

## BUILDING AS A PROCESS



Affordable Domino housing, part of Helsinki's  
“developing apartment building” - program

A patented, scalable concept and structural system  
for flexible and adaptable buildings/spaces.

New understanding of housing



Photo Tuomas Uusheimo



Photo Tuomas Uusheimo



Photo Tuomas Uusheimo

WHY?

# Objectives

Creating enduring built environment.

Creating resilient and regenerative buildings.

## **Designing for unpredictable.**

There's no need to predict future needs.

Extending the life span of buildings.

## **Buildings always in appropriate use.**

Resource efficiency, fast and affordable changes.

People can affect their own housing solutions – *creative dwellers*.

\*

Buildings understood as a process instead of a product



Unsustainable understanding of resource efficiency and optimization of space

HOW?

# ”Living House”

## Main ideas for flexibility

1

Unit based thinking

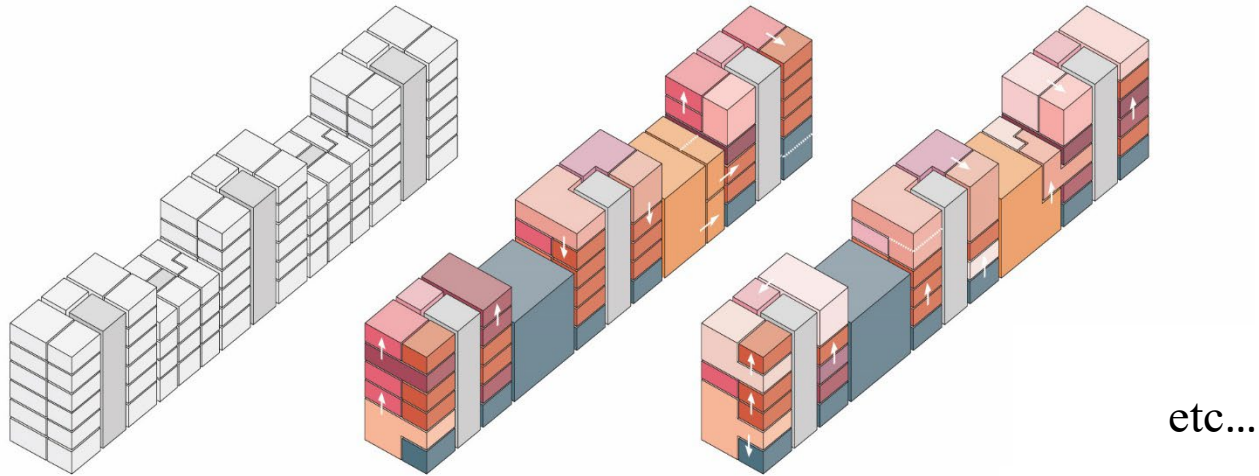
2

New structural and technical element system

3

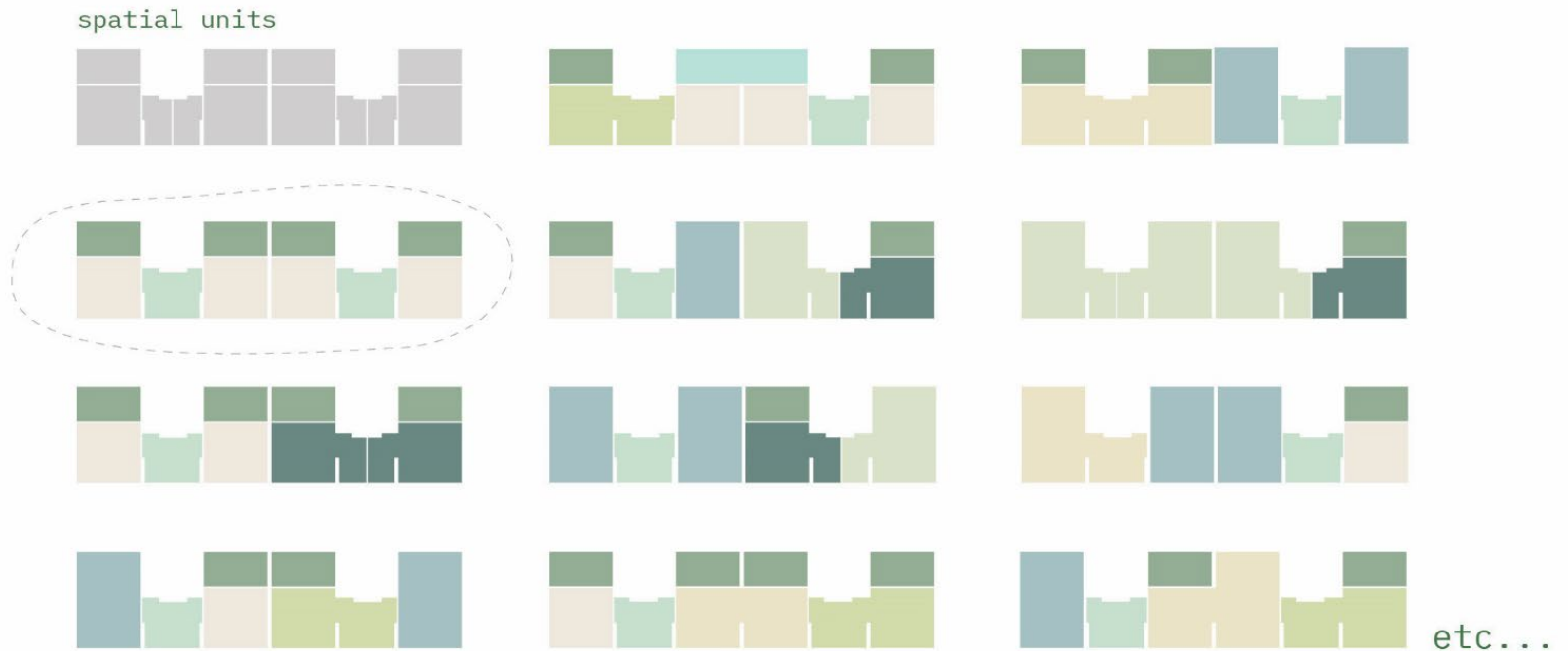
