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Zero Emission Buildings nZEB



ALUKÖNIGSTAHL
SCHÜCO JANSEN



REPUBLIKA HRVATSKA
Ministarstvo prostornoga
uređenja, graditeljstva i
državne imovine



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Zero
Emission
Buildings nZEB

Living Places Koncept održivog stanovanja

Predavač: mag. ing. arch., Tomislav Fabek



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VELUX®
SUSTAINABILITY
STRATEGY 2030

**It's our
nature**

<https://www.velux.com/what-we-do/sustainability/sustainability-strategy>

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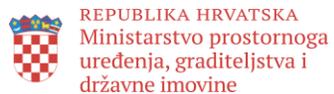


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EFFEKT I/O E **VELUX®**

Transforming spaces into
favourite living places



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Copenhagen in Common UNESCO-UJA – World Capital of Architecture 2023



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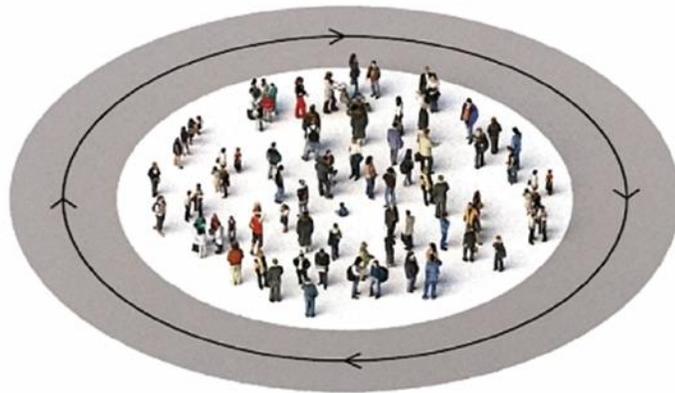


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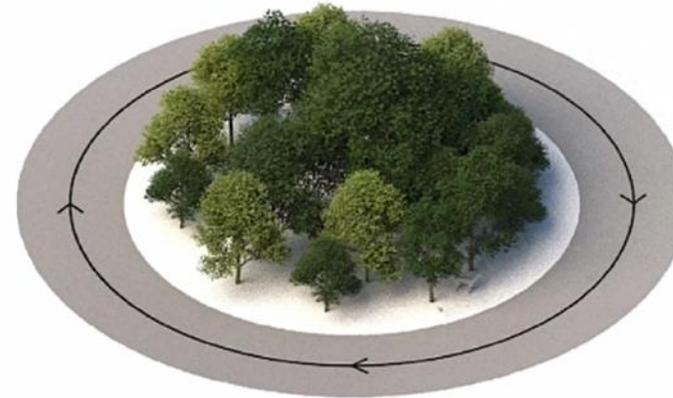


