



DESIGN FOR THE BUILT ENVIRONMENT MSc

FIVE YEARS
EXPERIENCE

edited by Massimo Perriccioli

Design for the Built Environment MSc. Five Years Experience

edited by Massimo Perriccioli

ISBN 978-88-916-5061-0

© Copyright Maggioli S.p.A. 2023

Maggioli Editore is part of Maggioli S.p.A.

ISO 9001: 2015 Certified Company

47822 Santarcangelo di Romagna (RN) • Via del Carpino, 8

Tel. 0541/628111 • Fax 0541/622595

www.maggiolieditore.it

e-mail: clienti.editore@maggioli.it

Reproduction, even in part, by any means made, including for internal use and educational, unauthorized.

Rights of translation, electronic storage, reproduction and adaptation, in whole or in part by any means are reserved for all countries.

Cover design: Stefano Perrotta

Published May 2023

This volume was made possible by a grant from the DiARC Department of Architecture at the University of Naples Federico II.



Index

INTRODUCTION

- 11** **Design for the Built Environment. Issues, methods, practices**
Massimo Perriccioli
- 13** **For a renaissance of Design in the study programmes of the Department of Architecture**
Mario Losasso
- 15** **A challenging reality for Design studies**
Alfonso Morone

PART I

Design Issues

- 22** The 6 senses journey: Aesthetics integration in digital design
Aurosa Alison
- 26** Experiencing lighting design
Laura Bellia
- 30** Geometry for design
Mara Capone
- 34** Napoli and its design
Alessandro Castagnaro
- 38** What Heritage for Exhibit
Gianluigi De Martino
- 42** Materials comprehension and selection for design
Ernesto Di Maio
- 46** Design for living happily
Nicola Flora
- 50** Industrial Design Studio
Alfonso Morone, Vincenzo Pinto

- 54 Digital Design Studio challenge
Pietro Nunziantè
- 58 Illusory spaces and digital contents: new dimensions for representation in contemporary art
Alessandra Pagliano
- 62 Designing micro-architecture
Massimo Perriccioli
- 66 Welcome to the New Industrial Revolution
Sergio Pone
- 70 The role and the tools of structural engineering in product and architectural design
Francesco P. A. Portioli
- 74 Socio-techno-natural entanglements: systemic design and the challenge of interconnectedness
Ramon Rispoli
- 78 Technological Design Studio: digital opportunities for the materiality
Sergio Russo Ermolli
- 82 What Exhibit for Heritage
Viviana Saitto
- 86 Architecture for design
Paola Scala
- 90 Art in the built environment: works, people, space. Strategies and aims of a three-years' experience
Paola Vitolo

PART II

Methods and Practices

- 98 Designing the transition to the sustainability in the Neapolitan region
Guilherme Nicolau Adad, Susanna Parlato, Iole Sarno
- 106 Time Markers. Object towards modernity in Figini and Pollini's factory in Sparanise
Annunziata Ambrosino, Antonio Stefanelli
- 114 Shelter and pods. Ideas and projects for the public dormitory in Naples
Anita Bianco
- 122 Casa Miranda: a temporary shelter for the inhabitants of living pods
Marina Block

- 130** Hacking, making, prototyping
Davide Ercolano, Daniele Lancia
- 138** Roberto Mango and United States of America
Federica Fiorillo
- 146** Time Markers. Proposal for a conservation methodology, between matter and memory
Alessia Fusciello, Stefano Guadagno
- 154** Places of innovation: data-driven design for a “digital” teaching experience
Giuliano Galluccio
- 162** Interior / Inner / Design experiences from the inside
Francesca Iarrusso
- 170** Living in a living space
Fabiana Marotta
- 178** On the walls, behind the walls: augmented reality for street art
Carolina Spiezia