Easy construction and maintenance

# 1 Unit based thinking



Units are continually combined and separated into  
different sizes of apartments  
during the whole life span of the building.  
Each unit has its own entrance door.

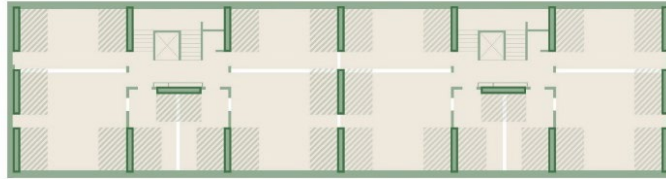
# Potential for endless amount of different apartment sizes...



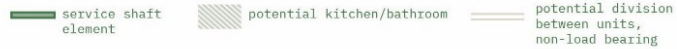
The spatial units can be easily combined and separated into different sizes of apartments and workspaces throughout the lifespan of the building.

# Domino housing in Oulunkylä, Helsinki

starting point for dwelling distribution...



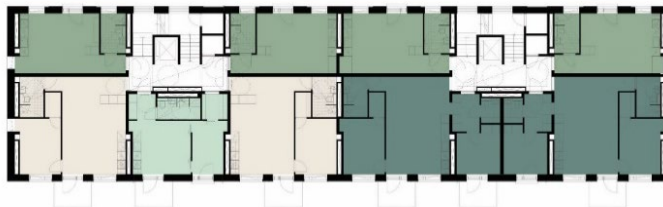
Core structure



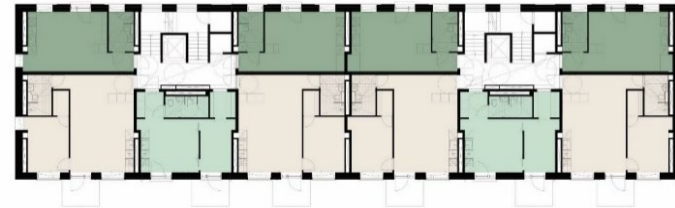
2. floor



4. floor



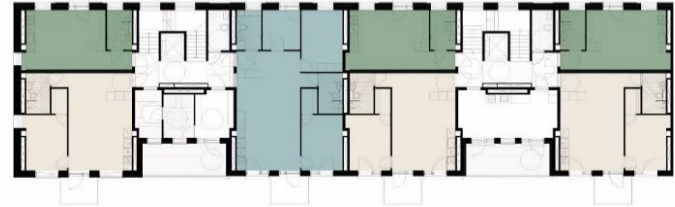
3. floor



5. floor

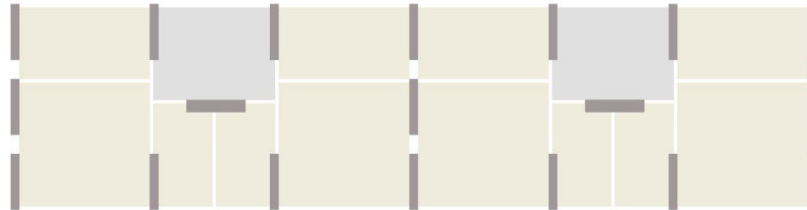


6. floor

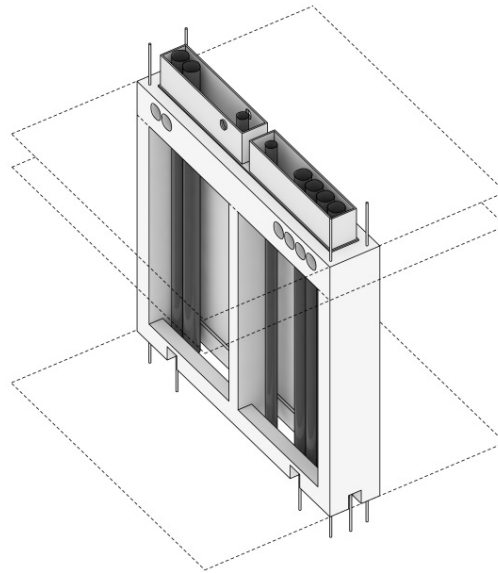


Initial configuration of spatial units into dwellings. Sizes and layouts of the apartments can change throughout the lifespan of the building.