Koncept i vizija



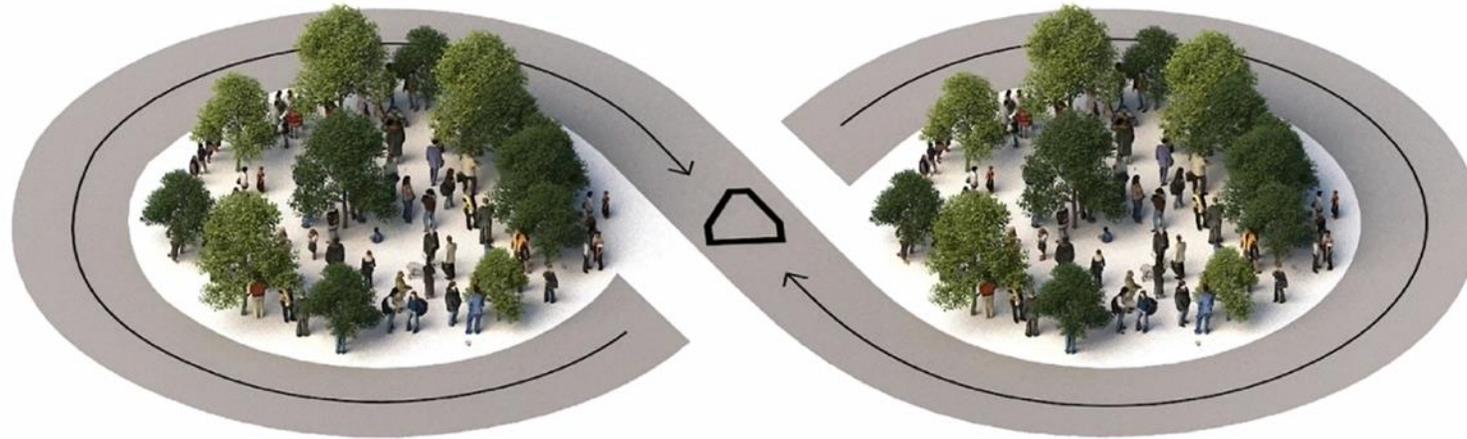


PEOPLE



PLANET

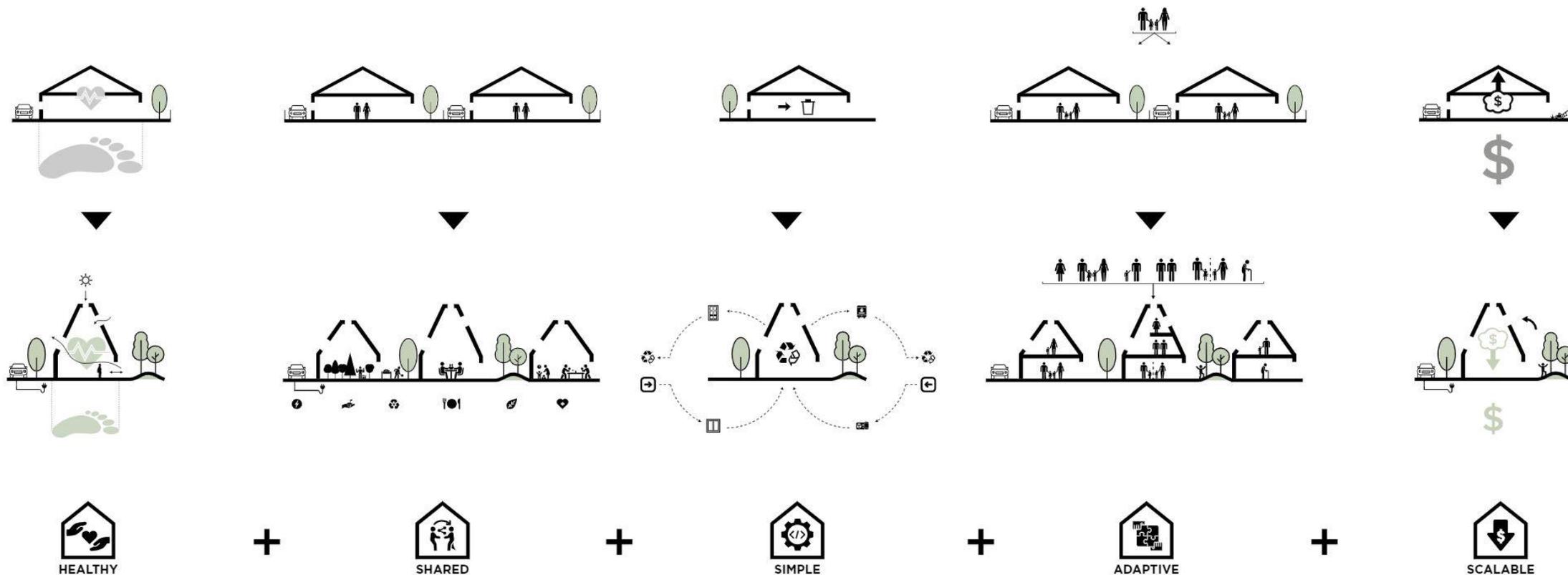
From a disconnected relationship with nature



