



## **The City Above The City**

# **Architects' Competition**

THE CITY ABOVE THE CITY initiative challenges architects and students of architecture from around the world to push the boundaries of modern wood building design in the urban environment. Entrants are asked to select a centrally-located building in one of the world's most populated cities and develop an innovative wood design solution that adds density through additional floor area. Known buildings, especially buildings under threat of demolition are encouraged as sites for revitalization, new development and innovation.

Housing the world's growing urban population is one of the most significant challenges facing humanity today. Currently, half of the world's population live in cities. By 2050, 2/3 of the world's population will live in urban areas. Cities must develop strategically to meet these immense housing demands along with the associated infrastructure. Too often the proposed solutions to this problem show little regard for the existing framework of our cities, choosing instead to replace the old with new, at great environmental, social, and cultural cost. The greatest design challenge then, is not only to build new structures, but to build upon the existing fabric of our cities, knitting together old and new. Today, engineered wood offers designers an incredible opportunity to meet this challenge. New wood products allow designers to build taller structures that are much lighter than alternative materials (steel and concrete) while still meeting strict criteria for fire resistance and/or seismic challenges. All this can be achieved using a natural, beautiful material – grown by the sun.

The properties of wood material are utilized best when building up. The tallest trees in the world grow to forty storeys tall. There is no reason why our building too, cannot reach even higher in wood. Utilizing the inherent strength of wood fiber there are countless new possibilities to explore.

We are excited to see what ideas you have to show the world!

# Table of contents

<b>The roofs of today are the plots of tomorrow</b>	3
Building additional floors with wood	3
<b>The competition</b>	3
Schedule	3
Location	3
Building site	3
Program	3
Material: Wood Structure	4
Kerto® LVL	4
<b>Details</b>	5
Schedule	5
Awards	5
Contacts	5
Public announcement	5
<b>The jury</b>	6
<b>Submission requirements</b>	7
Submission format	7
Drawing and format	7
Required drawings	7
Writing and formats	7
Criteria for judging	7

# The roofs of **today** are the plots of **tomorrow**

## **Building additional floors with wood**

Abstract of article by Martin Langen, CEO of B+L Marktdaken GmbH, Bonn, Germany.

The demand for housing in urban areas continues to grow. Unused land along railway lines, similar to land previously used for commercial and industrial purposes, is being developed as building plots in inner city areas. But the available land is limited. In order to provide housing space, densification in the form of filling vacant lots or the more efficient replacement of buildings is being promoted.

The city of Bonn, for example, shows a total ground area of residential buildings of 6.6 million m<sup>2</sup>. Of this an (unbelievable) 27% could have an extension built according to the survey. This way, more than 20,000 apartments with an investment volume of more than EUR 4 billion could be created in the former capital.

## The **competition**

### **Schedule**

Submission deadline: 30 September, 2016

Winners announced: October 2016

### **Location**

The competition does not impose a specific site or city. Entrants are encouraged to select a site within one of the world's densest cities. Cities and sites which entrants deem are particularly suited to address issues of global urban housing needs are preferred.

Recommended cities; Berlin, Copenhagen, Istanbul, London, Paris, Shanghai, Stockholm and Washington DC.

### **Building site**

Entrants must choose an existing building or neighborhood that they deem provides a great opportunity to meet urban housing needs through the construction of additional floors. Known buildings, especially buildings under threat of demolition are recommended. While design solutions can span between or extend out from buildings, all solutions **MUST** build upwards! Participants should use the existing context of the city to reinforce the character of the proposal.

The size of the building or site chosen is only dictated by the ambitions of individual proposals.

### **Program**

The primary programmatic element included in the proposal must be housing. Additional program areas that address the particular needs of a community (commerce, industry, culture, learning etc.) are encouraged and should be secondary to the housing provided.

Proposals can seek to add significant density on a single site, OR provide solutions at various scales that are replicable throughout a city and even applicable to other cities.

## Material: Wood Structure

Entrants will be challenged to propose construction systems that draw on the performance characteristics of a variety of wood technologies. Design solutions are required to use Kerto® LVL (laminated veneer lumber) as the primary structural system. Otherwise material selection is up to the entrant. Solutions that devise new uses for LVL and other wood products are encouraged.

The competition seeks bold and ambitious plans that push the limits of wood and provide interesting ways to connect the wood construction system to an existing building and urban context.

### Kerto® LVL

Metsä Wood's Kerto® is a laminated veneer lumber (LVL) product used in all types of construction projects, from new buildings to renovation and repair. Kerto® is incredibly strong and dimensionally stable. Kerto® delivers its high strength from the homogeneous bonded structure.

Kerto® is produced from 3 mm thick, rotary-peeled wood veneers that are glued together to form a continuous sheet. The sheet is cut to length and sawn into beams, planks or panels in accordance to customer's requirements.