## 2 New structural and technical element system

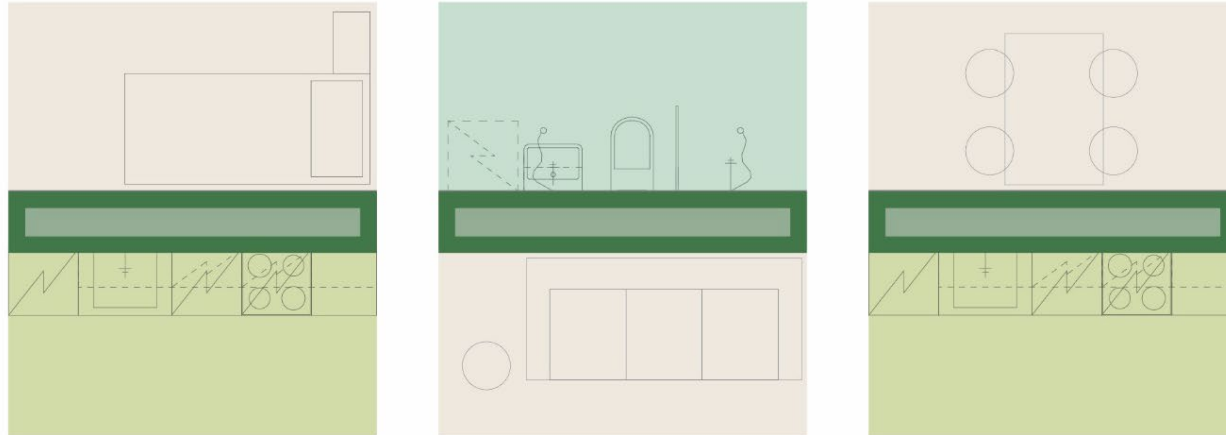


Load-bearing structure + technical service systems

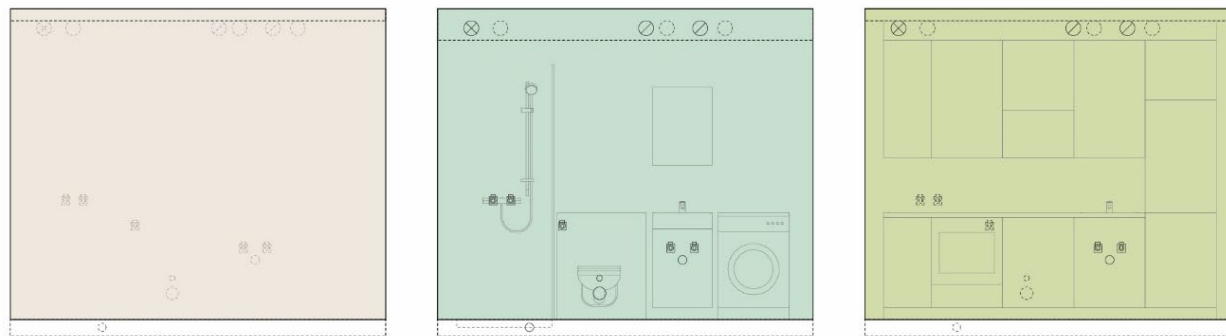


The apartments can be easily modified according to needs.  
Next to the technical element the room space can specialize into any type of room.  
Architectural design is free.