PEOPLE + PLANET

...to reconnect with the eco-systems that sustain us

Načela



LCA analiza



Referentni primjer

60% Europljana živi
u samostojećim obiteljskim kućama



Karakteristična kuća

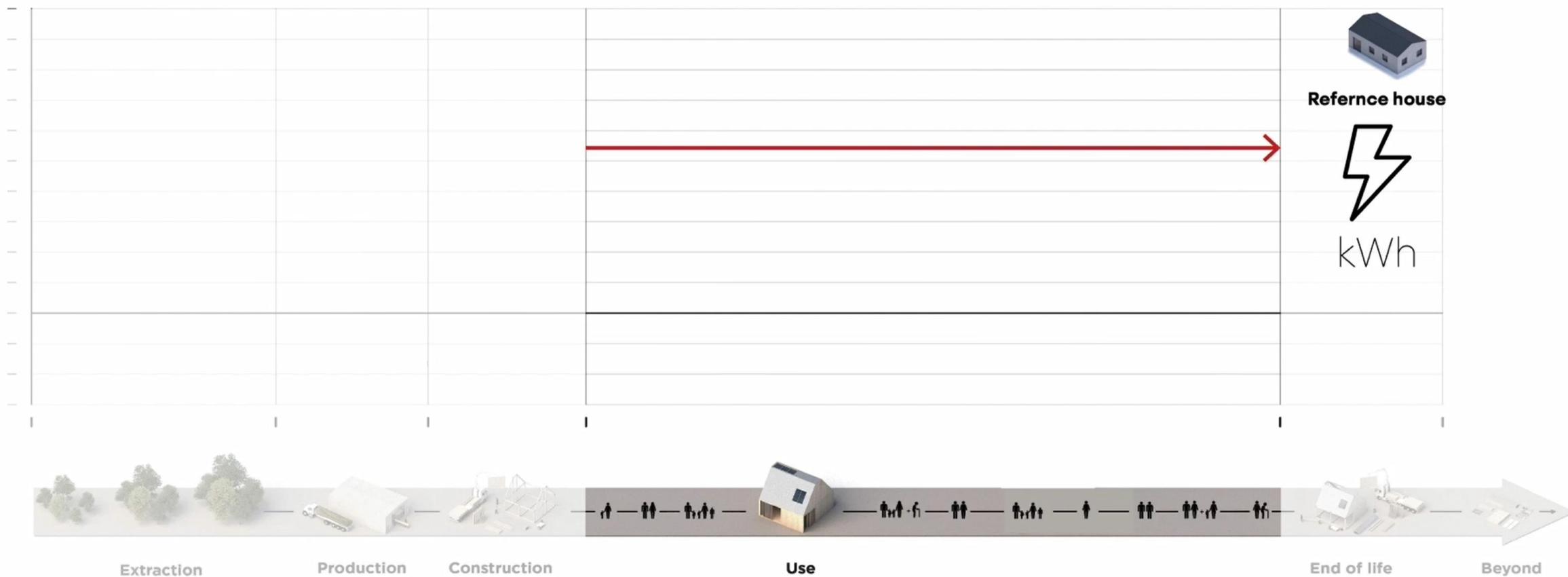
Površina: 170 m²
m² po osobi: 42



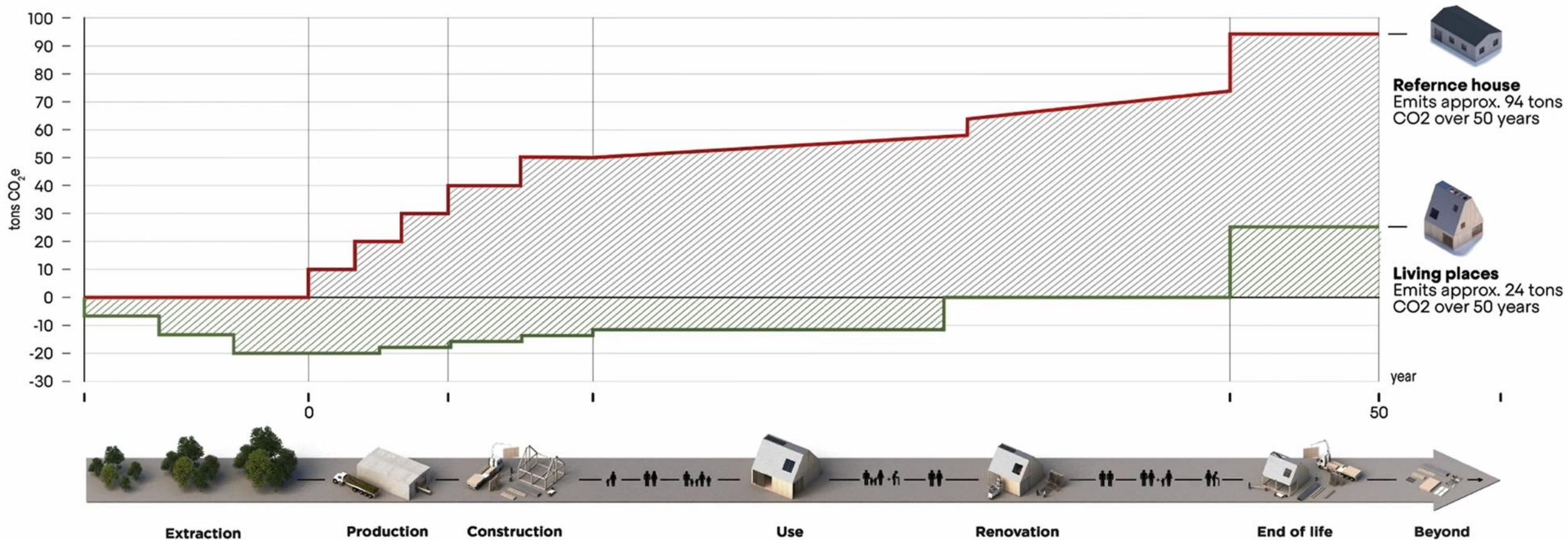
Living Places

Površina: 145 m²
m² po osobi: 36

Fokus održivosti – jučer



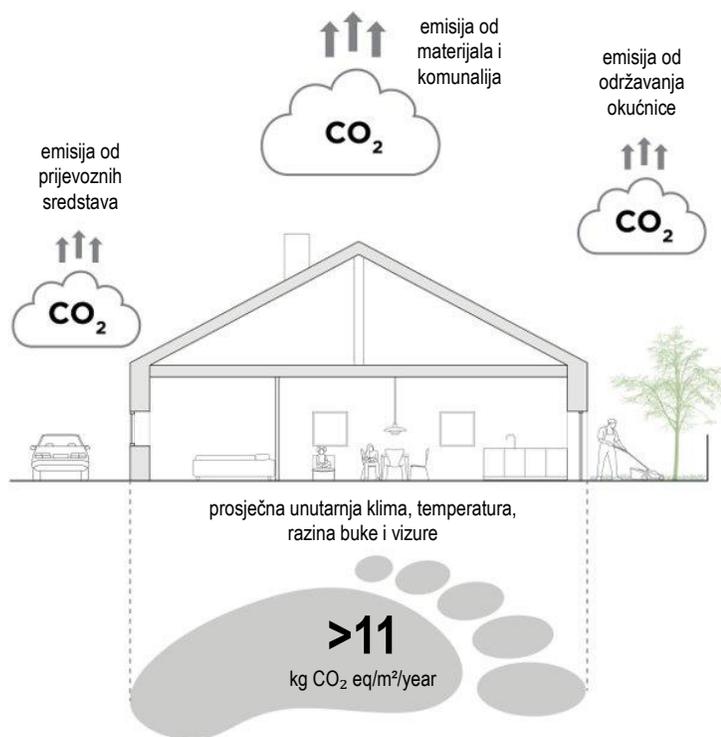
Fokus održivosti – danas



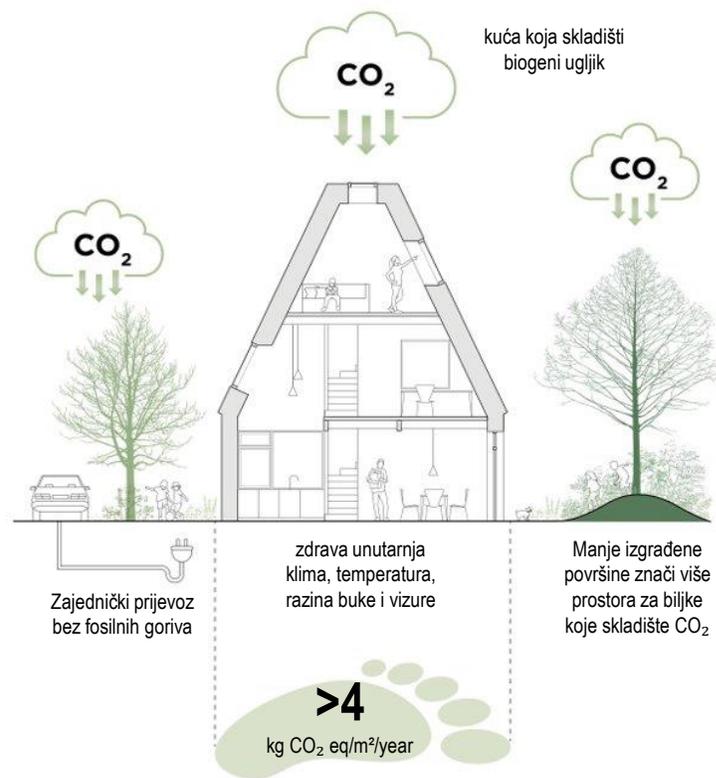
Koncept zdravog planeta



Utjecaj na okoliš karakteristične obiteljske kuće u Europi



Utjecaj na okoliš karakterističnog "Living Places" prototipa



