



#### The system

WFH is a modular load bearing steel frame construction, connected by the use of the 'Twist-locks corners'. The steel construction is dimensioned for constructions up to 10 stories, and higher constructions can be achieved by reinforcing the system. The connection principle is very stable and suitable in earthquake areas.

#### The Modules

The WFH system is a set of modules, each 6 meters long, and 2.5 or 3.0 meters wide. There are 3 types; technical module, flex module and facade module and all modules have pre-installed kitchens, bathrooms and technical shafts. The wall elements are specially designed for every project, which gives a unique possibility for customizing the building layout. WFH is developed for family housing, retirement- and nursing homes, compact student housing, and hotels in many different layouts.

#### Time

The modules are produced in industrial facilities under high quality control by 3<sup>rd</sup> part company. The modules are stored and transported on time, which makes the construction logistics and on-site construction time much easier. The on-site construction time is only 1/3 of conventional concrete construction, which is a great advantage for the local community. From an economic perspective, the short construction time results in an earlier use and rental of the building.



Economy

The circular design makes it possible to dismantle, move and scale every WFH building. It is a unique, long-lasting solution because the building can adapt to changing needs - without compromising in terms of material quality and durability. Calculations show that each time one reuses the structural module, one minimizes the cost of the following construction significantly since the structural system is prepaid and usually responsible for half of the expenses. In this perspective, the system is maintaining its economic value and becomes a secure long-term investment.

#### Sustainability

A circular resource flow is the most impactful step towards solving the environmental crisis. WFH focuses on making the biggest CO2 contributor - the structural system - reusable 1:1. On top of this, the system is

compatible with all biobased and waste-based materials for the interior and the facade making it the most sustainable choice in all aspects. Life Cycle Assessment (LCA) shows that WFH can meet a 4,5 CO2eq-/m2/ year limit, that in Denmark is the 2029 Low carbon demand.

#### Ukraine

WFH can be pre-produced while waiting for a possible rebuild of Ukraine. This makes the actual rebuild much faster. In Ukraine there are a lot of demolished building materials, that can be reused in new modules and then becomes a solution to the waste problem. The WFH system, opens up for local production of façades, roofs and interiors helping local craftsmen and industries to start up again. If the demand for WFH housing is high, it is possible to reuse Ukraine industrial facilities to produce the modules locally.



**Pre-installed kitchen** 

Pre-installed bathroom

# WorldFlexHome

WFH is a unique, patented building concept, designed for future sustainable housing.

## Why WorldFlexHome?

- Sustainability: WFH has a low up-front carbon footprint and the modules can be reused 1:1 again and again!
- Robust: WFH is a long lasting solution with high quality and robust construction system.
- Mobile: WFH is easy to dismantle, move, and reuse in new sites and configurations.
- Effective: WFH is designed for effective land use with possible construction up to 10 stories.
- Circular: WFH is designed for disassembly and is ready for future circularity.
- Economic: WFH is a great investment because of the circular potential that ensures future reuse of resources.

## Contact

Anders Bach Sørensen

Mail: abs@worldflexhome.com Phone: +45 2834 8096 www.worldflexhome.com

### **Business Partners:**

ERIK arkitekter Morten Ørsager

Mail: mo@erik.dk Phone: +45 4214 7004 www.erik.dk

## WorldFlexHome

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green business consultancy Henrik Sørensen

Mail: hs@henrik-innovation.dk Phone: +45 2554 4014 www.henrik-innovation.dk/