# Plug-in system, same for different room types, no horizontal piping needed

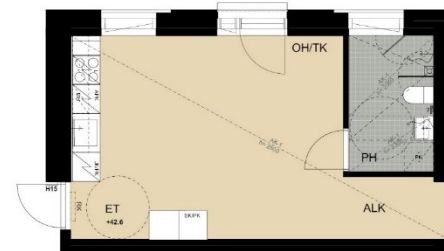
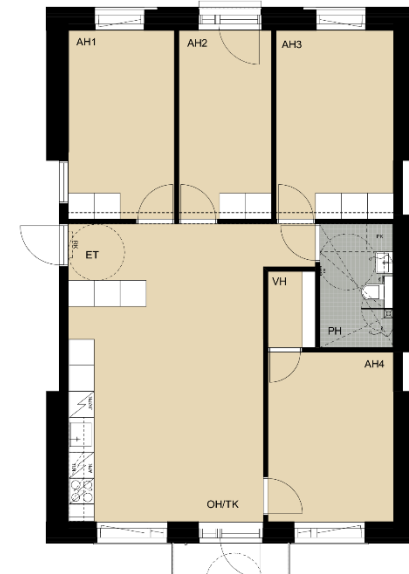
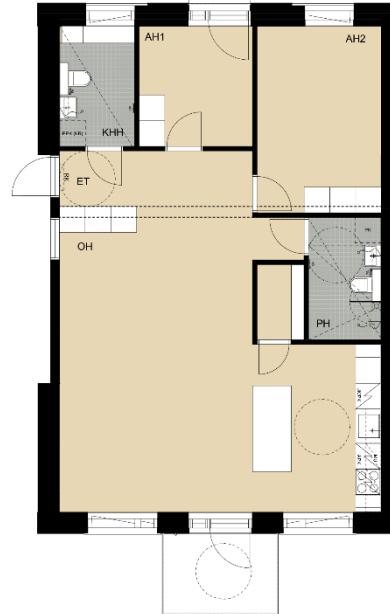
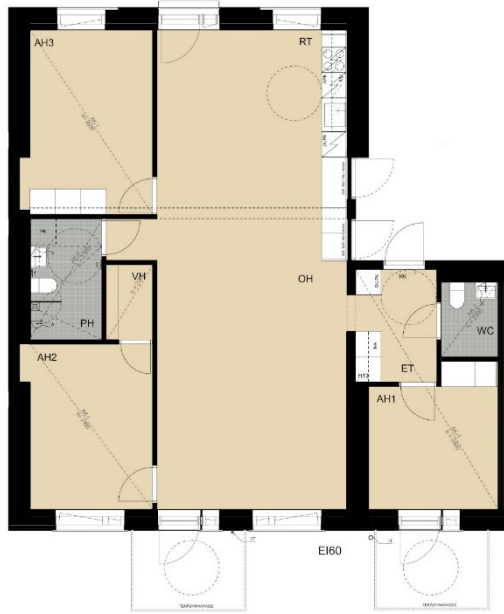


All spaces in the building are in connection with load-bearing service shaft elements, which means that the spaces can be specialized and changed into any room space (kitchen, bathroom, toilet, other living space)



"Plug and play" - all the utility connections are preplaced in the service shafts and can be taken in to use or left hidden as needed. The changes are easy, resource-efficient and reversible.

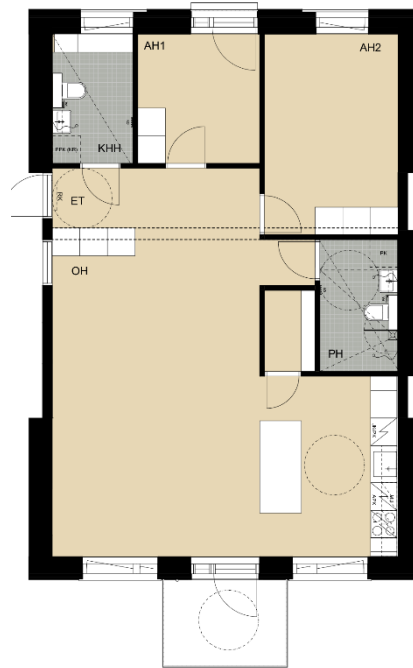
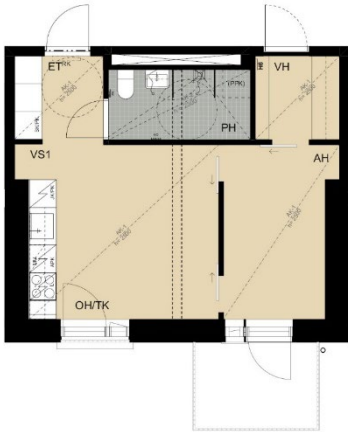
# Examples of apartments



etc...

# Examples of apartments

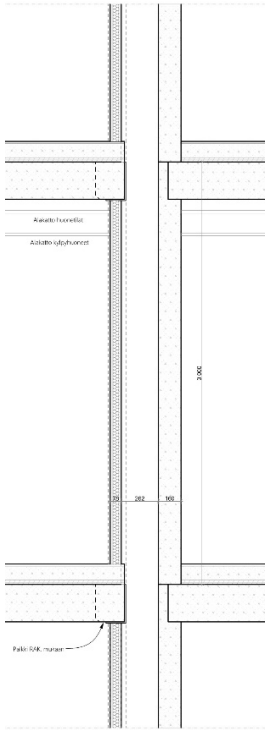
Potential group home solution, in which the occupants share the living and kitchen areas, but have their private room and bathroom

