluster consumes approximately half of the – primarily non-renewable – raw materials and produces 40% of the waste. The building occupancy takes 40% of the total energy consumption and only a little less of the CO2 emissions. The energy required for building materials industry and its GHG emissions have caught very little attention until now.

The European Union has set an objective for all new buildings to fulfill the zero energy building requirements after 2019. Additionally, the EU calls for reducing the CO2 emissions 80% by 2050 in comparison to the level of 1990. All these aspirations mean a tremendous challenge to the construction cluster.

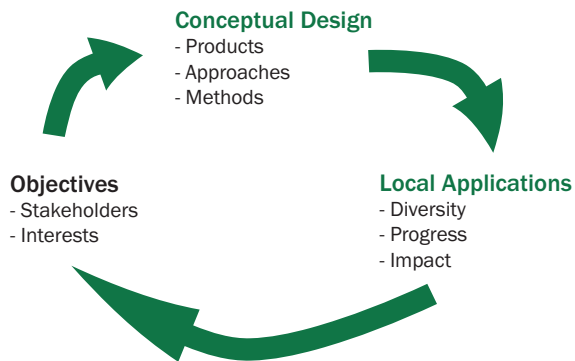
Launching a new industrial tradition with an impact over centuries is possible today. The change takes place only through the cooperation of multiple stakeholders. Developers and investors have a key position but they need support and solutions from other parties, such as designers and component manufacturers. Cost-efficient, sustainable, and high quality design, production, and installation solutions serve common interests.

Conceptual Design Competition Catalyzing the Change

The City of Kouvola – in collaboration with the Finnish Forest Industries Federation, the Finnish Innovation Fund, the Finnish Funding Agency for Technology and Innovation, KSS Energy, and the Regional Council of Kymenlaaksi – organizes a Timber Development Com-

petition. The design and build competition aims to demonstrate the potential of multi-storey timber developments.

The competition searches for conceptual design solutions demonstrated on a pilot site in the City of Kouvola. Conceptual Design Competition means replicable and locally adaptable solutions and approaches enabling large scale industrial production of cost efficient and sustainable multi-storey timber residential buildings.



The approach to Conceptual Design Competition

An open international call requesting for qualifications precedes the competition. We encourage the candidates to form multidisciplinary teams covering at least the following fields of expertise:

- 1) Design competence: includes at least architectural and structural design knowledge and skills, HVAC and energy efficiency expertise, fire protection engineering and expertise on cost planning.
- 2) Industrial partner in timber construction: component and/or material manufacturer and contractor expertise aiming to apply the competition results in multi-storey developments.

Maximum of five qualifying teams will be invited to the competition. The Request for Qualification opens on September 1st and ends on September 22nd 2010. All teams providing an entry fulfilling the submittal criteria will receive a 55 000 Euro honorarium. The winning team will have the opportunity to develop the pilot site after the competition.

Objectives

The competition aims at demonstrating timber constructed multi-storey residential development on a pilot site in the City of Kouvola. The emphasis is on relevant industrial approaches and systems, however, the proposed solutions must enable a variety of high quality architecture. Further, the competition explores issues related to training, research and development associated to timber construction as part of Woodinno centre's mission. Woodinno targets activating entrepreneurship connected to the forest cluster in the region of Kouvola. The outcomes of the competition shall enhance

ce the adoption of prefabricated timber construction nationwide.



The concept of Woodinno Centre

The competition is at the same time a common platform for product and process development among different stakeholders of the supply chain. We expect the qualified teams have set a strategic objective in allocating resources in design, component production, installation or other process or product relevant to timber development.

Teams will have three tasks:

1. Developing and demonstrating a system for prefabricated multi-storey residential timber construction.

We expect the teams to propose an approach for design, manufacturing, installation and other relevant products, methods or services needed for energy efficient multi-storey timber developments.

The evaluation of the proposal requires presenting indicators and metrics showing the deduction of raw material consumption and energy use as well as GHG emissions both in manufacturing and construction.

2. Design a Pilot Development

The teams demonstrate the viability of the proposed concept in a pilot development. The pilot development is located in the centre of Kouvola at the river bank of Kymijoki river. The size of the development is approximately 15 000 m². The project must illustrate also higher timber construction consisting of 6-8 floors. The development is mainly residential but the teams may also propose other public or private sector functions supporting the concept.

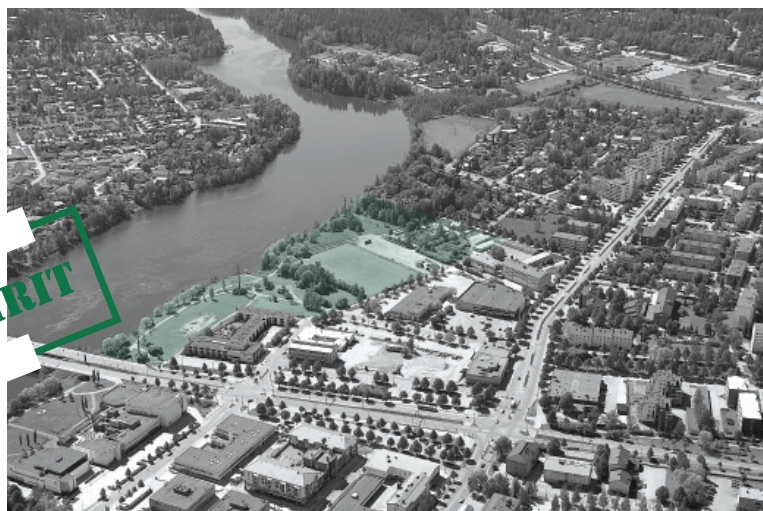
3. Envision a Business

The teams should elaborate their ideas on potential business related to the concept or firms supporting the implementation of the concept. The most important objective is supporting sustainable and climate friendly transition of the forest cluster to more value adding timber industry in the Region of Kymenlaakso. The proposals of the teams may contain, for example, a business case showing the linkage between business and design, products, or services crucial to timber development.

Schedule

RFQ submittal period begins: 01 September 2010
Deadline for RFQ submittals: 22 September 2010
Selection of the teams announced: 6 October 2010
Launching the competition: 11 October 2010
Workshop 11-13 November 2010
Competition proposals due: 17 January 2011
Winning team announced: March 2011

Please note that all dates are subject to change!



Aerial view to the pilot site.

Contact

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