

PREFABRICATED COTTAGE VILLAGES

RAUTA
RELIABLE SOLUTIONS



Rauta company

- ✓ Expert in steel construction
- ✓ Exclusive supplier of Ruukki commercial products to Ukraine
- ✓ Design, delivery, assembly



Sandwich panel houses technology

- ✓ Absence of a separate frame
- ✓ PIR core sandwich panels act as a load-bearing structures and building envelope



Full-set delivery

- ✓ **Standard house set**
(flooring, walls, partitions, roofing, additional elements and fixings)
- ✓ **Extended house set**
(standard house set + lightning protection, windows and doors)
- ✓ **Full house set**
(extended house set + foundation, engineering services and internal finishing)



High construction speed

- ✓ A house is erected within only 5-7 days
(foundation, envelope structures, main engineering services)
- ✓ Small weight of structures
- ✓ All-weather installation
- ✓ Installation in congested conditions
- ✓ Possibility to extend



Energy efficiency

Thermal resistance of 160 mm thick

Ruukki PIR panels **$R=7,43 \text{ m}^2\text{K/W}$**

Minimum acceptable value under DBN V.2.6-31:

✓ For walls: $R_{\min}=3.3 \text{ m}^2\text{K/W}$

✓ For roof: $R_{\min}=6.0 \text{ m}^2\text{K/W}$

Solar panels allow to obtain a Positive Energy Building



Reliability

- ✓ High load-bearing capacity
- ✓ Seismic stability of up to 7 points
- ✓ Burglar protection class 2



Durability

- ✓ High quality Ruukki sandwich panels
(S280 Zn190-275 g/m² structural steel,
PIR with compressive strength >100 kPa)
- ✓ Durability – up to 50 years



High operational compatibility

- ✓ Precise geometrical characteristics
- ✓ Minimum structures fitting on site
- ✓ High quality of construction



Finishing' options

- ✓ Three types of panel profiling
- ✓ All RAL colors
- ✓ Any additional internal and external finishing



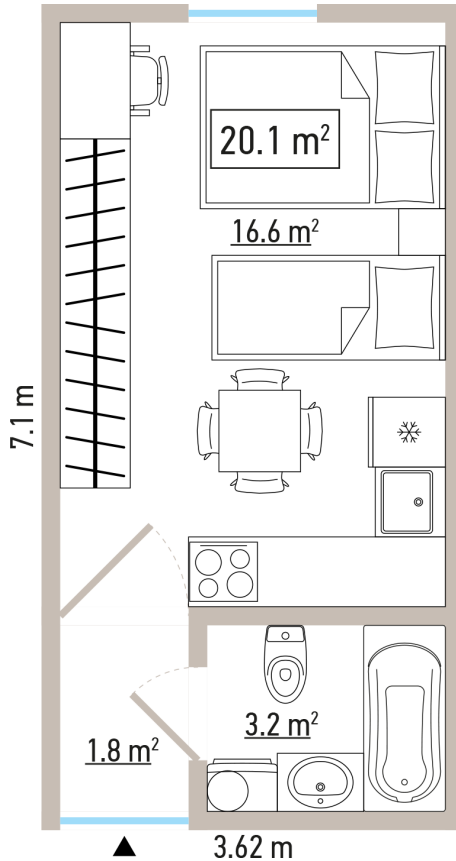


Life cycle

- ✓ **High sustainability of materials**
(EPD declaration, LEED and BREEAM certificates)
- ✓ **Ease to disassemble and relocate buildings**
- ✓ **Possibility of adjusting to new functions**
(recreation resorts, outpatient hospitals, administrative, trade or office buildings etc.)
- ✓ **Recycling at the end of the life cycle**
(steel facing used as scrape metal and PIR core re-used or burnt)

Basic house set for internally displaced persons (IDPs)