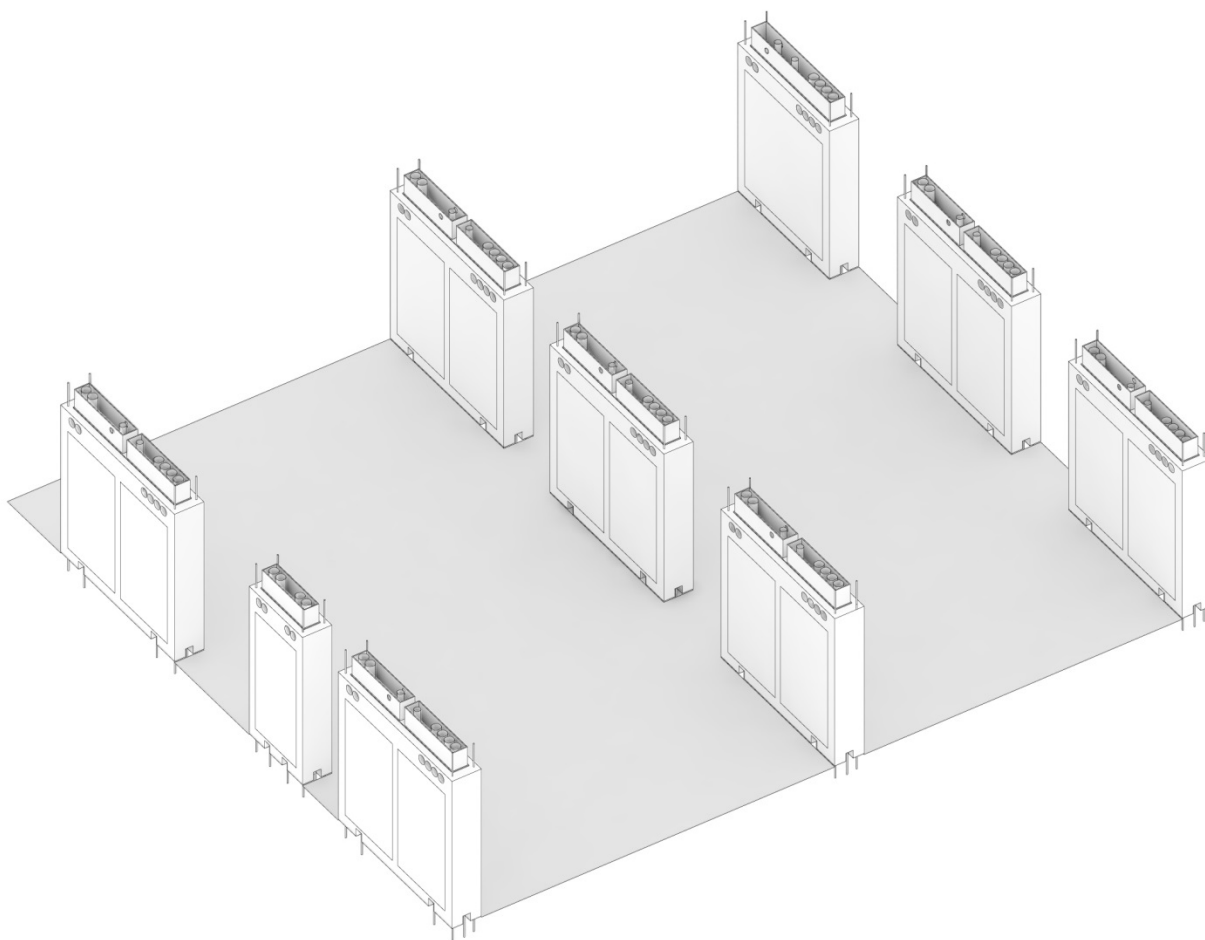


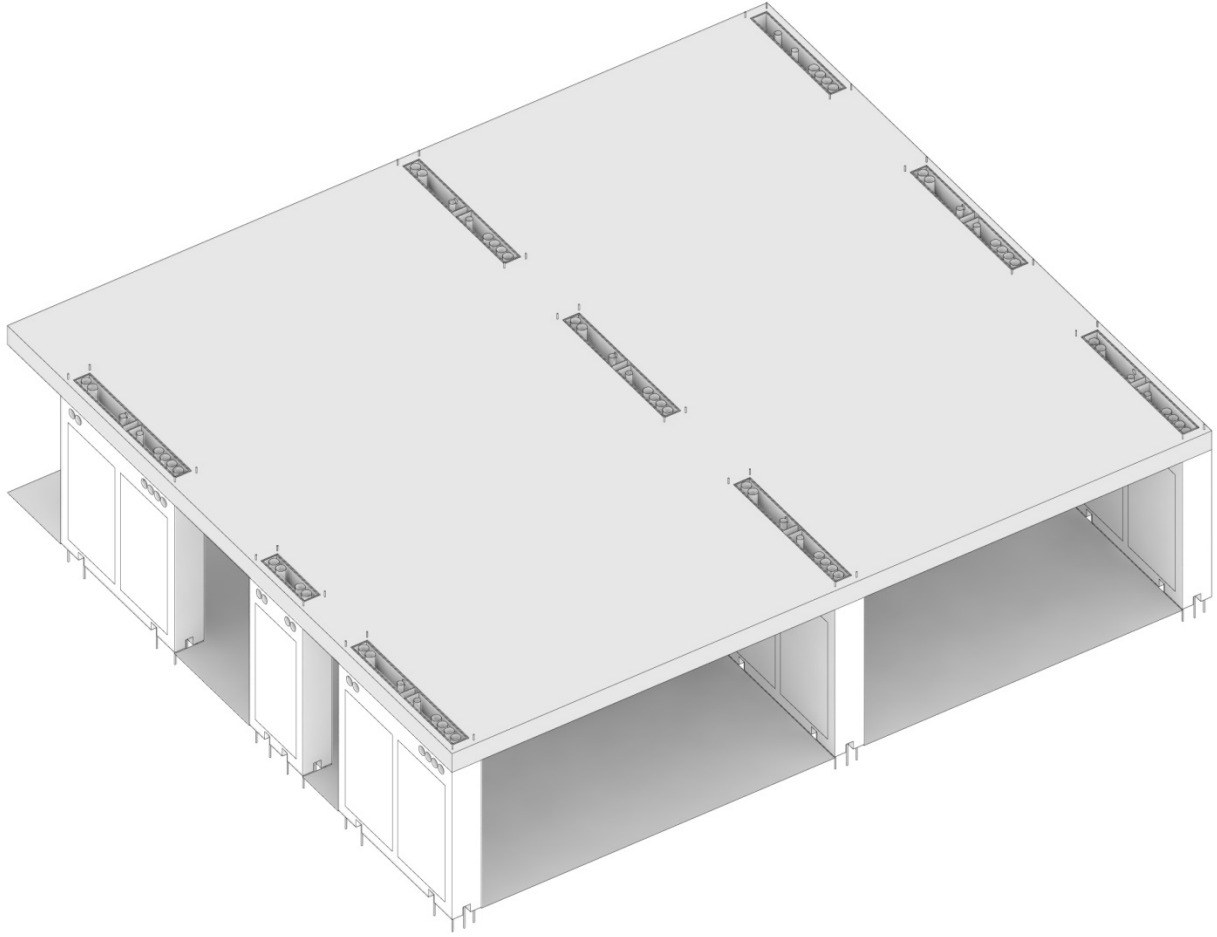
etc...