PART III

Final works

- 190** Monte Sant’ Angelo Environmental Graphic Design: A wayfinding plan update for the Monte Sant’ Angelo University Campus in Naples
Guilherme Nicolau Adad
- 194** A Home for Jago, an artist in the Sanità district
Paola Buccaro
- 198** Sticking the city
Martina Coppola
- 202** Process and market innovation for strategy brand
Nadia Miano
- 206** The District of Creative Churches in Salerno
Chiara Pisano
- 210** Application of innovative technologies with bioplastic filaments into the manufacturing handcraft system of Rione Sanità
Iole Sarno

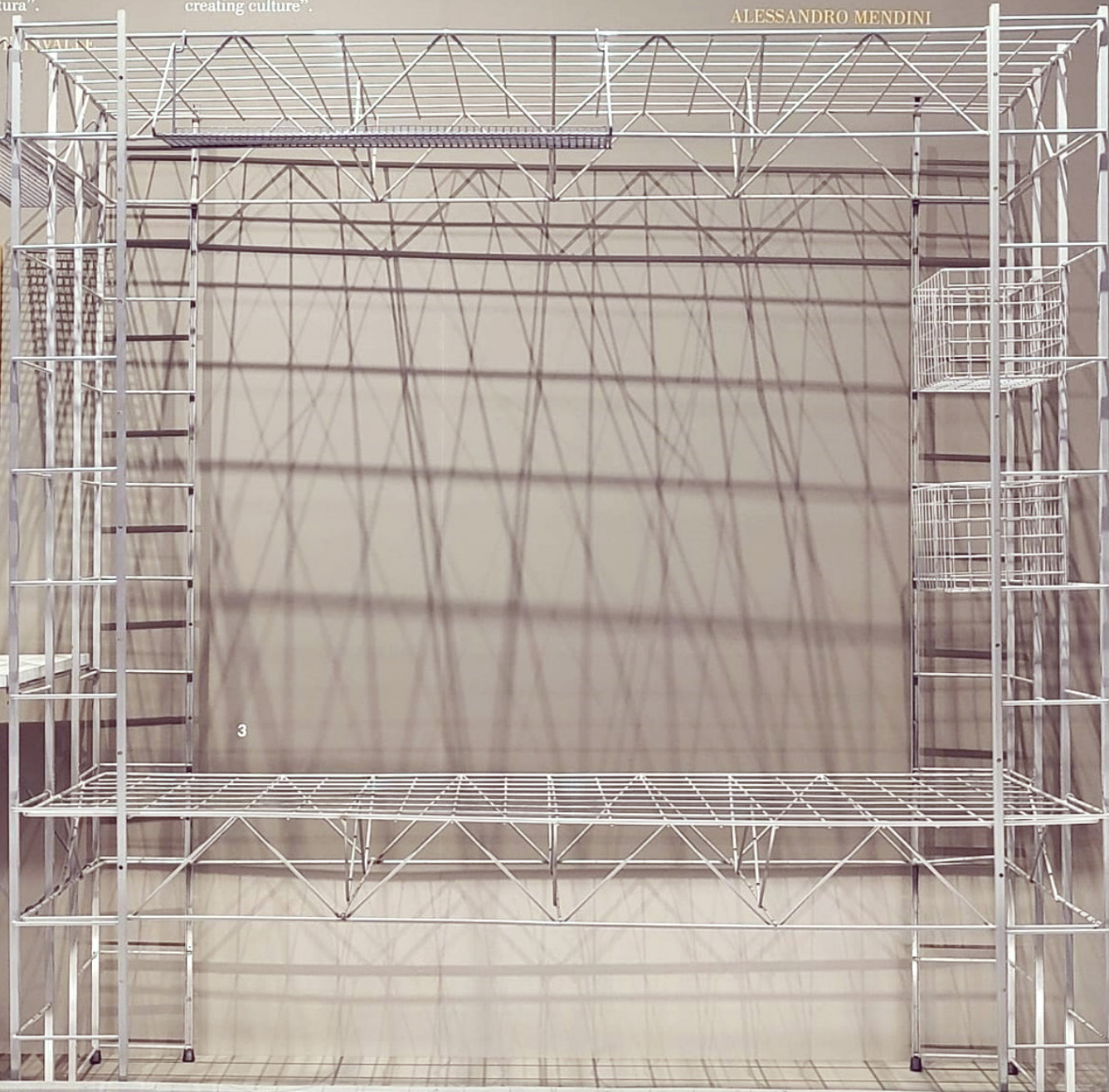
“Penso in primo luogo a Bruno Munari, il geniale decano dei designer italiani, colui al quale dobbiamo una intelligente mediazione fra invenzione crociana dell'arte e avanguardie, tutte le avanguardie ma sopra tutto quelle legate alla cultura dell'astrazione degli anni Trenta e quindi dell'Informale. La novità di Bruno Munari sta proprio qui, nella sua attività di teorico e insieme di operatore, di narratore per gioco e sul gioco e di consapevole promotore di nuovi modi di fare cultura”.

