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POLAND, LITUANIA, LATVIA,AUSTRIA,FINLAND/TEAM2

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SUSTAINABLE, HIGH-PERFORMANCE BUILDING SOLUTIONS IN WOOD

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Basic Data

- Type: Livingspace for young people and families
- Flat sizes:46 / 95m2
- 48 Flats (Density:0,55)
- Included: room for bicycles, community areas, garden or balconies, parking lots

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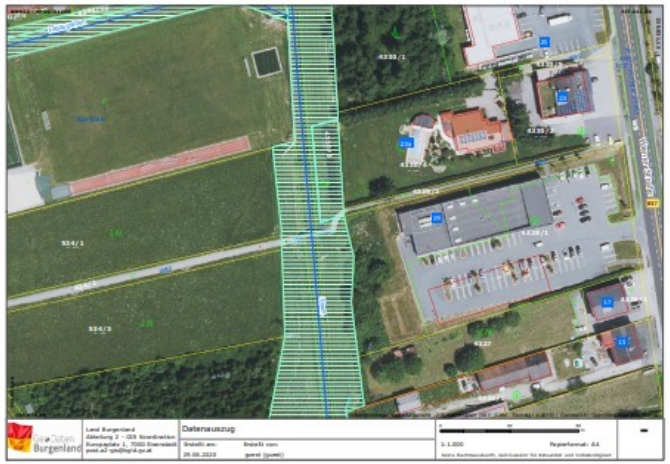
Location

- Stegersbach, a town in the Austrian state of Burgenland. Famous for golfing and its thermal bath.
- Population: 2,468
- Coordinates: 47.16317702532415, 16.161777468347303



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Site plan

Total area of the site:
11.310m2

Area of the buildings:
2060m2

Area of the pavings:
2944m2

Area of the green space:
6306m2

Density: 0,55

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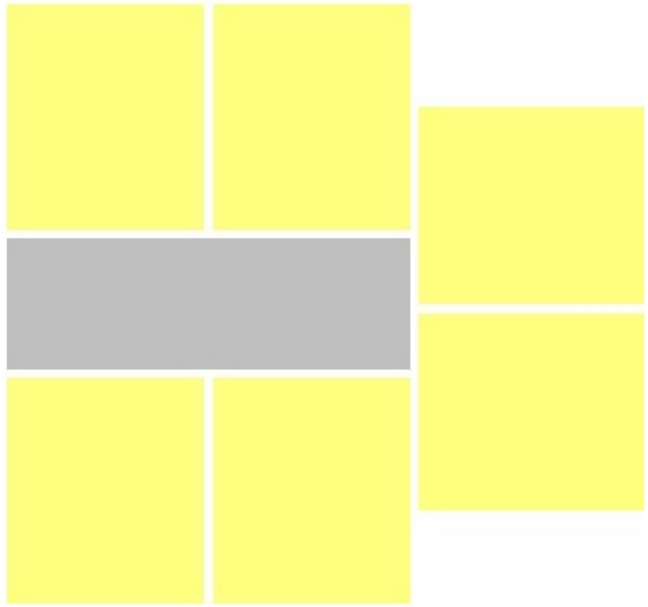
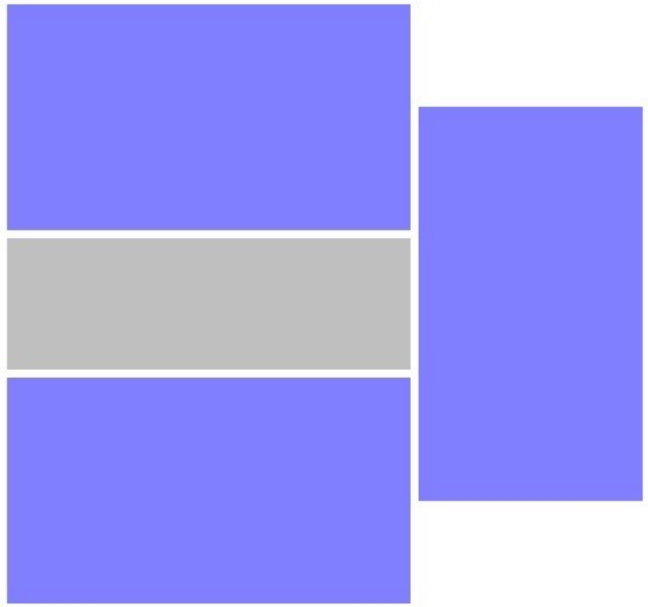
Floor plans

