The Spatial Mediator Assembly Instructions

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Introduction

This booklet contains all the steps required to assemble the modular system of The Spatial Mediator -a hybrid public building located at the Ter Apel railway station. The building is designed around a flexible, demountable module that can be configured to house a wide range of functions, from public spaces and community facilities to temporary accommodation.
The system consists of two parts that work together:

Part 1

Structural Module forms the load-bearing skeleton of each unit. It is built from reclaimed shipping container corner castings combined with timber Beam A and Beam B elements, connected using standard A-bolts. Modules can be stacked vertically using automatic twistlocks, allowing the building to grow over time.

Part 2

Prefab Panel Infill fills the structural module with floor, wall, and ceiling panels. The panels connect using the integrated Rothoblaas click-and-slide system - no additional tools or adhesives required. The infill is fully demountable and can be reconfigured to adapt to changing needs.
Follow the steps in order. Complete Part 1 fully before beginning Part 2. For stacking multiple modules, complete steps 1-9 of Part 1 twice before proceeding to steps 10-12.

Minimum 2 persons required throughout. Crane operation by certified personnel only.

You will need:

Structural Module
- Container corner castings (8×) (4× bottom frame, 4× top frame)
- A-bolts (52×) (step 1: 0, step 3: 16, step 5: 4, step 6: 16, step 7: 16)
- Beam A - horizontal beams (16×) (8× bottom frame, 8× top frame)
- Beam B - vertical beams (8×)
- Floor support system (2×)
- Floor panel (2×)
- Wall panels - your choice (8×)
- Ceiling panel (2×)
- Automatic twistlocks (4×)
- Crane (1×)

Prefab Panel Infill
Floor panels
- Floor panel A (3×)
- Floor panel B (6×)
- Floor panel C (4×)

Wall panels - base layer
- Wall panel A (4×)
- Wall panel B (3×)
- Wall panel C (3×)

Wall panels - upper layer
- Wall panel D (3×)
- Wall panel E (6×)
- Wall panel F (3×)

Structural
- Beams (9×)

Ceiling panels
- Ceiling panel A (1×)
- Ceiling panel B (1×)
- Ceiling panel C (1×)

Connection system
- Rothoblaas connection system (integrated into all panels - no separate installation required)

Safety Instructions

- Personal protection

Always wear safety gloves when handling beams, panels, and metal corner castings.
Wear steel-capped boots at all times on the assembly site.
Wear a hard hat when working beneath lifted components or when operating near the crane.
Do not work alone - a minimum of 2 persons is required at all stages.

- Bolted connections

Always tighten all A-bolts fully before proceeding to the next step.
Do not use damaged or corroded bolts - replace immediately.
After full assembly, inspect all connections before any load is applied.

- Panel handling

Panels are heavy - always use two people when lifting and positioning.
Ensure all panels are fully seated and clicked into position before continuing.
Never stand on panels before they are fully secured in the floor support system.

- Crane operations

Keep the crane area clear of all non-essential personnel at all times.
Never work or stand beneath a suspended load.
All crane lifts must be carried out by a certified crane operator.
Ensure lifting straps and rigging are rated for the load before each lift.

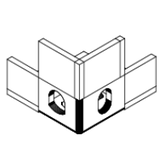
- Twistlocks

Before stacking a second module, verify that all 4 twistlocks are fully engaged - you should hear an audible click.
Never lift or move a stacked module unless all twistlocks are confirmed locked.
Inspect twistlocks for wear or damage before each use.

Step 1

Take the reclaimed container corner casting.

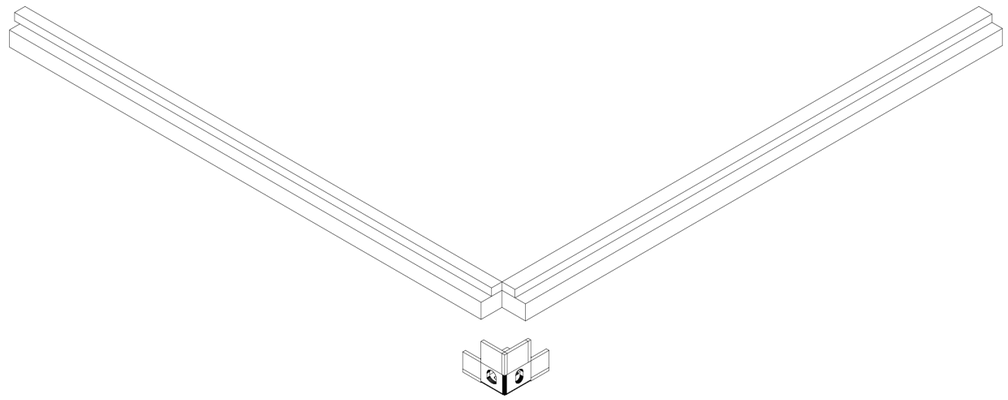
For this step you will need: 1× container corner casting



Step 2

Take 2 Beam A pieces and place them flush against the corner fitting.

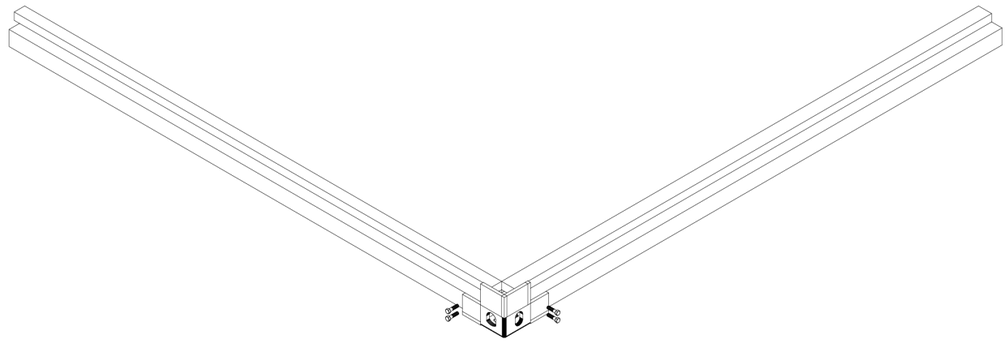
For this step you will need: 2× Beam A



Step 3

Secure the corner casting to the 2 Beam A pieces using 4 A-bolts. Repeat this process for all 4 corners to form the complete bottom frame.

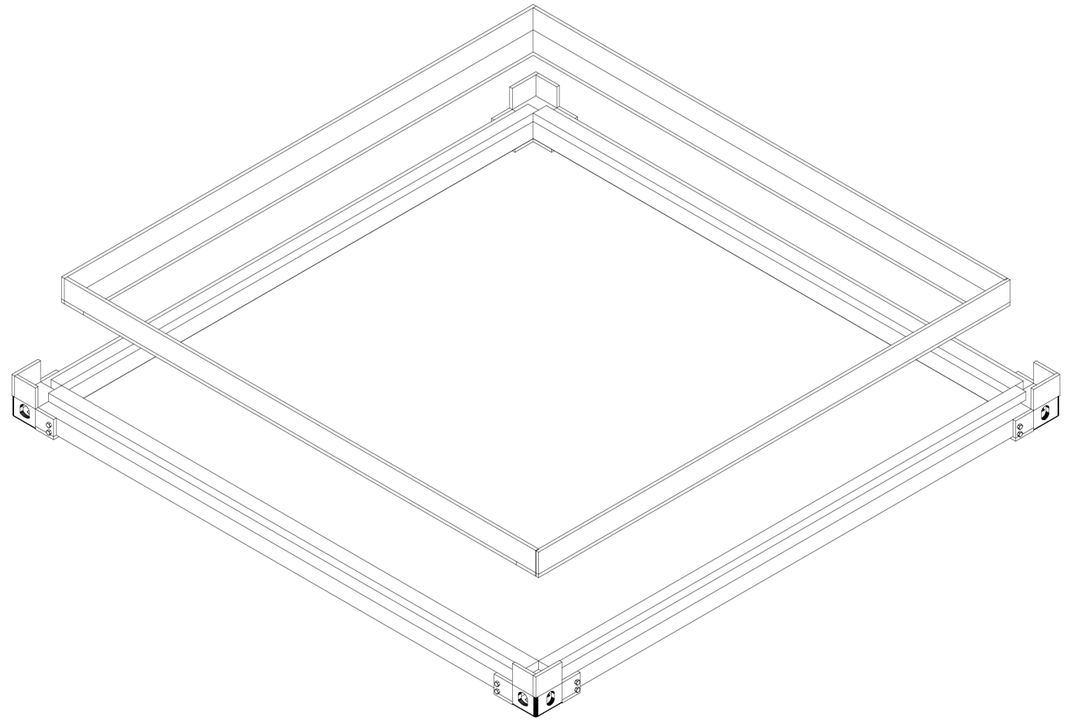
For this step you will need: 3× container corner casting, 6× Beam A, 16× A-bolts



Step 4

Take the floor support system and place it between the 4 Beam A pieces.

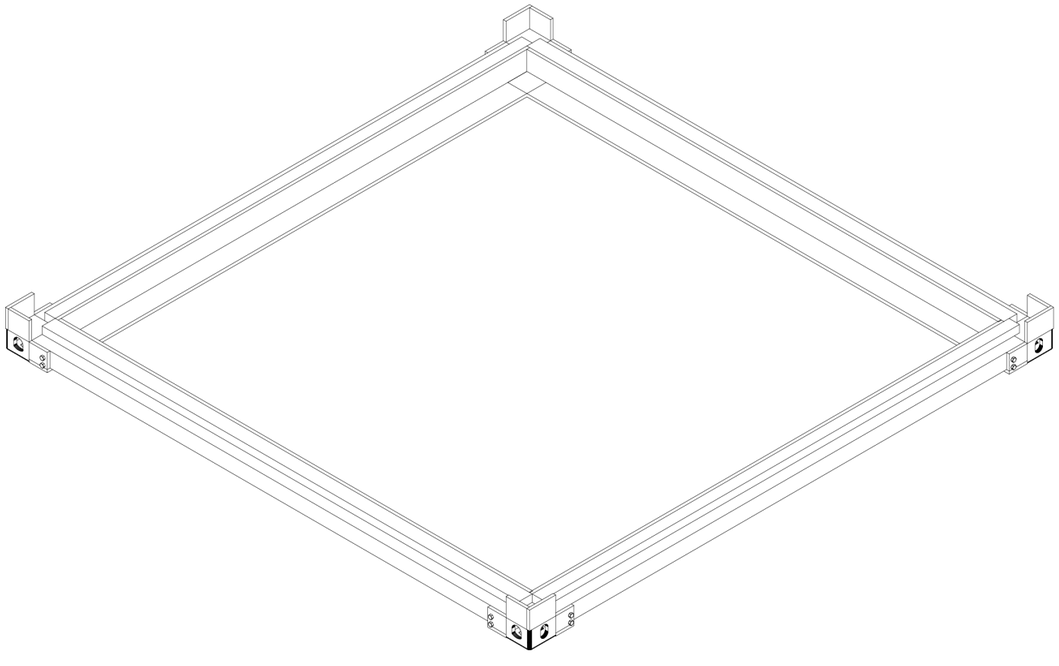
For this step you will need: 1× floor support system



Step 5

Secure the floor support system in place using 4 A-bolts.

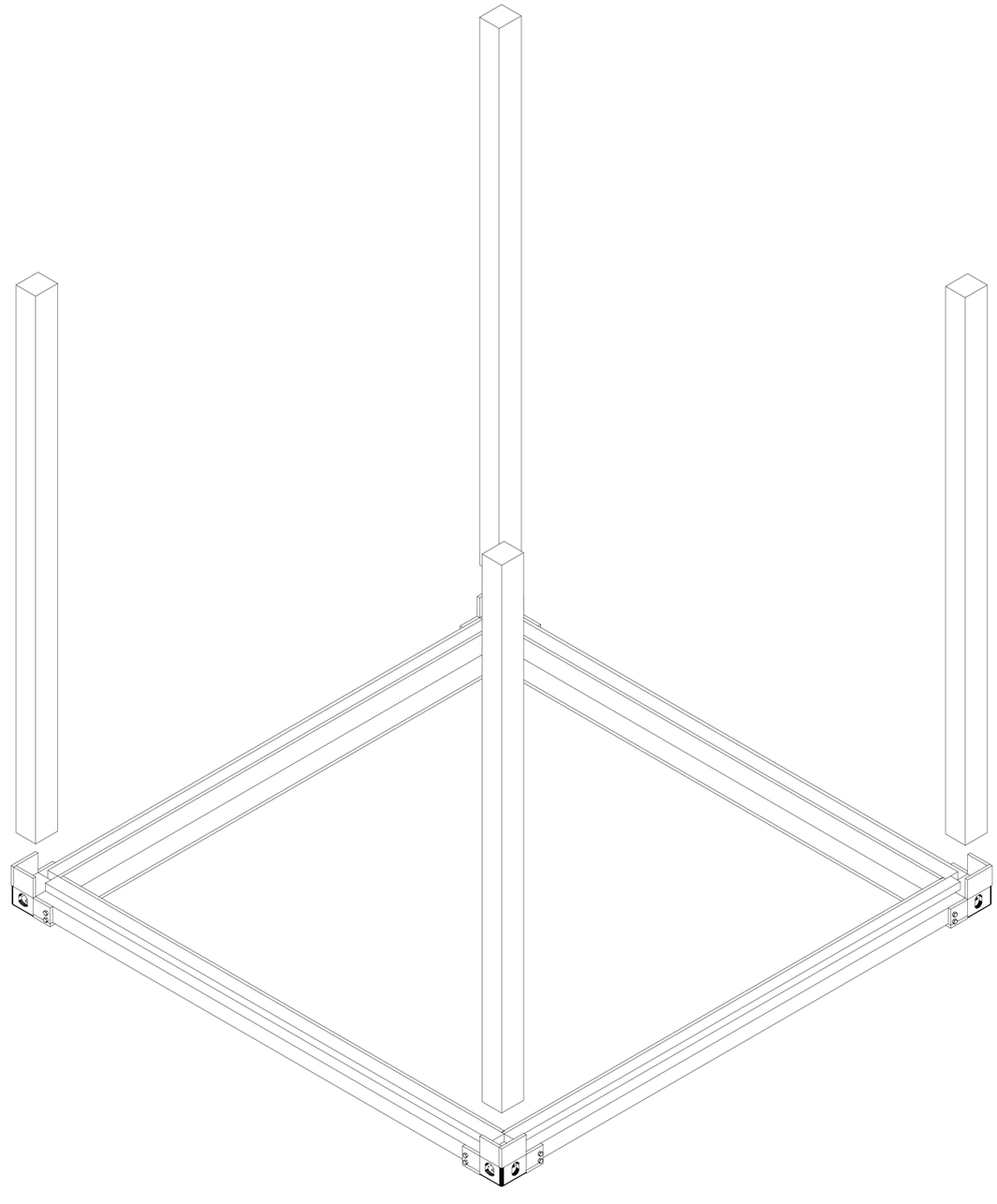
For this step you will need: 4× A-bolts



Step 6

Take 4 Beam B pieces and place them vertically upright at each corner. Secure each corner with 4