Čimbenici zdravog doma



LIGHT

- 01 Daylight from multiple directions
- 02 Direct sunlight and diffuse skylight
- 03 Dimmable lighting in all rooms
- 04 Quality of electric illuminators
- 05 Roof windows to increase daylight level

THERMAL ENVIRONMENT

- 01 Cross and stack ventilation
- 02 Effective solar shading
- 03 Rooms with increased ceiling height
- 04 User control of the indoor climate
- 05 Sensors to automatically prevent overheating

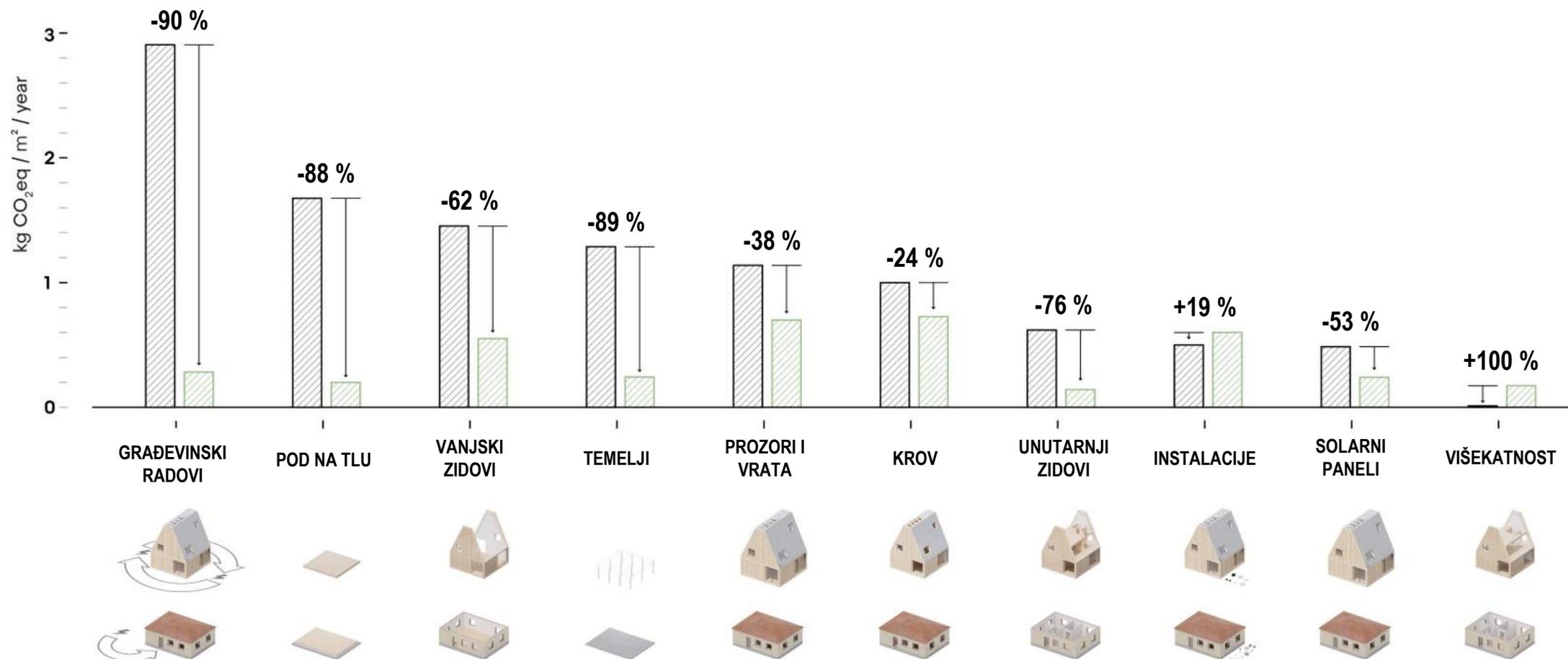
INDOOR AIR QUALITY

- 01 Effective removal of particles
- 02 Low polluting materials
- 03 Cross and stack ventilation
- 04 Cleaning-friendly surfaces