For more information contact us: [competition2016@metsagroup.com](mailto:competition2016@metsagroup.com). More information about Kerto® LVL is also available on our website and free online Timber Academy courses.

### Kerto® is available in following variations:

- Kerto®-S LVL beams – Excellent for long span roof and floor beams
- Kerto®-Q LVL panels – Optimal for most load bearing structures
- Kerto®-T LVL studs – Ideal for use as a stud in load-bearing and non load-bearing walls
- Kerto®-Ripa roof or floor elements – Ideal for long span roof and floor solutions

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# Details

## Schedule

SUBMISSION DEADLINE: 30 SEPTEMBER, 2016

WINNERS ANNOUNCED: OCTOBER 2016

## Awards

1 GRAND PRIZE OF 10,000 €

2 SECOND PRIZES OF 5,000 €

5 THIRD PRIZES OF 2,000 €

Prizes before taxes. Participants outside Finland are responsible for paying possible taxes according to the local law.

## Contacts

e-mail: [competition2016@metsagroup.com](mailto:competition2016@metsagroup.com)

Website: <http://planb.metsawood.com>

## Public announcement

Communication and photos and films of winners, winning projects and honourable mentions can be released to architectural magazines, newspapers, webpages and other relevant media after the winner's announcement.

By entering the City above the city competition, the participants accept that the organiser – MetsäWood – may publish and disseminate the submitted projects and photos of the participants in analogue and digital form.



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## The jury

The jury members have been chosen because of their concern for the challenges and threats posed by growing urban populations - and a visionary understanding of how engineered wood can be used mitigate the negative effects of urbanisation. The jury has extensive in-depth expertise in wood structure architecture and sustainable design.



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### Michael Green – Chairman

Michael Green founded his architecture firm MGA and his not for profit school DBR | Design Build Research to focus on progressive architecture, research, education and innovation. From offices in Vancouver and Portland, he and his team of 25 designers work on international projects that are diverse in their scale, building type and location. Michael is vested in helping build healthier communities through innovative architecture, interiors, landscape, and urban design. Michael is particularly known for his research, leadership and advocacy in promoting the use of wood in the built environment with extensive international talks on the subject, including 3 TED events culminating in his 2013 TED talk which has been viewed over a million times.



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### Mike Kane

Mike Kane is a British senior lecturer at London South Bank University in architecture, and a director of KMK Architects. Kane focuses on the ways in which cities can prepare for the changes in climate, limitation on resources and increasing urbanization. He has regularly contributed to the Energy & Resource efficiency module and has a keen interest in low-carbon and resource efficient architecture.



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### Stefan Winter

Stefan Winter is a professor at the Chair of Timber Construction and Structural at the Technical University of Munich. His main research interests include timber construction, fire safety in timber buildings, multi-story timber structures, energy-efficient timber construction and building modernization with prefabricated components, adhesives for load-bearing timber structures, life cycle analyses and life cycle assessments.



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# Submission requirements

## Registration and submission deadline: September 30, 2016

### Submission format

The entrant is required to submit the final project ONLINE. It must be uploaded through the City above the city competition website at <http://planb.metsawood.com> by 5:00 pm CET, on SEPTEMBER 30, 2016.

### Drawing and format

Submissions must be designed on no more than four A2 digital boards maximum file size 5MB.

The names of participants must NOT appear on the boards. All boards are required to be uploaded through the website in Portable Document Format (PDF) or image (JPEG) files.

The main image should be 3840 x 3840 px and 72 dpi (JPEG).

### Required drawings

Each presentation must directly address the criteria outlined in the Design Challenge and Criteria for Judging sections and must include (but is not limited to) the following required drawings. All drawings should be presented at a scale appropriate to the design solution and include a graphic scale and north arrow.

- SITE PLAN showing the surrounding buildings, topography, and circulation patterns
- FLOOR PLANS
- VERTICAL SECTION of the whole building/site sufficient to show site context and major program elements.
- DETAILS of the building, clearly showing the wood structural system.
- 3-DIMENSIONAL REPRESENTATION(S), either in the form of axonometric, perspective, or model photographs – one of which should illustrate the character of the project. At least one of these views must be of a significant interior space, and one view must be of the building shown within the neighborhood context.

### Writing and formats

A brief essay (500 words maximum, in English) is required as part of the submission that describes the most important concepts of the design. Keep in mind that the presentation should graphically convey the design solution and context as much as possible, and not rely on the design essay to convey a basic understanding of the project. This abstract is included in the final online submission, completed by the entrant(s) in a simple copy/paste text box.

### Criteria for judging

Criteria for the judging of submissions will include:

- Use of Kerto® **LVL (laminated veneer lumber) as the primary structural material.**
- Creative and innovative use of wood in the design solution.
- Integration of structure and concept into an existing building or city fabric.
- Building additional floors atop the chosen development site.
- Demonstration of the overall environmental benefits of carbon sequestration using wood fiber.
- Any other strategies employed to reduce the design's carbon footprint.