Assably of appartmants





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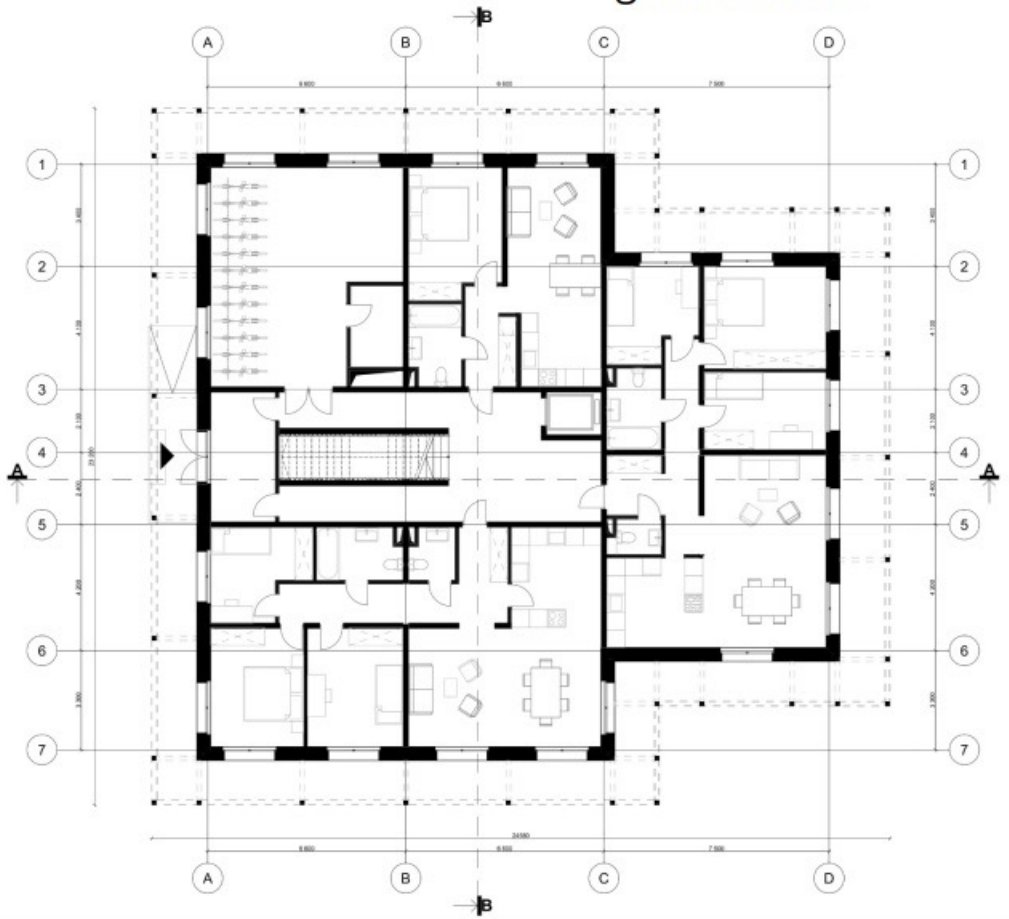
Floor Plans

ground floor



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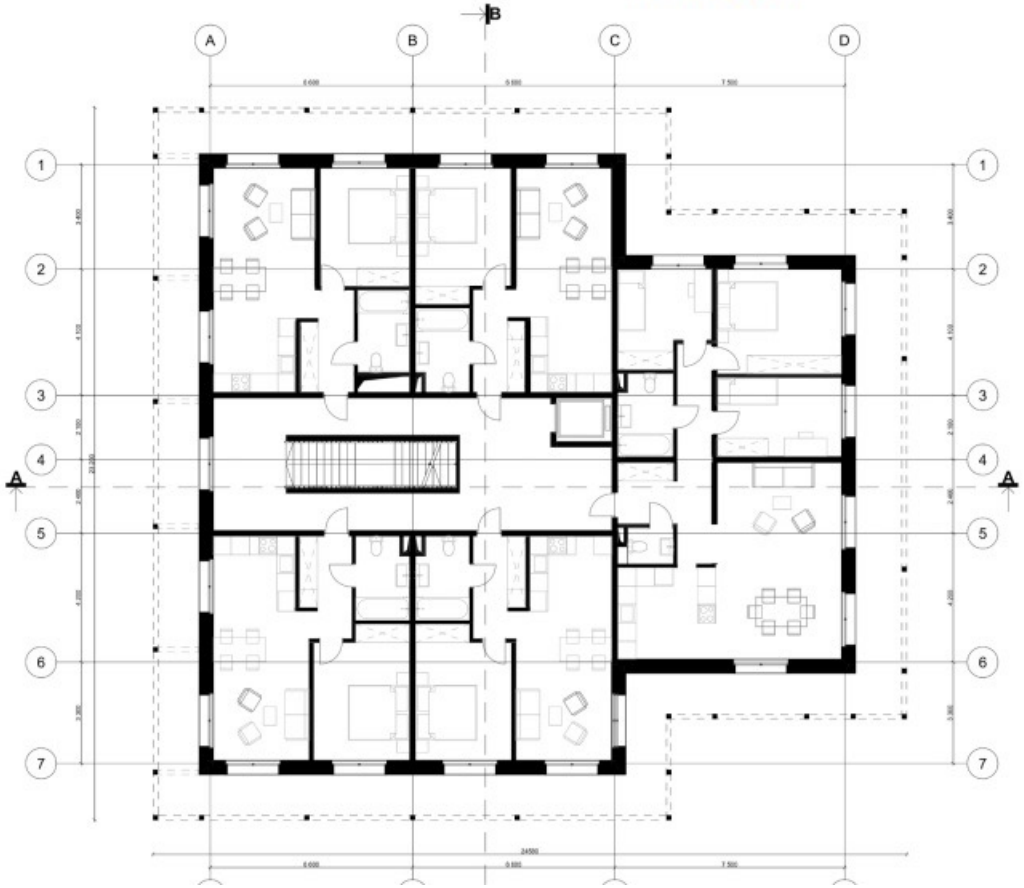
Floor Plans