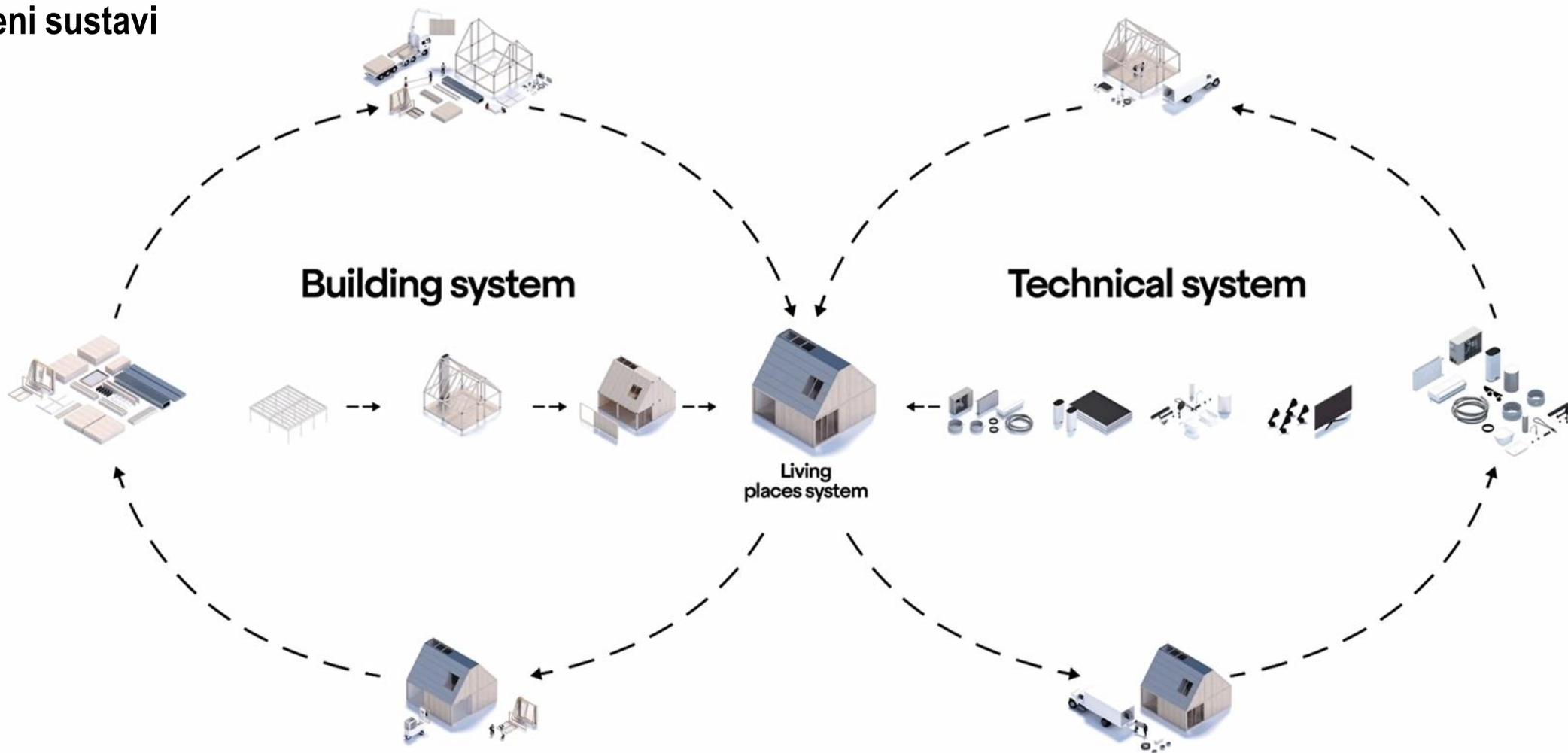
ACOUSTICS

- 01 Reduction of ventilation noise
- 02 Sound transmission
- 03 Reduction of impact noise