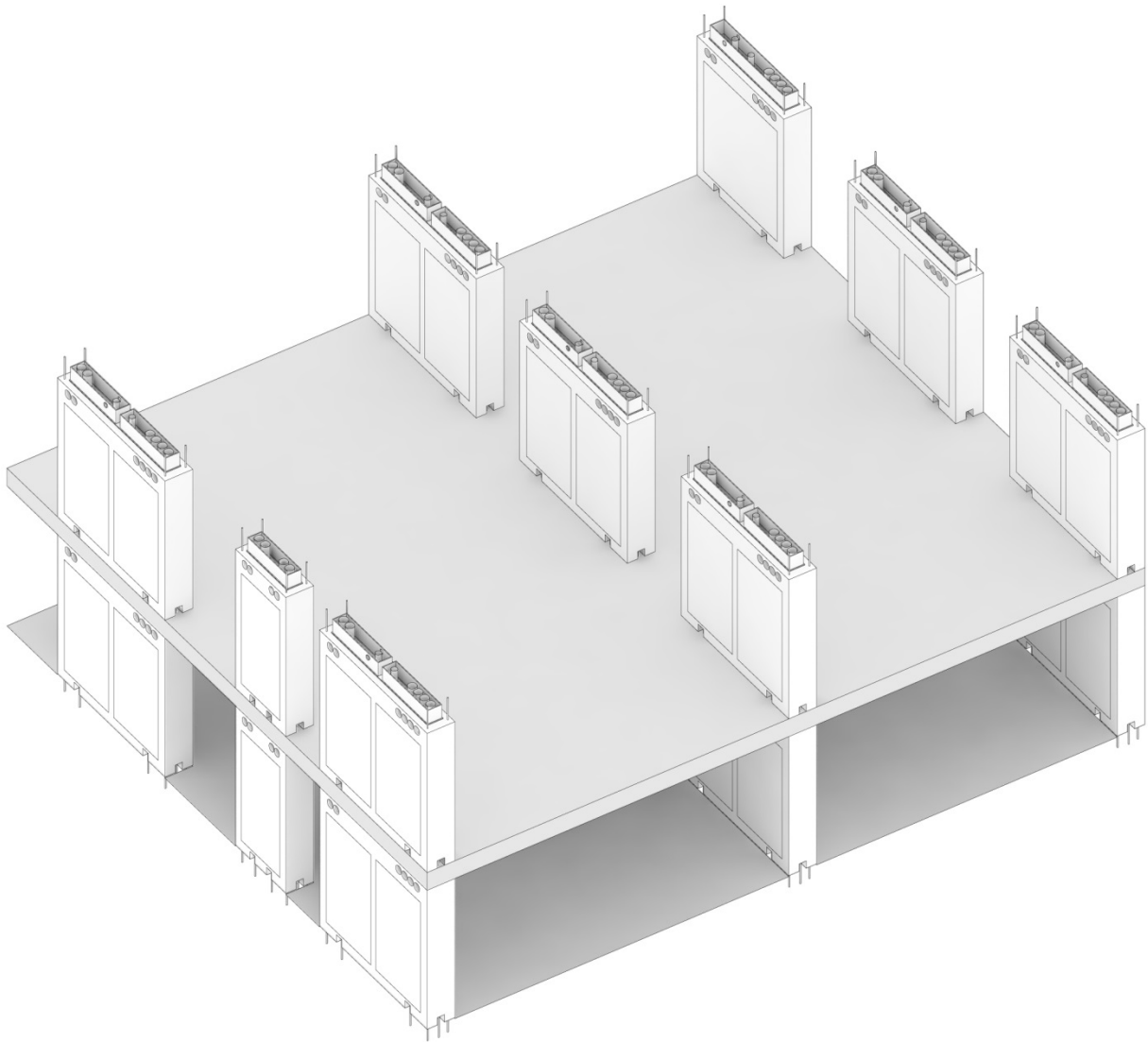
# 3 Easy construction and maintenance