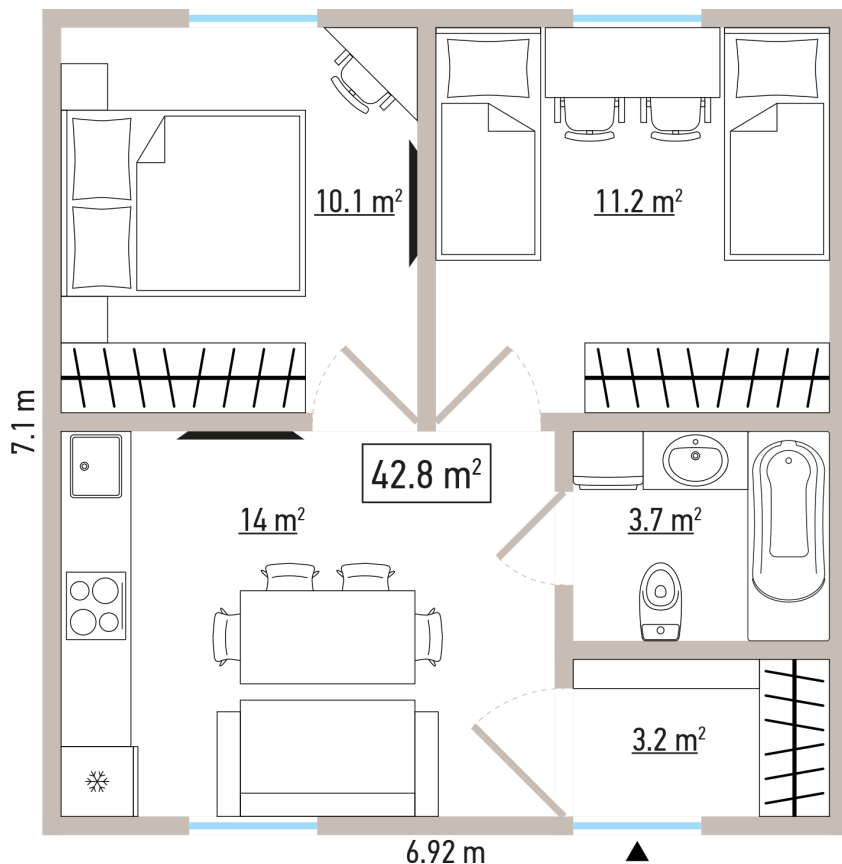
Foundation	Prefabricated of reinforced concrete blocks
Walls, floor and roof	Ruukki PIR sandwich panels
Roofing cover	PVC membrane
Entrance door	Metal
Windows	PVC windows with triple glazing
Internal doors	Timber with MDF
Flooring cover	Commercial linoleum or laminate above OSB
Heating	Electric air heating
Ventilation	Supply via a diffuser and forced exhaust from the kitchen and WC
Power supply	Arrangement of power supply sockets
Water supply and sewage	Provision of water supply and sewage in wet areas
Lightning protection	Lightning rod and earthing



Layout 1

- ✓ Area 20.1 m²
- ✓ Lobby
- ✓ One room with a kitchenette
- ✓ Combined WC
- ✓ For 1-3 people
- ✓ Price – starting from 690 €/m²