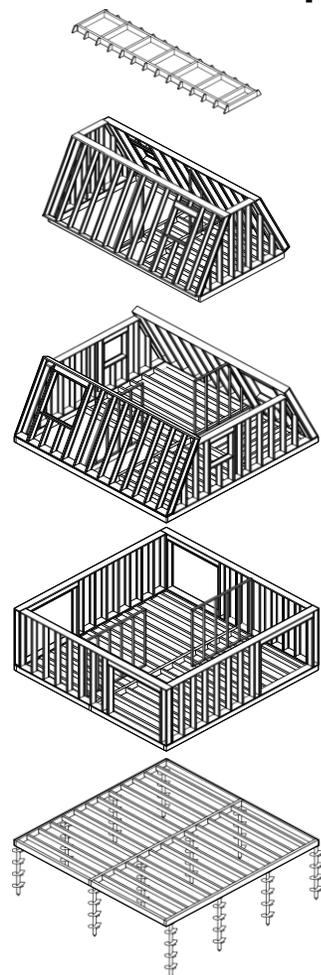
Optimizacija radova po građ. elementima



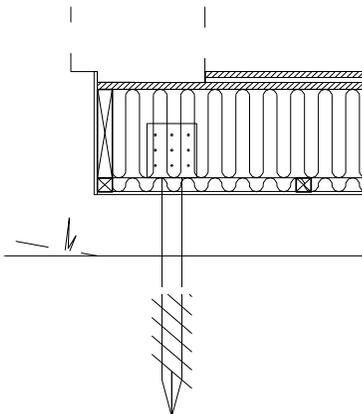
Odvojeni sustavi



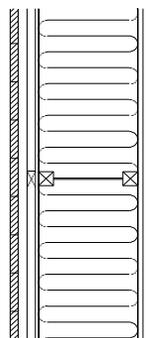
Jednostavna kuća s pametnim sustavima



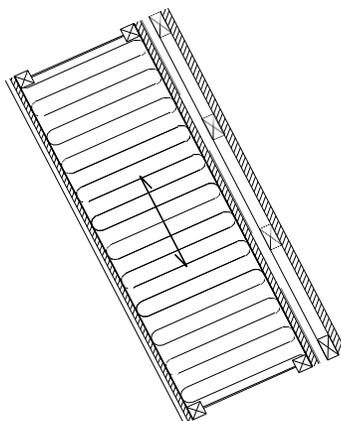
1. Temelji



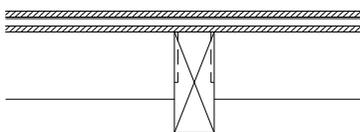
2. Vanjska stijena



3. Krovna konstrukcija



4. Međukatna konstrukcija



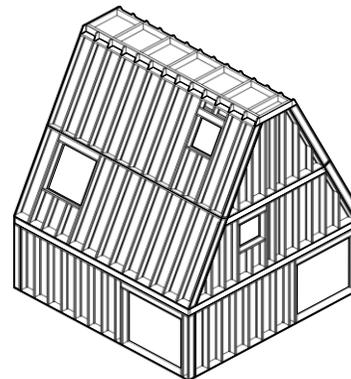
5. Nosiva stijena



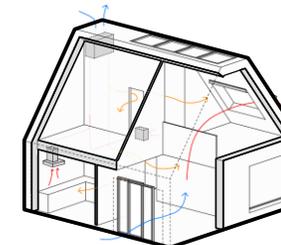
6. Pregradna stijena



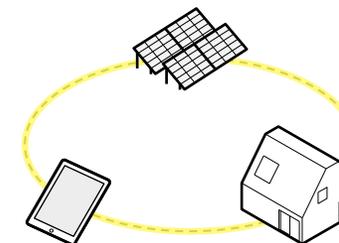
Aksonometrija
konstruktivnog sustava



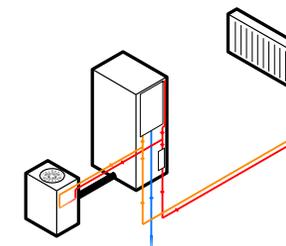
Ventilacijski sustav



Elektrotehnički sustav



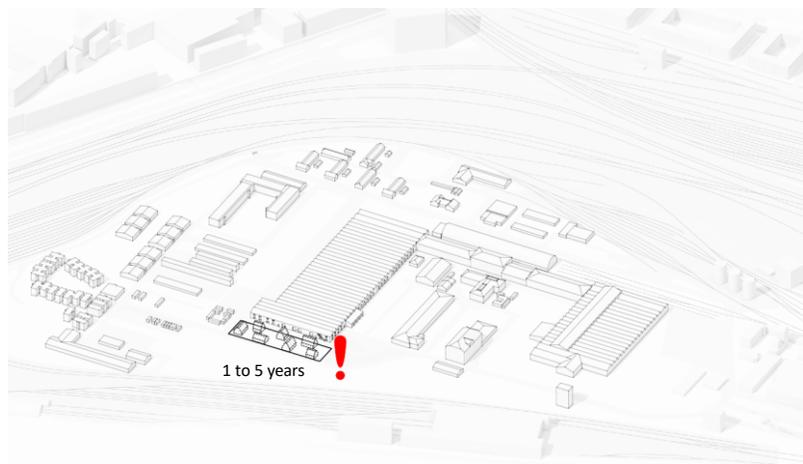
Sustav grijanja



Kontekst

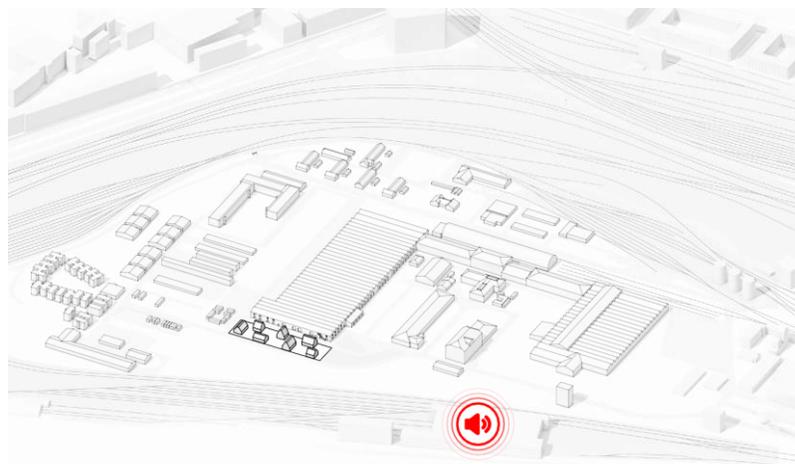


Ograničenja na lokaciji



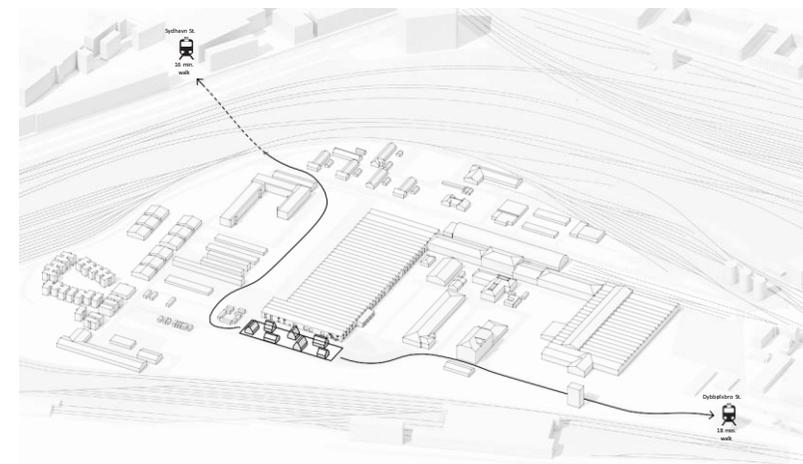
PRIVREMENA IZGRADNJA

Budući da je lokacija obuhvaćena generalnim urbanističkim planom, projekt je privremen, što ograničava način na koji možemo graditi i programirati sklop.