first floor



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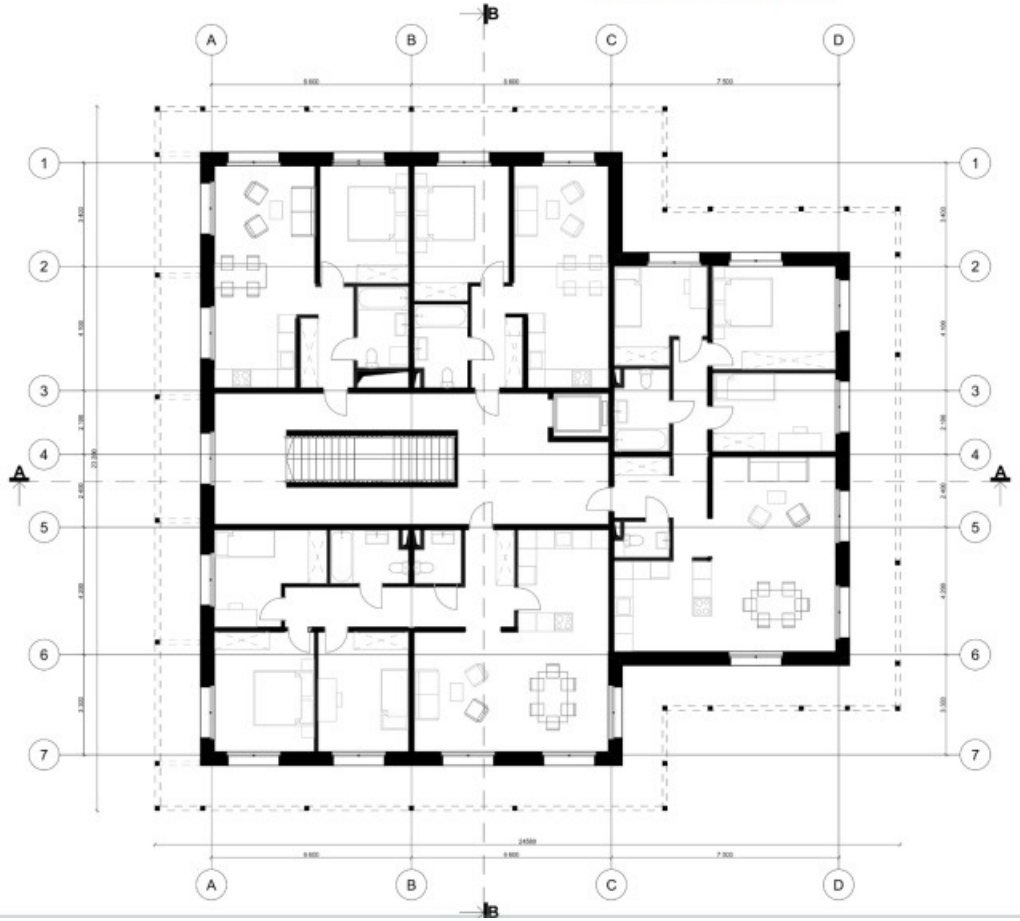
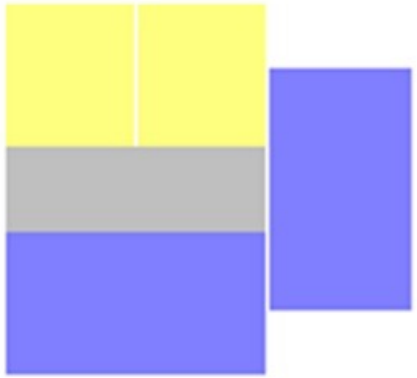
Floor Plans