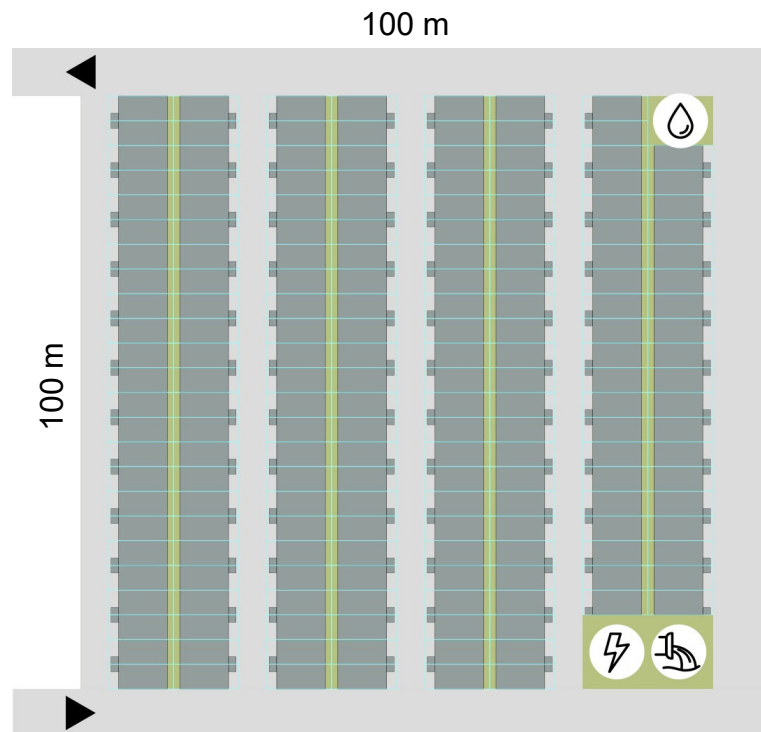


Layout 2

- ✓ Area 42.8 m²
- ✓ Lobby
- ✓ Two bedrooms
- ✓ Kitchen
- ✓ Combined WC
- ✓ For 2-4 people
- ✓ Price – starting from 650 €/m²



1 hectare cottage village for IDPs



Project advantages:

- ✓ Comfortable living of the maximum number of people in individual houses with minimum built-up area
- ✓ Single architectural style

Parameters:

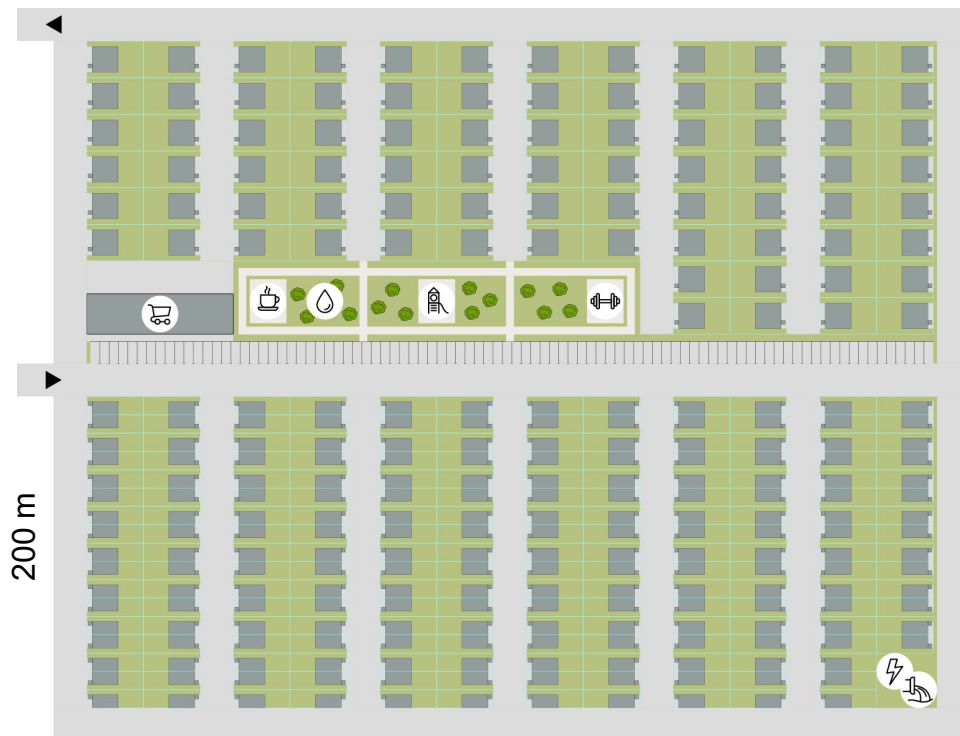
- ✓ Residential development area: 4,703 m²
- ✓ Area of roads with sidewalks: 3,464 m²
- ✓ Number of blocked single-room houses, gross area 20 m²: 184 houses
- ✓ Number of residents: up to 552 people