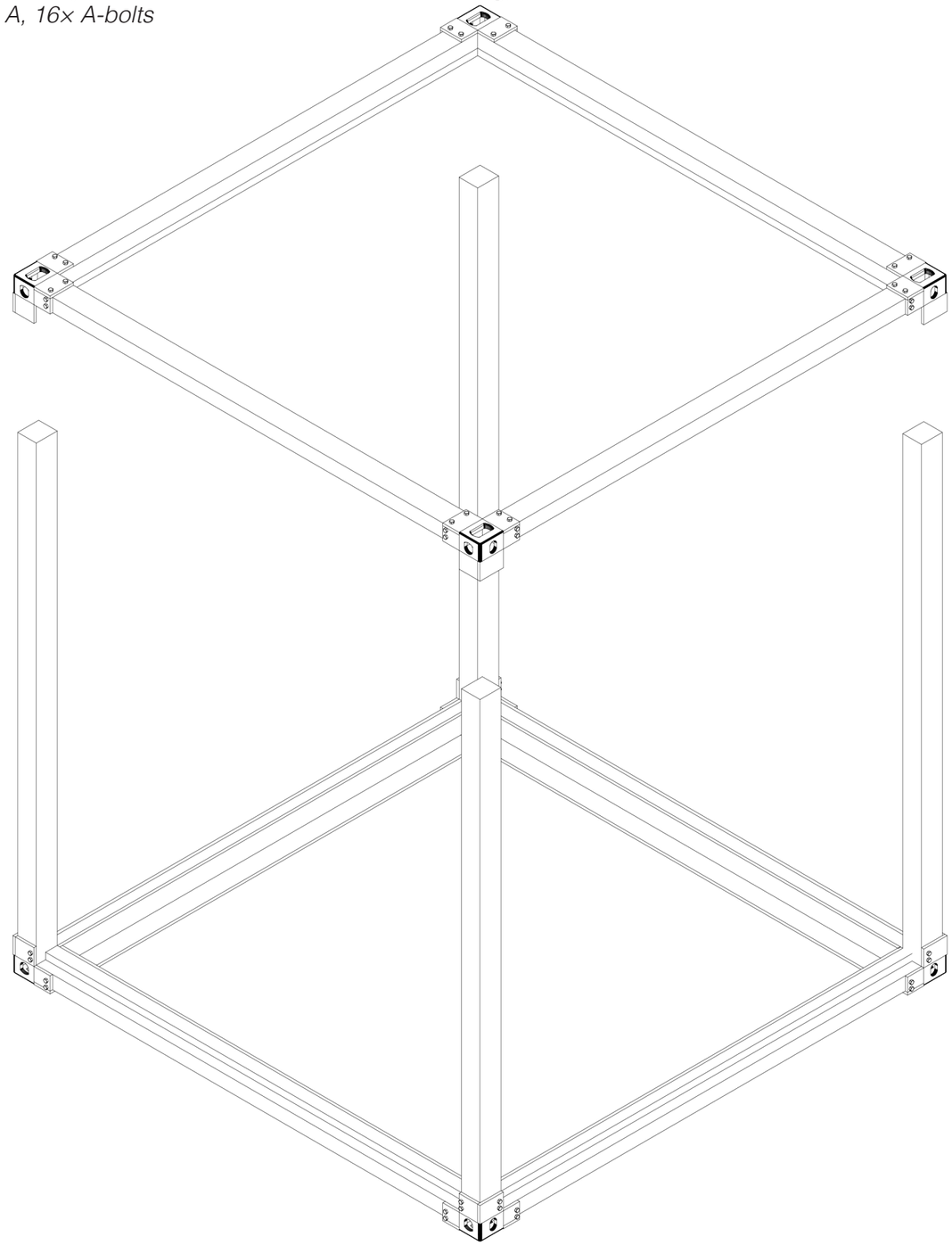
For this step you will need: 4× Beam B, 16× A-bolts



Step 7

Repeat steps 1–3 to assemble the top frame.

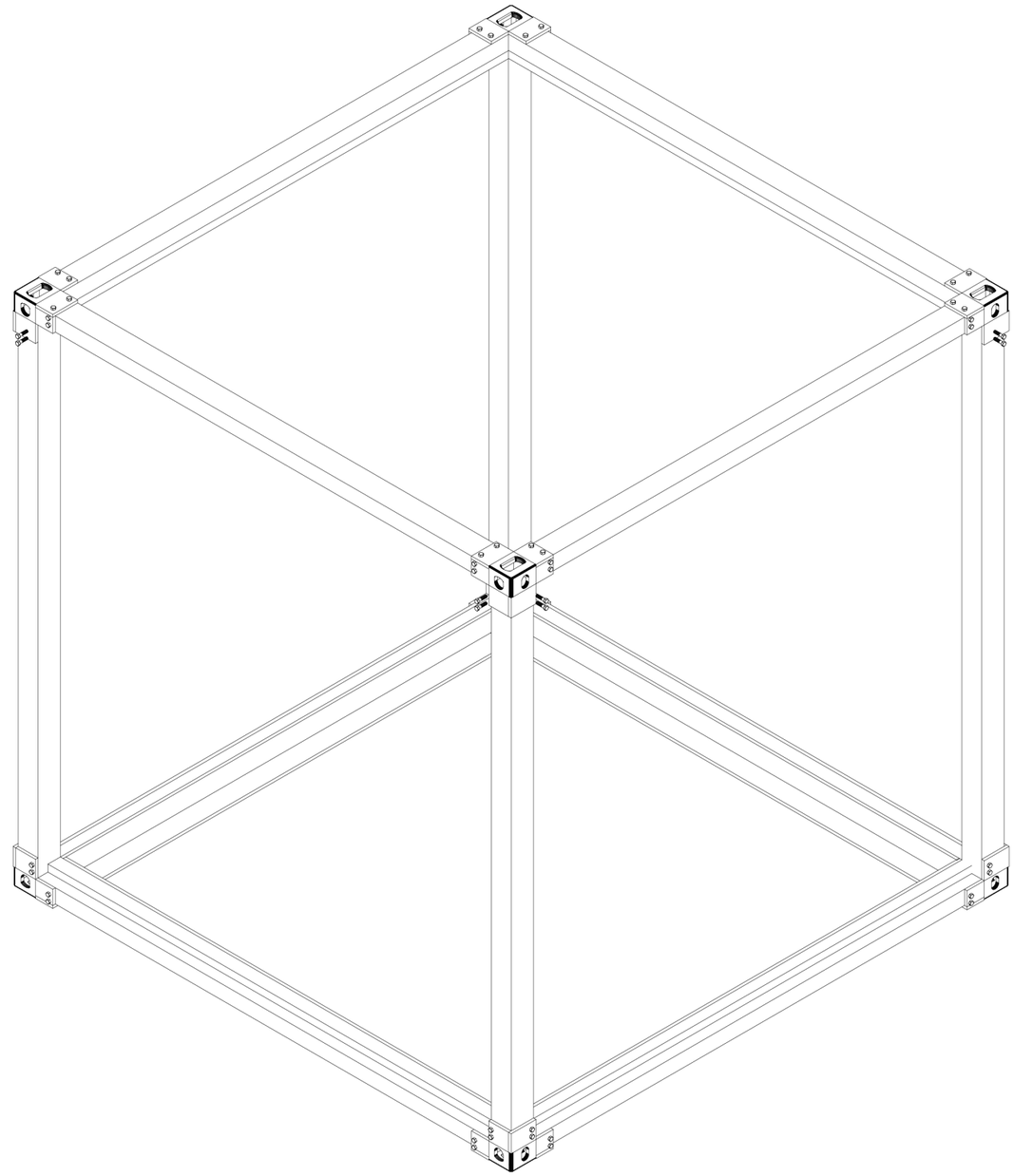
For this step you will need: 4× container corner casting, 4× Beam A, 16× A-bolts



Step 8

Attach the completed top frame to the 4 upright Beam B pieces using the corner castings. Secure

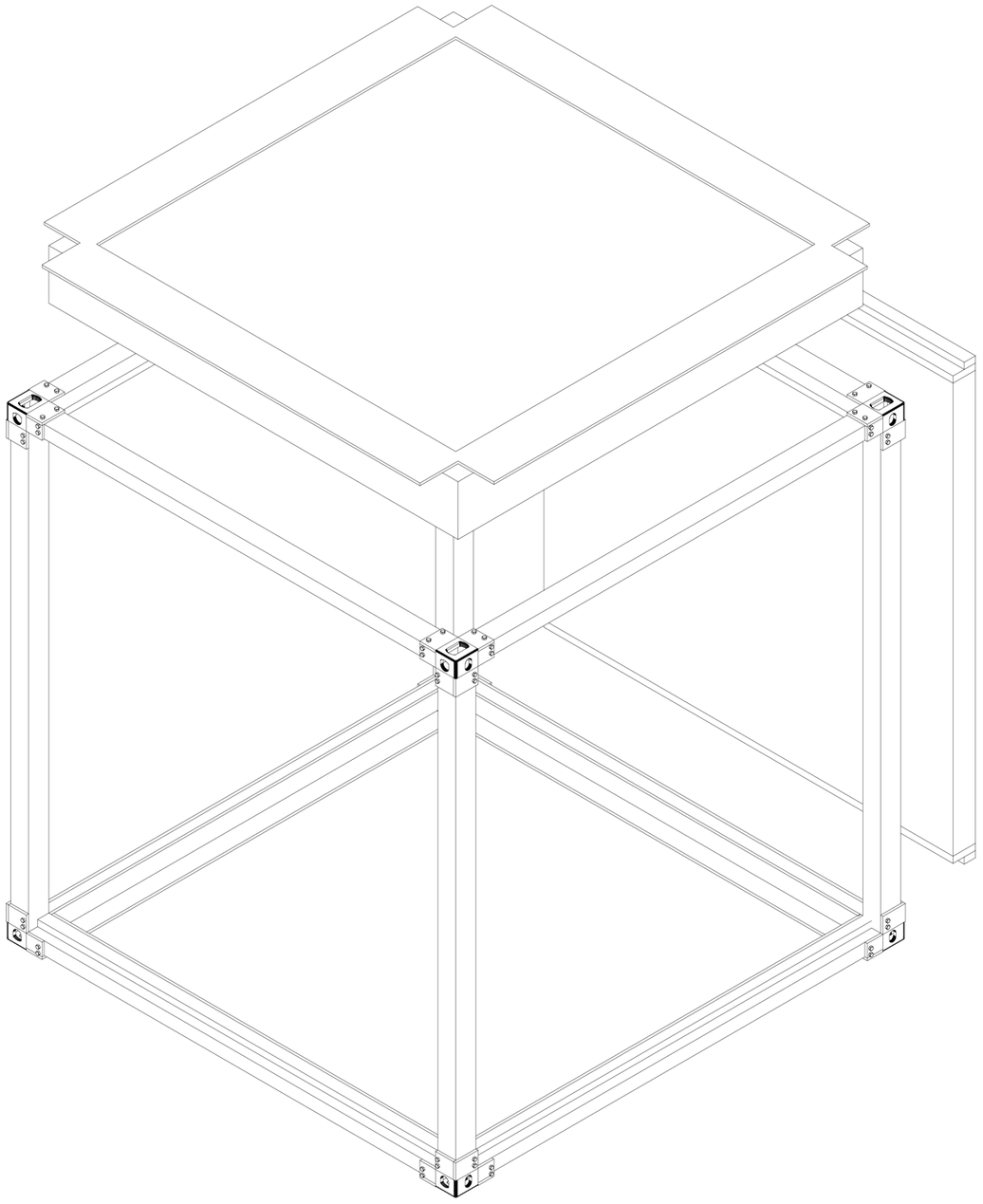
For this step you will need: 4× A-bolts per corner, 16× A-bolts total



Step 9

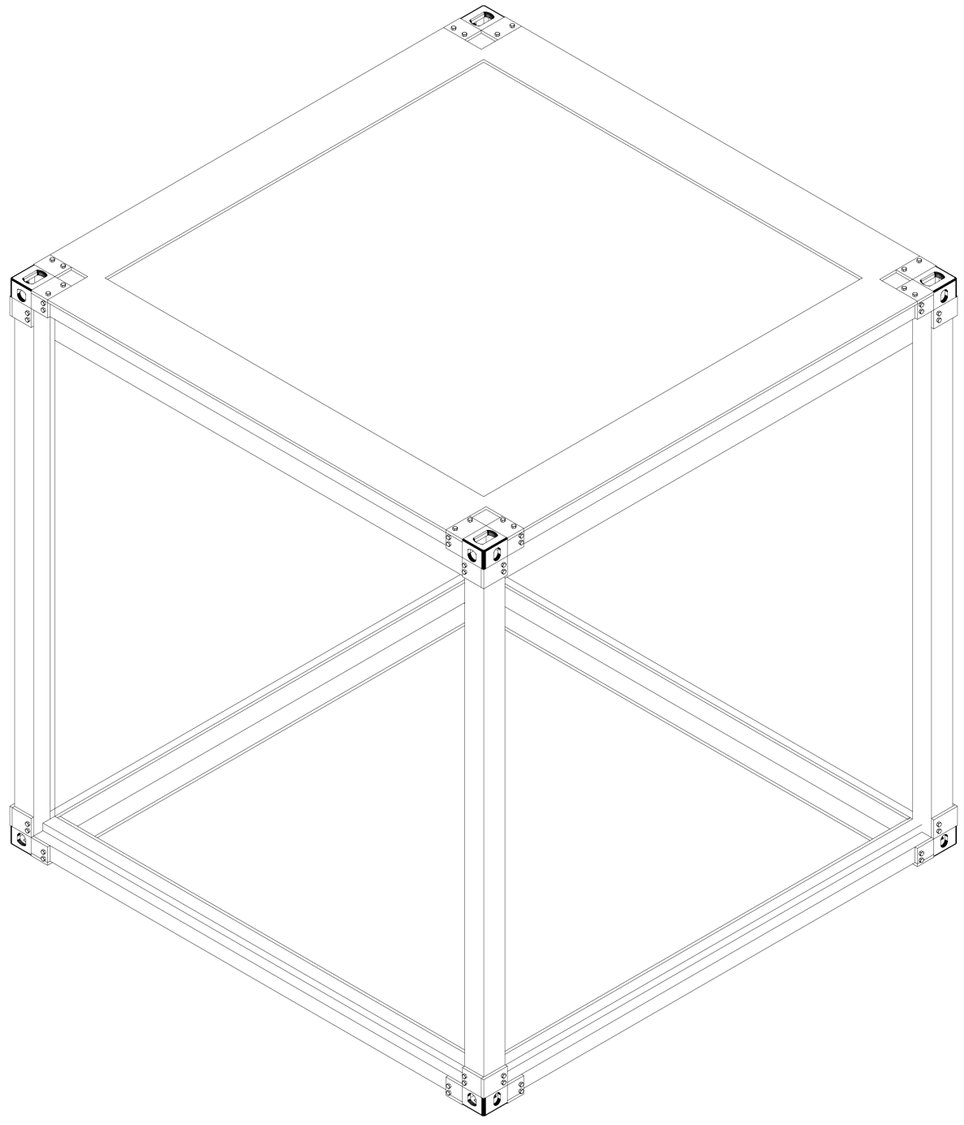
Using a crane, lower the floor panel into the floor support system. Then slide the 4 chosen wall panels into position. Finally, place the ceiling panel on top.

For this step you will need: 1× floor panel, 4× wall panels of your choice, 1× ceiling panel, 1× crane



Step 10

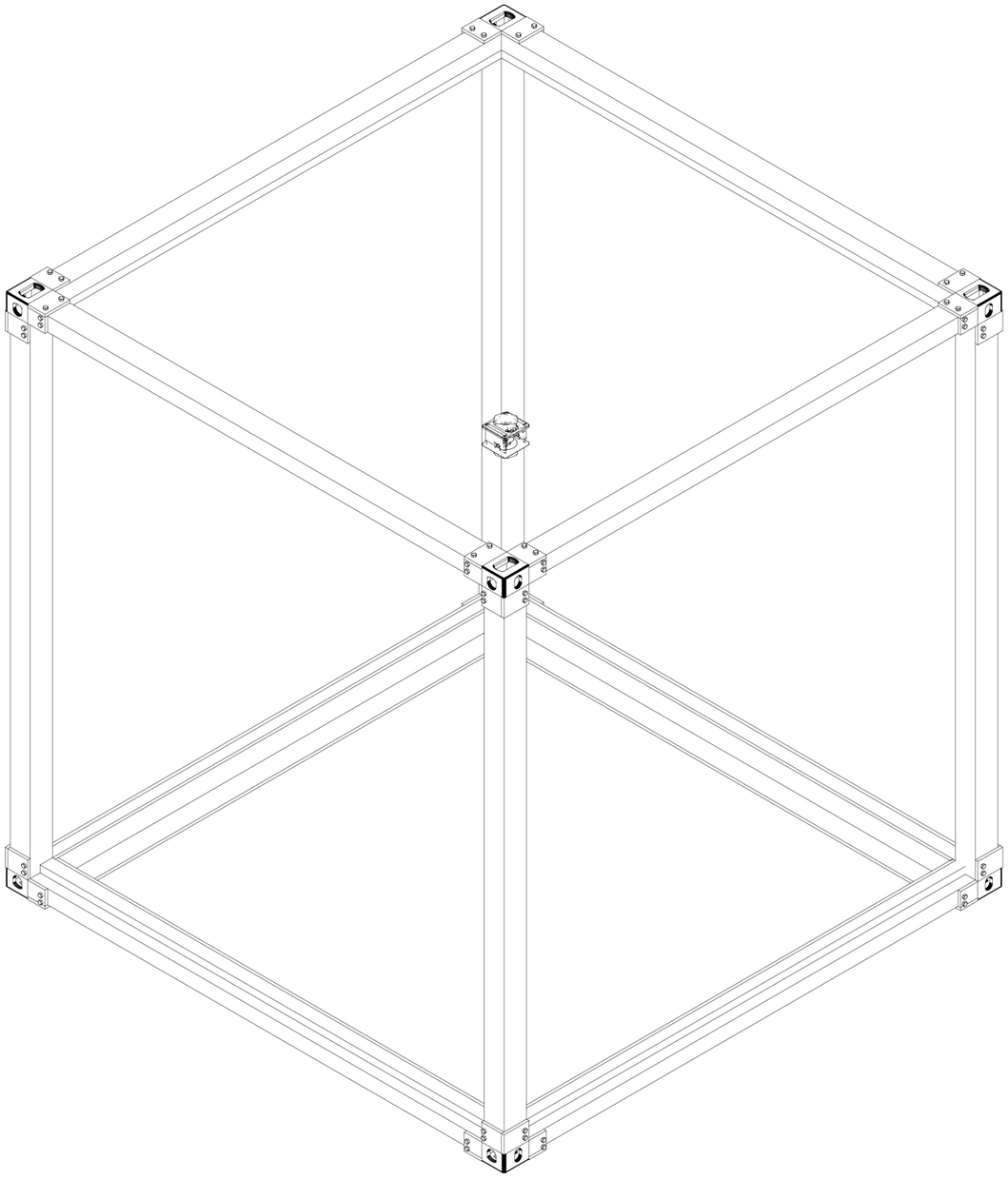
The module is now complete. Before continuing to steps 11–14, repeat steps 1–9 to assemble a second module.