second floor





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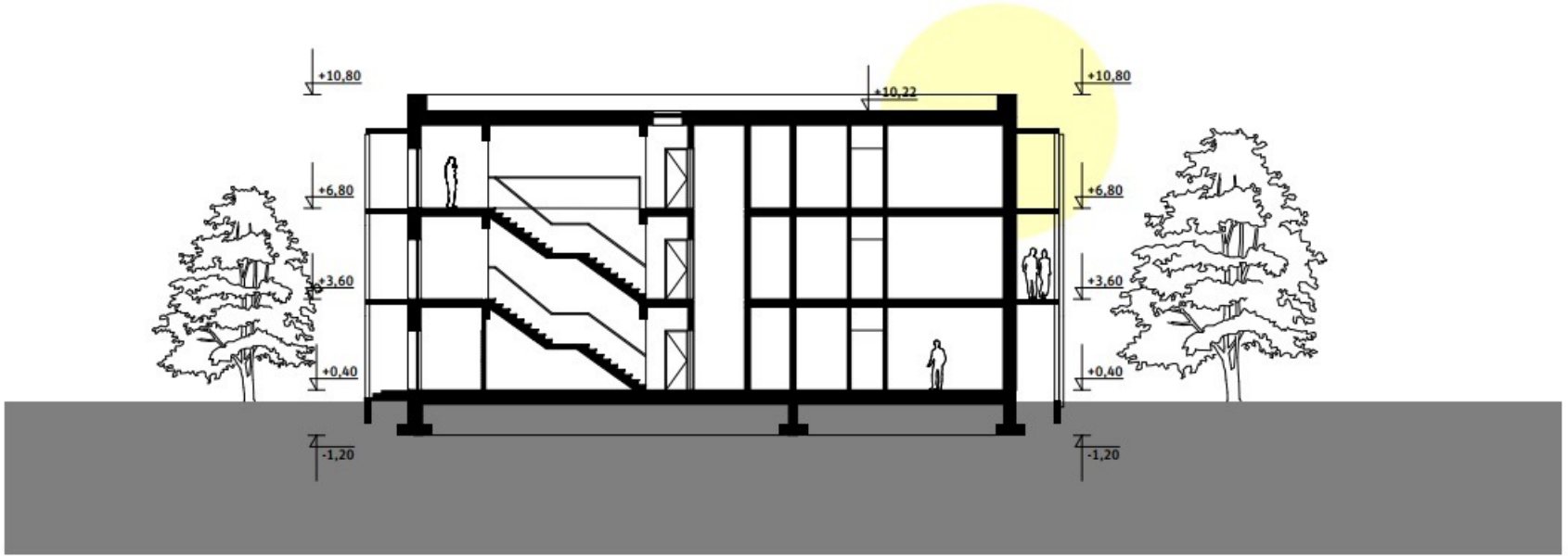
Section A



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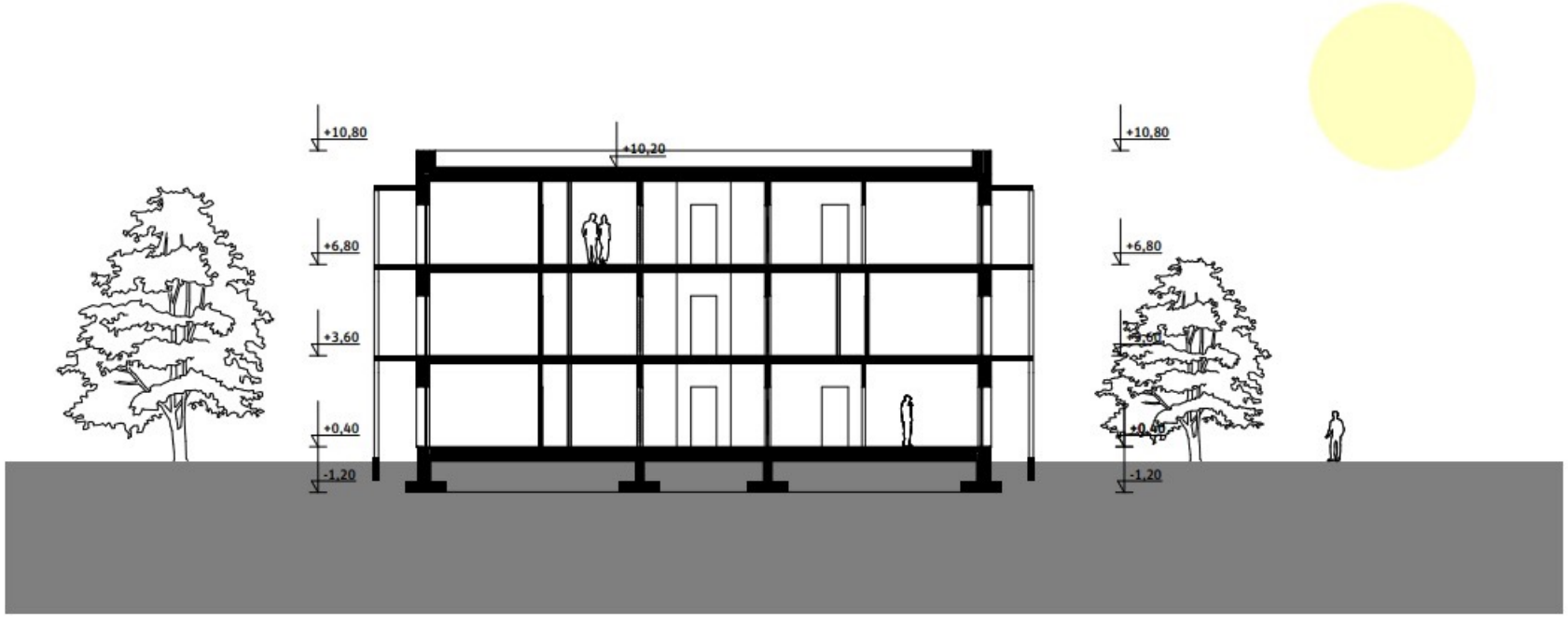
Section B