Implementation time: 3 months



5 hectares cottage village for IDPs

250 m



Project advantages:

- ✓ Comfortable living in individual houses with a lawn in the yard
- ✓ Single architectural style
- ✓ Utmost infrastructure: shop, car parking, recreation areas, play and sports grounds

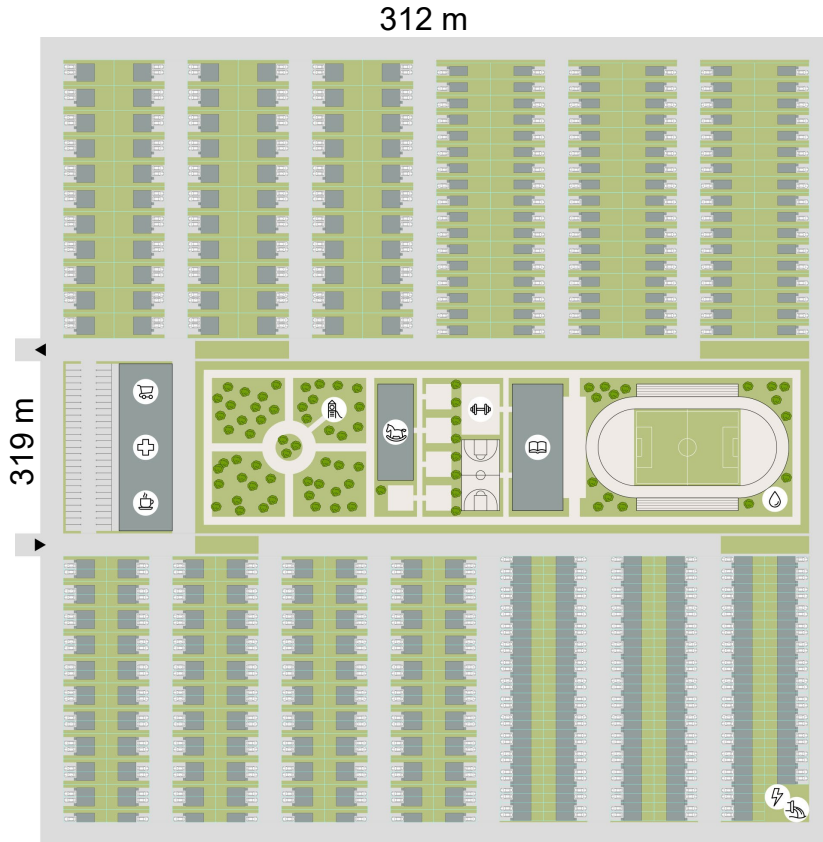
Parameters:

- ✓ Residential development area: 9,057 m²
- ✓ Area of roads with sidewalks: 17,109 m²
- ✓ Guest parking: 90 slots
- ✓ Number of houses:
 - Separately standing with two bedrooms, gross area 42 m²: 80 houses
 - Detached house with one room, gross area 20 m²: 201 houses
- ✓ Number of residents: up to 923 people

Implementation time: 6 months



10 hectares cottage village for IDPs



Project advantages:

- ✓ Comfortable living in individual houses with a lawn and parking slots
- ✓ Single architectural style
- ✓ Improved infrastructure: shopping center, guest parking, nursery school, school, stadium, park, play and sports grounds

Parameters:

- ✓ Residential development area: 14,480 m²
- ✓ Area of roads with sidewalks: 24,464 m²
- ✓ Guest parking / resident parking: 52/572 slots
- ✓ Number of houses:
 - Separately standing with two bedrooms, area 42 m²: 66 houses
 - Detached house with one room, area 20 m²: 102 houses
 - Detached house with one room, area 20 m²: 168 houses
 - Blocked house with one room, area 20 m²: 170 houses
- ✓ Number of residents: up to 1,584 people

Implementation time: 1 year



**Let`s rebuild
Ukraine
together!**

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