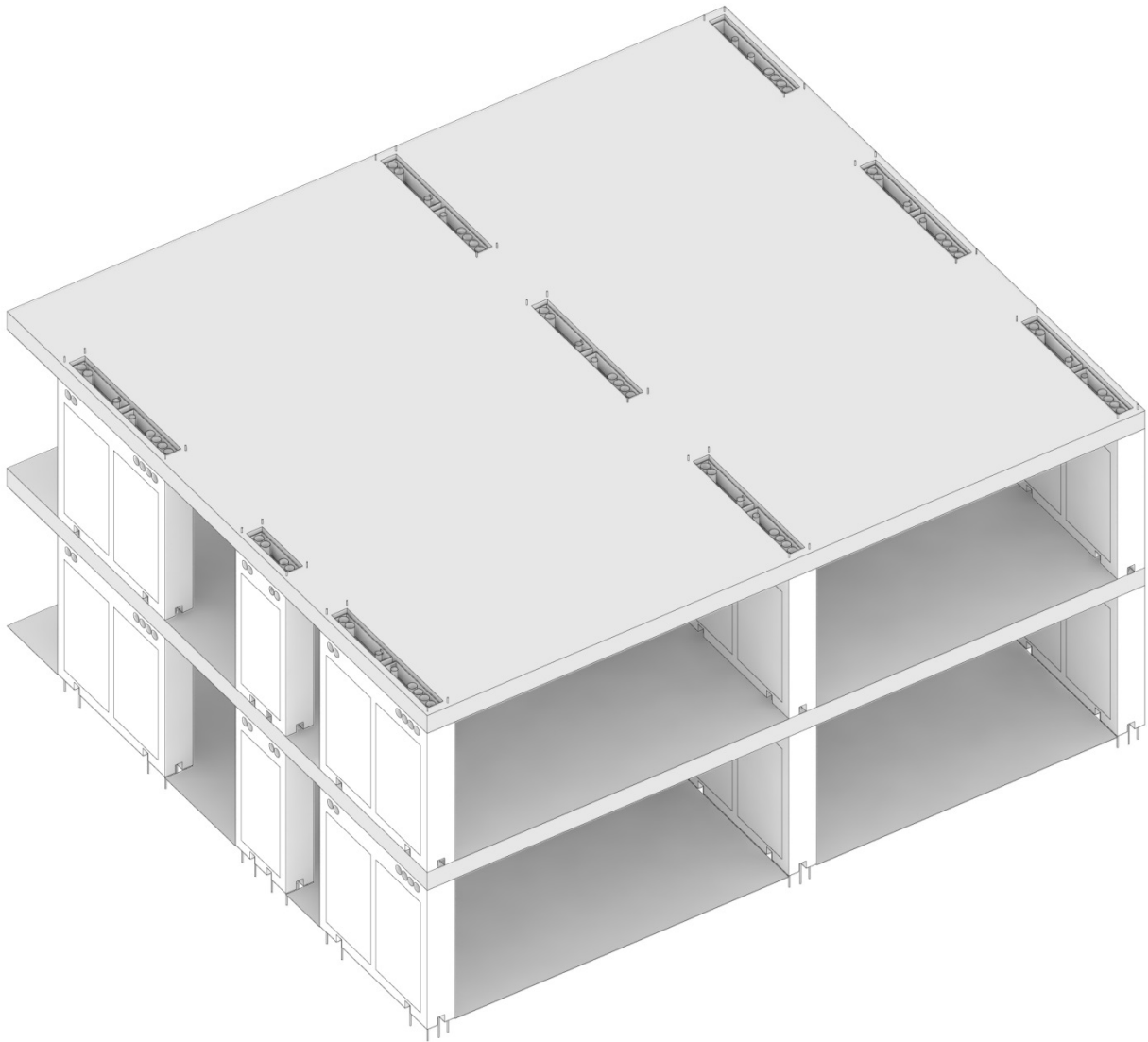
Spatial potential for later technical system's renovations