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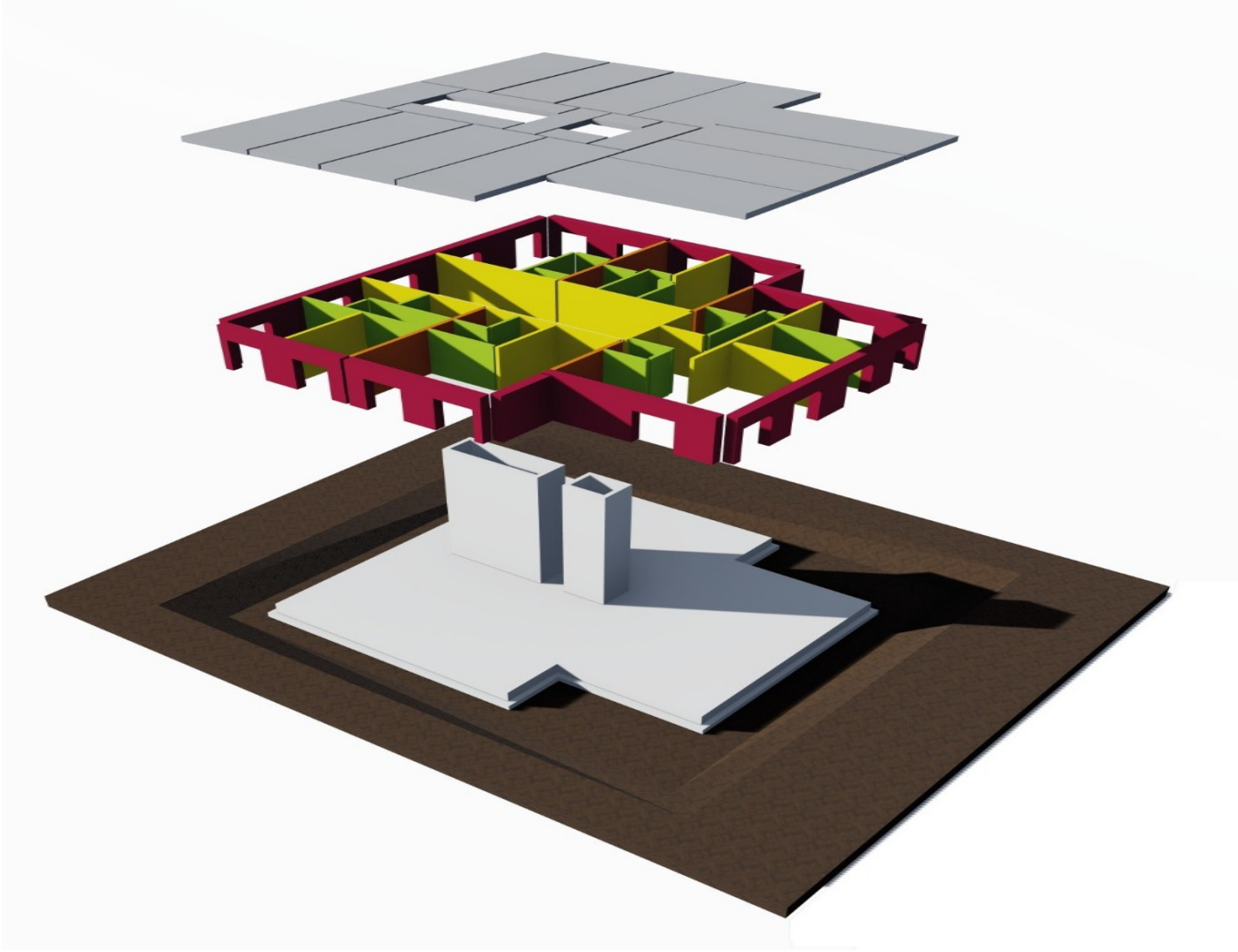
Prefabricated elements

Elements per floor:

- 37 floor slabs
- 29 wall elements
- 21 window beams
- 30 interior wall elements
- 6 internal wall beams



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Cost efficiency

- compact design and simple shape - more efficient
- getting materials from only few suppliers so it’s easier and more efficient
- durable materials so after some time it will be profitable
- small apartments are cost worthy and space is used efficiently
- a lot of the energy is self-generated (solar panels)
- no expensive materials
- Self-supporting balconies

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Cost estimation

element	Cost for 1 element	Cost for whole elements in 1 building
Floor	€48,143	€144,429
Roof	€77,217	
Balcony	€7008	€77,088
Ground floor	€44295	
Roof above balcony	€3399	€37389
Exterior wall	€50195	€150585
Separating wall	€31897	€95691
Interior wall	€35055	€105165
Exterior wall without window	€38072	€114216
Workers(5 people)		€21340

Total cost for whole 1 building= €867415

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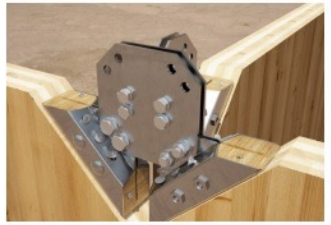
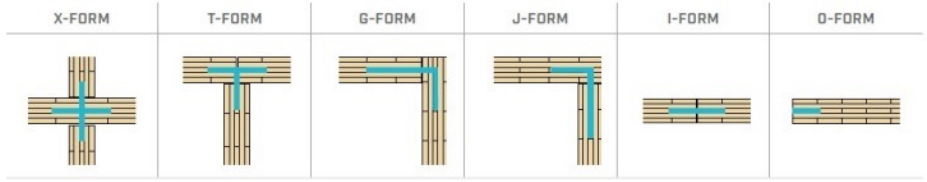
Jointing technology