Step 11

Place 4 automatic twistlocks onto the 4 top corner castings of the lower module.

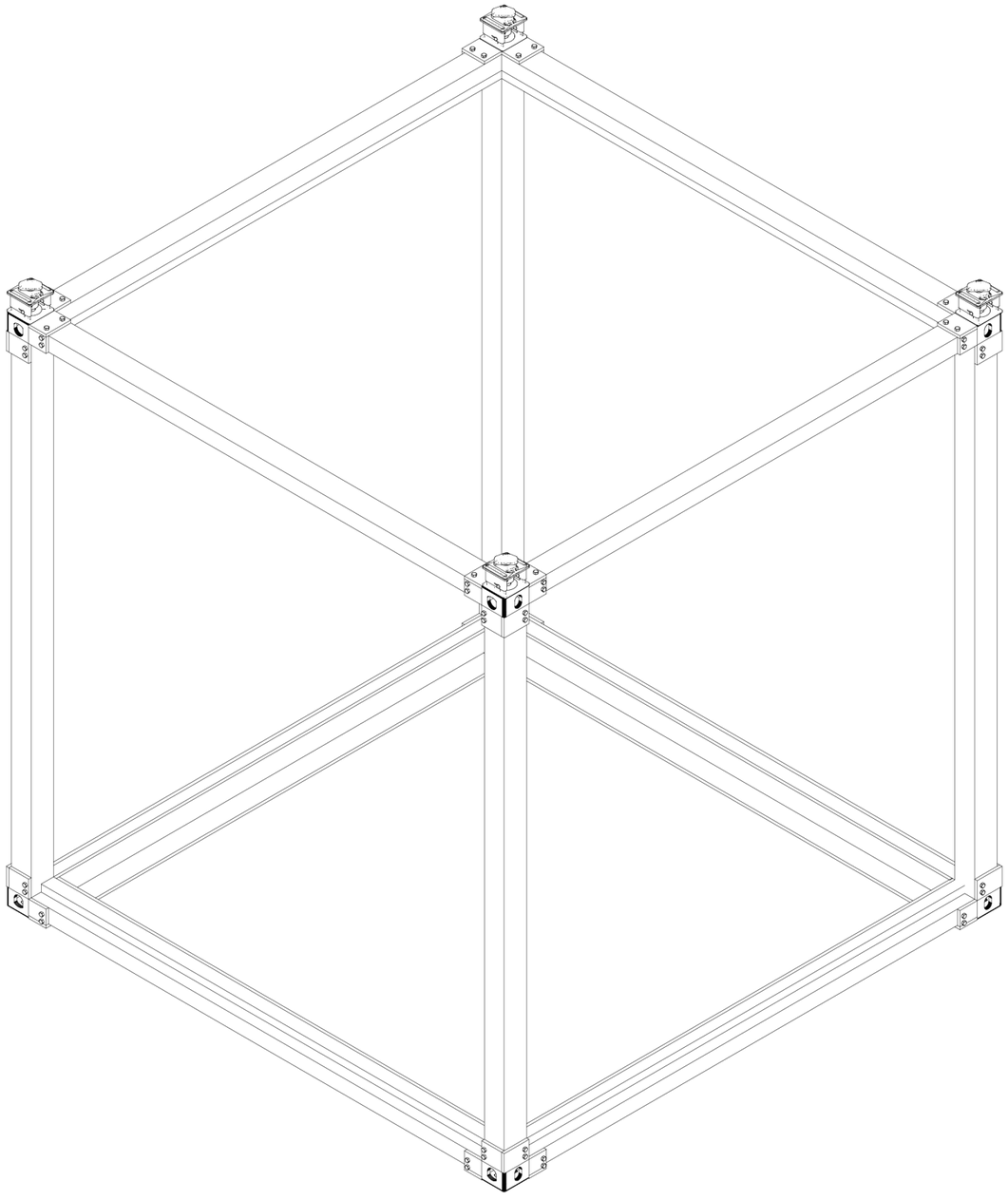
For this step you will need: 4× automatic twistlock



Step 12

Secure a twistlock onto each of the 4 top corners until locked.

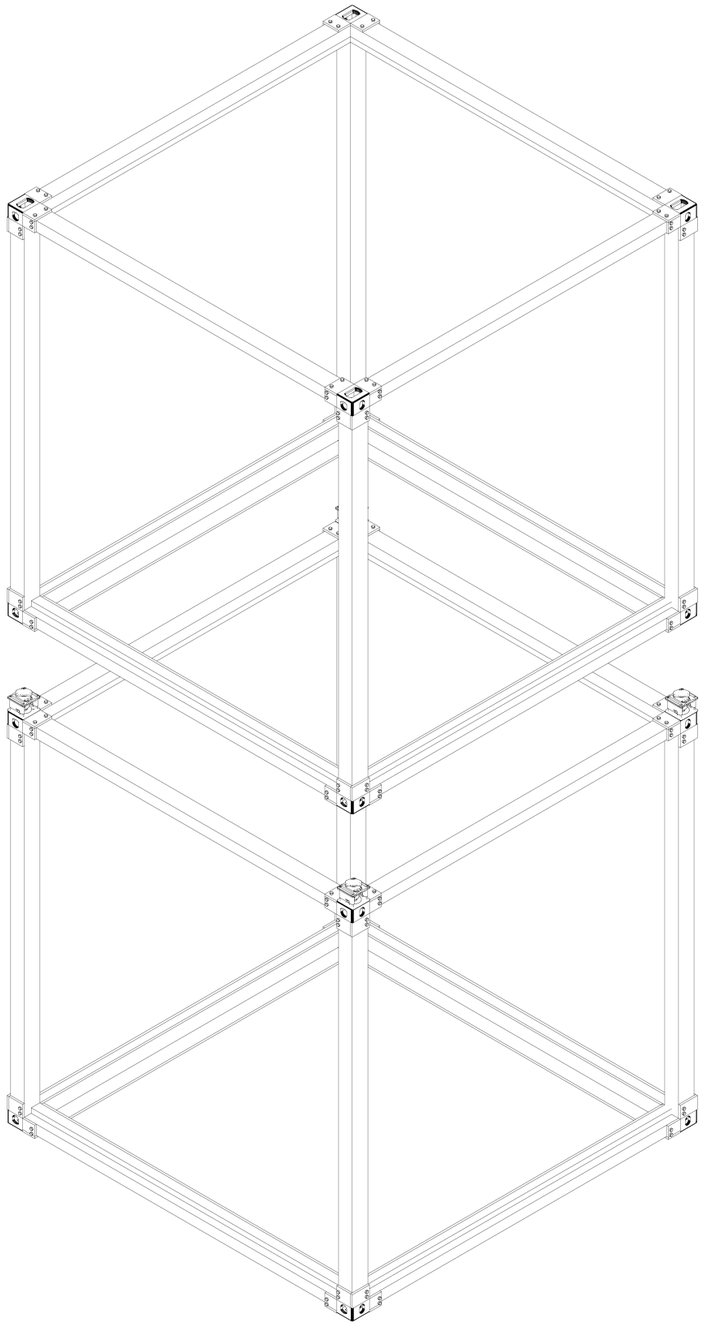
For this step you will need: the 4× twistlocks from step 11



Step 13

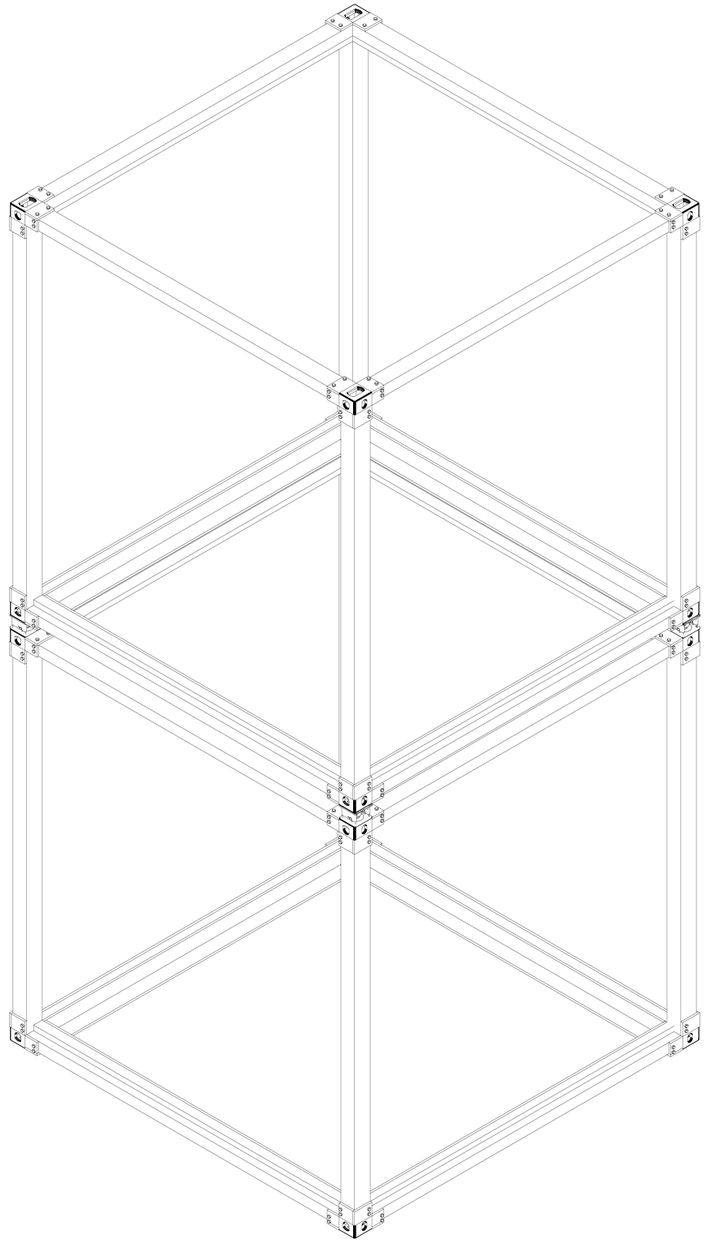
Using a crane, lift the second module and carefully lower it onto the first. The twistlocks will automatically lock both modules together.

For this step you will need: 1× crane, completed second module



Step 14

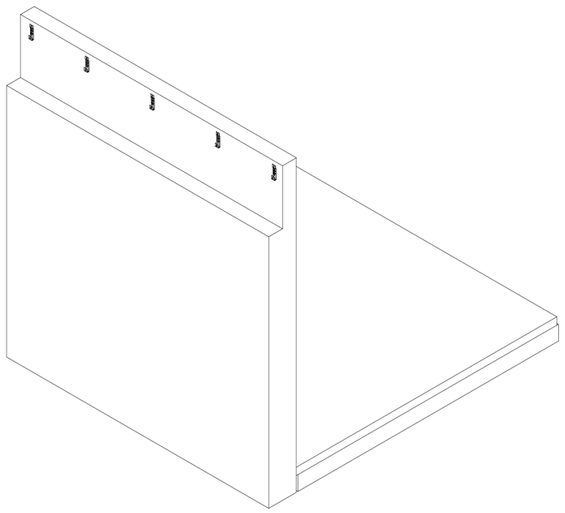
The 2 modules are now connected



Step 1

Take floor panel A and wall panel A, slide them together. Position this combined piece in a chosen corner between the columns.

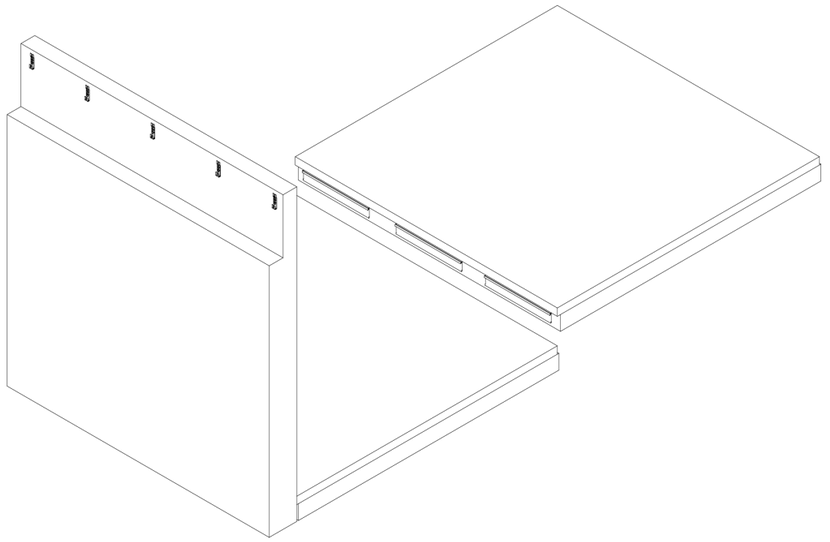
For this step you will need: 1× floor panel A, 1× wall panel A



Step 2

Take floor panel B and slowly slide it into floor panel A.

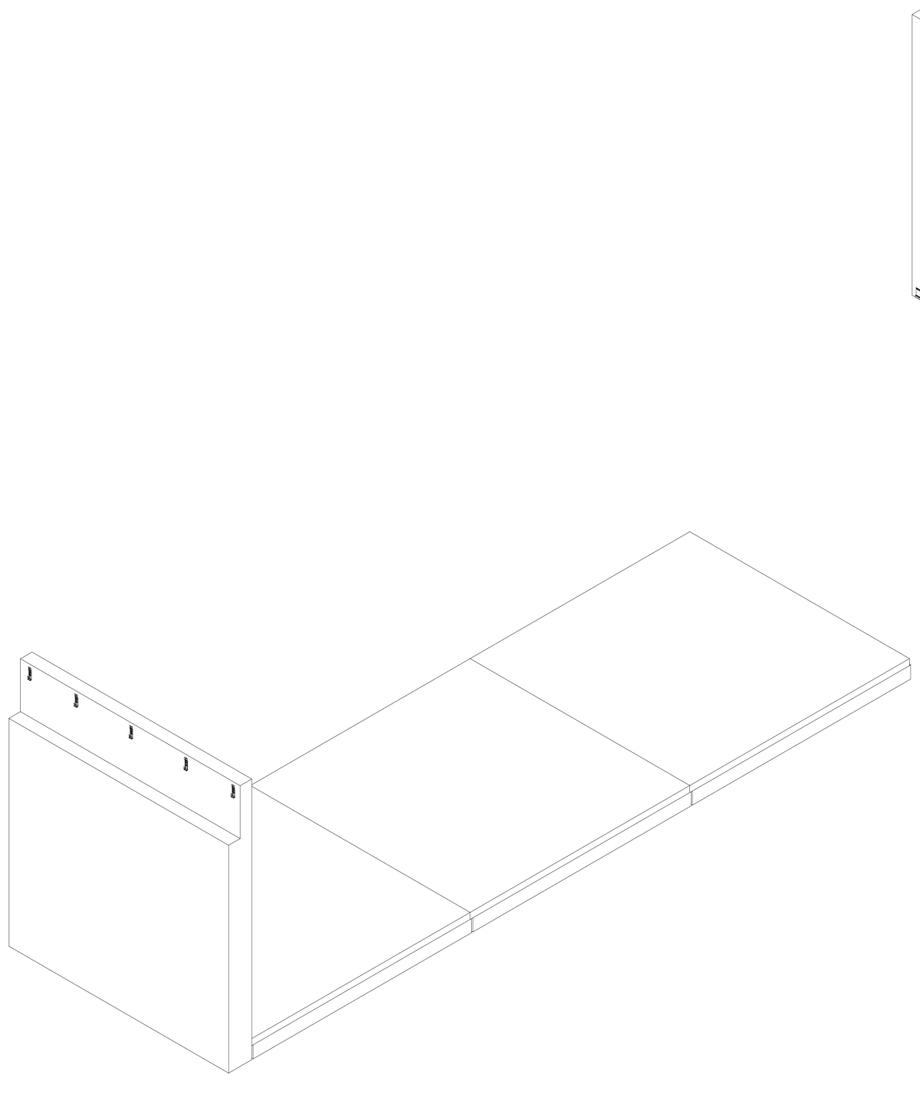
For this step you will need: 1× floor panel B



Step 3

Repeat step 2 with another floor panel B. At the same time, prepare wall panel A for the next step.