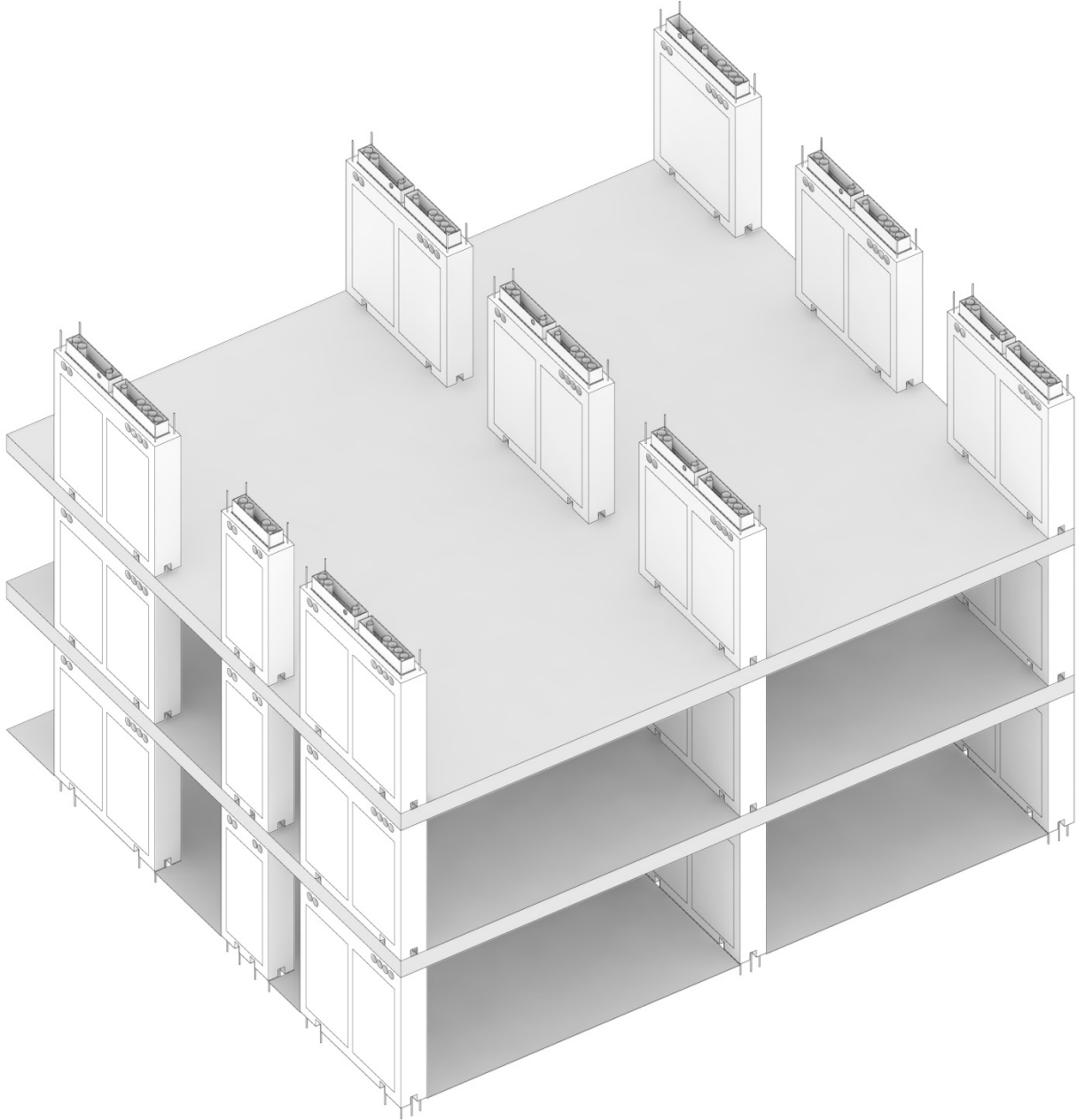












Suitable for all building types,  
do not hinder architectural design.

\*

Architect can define the building typology and unit sizes  
according to the aspirations of the client.

\*

Owner developers can save in life cycle costs.

\*

You can easily split larger dwellings into smaller ones, or combine them,  
if needs or market conditions change.

\*

Inhabitants can have more say in dwelling solutions.

\*

In a broader view, buildings are in efficient use,  
you can find dwellings in buildings that reflect the needs and societal changes.



Thank you!