BUKA

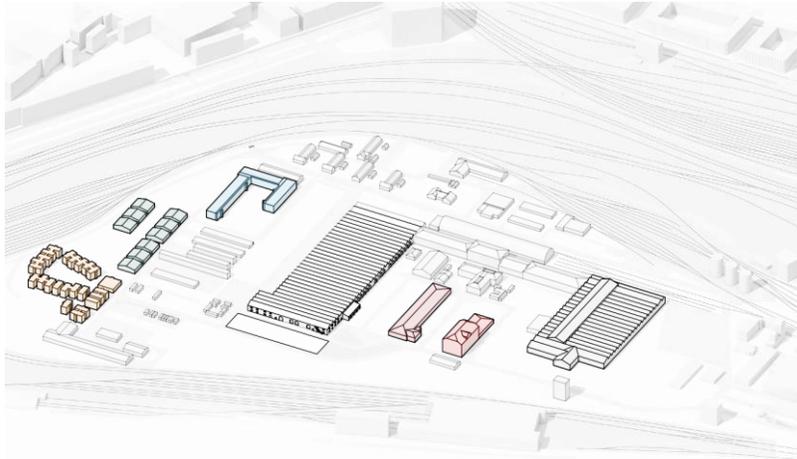
Razina buke premašuje propisane, stoga je program ograničen.



PRISTUPAČNOST

Iako se lokacija projekta nalazi u središtu Kopenhagena, čestici je teško pristupiti, to smanjuje broj posjetitelja koje možemo očekivati.

Potencijali na lokaciji



CPH Village	DSB ejendomme	Temporary school
Banegaarden	Co-working offices	Event Hall

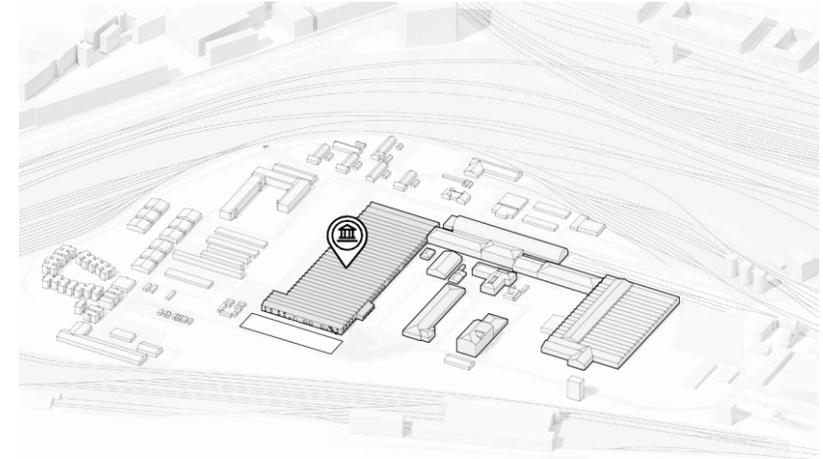
POSTOJEĆA IZGRADNJA

U blizini čestice nalaze se mnogi postojeći programi koji povećavaju potencijal projekta i omogućuju sinergiju između njih.



POVOLJAN POLOŽAJ

Čestica se nalazi u srcu Kopenhagena i dostupno je iz svih većih četvrti. Ova lokacija ima veliki potencijal da postane novo omiljeno središte Kopenhagena.



POSTOJEĆA GRADITELJSKA BAŠTINA

Čestica se nalazi pored starih zgrada za održavanje vlakova, te su zgrade vrijedna kulturna baština i pružaju nevjerojatan kontekst za ovakav projekt.

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Projekt



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AGC
Your Dreams, Our Challenge

BOSCH
Tehnologija za život

KNAUF INSULATION

profine
KÖMMERLING KBE

Wienerberger

baldiri
studio

NGE
Nosivi građevinski elementi d.o.o.

VELUX

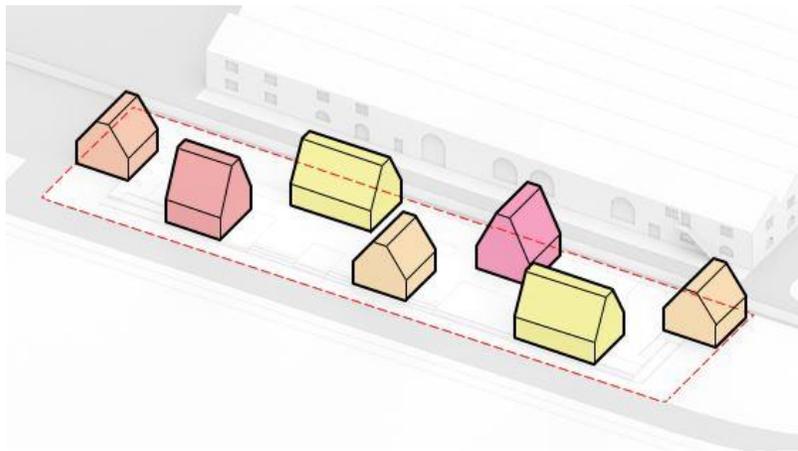


Living Places u m²:

Građ. čestica	2230 m ²
Vanjski prostori	1690 m ²
Stambene jedinice	260 m ²
Paviljoni	420 m ²
Ukupna izgrađena površina	680 m ²