- **Screws are used – no glue**
- **X-RAD connection to join the CLT elements**
  - Saves time
  - X-RAD installedoff-site
  - Connection on-site



- **Non-CLT elements**
  - Angle brackets,etc.

rothoblaas

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Transportation

ELEMENTS	AMOUNT OF	TRUCKS in Total
Celling	63	
Exterior wall	39	
Seperation wall	83	
Wall between apartments	12	
Interior wall	33	
Beam	36	
Stud	9	
Transport for all elements		13

Total cost for truck= €2382,9

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Crane

Technical data

Max. load capacity	350 t
at radius	3 m
Telescopic boom from	14.90 m
Telescopic boom up to	70.00 m
Lattice jib from	6.00 m
Lattice jib	up to 78.00 m
Drive engine/make	Liebherr
Drive engine	8 -Zylinder-Diesel
Drive engine/power	455 kW
Number of axles	6
Crane engine/make	Liebherr
Crane engine	4-Zylinder-Diesel
Crane engine/power	180 kW
Drive/Steering standard	12 x 6 x 12
Drive/Steering option	12 x 8 x 12
Driving speed	85.00 km/h
Total ballast	140.00 t

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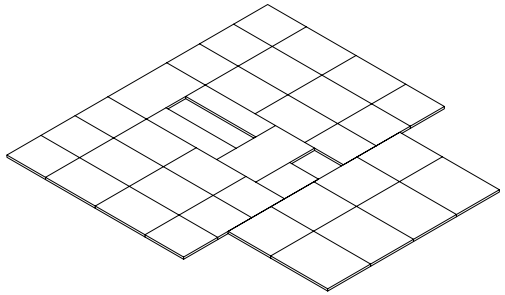
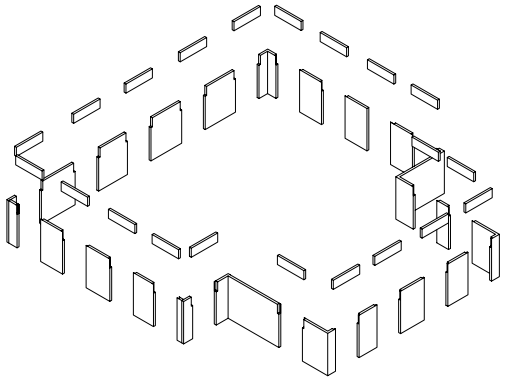
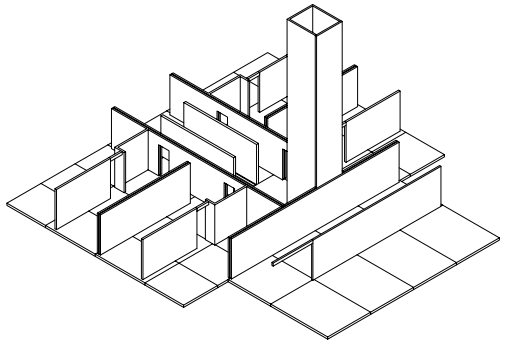
Construction Process



3. step: ceiling/floor



2. step: external walls+ beams



1. step: floor + internal walls+ elevator shaft

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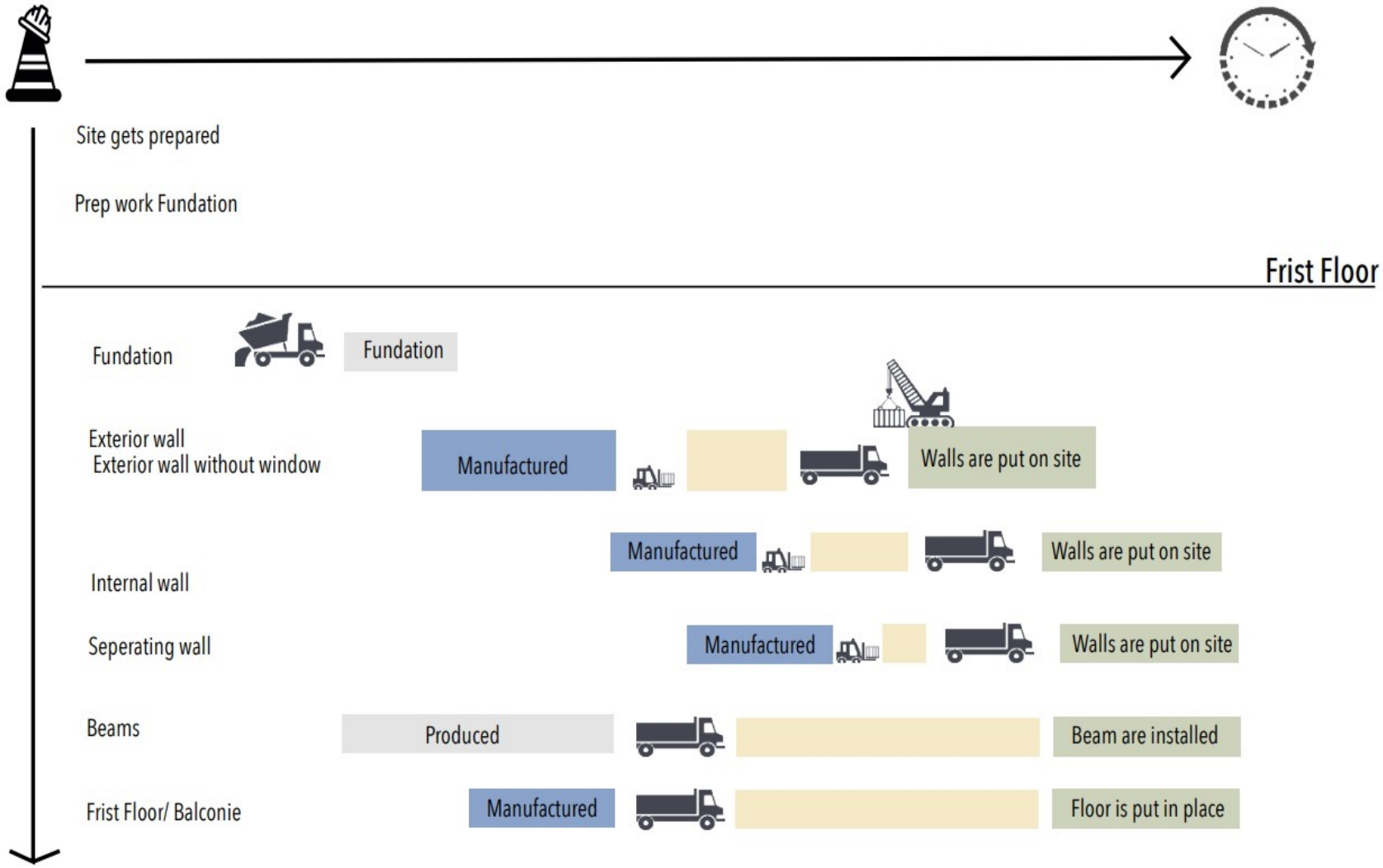
Site plan



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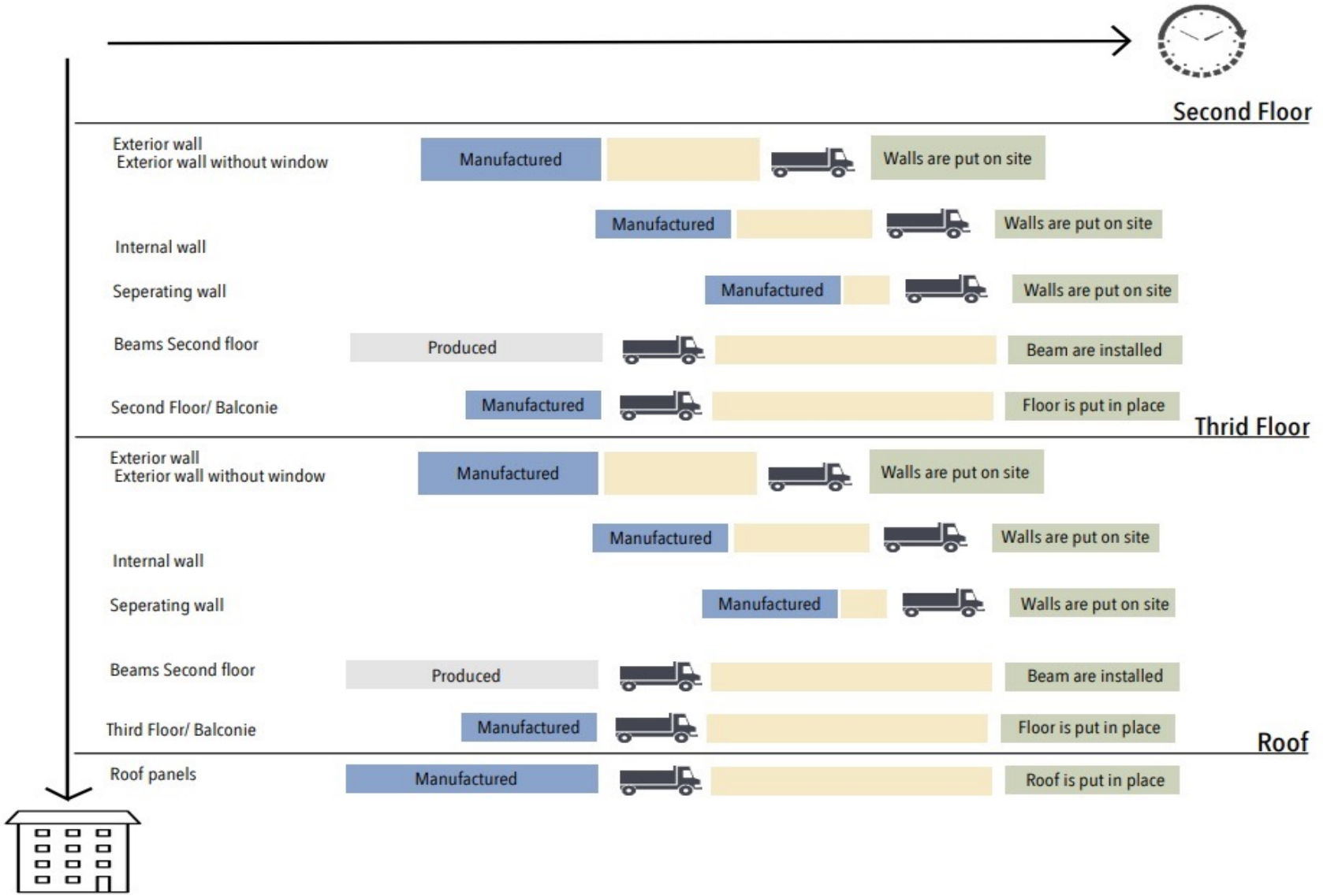