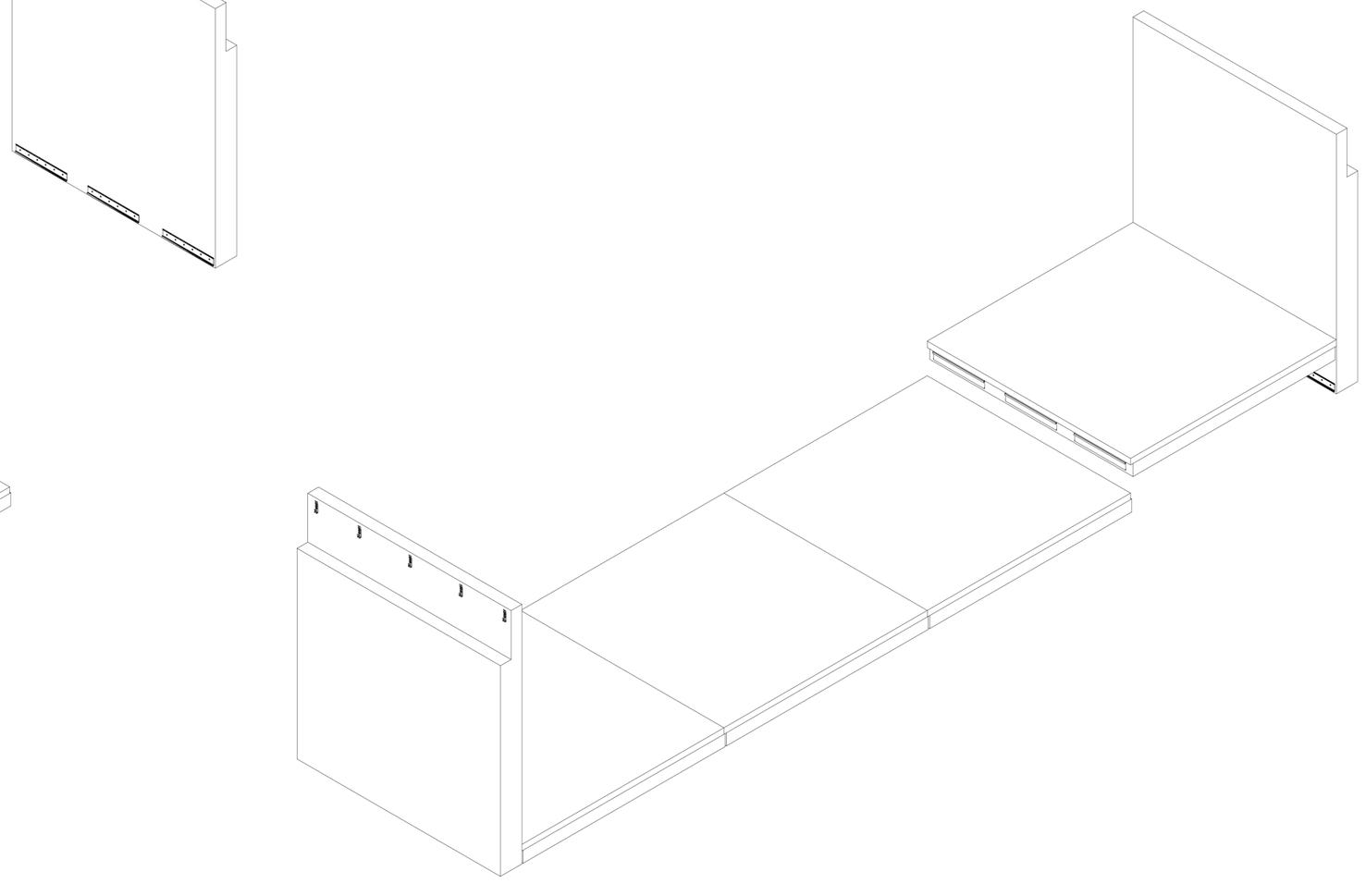
For this step you will need: 1× floor panel B, 1× wall panel A (prepared)



Step 4

Place floor panel C between floor panel B and wall panel A to close the floor row.

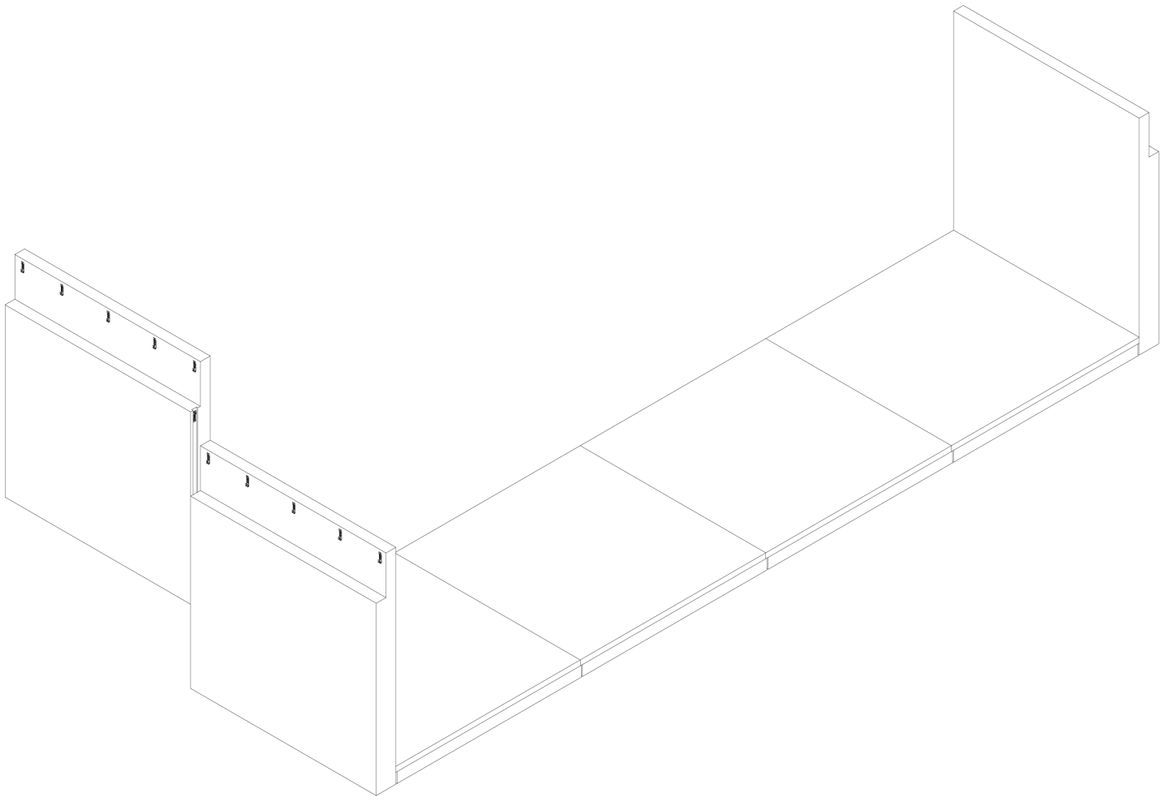
For this step you will need: 1× floor panel C



Step 5

Take wall panel B and slide it into wall panel A.

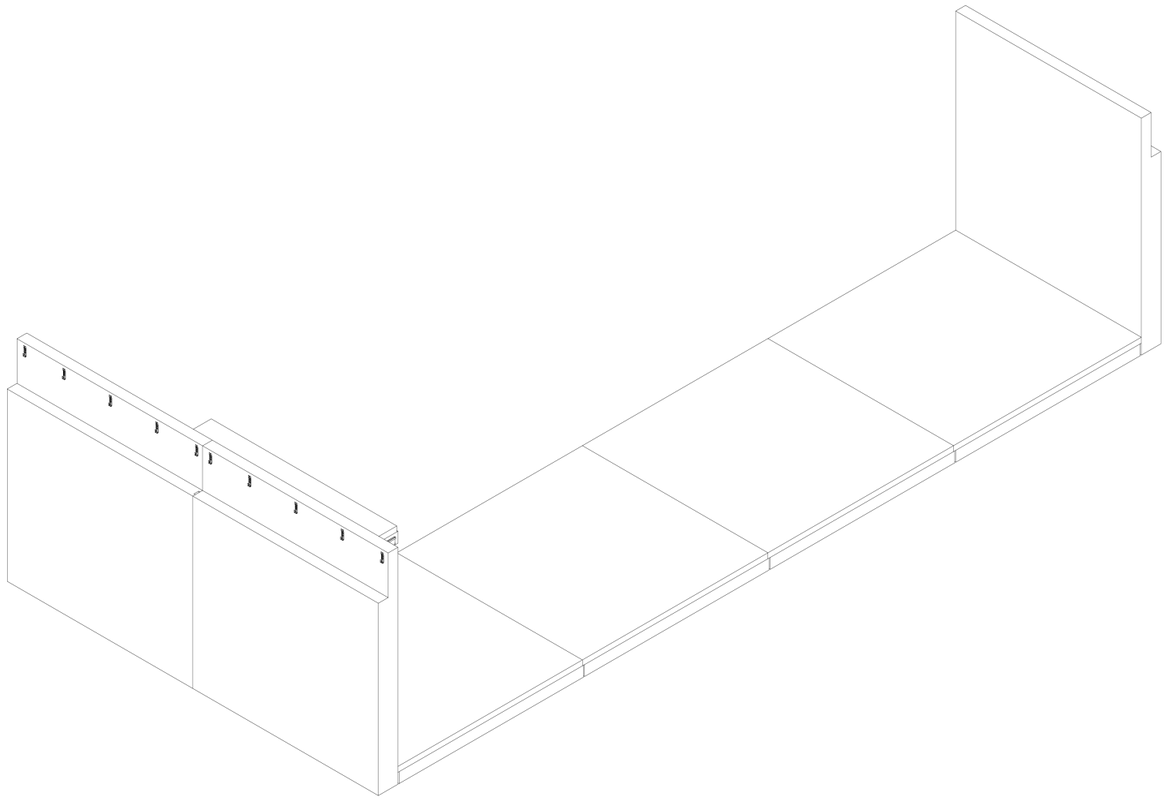
For this step you will need: 1× wall panel B



Step 6

Take floor panel A and slide it onto the newly placed wall panel B.

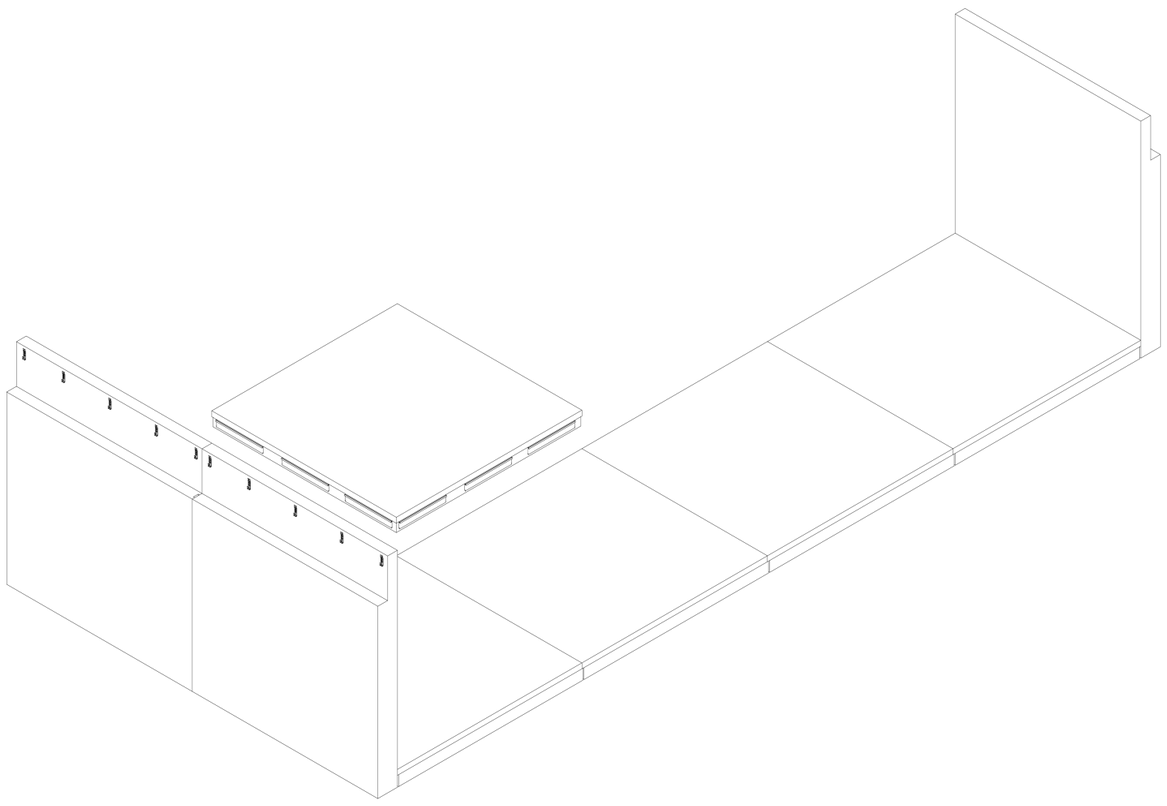
For this step you will need: 1× floor panel A



Step 7

Take floor panel B and slide it onto the newly placed floor panel A.

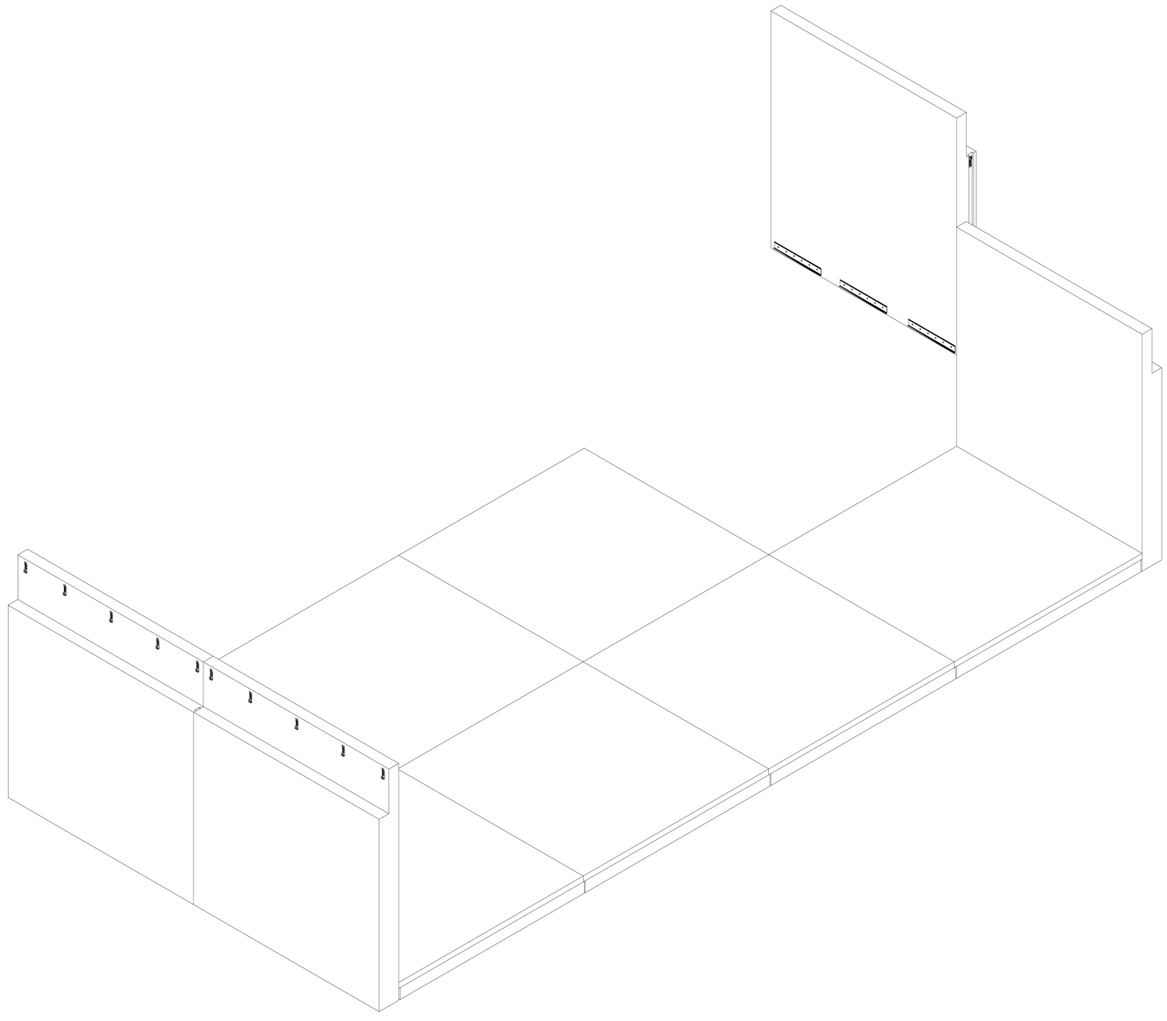
For this step you will need: 1× floor panel B



Step 8

Repeat step 7 with another floor panel B. At the same time, prepare wall panel B for the next step.

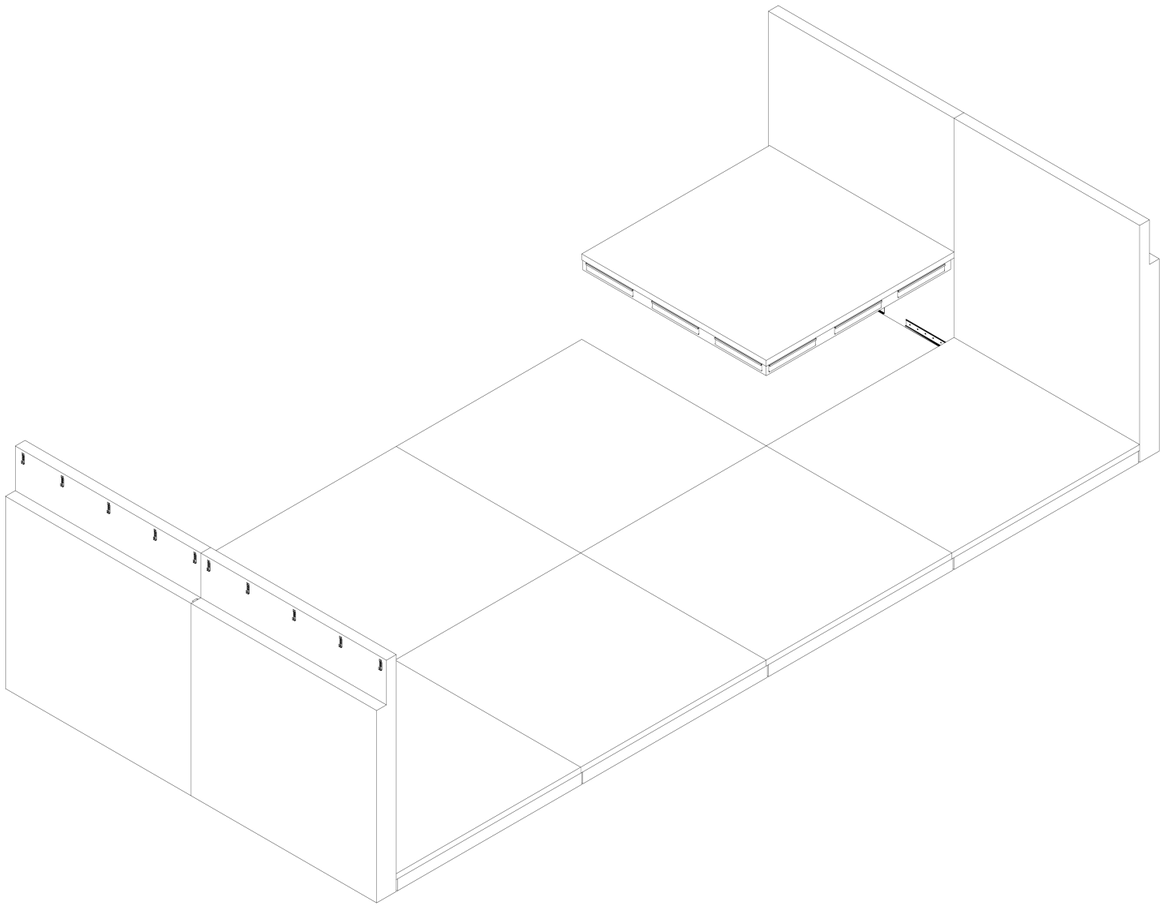
For this step you will need: 1× floor panel B, 1× wall panel B (prepared)



Step 9

Place floor panel C between floor panel B and wall panel B to close the second floor row.

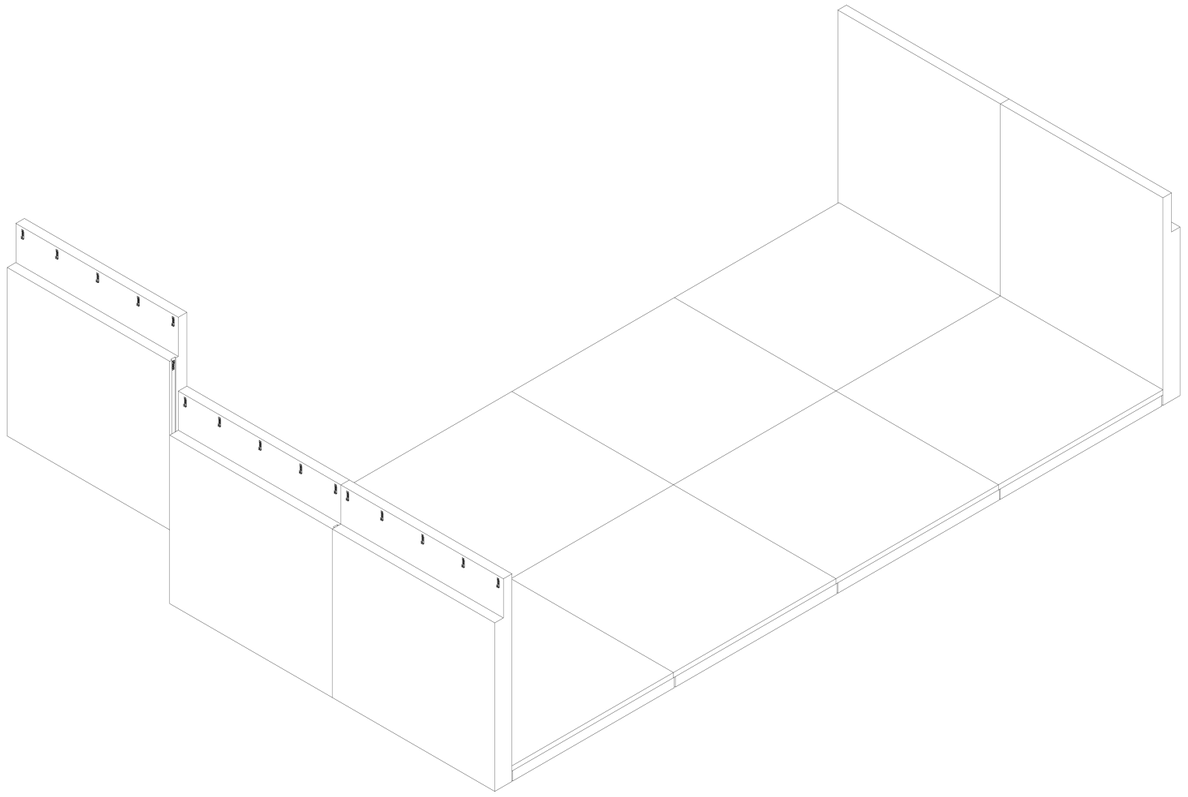
For this step you will need: 1× floor panel C



Step 10

Take wall panel C and slide it into wall panel B.

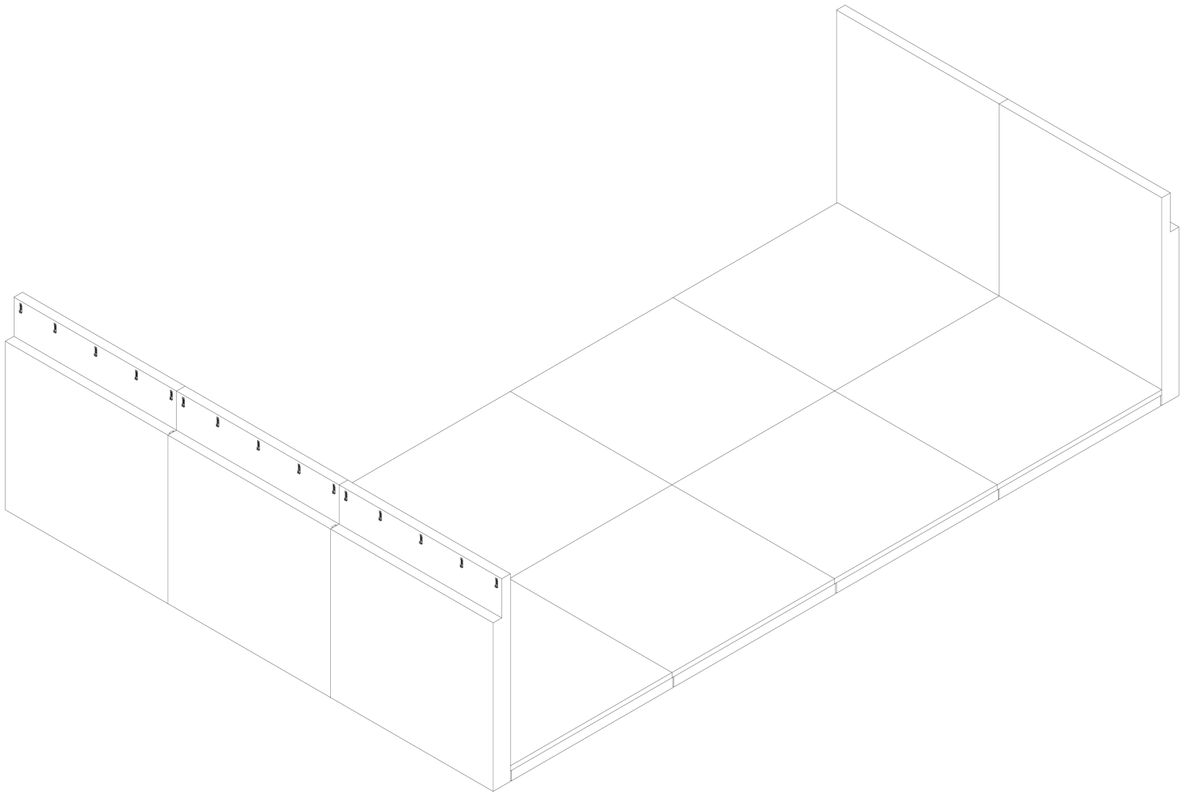
For this step you will need: 1× wall panel C



Step 11

Take wall panel A and place it at 90° to wall panel C in the next corner.

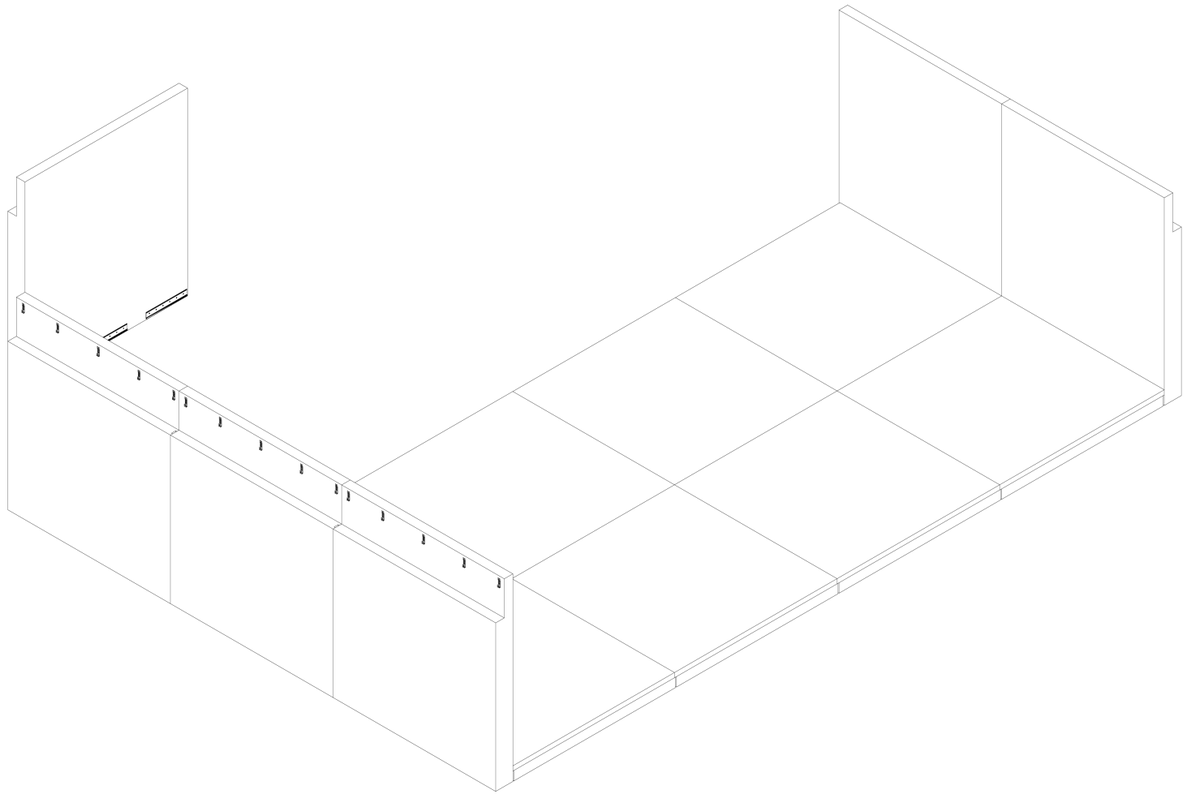
For this step you will need: 1× wall panel A



Step 12

Place an additional wall panel A between the two previously placed wall panels A and C.

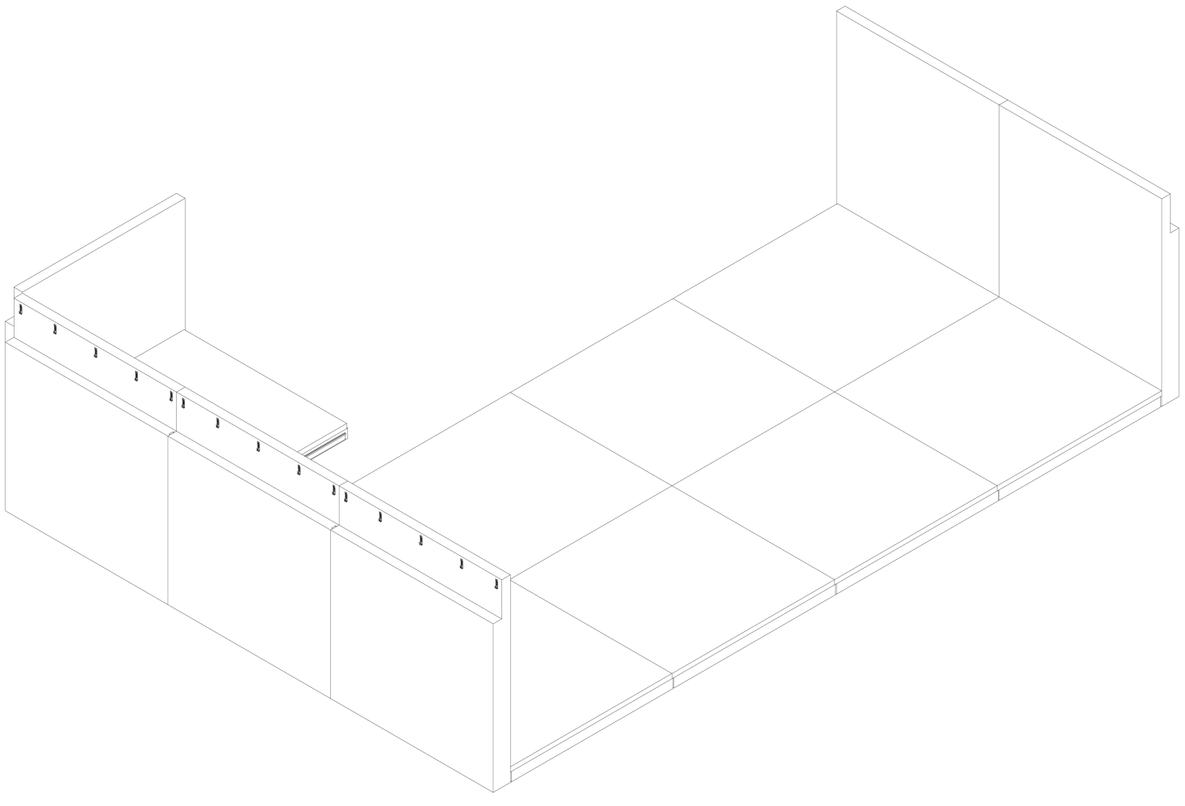
For this step you will need: 1× wall panel A



Step 13

Take floor panel A and slide it into wall panel A and C.

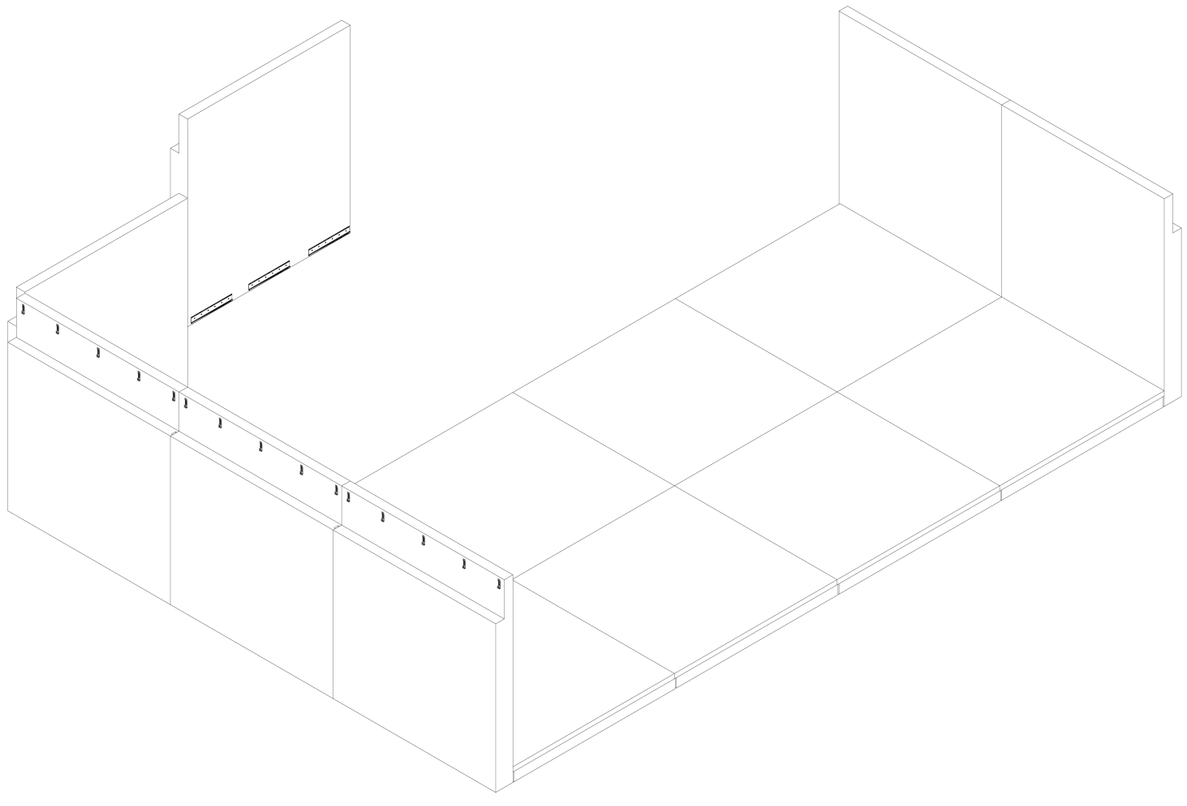
For this step you will need: 1× floor panel A



Step 14

Take wall panel B and slide it into wall panel A.

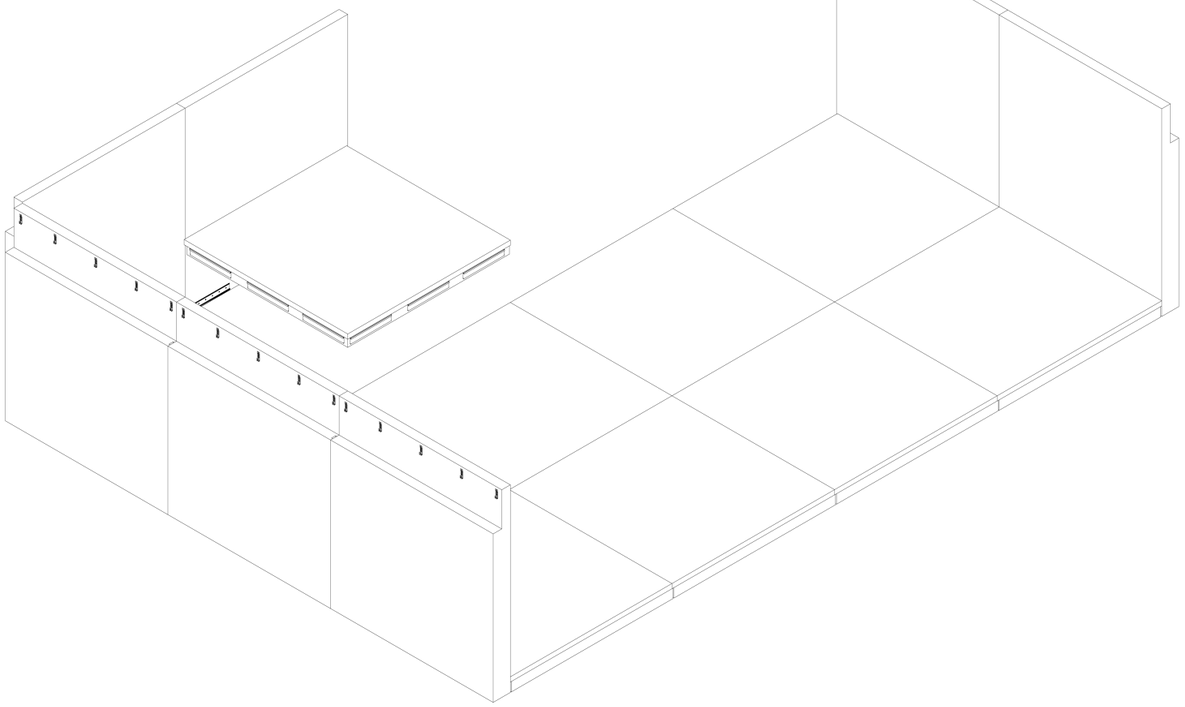
For this step you will need: 1× wall panel B



Step 15

Take floor panel B and slide it onto the newly placed wall panel B.

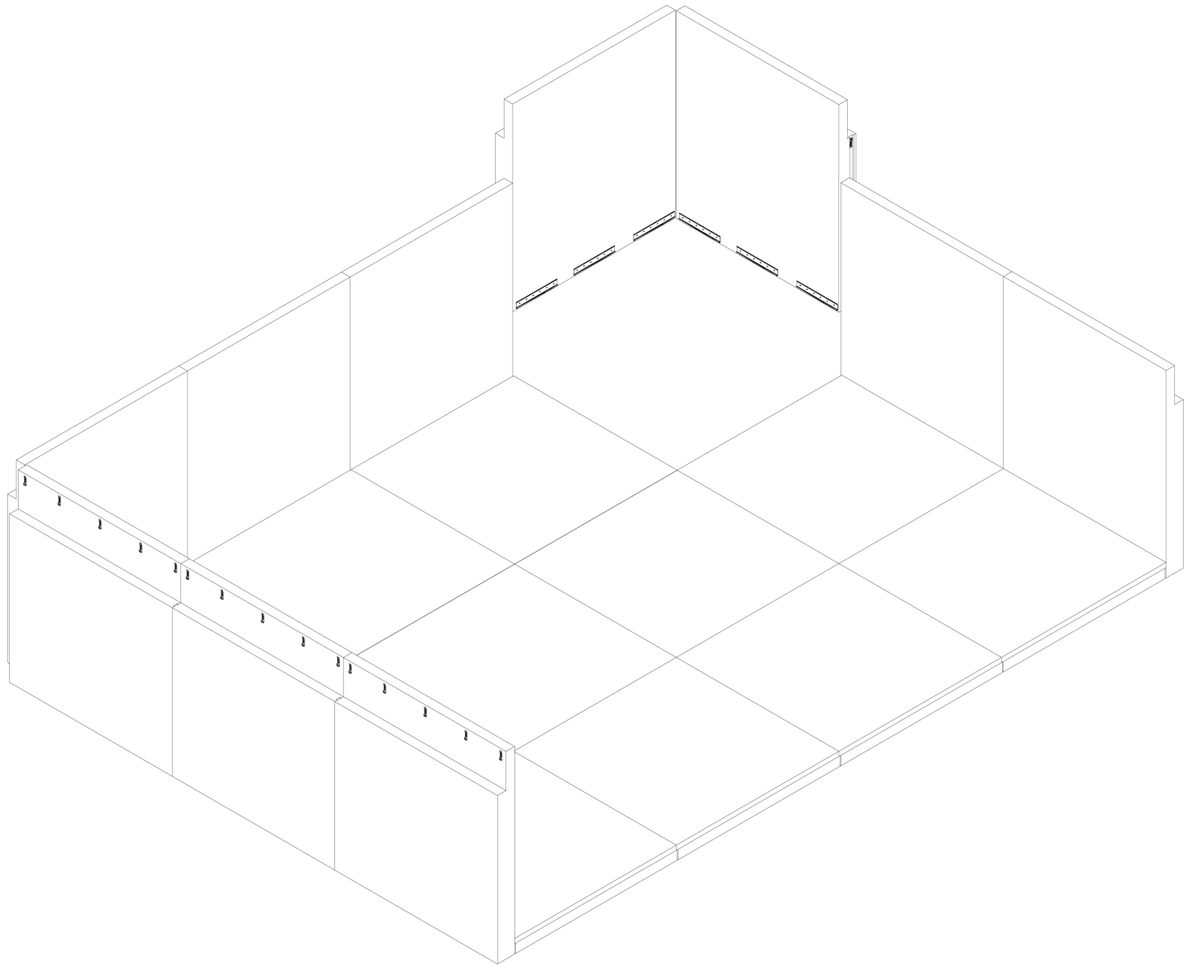
For this step you will need: 1× floor panel B



Step 16

Repeat this process and place wall panels C and C together in the next corner.

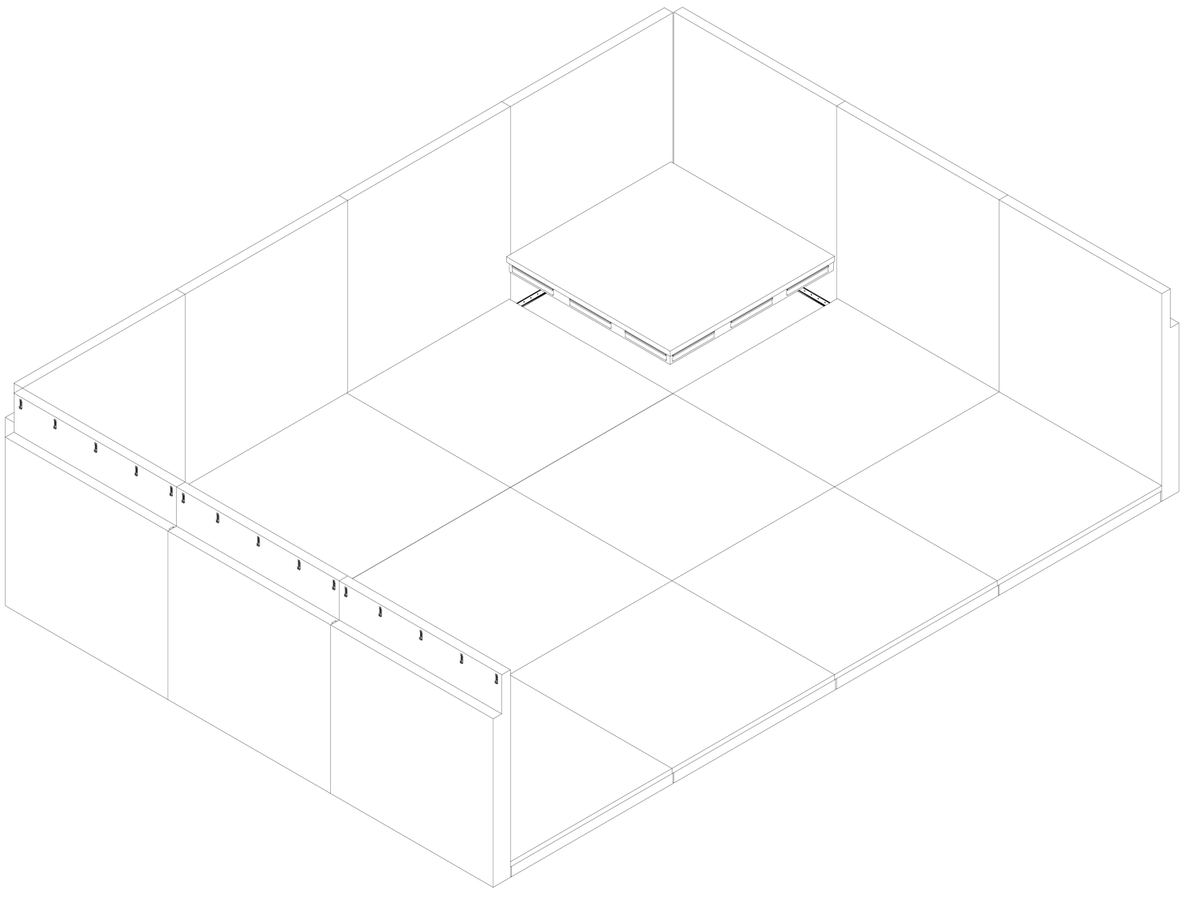
For this step you will need: 2× wall panel C



Step 17

Place floor panel C into the corner formed by the two wall panels C.

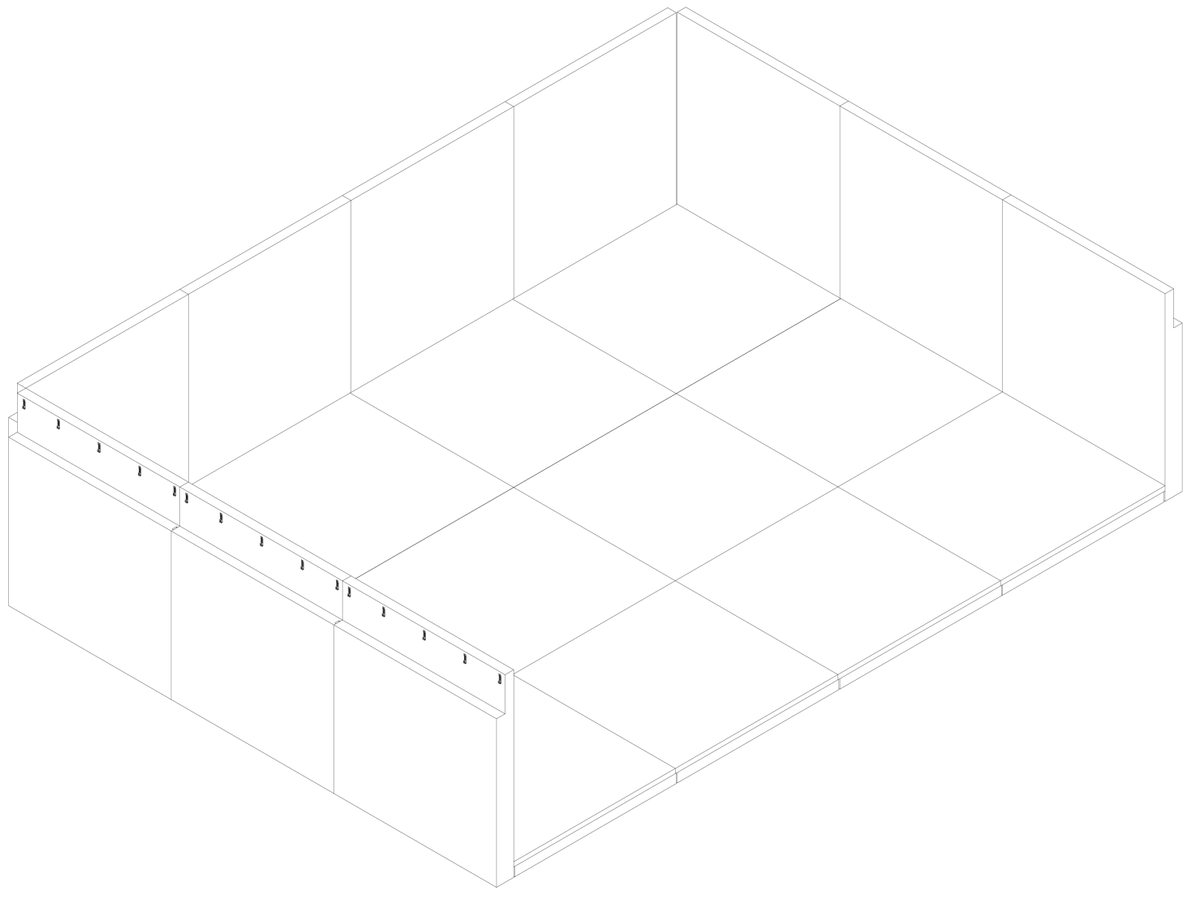
For this step you will need: 1× floor panel C



Step 18

The base structure is now complete.

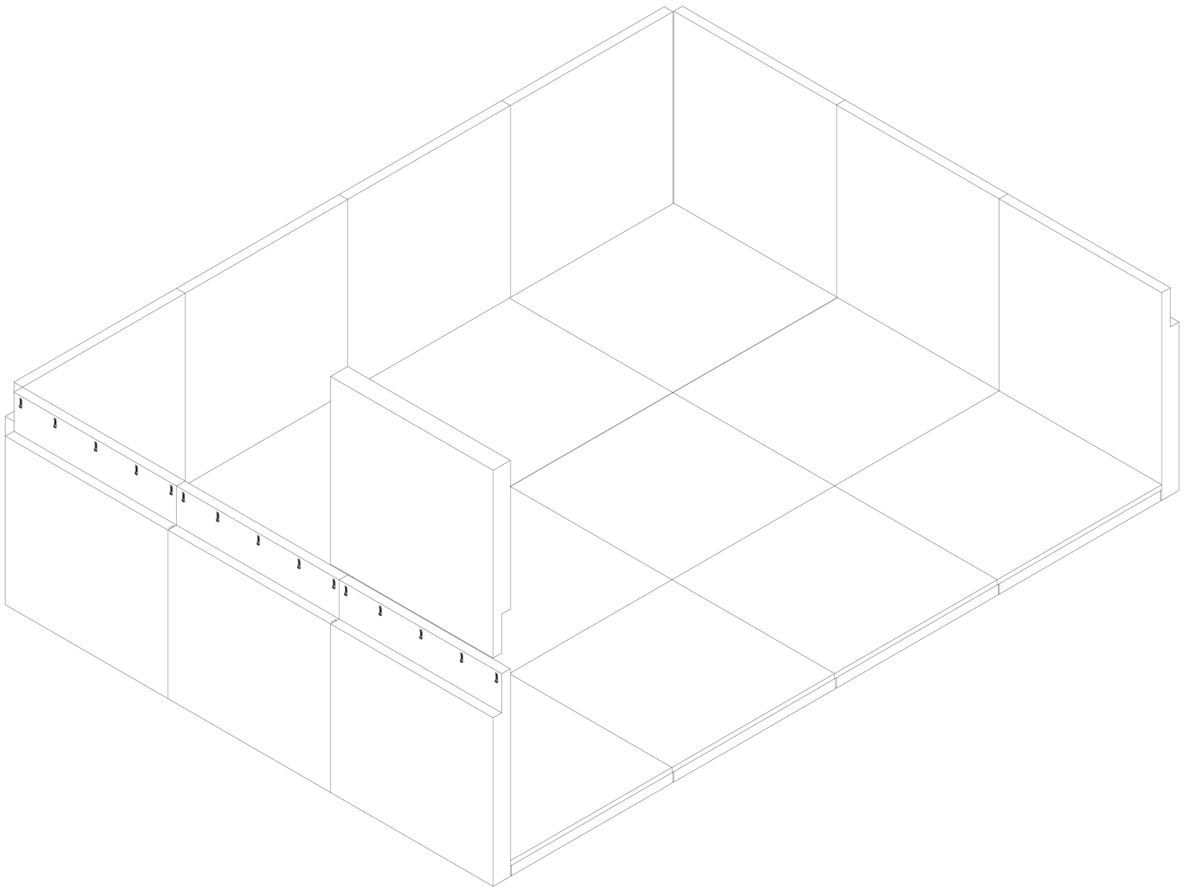
No additional parts needed — check all panels are fully seated before continuing.



Step 19

Take wall panel D and slide it onto the first placed wall panel A.

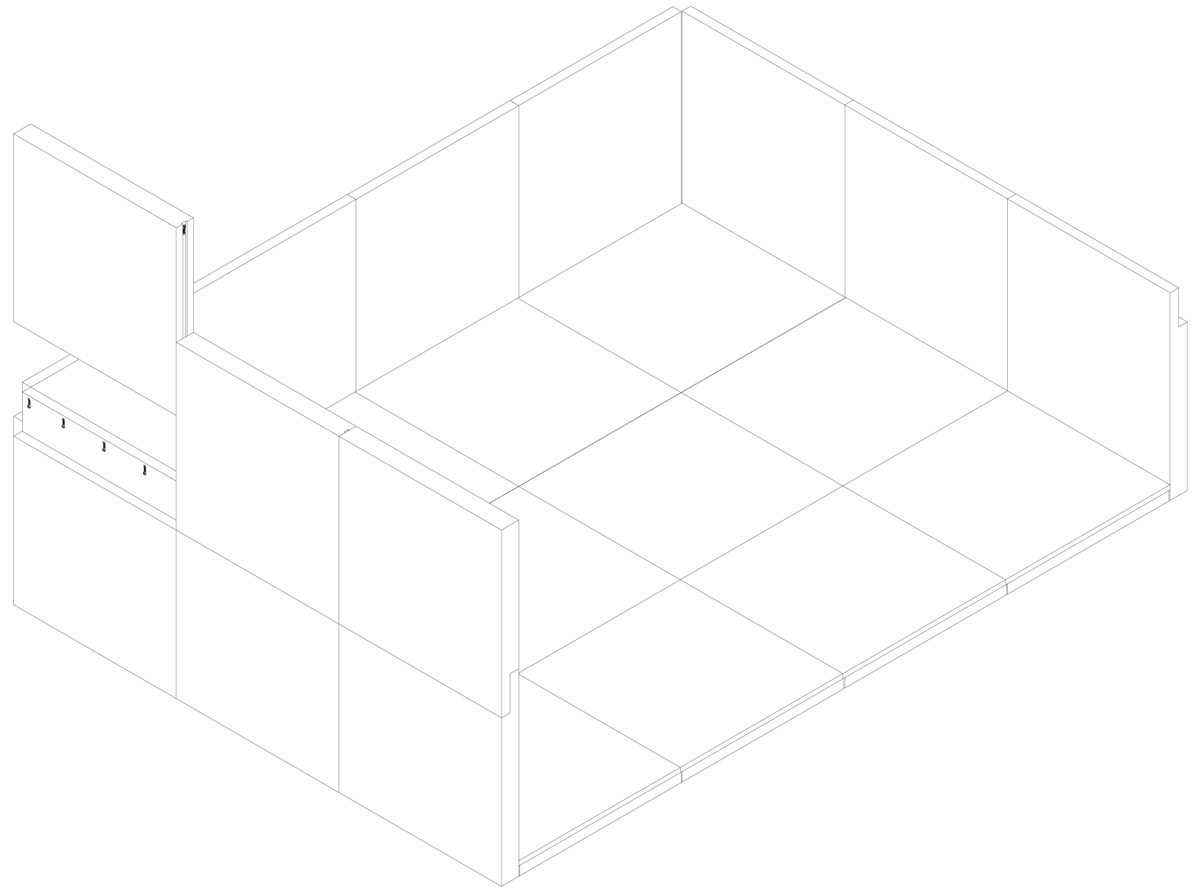
For this step you will need: 1× wall panel D



Step 20

Continue by sliding wall panel E and then wall panel F into each other in sequence.

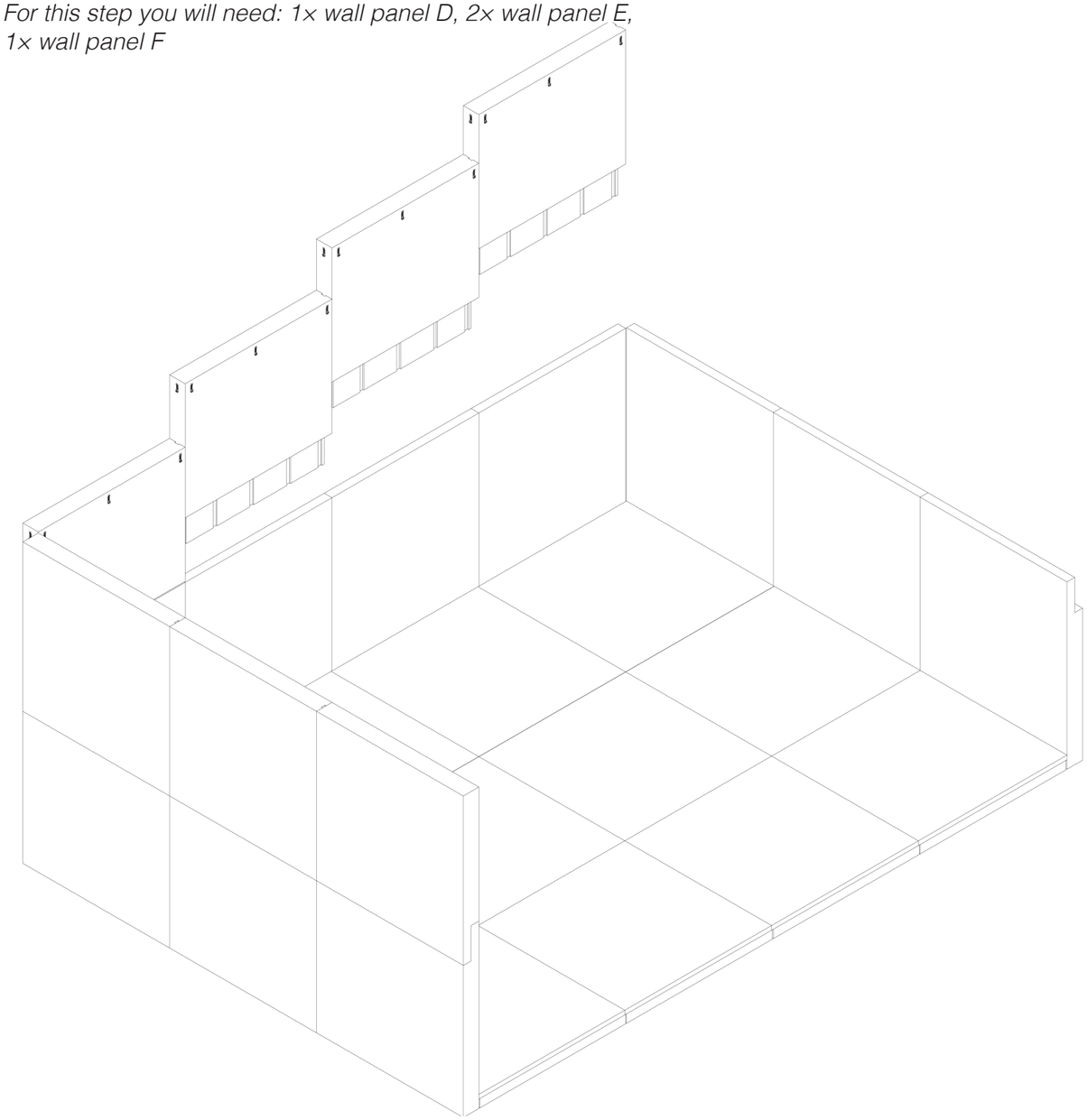
For this step you will need: 1× wall panel E, 1× wall panel F



Step 21

Repeat this process on the adjacent side, rotated 90°. Start with wall panel D, followed by 2× wall panel E, and finish with wall panel F in the corner.

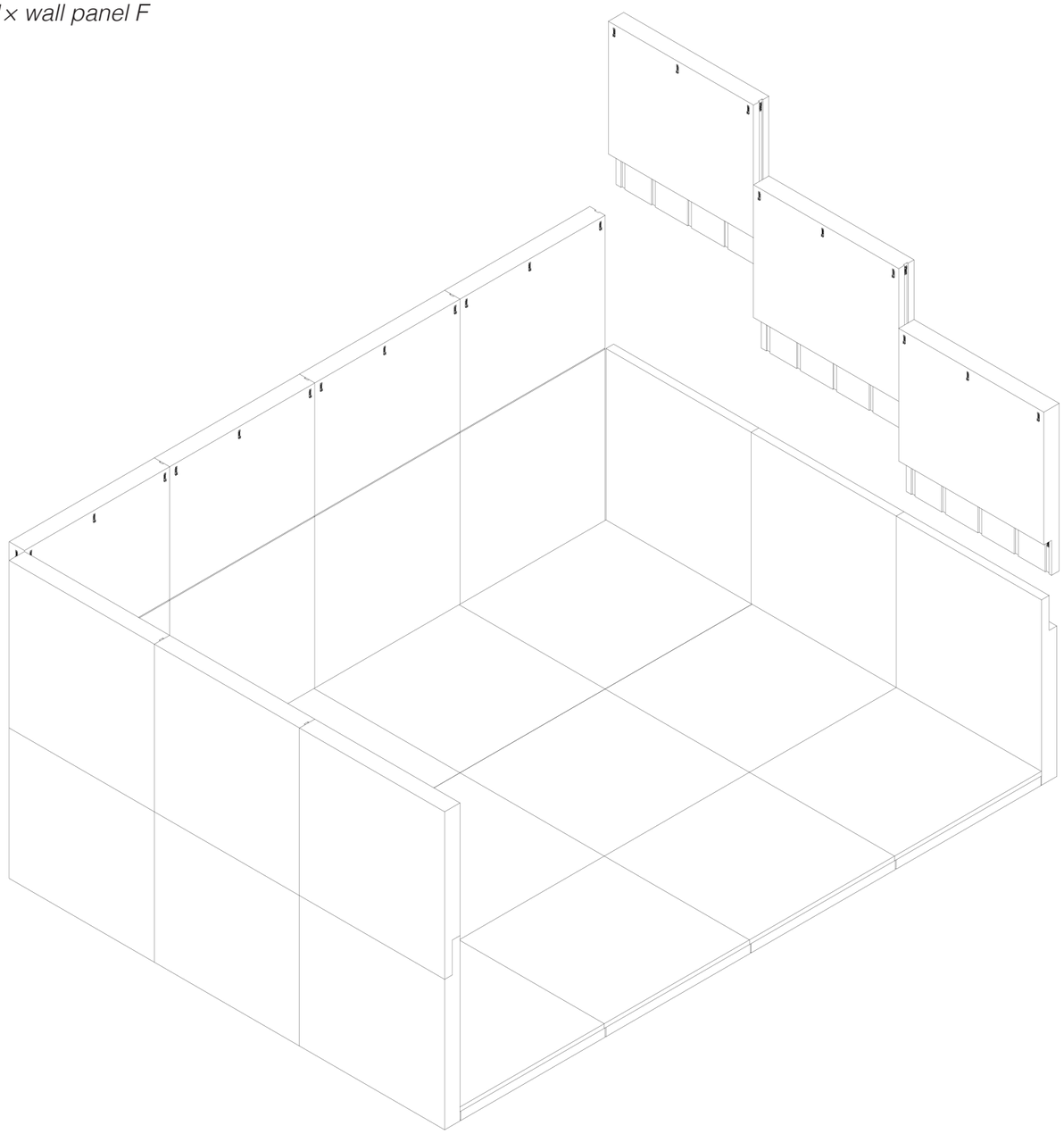
For this step you will need: 1× wall panel D, 2× wall panel E, 1× wall panel F



Step 22

Repeat step 20 on the opposite side.

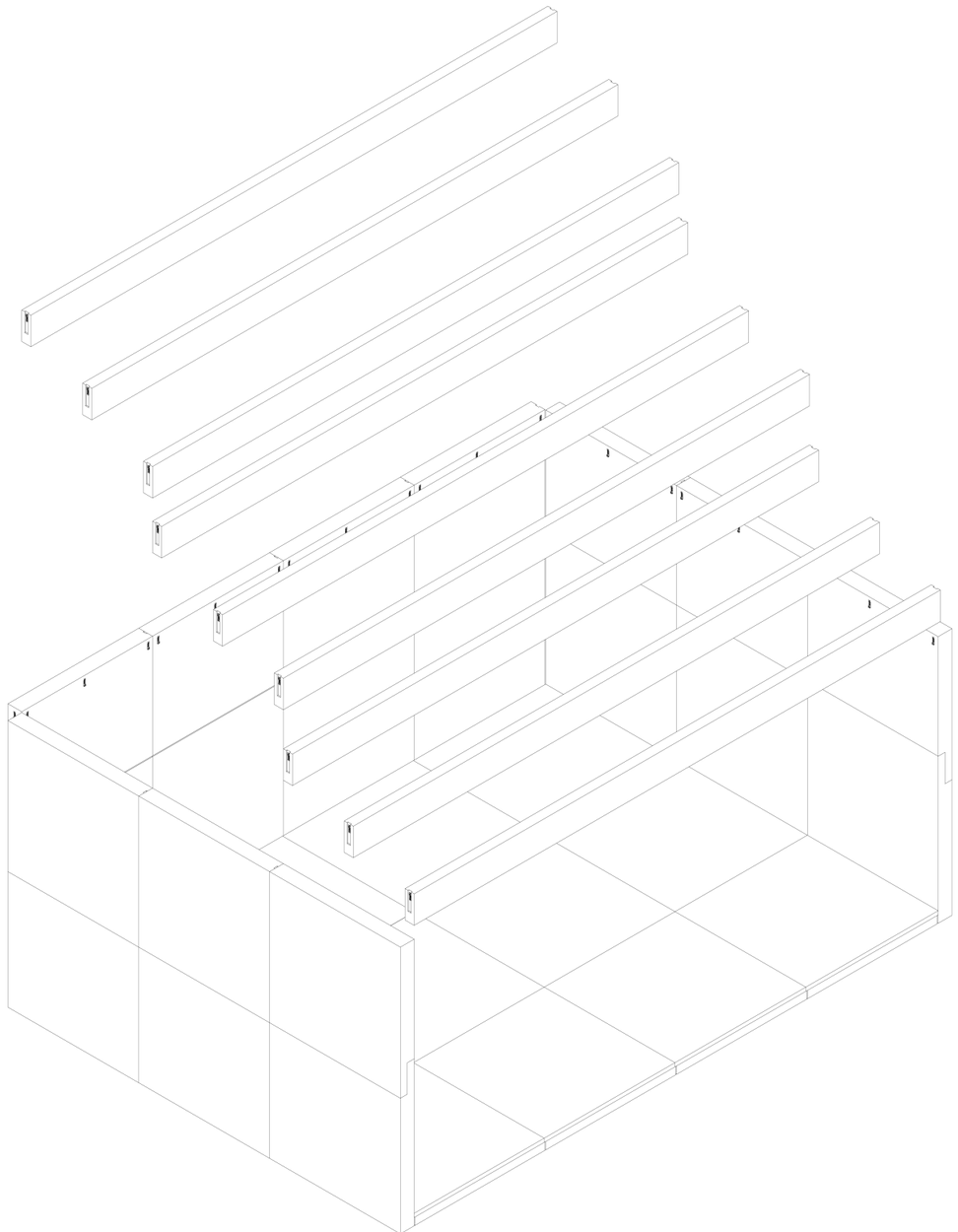
For this step you will need: 1× wall panel D, 2× wall panel E, 1× wall panel F



Step 23

Slide the 9 beams one by one onto wall panels D, E, and F to provide structural stability.

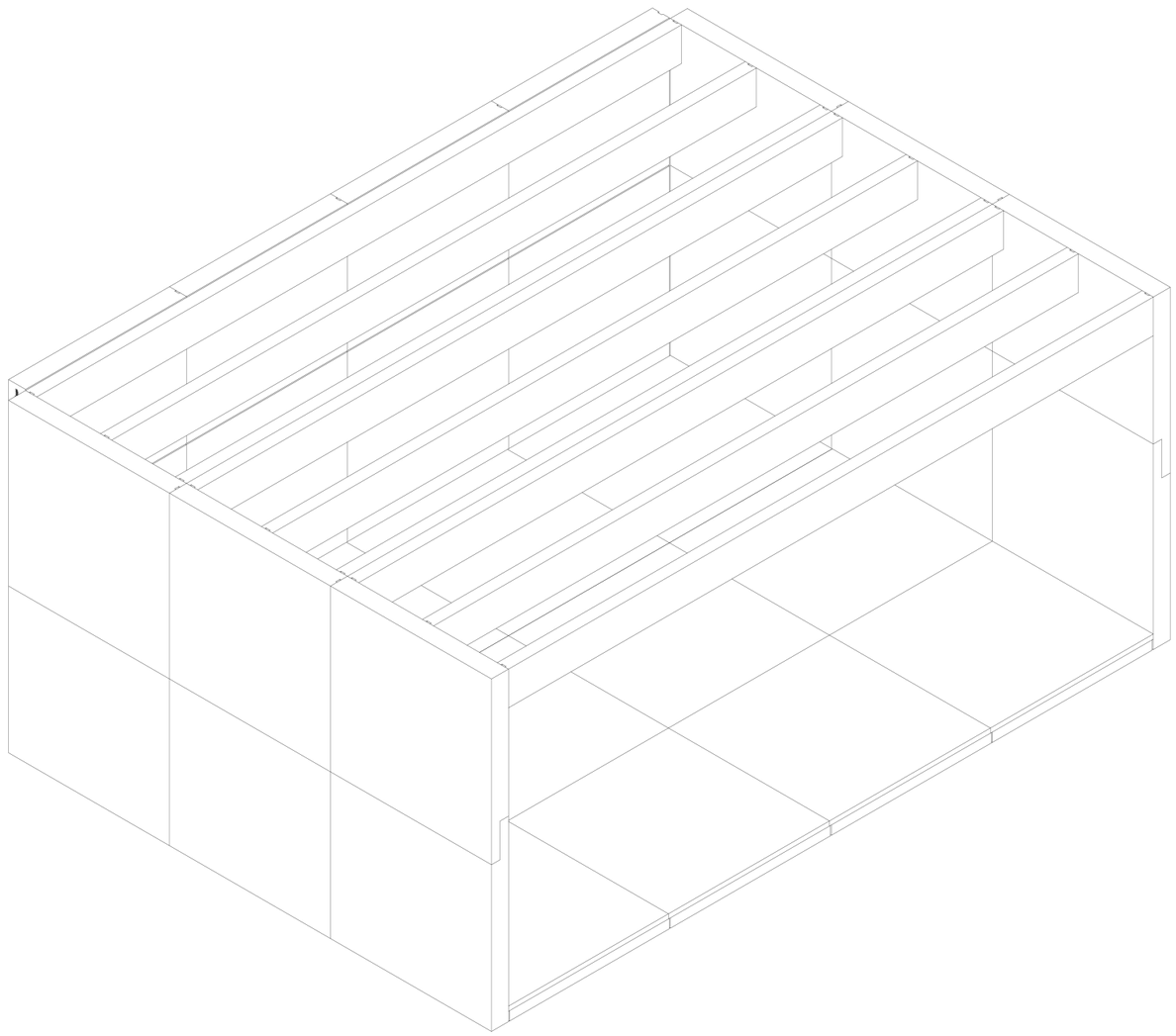
For this step you will need: 9× beam



Step 24

The structure is now stable and fully braced.

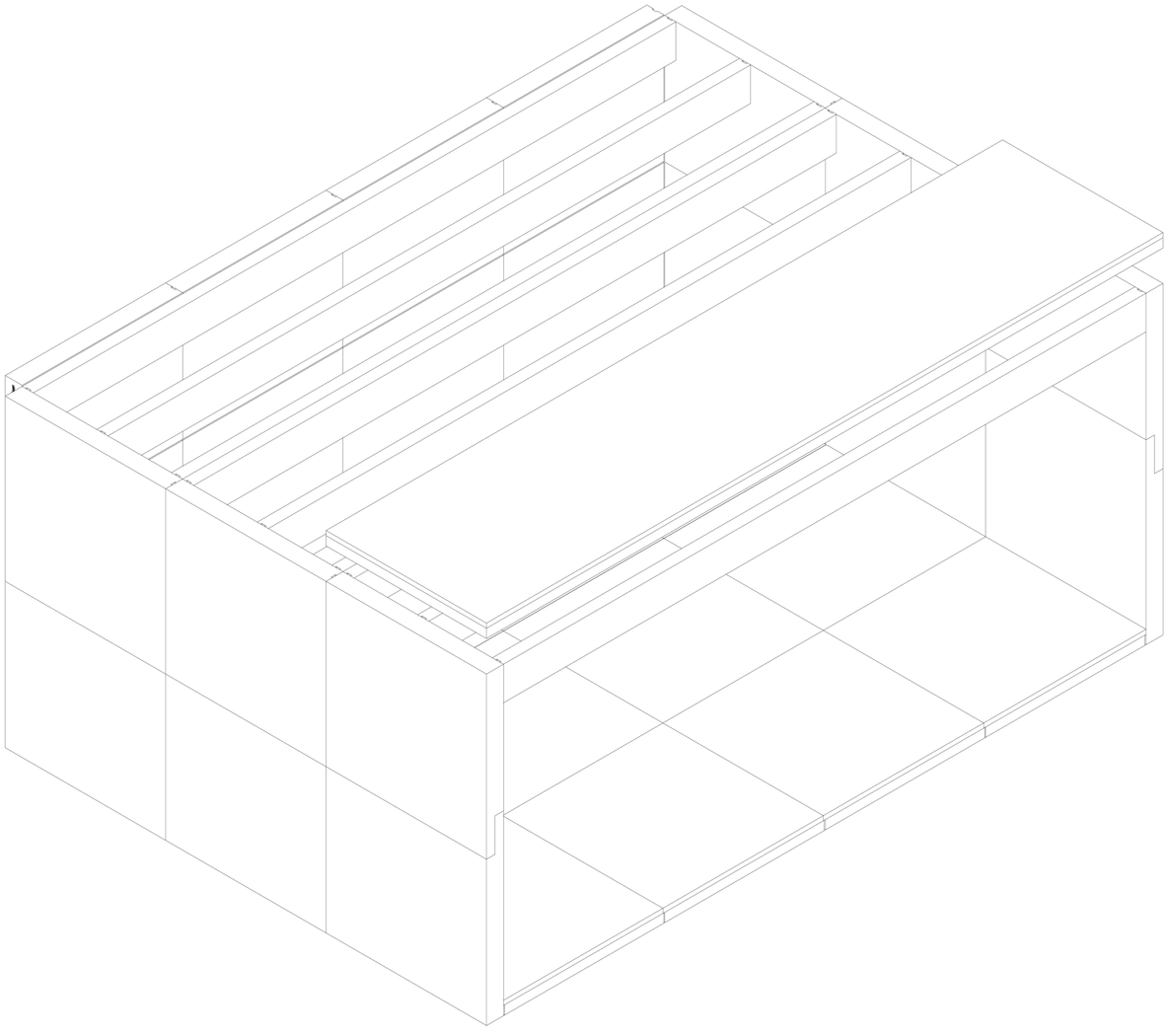
Check all beams are correctly seated before continuing.



Step 25

Take ceiling panel A and place it starting from the corner where you began in step 1.

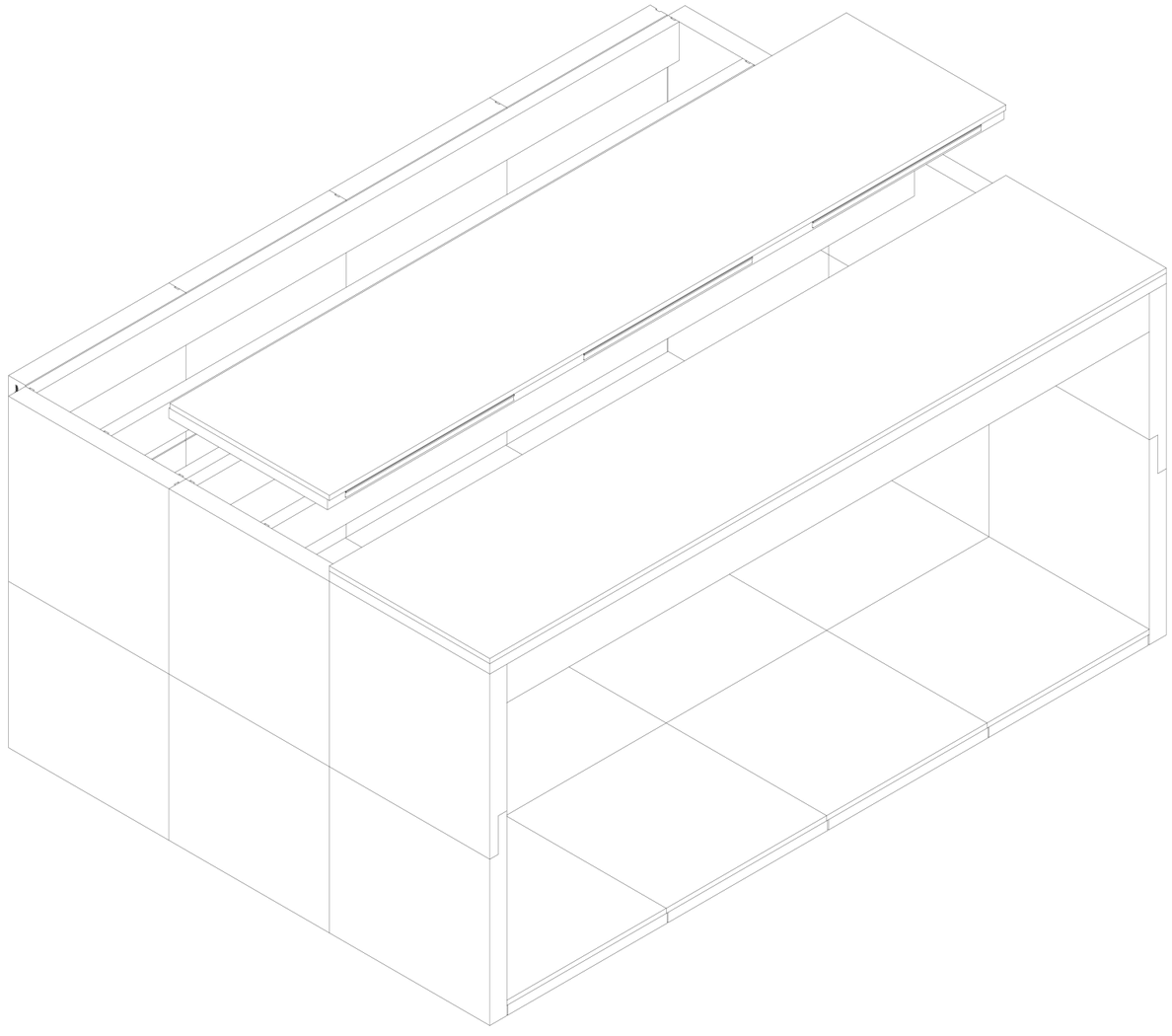
For this step you will need: 1× ceiling panel A



Step 26

Continue by placing ceiling panels B and C in sequence.

For this step you will need: 1× ceiling panel B, 1× ceiling panel C



Step 27

The module is complete and ready for use.