



# Łukasiewicz Wood Technology Institute

**CALL: HORIZON 2020, European Green Deal, Area 4: Energy and resource efficient buildings**

## KEYWORDS

*Autonomous building, prefabrication, engineered wood, building product, renewable raw materials, modified wood, recycling*

## PROJECT TITLE

Autonomous, friendly to the environment and residents, multi-family public housing building made using the prefabricated wooden frame technology, observing the principles of sustainable construction

## PROJECT ACRONYM BULDWOODPREF

## CUSTOMER

The project is planned to be executed in partnership with:

- design company,
- manufacturer of wooden building products,
- producer of prefabricates for wooden construction,
- territorial self-government unit,
- R&D institutions.

The project is targeted at various-level administration and self-government authorities whose competence is to provide buildings for socially impaired people (i.e. requiring assisted living, especially single mothers, the elderly and the handicapped) and/or provide them in case of natural disasters.

## PROJECT IDEA

The main parts of the project:

- development and empirical verification of the technology of prefabrication of building partitions made of wood, while recycled materials and products are used in the process to the maximum possible degree,
- design of a model solution of a building and/or a set of several multi-family buildings, observing all presently known principles of residents' safety and comfort; the solution will be designed based on prefabricates of building partitions, developed at the first stage of the project implementation. The building and/or the set of buildings, designed as a zero-energy building or set of buildings, should be autonomous at least as regards the supply of electric energy (photovoltaics) and water, including water supply supplemented by management of rain water and "grey" water, preferably with its own water treatment facility,
- erection of a building and/or a set of several buildings, together with installation of measuring devices facilitating tests of the building/s for the actual consumption of utilities and the air quality,
- carrying out tests of the building/s for the actual consumption of utilities, the air quality and the quality of living in a minimum two-year cycle, in order to verify the adopted project assumptions and identify the areas where the implemented solutions can be improved.

## MARKET

Poland, like many other European countries, is a country whose resources of raw wood material are average, but where the wood-based industries are well developed. Annual removals equal up to 40 million m<sup>3</sup>. The project is targeted, inter alia, at the market made up by companies manufacturing prefabricated wooden houses, which for a few years has been developing and becoming more effective in Poland. Although, wooden construction in Poland is practically limited to single-family housing, prefabricates are today also used to build some public buildings, such as schools, kindergartens, and hotels.

## LOOKING FOR

- Project Leader
- Partners

## CONTACT INFORMATION

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