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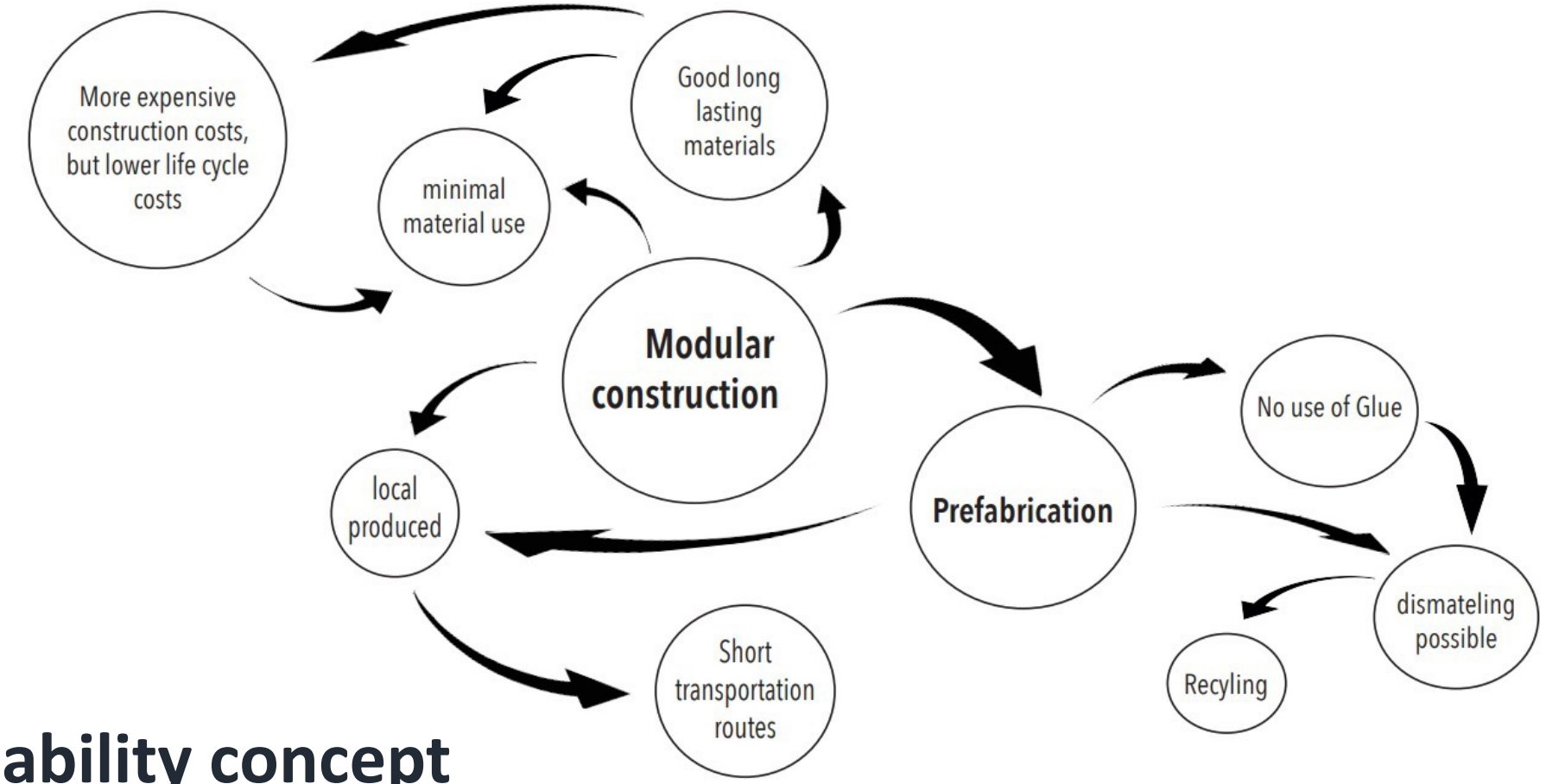

Sustainability concept

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Lesson learned

we learned many ways to make the world a better place, we learned to use wood in areas where we didn't know it was possible to use wood, and many ways to build a house using materials that do not harm nature.

Thanks For your attention!