ARTURO CARLO OZZI

“I am thinking primarily of Bruno Munari, the outstanding doyen of Italian designers and the one to whom we owe a debt for his intelligent mediation between a Crocean invention of art and the avant-garde; all avant-gardes but above all those linked to the culture of 1930s abstraction and therefore the Informal. Bruno Munari's innovation is right here, in his activity as a theorist and as a producer, a storyteller of and about games and as a conscious promoter of new ways of creating culture”.

“Bruno Munari ovvero l'apolide fantasista del design, il triplo concentrato di materia cerebrale creativa, il posacenere-capolavoro. Ma è difficile dire che cosa è Munari. Meglio aggirare l'ostacolo e dire cosa egli 'non è'. Munari, allora non è un designer, non un pittore, non un grafico, non un cartellonista, non un vetrinista, non uno stilista, non un saggista, non un insegnante, non uno scultore, non un fotografo, non un regista, non un poeta, non un bambino, non un adulto, non un vecchio, non un giovane”.

ALESSANDRO MENDINI



Casa Miranda: a temporary shelter for the inhabitants of living pods

Marina Block

Marina Block
Industrial Design
Department of Architecture
University of Naples Federico II, Italy
marina.block@unina.it

What then is this thing called Design if it is neither style nor applied art? [...] It is planning done without preconceived notions of style, attempting only to give each thing its logical structure and proper material, and in consequence its logical form.

Bruno Munari (1966)

The Industrial Design Studio proposed a design exercise of a temporary accommodation system for out-of-town students in “Casa Miranda”, a 1930 building currently under renovation and originally intended for student accommodation.

The housing system to be placed inside the “shelter”, also during the construction phase, is made up of small “living pods”, temporary modules and devices, with low technological complexity, mainly made of prefabricated materials and dry assembled. The accommodation modules have dimensions that refer to the space used by each student (maximum 6 square meters) and must be flexible living spaces, guaranteeing different uses during the day, through system components with a high level of functionality and integration and user interaction.

The living spaces are also integrated by a system of mobile service units of different sizes, the “servicepods”, which are made off-site with folded steel systems (CFS) and dry-assembled lightweight materials (fig. 1).

Through the suggestions of designers who, since the 1970s, have set out interesting reflections on the theme of the “living space” – from Joe Colombo to Bruno Munari, from Archigram to Toyo Ito, from Achille Castiglioni to Shigeru Ban, to mention just a few- three possible design strategies have been identified for arranging the living space inside the shelter by using equipped living modules.

The “cabin” (figg. 2-3), a living module simplified to the essential, a limited but at the same time open space containing all the equipment and objects necessary for carrying out the primary activities; the “core” (fig. 4), a unit containing devices and equipment accessible through sliding or folding mechanisms; the “equipped wall” (fig. 5), a wall containing devices and equipment available through opening and closing mechanisms.

Considering the increasing complexity and multidisciplinary nature of the design process, where design is now seen as a ