



Co-funded by the Horizon 2020
Framework Programme
of the European Union



REVERSIBLE EXPERIENCE MODULES (REMS)

PRESENTATIONS & VISITS pilot projects BAMB - 13/10/2017



DESCRIPTION OF THE PILOT PROJECT

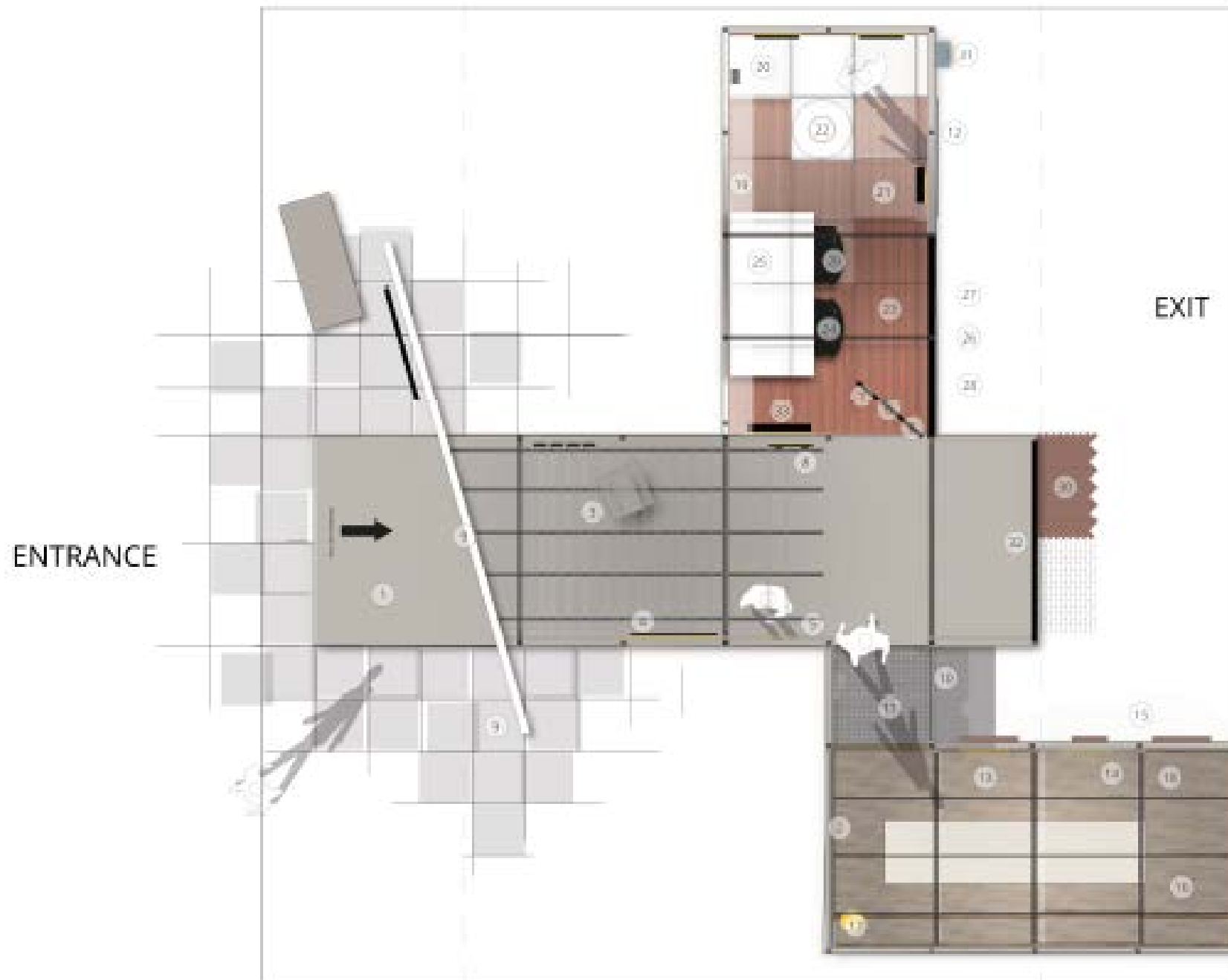
- Travelling exhibition
- Adaptable floorplan: 40-100m²
- Provide experience of Materials Passports and Reversible Building for professional visitors
- Travelling to Belgium, United Kingdom, Netherlands, Germany from January 2018 - January 2019

DESCRIPTION OF THE PILOT PROJECT

Objectives of the REMs:

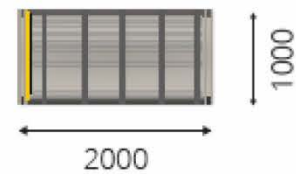
- Demonstrate and test the practical utility of passports for products (what they are and how they work) in an interactive operational environment and thus:
- Test the functionalities of the passport software platform including entering data and retrieving information;
- Test the passports through the software platform by retrieving information relating to the REMs and comparing the information with the actual product or the description and visualisations of the product;
- Test the passport functionality by using its information to e.g. disassemble or assemble a product, or understand its value propositions;
- Test the passports by gauging the degree to which it is understood after demonstration sessions;
- Show how the passports help prevent waste;
- Show how they help improve resource productivity; and
- Show how they help reduce emissions.

DESCRIPTION OF THE PILOT PROJECT: MAXIMUM FLOORPLAN, 30 REMS

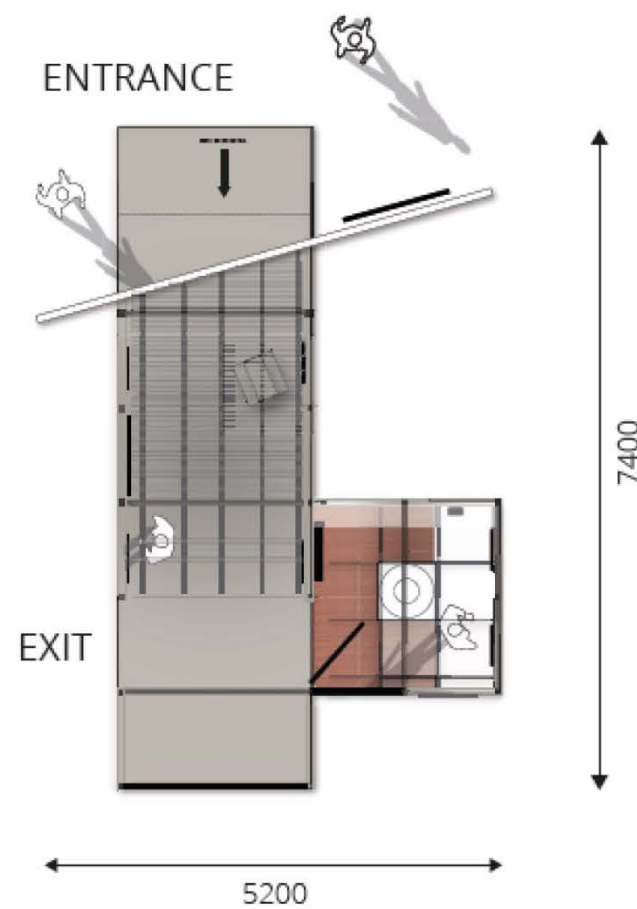


DESCRIPTION OF THE PILOT PROJECT: SMALLER FLOORPLANS

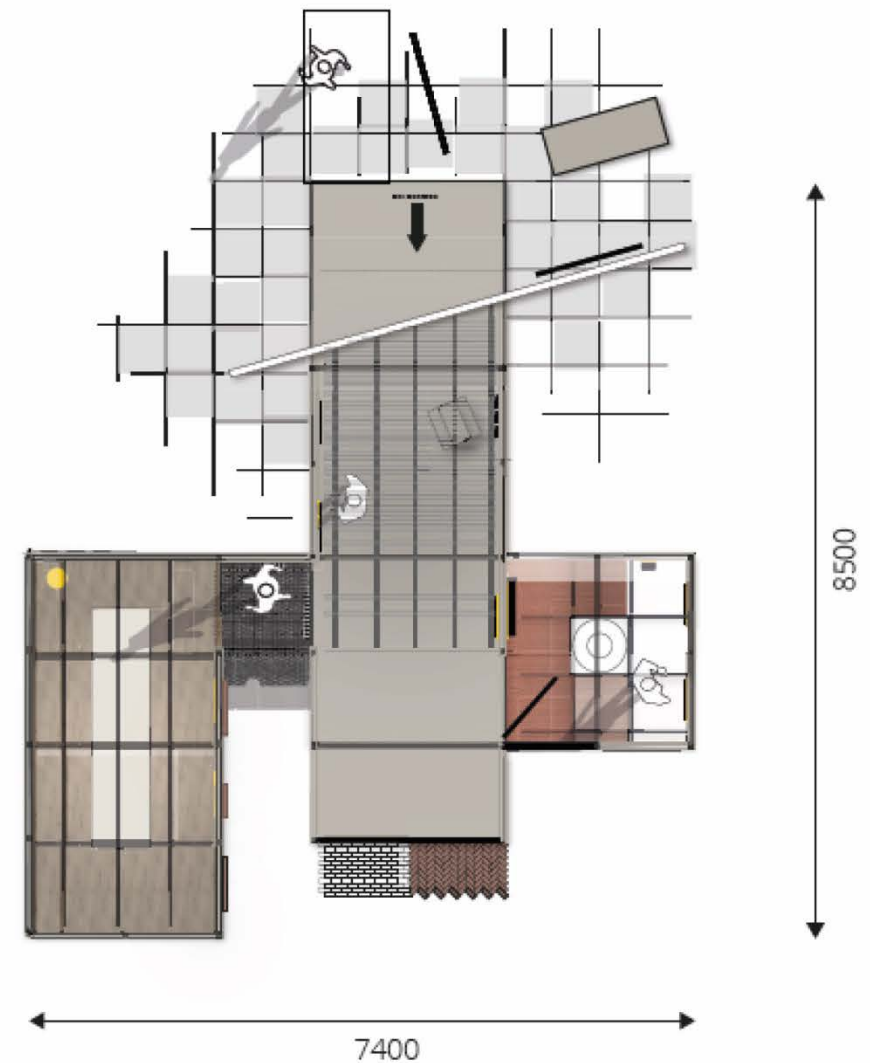
SMALL (2 M2)



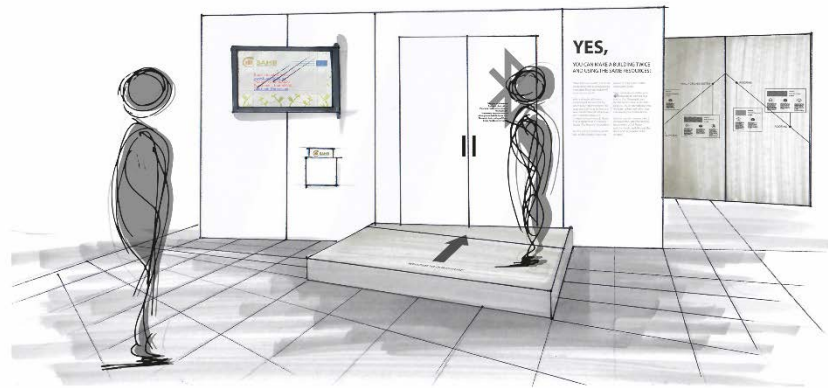
MEDIUM (38,5 M2)



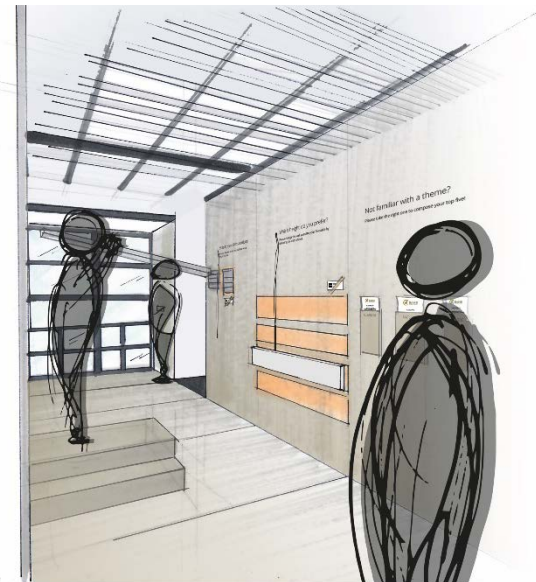
LARGE (63 M2)



DESCRIPTION OF THE PILOT PROJECT: WALKTHROUGH



entrance

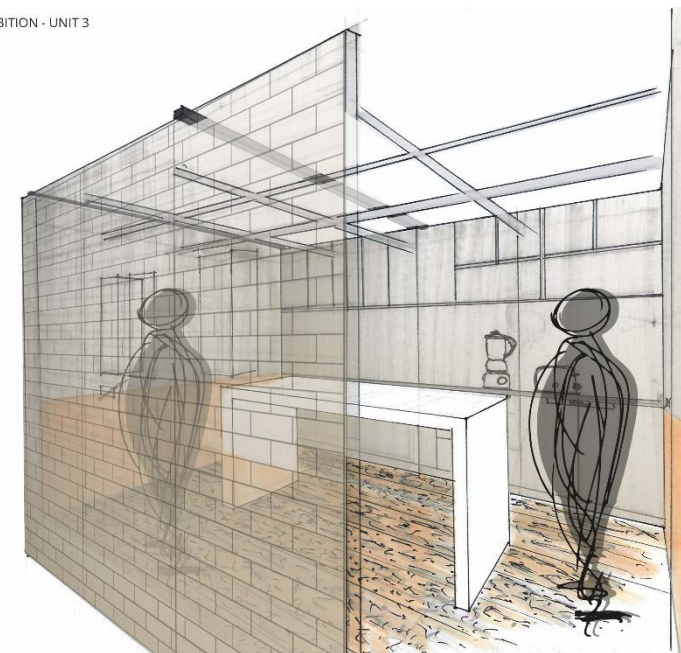


hallway



office

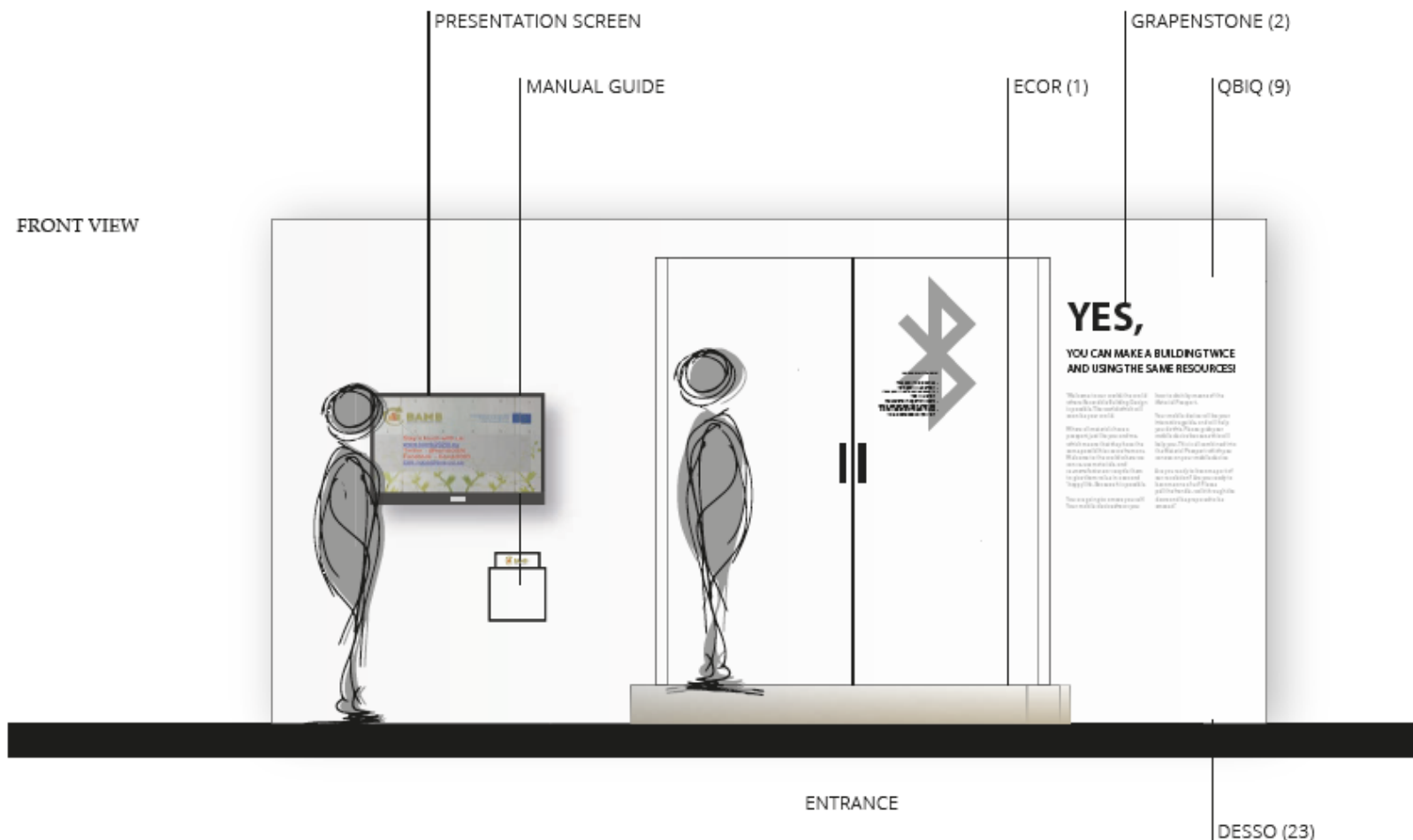
EXHIBITION - UNIT 3



home

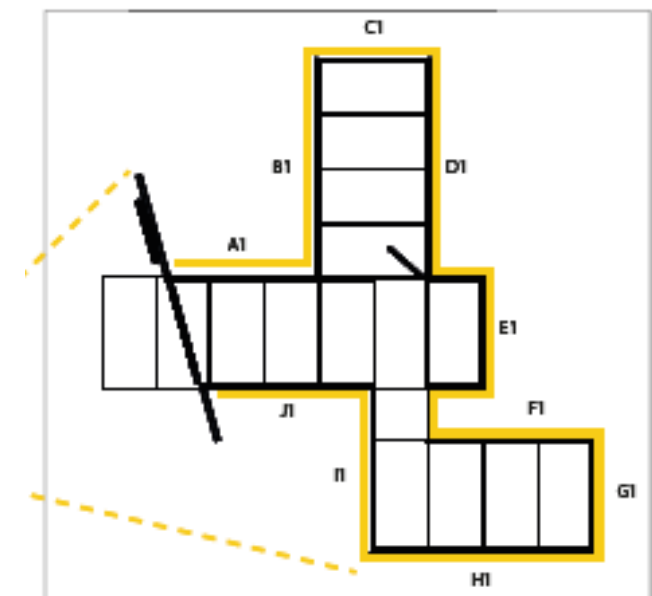
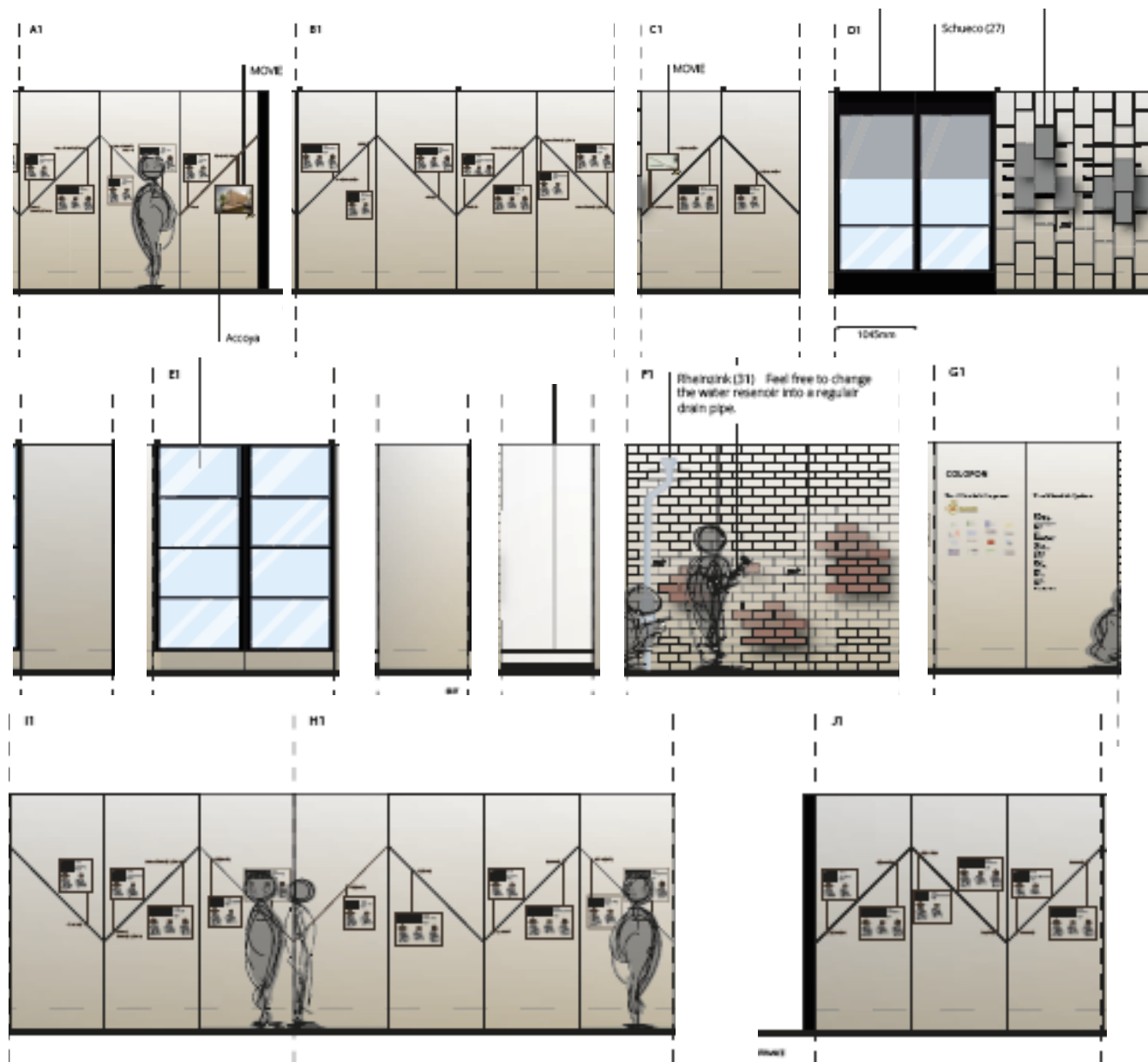
DESCRIPTION OF THE PILOT PROJECT: WALL FOLDOUT ENTRANCE

- The entrance introduces BAMB, REMs, Material Passports and Reversible Building
- At the entrance a screen provides the opportunity to give presentations

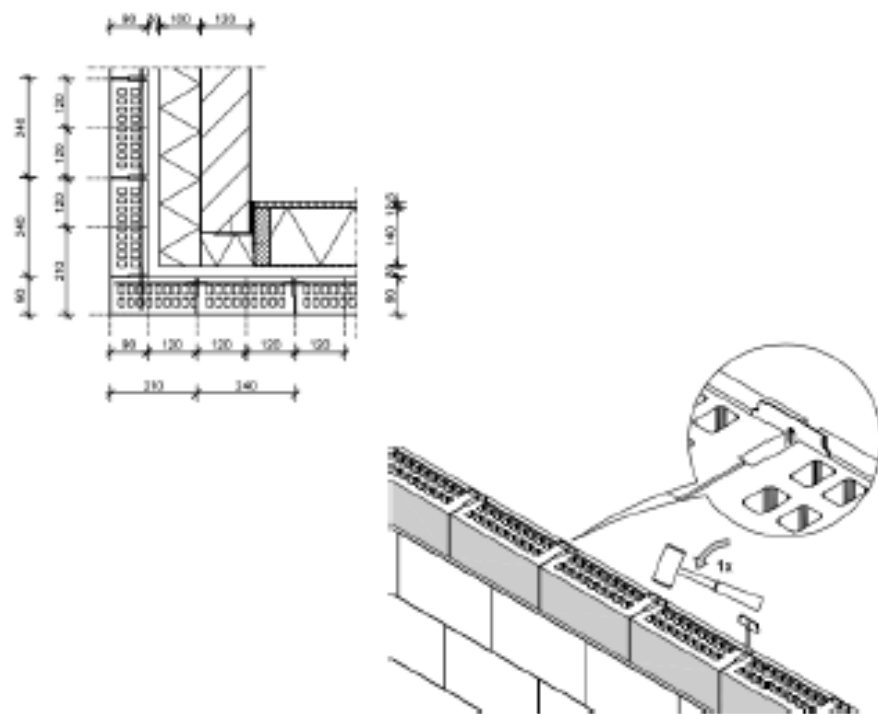


DESCRIPTION OF THE PILOT PROJECT: WALL-FOLDOUT OUTSIDE

- The outside contains most of the 40 visual REMs, and 4 facades

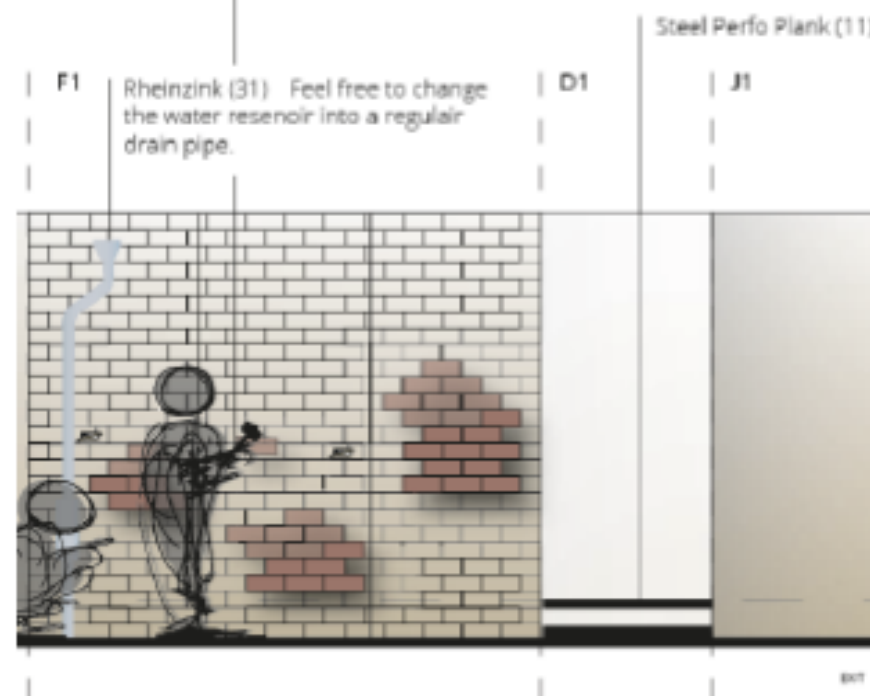


15. ClickBrick Daas Baksteen



REM construction

ClickBrick (15) To demonstrate the principle of the ClickBricks, physical ClickBricks will be fixed on three physical locations; on top of these, ClickBricks will be placed that can be re-positioned. In this way, bricks from one panel to the other, and vice versa. A hammer is needed to attach and detach the ClickBricks. This will be attached to the construction by means of a rope.

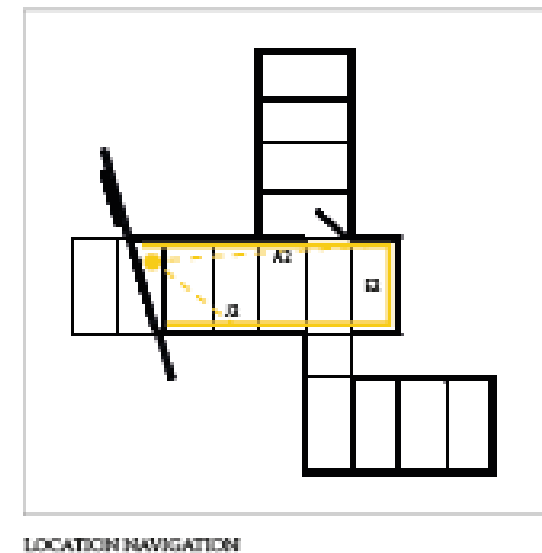
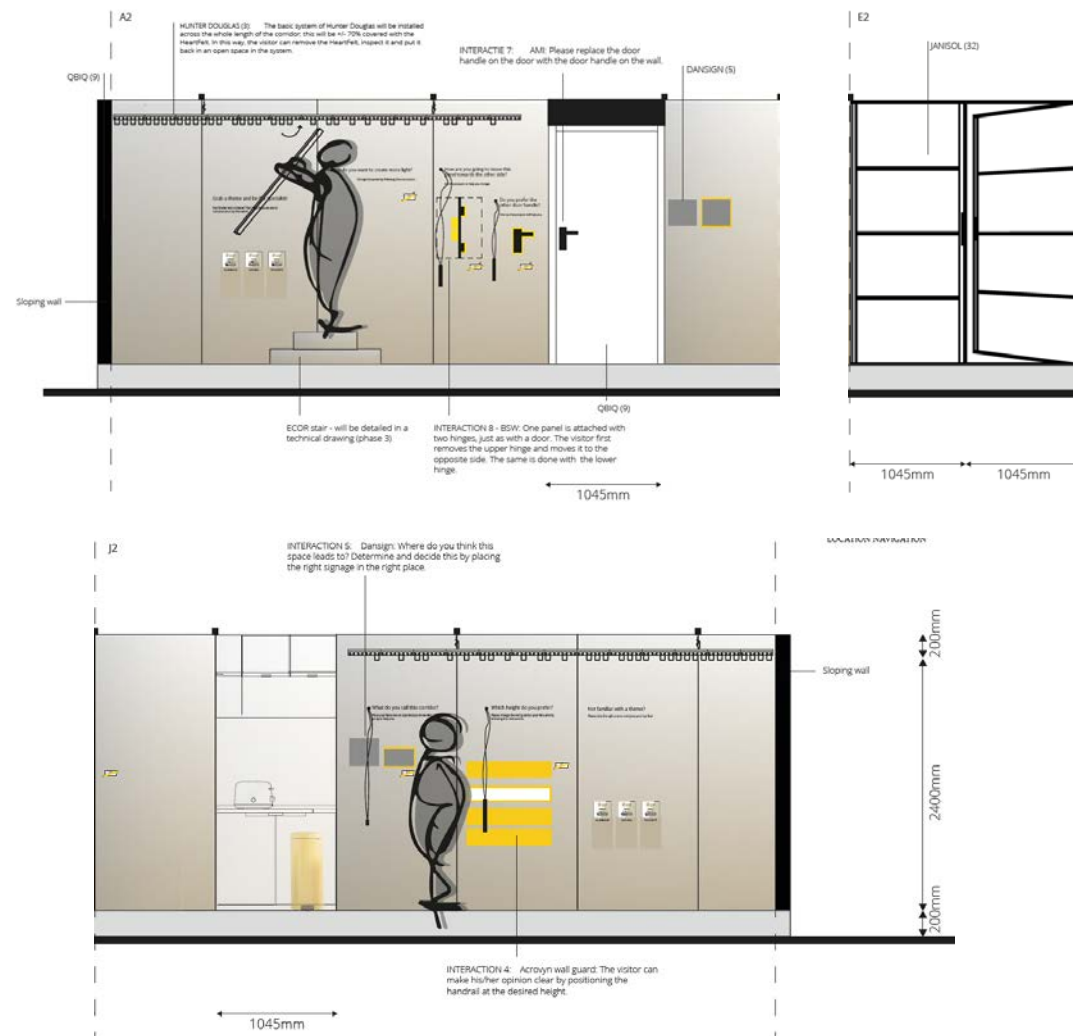


REM interaction



DESCRIPTION OF THE PILOT PROJECT: WALL-FOLDOUT HALLWAY

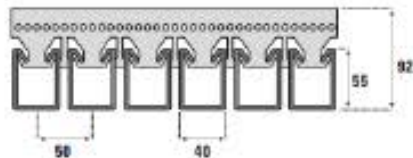
- The corridor features the physical REMs of system ceiling, walls and doors, hardware – locks, hinges, a façade and signage.



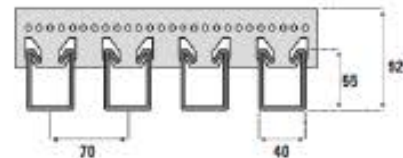
LOCATION NAVIGATION

3. HeartFelt Ceiling System Hunter Douglas

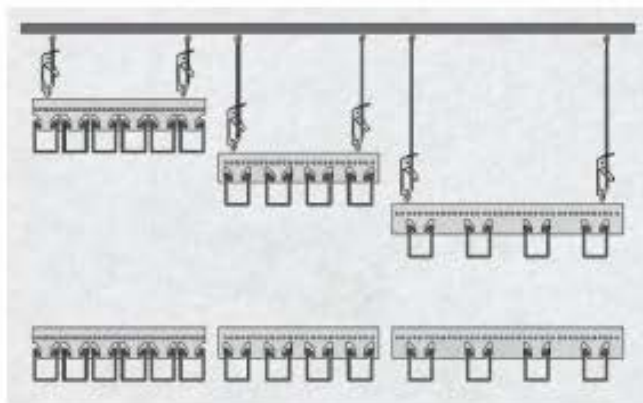
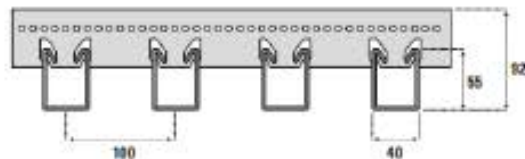
Cross-section of 50 mm module



Cross-section of 70 mm module



Cross-section of 100 mm module

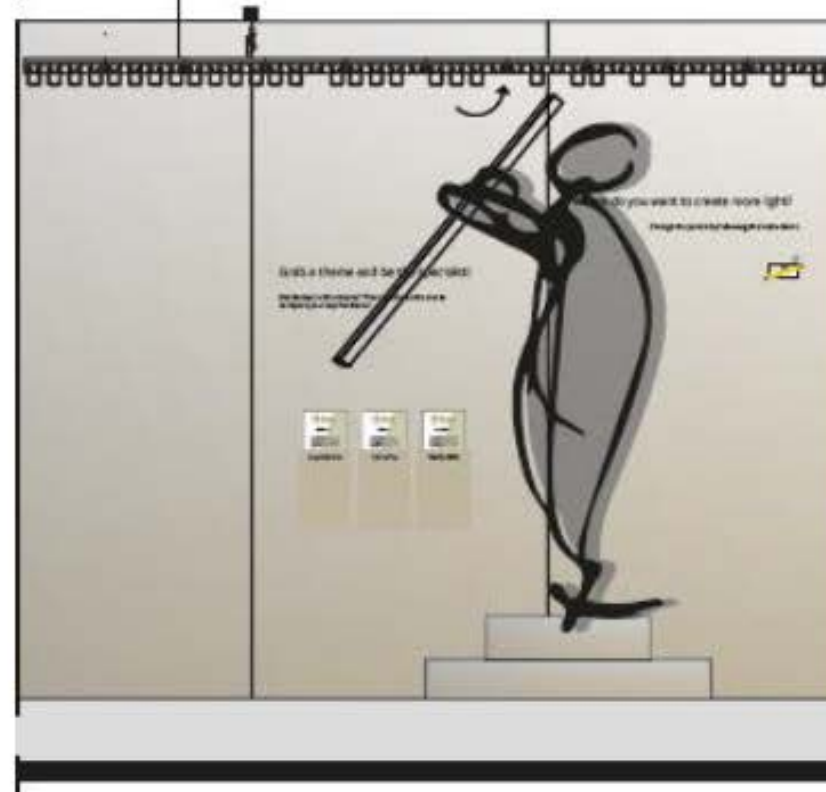


REM construction



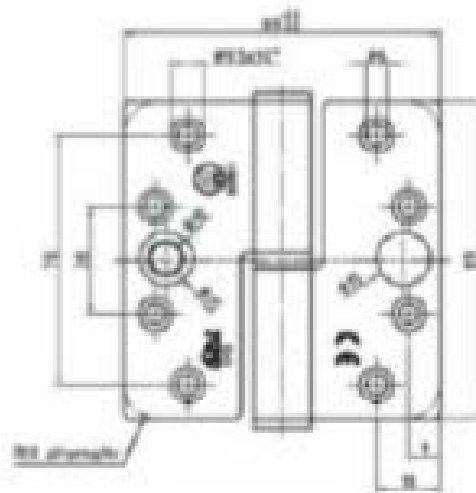
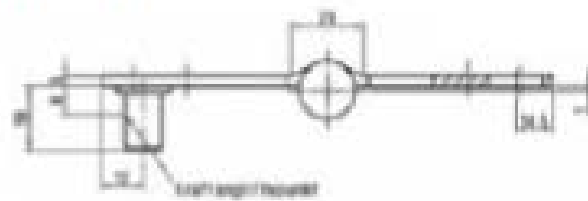
A2

HUNTER DOUGLAS (3): The basic system of Hunter Douglas will be installed across the whole length of the corridor; this will be +/- 70% covered with the HeartFelt. In this way, the visitor can remove the HeartFelt, inspect it and put it back in an open space in the system.

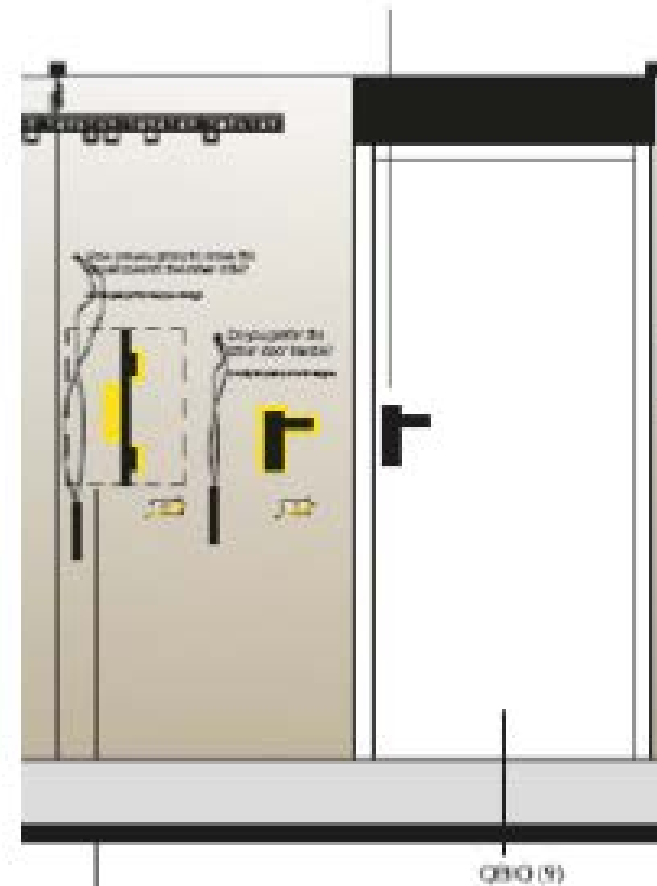


REM interaction

8. Lift-off hinges BSW



REM construction



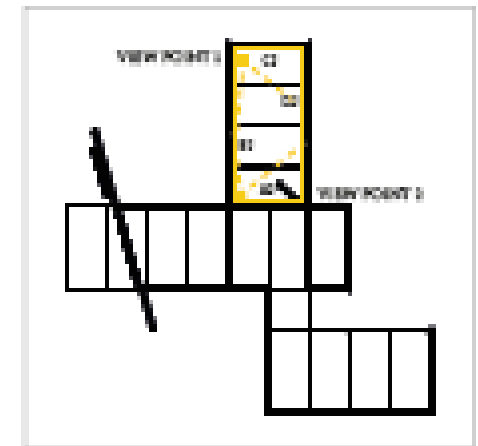
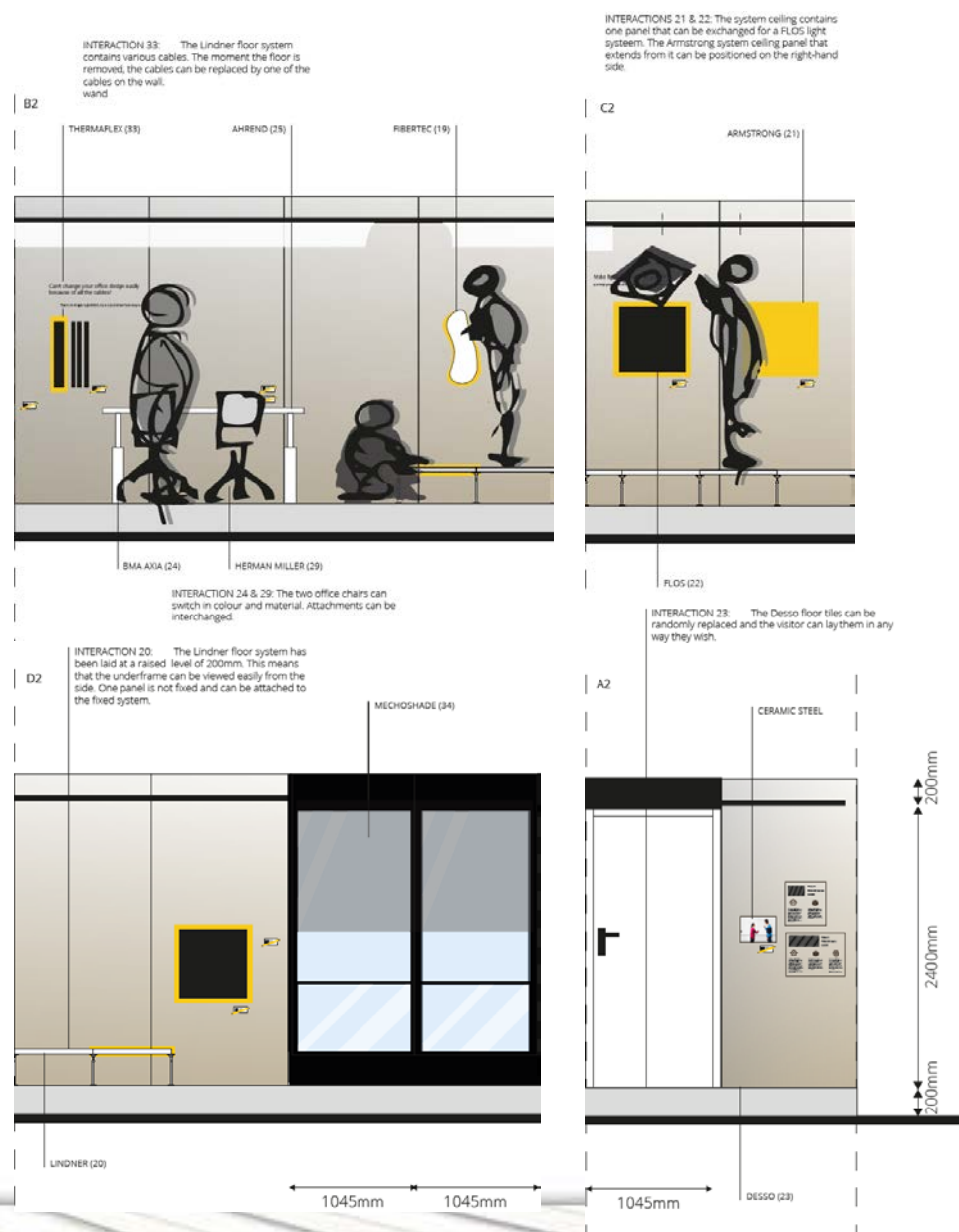
INTERACTION 5 - BSW: One panel is attached with two hinges, just as with a door. The visitor first removes the upper hinge and moves it to the opposite side. The same is done with the lower hinge.

REM interaction



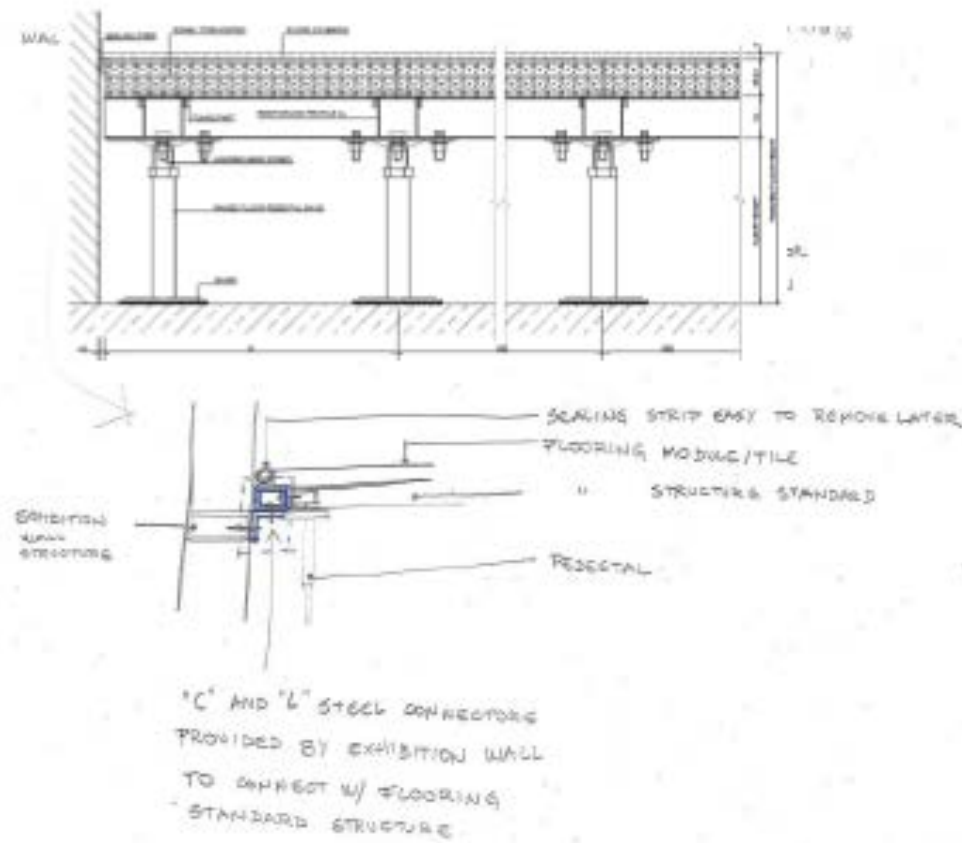
DESCRIPTION OF THE PILOT PROJECT: WALL-FOLDOUT OFFICE

- The office area contains REMs of air circulation, system ceiling, lighting, computer floor, office furniture, flooring and insulated piping



LOCATION NAVIGATION

20. Nortec raised access floor
Lindner



REM construction



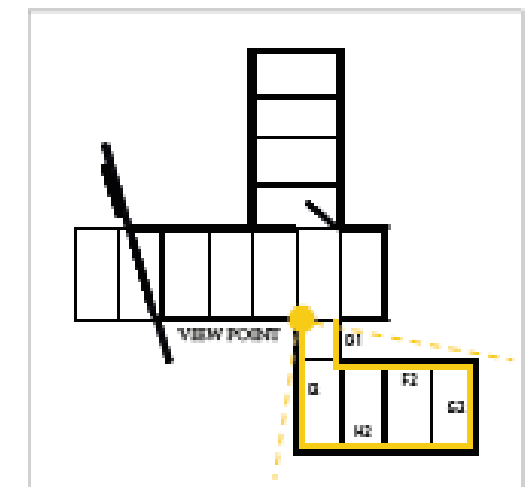
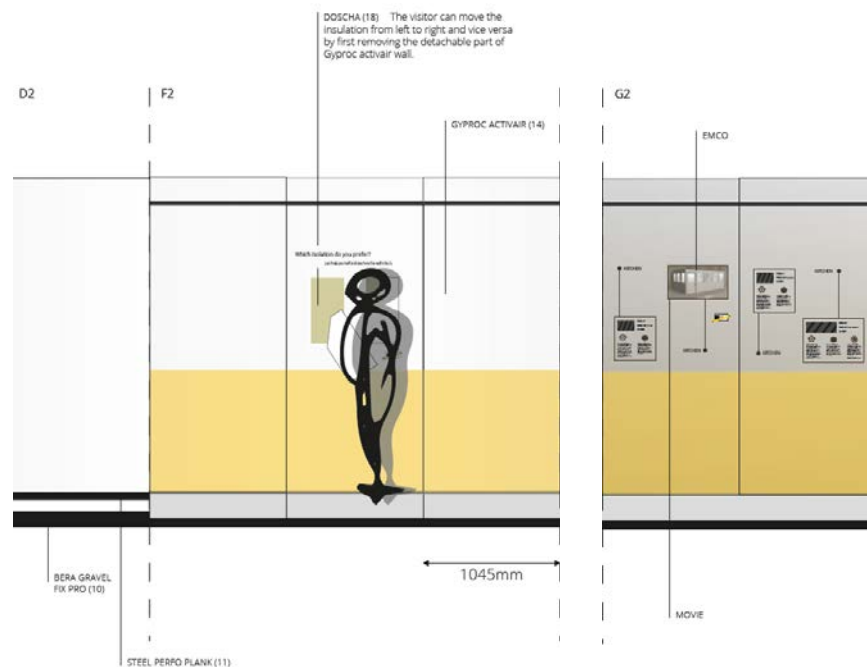
INTERACTION 20: The Lindner floor system has been laid at a raised level of 200mm. This means that the underframe can be viewed easily from the side. One panel is not fixed and can be attached to the fixed system.



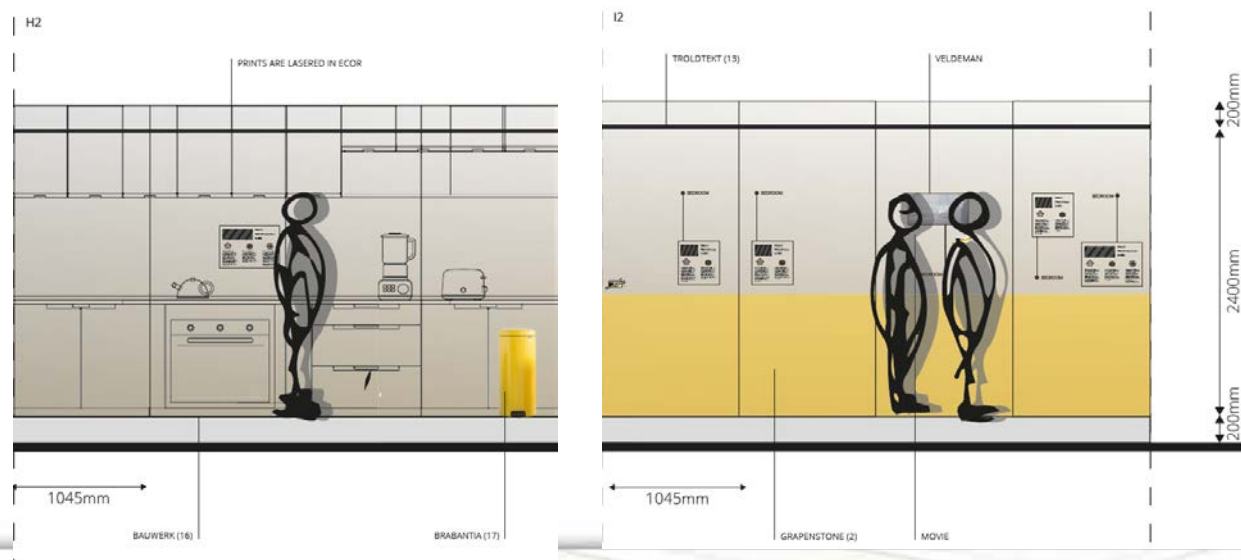
REM interaction

DESCRIPTION OF THE PILOT PROJECT: WALL-FOLDOUT HOME

- **The home unit contains REMs of coating, wall , ceiling, insulation and home accessories.**



LOCATION NAVIGATION

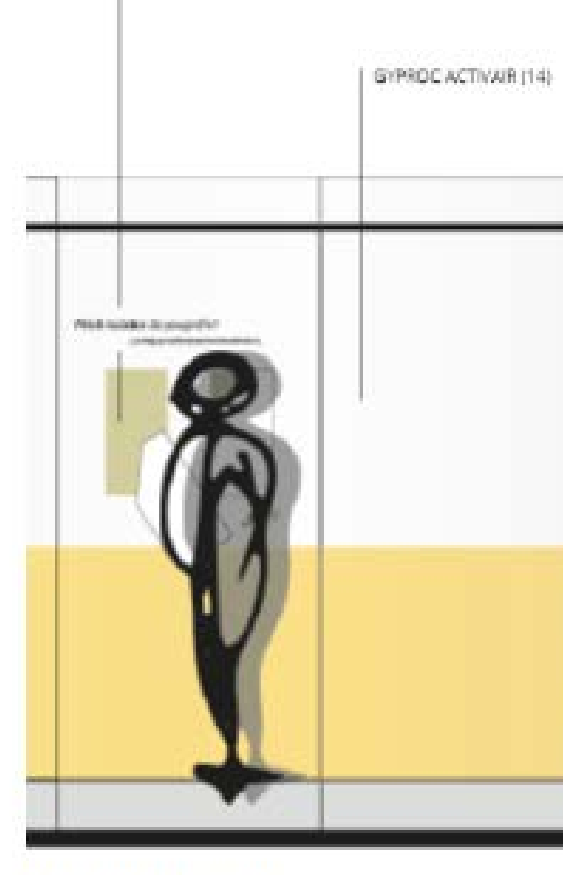
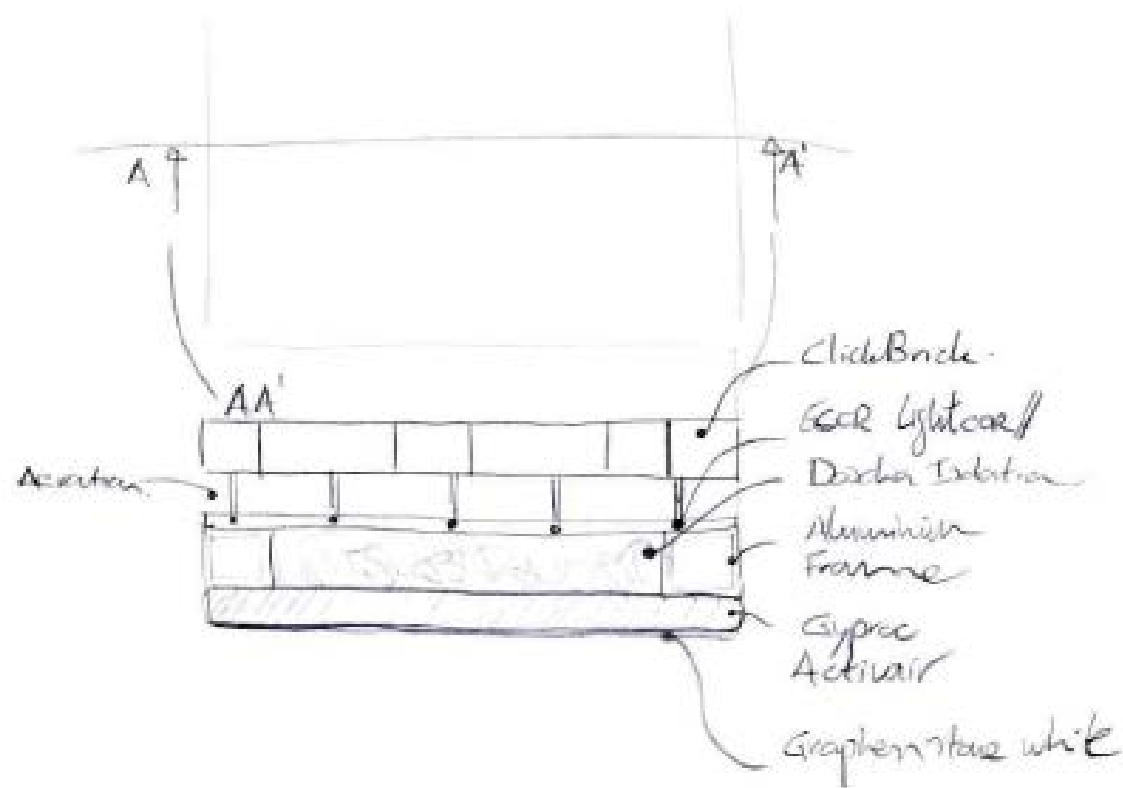


18. Doschatherm Doscha



DOSCHA (18) The visitor can move the insulation from left to right and vice versa by first removing the detachable part of Gyproc activair wall.

GYPROC ACTIVAIR (14)



REM construction

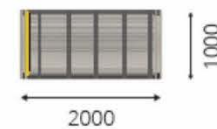
REM interaction

SCENARIOS

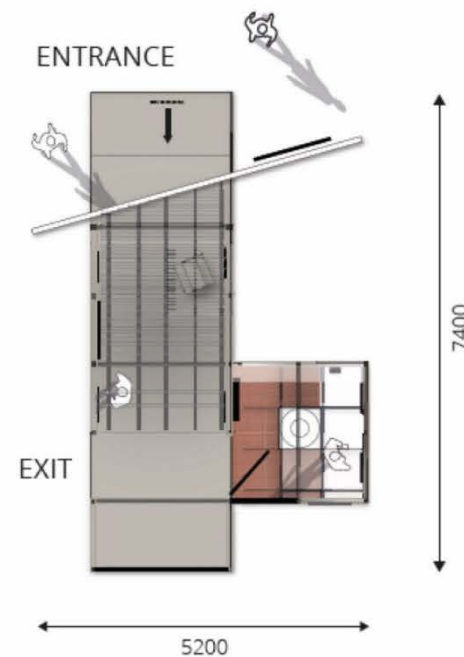
Scenario 1 - 3 times

REMs are optimized to change their floorplan to fit in various locations:

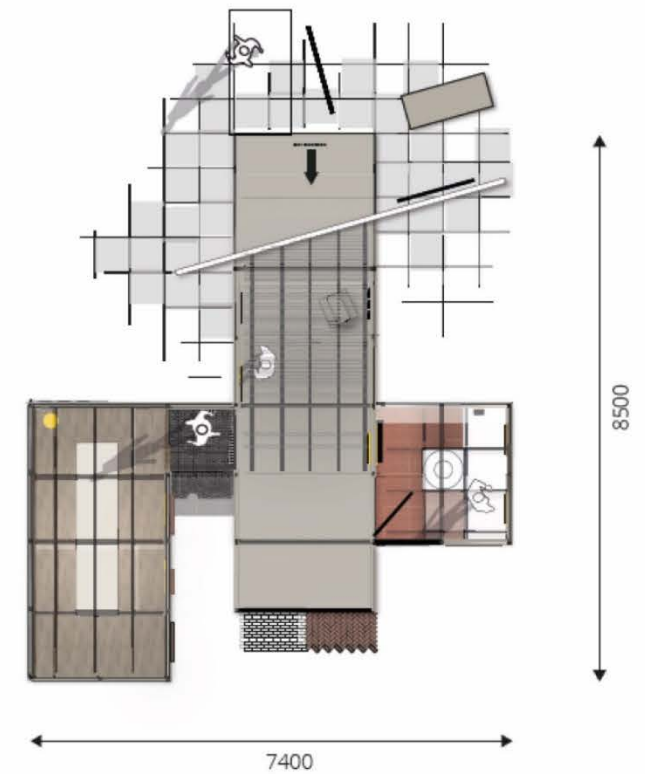
SMALL (2 M2)



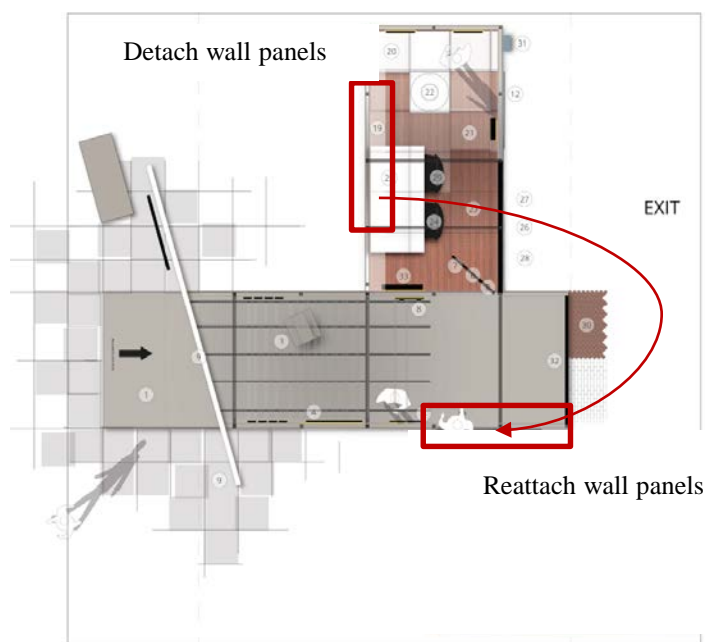
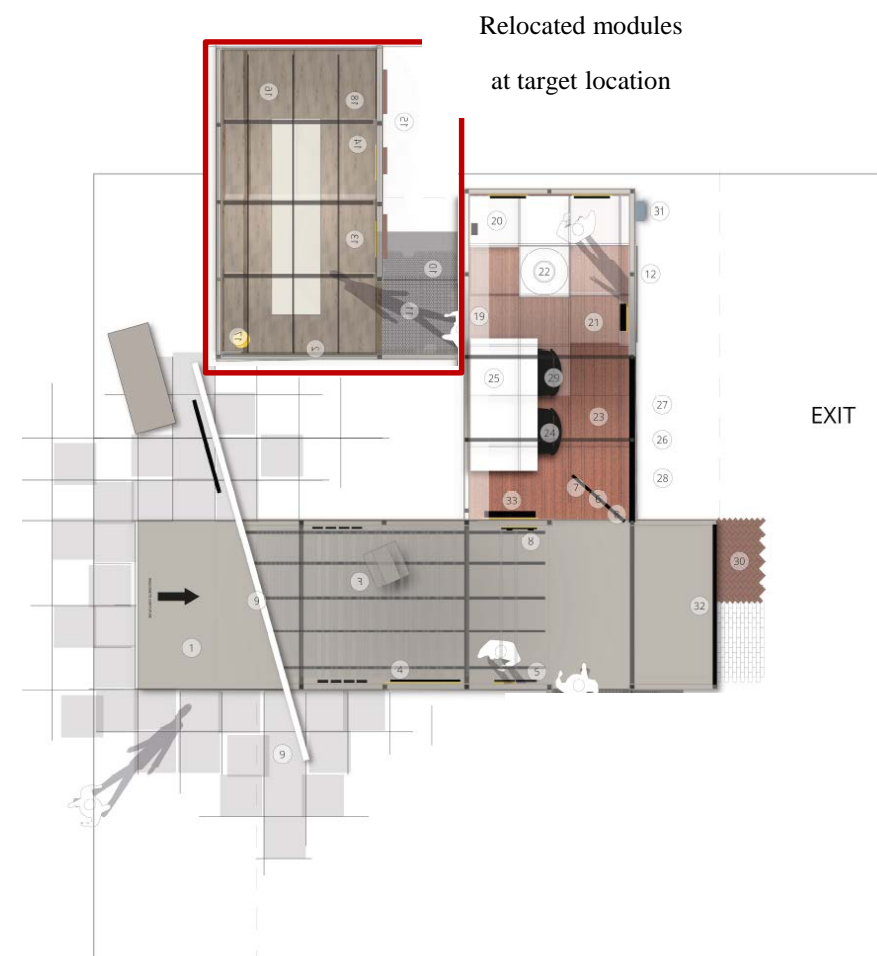
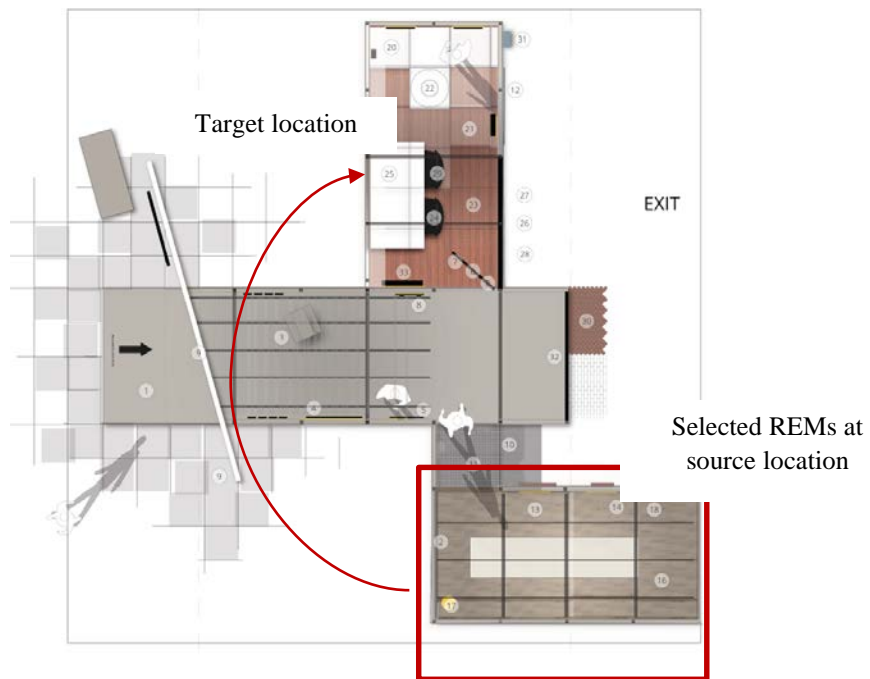
MEDIUM (38,5 M2)



LARGE (63 M2)




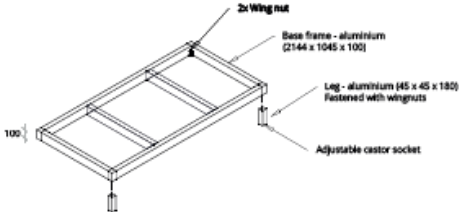
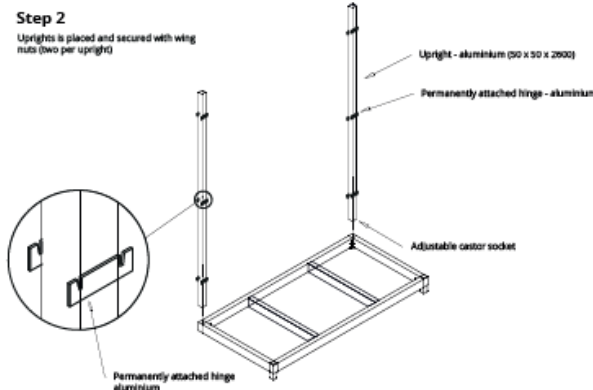
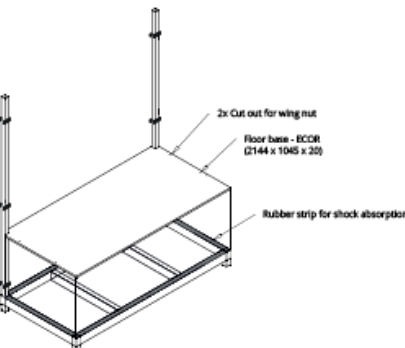
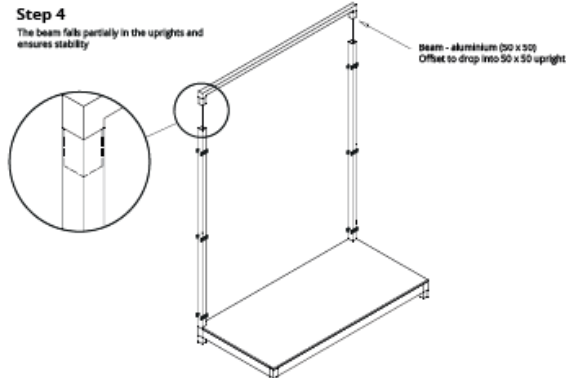
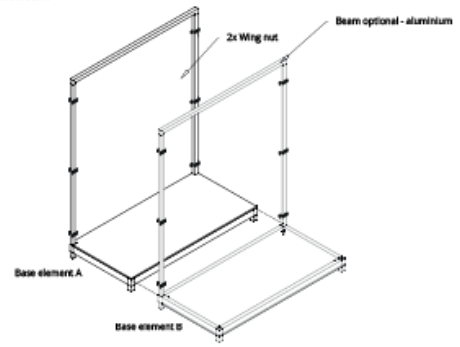
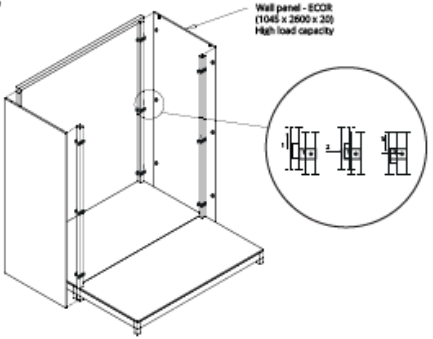
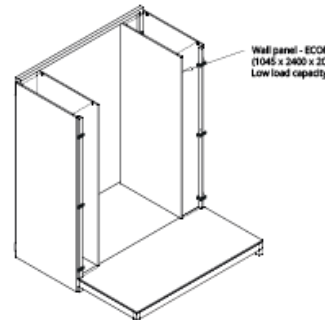
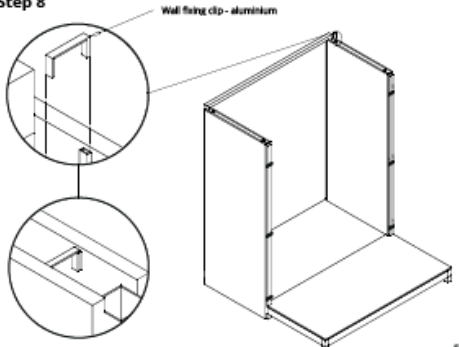
DESCRIPTION OF THE PILOT PROJECT: CHANGE FLOORPLANS



SCENARIOS

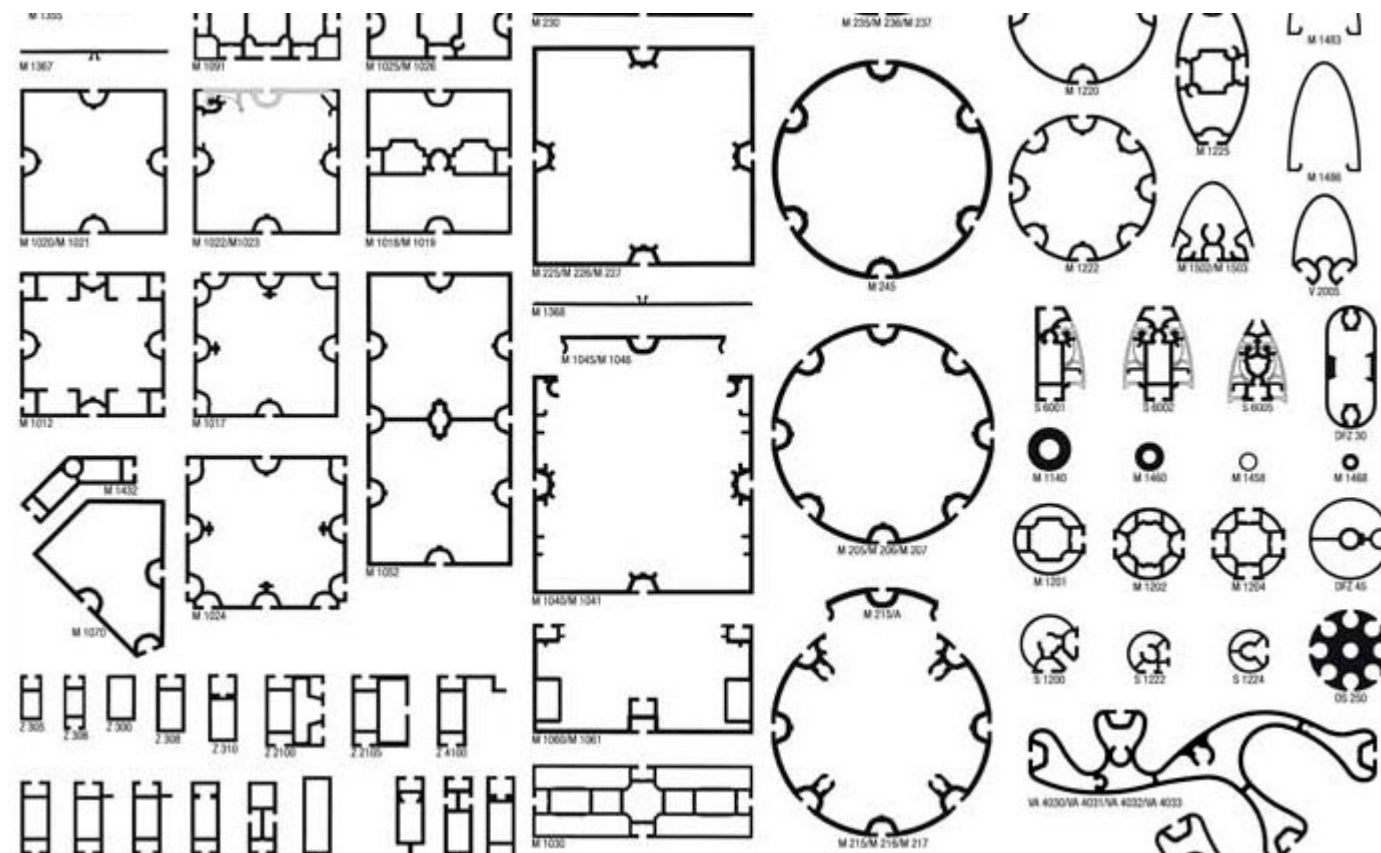
Scenario 2 - 6 times

The construction of the REMs is optimized to be build with two persons in 2 days, dismantled in 1,5 and to travel in a compact truck (BE Combination)

DOCUMENT	PROJECTNUMBER	PROJECT	PAGE	SCALE	FORMAT	DRAWN BY	DATE	
Basic module Setup Guide	2016014	BAMB - REM Exhibition	1	NA	A3 - MM	Lotte de Jong	14.06.2017	 www.androlab.eu
<p>Step 1 Two legs are placed in the basic frame</p> 								
<p>Step 2 Uprights is placed and secured with wing nuts (two per upright)</p> 								
<p>Step 3 Floorbase is secured with wing nuts (two left, two right)</p> 								
<p>Step 4 The beam falls partially in the uprights and ensures stability</p> 								
<p>Step 5 A second base element is build in the same principle</p> 								
<p>Step 6 The wall panel (or REM*) hangs on the hinge of the upright from base element A and B</p> 								
<p>Step 7 The wall panel (or REM*) hangs on the hinge of the upright from base element A and B</p> 								
<p>Step 8</p>  <p>For more safety the outer and inner wall panel is connect by an aluminium clip</p>								

TECHNICAL ASPECTS & MATERIALS

A standardized building system based on aluminium profiles will be used for maximum reuse possibilities and residual value, while ensuring strength and adaptability in the construction.



© Octanorm

OPPORTUNITIES & BARRIERS

- Builders, contractors were reluctant to take up the challenge of realizing a reusable exhibition. Familiar construction materials and methods could not be applied. Risk avoidance translated in high proposals, not feasible with our budget.
- A substantial part of the realization costs lie in the buildup of the exhibition. Buildup time and had to be reduced by reducing the complexity of the design (cancel the raised floor) and choosing a standardized build system, with standard wall panels instead of the ECOR panels.
- To realise the optimized design a builder is selected who can also realize the transport and buildup at site and has hands-on knowledge of how designs translate into buildup time.

NEXT

- The design will be finalized. All participating suppliers will be defined, as will the locations. There is still room for suppliers to join with a visual REM!
- Prototyping is expected to start and end in October 2017
- Following the tests, design improvements will be made, and the final design will be realized
- All passports for the 70 materials will be developed
- An events programme will be developed for the 6 locations
- As soon as the locations are defined, the consortium will be invited to co-develop these events.



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THANK YOU

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