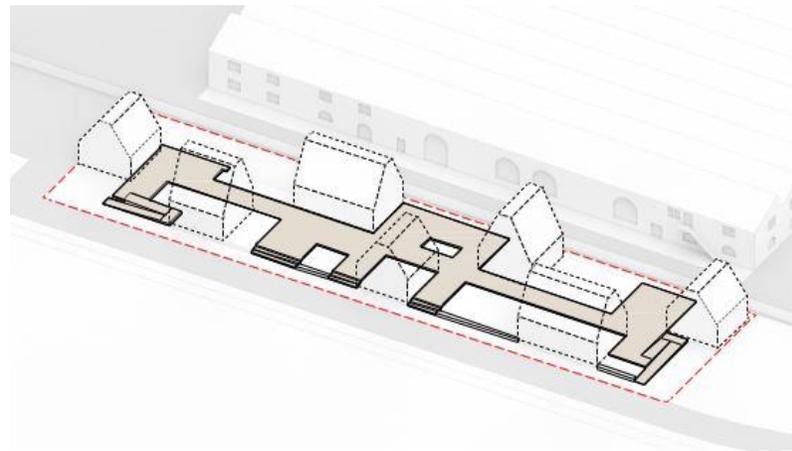
SITE

Koncept



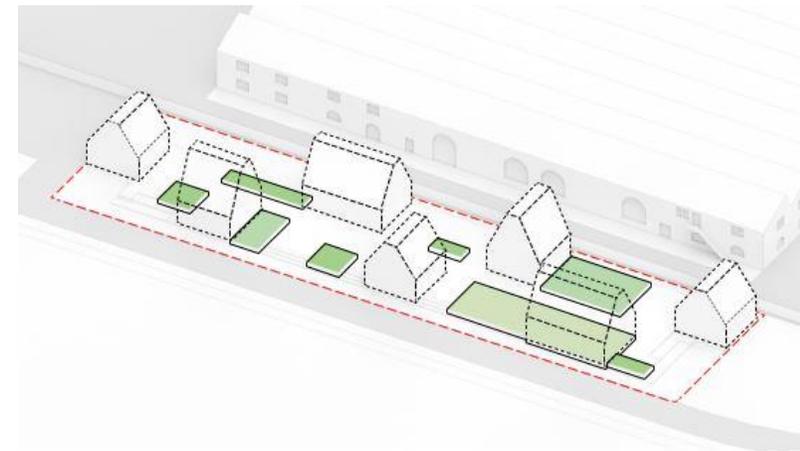
ZGRADE

Stambene jedinice i paviljoni.



KOMUNIKACIJA

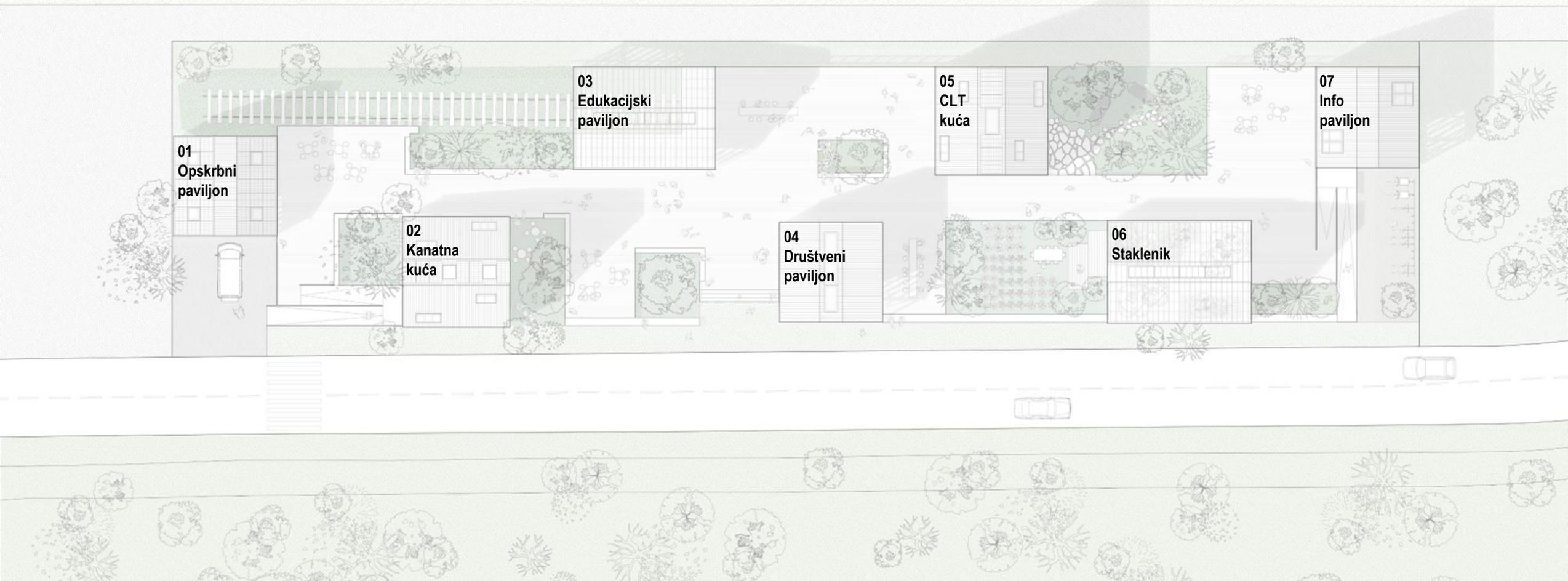
Drvena paluba postaje glavna komunikacija i javni prostor.



ZELENE POVRŠINE

Zeleni otoci s različitim biljnim vrstama.

Situacija



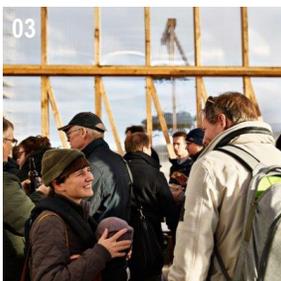
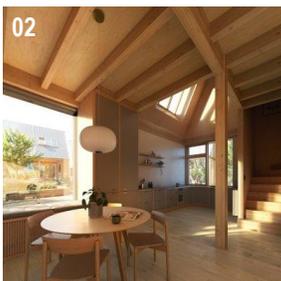
Pročelja



Presjeci



Program



01 Opkrbni paviljon



03 Edukacijski paviljon



05 CLT kuća



07 Info paviljon



02 Kanatna kuća



04 Društveni paviljon



06 Staklenik





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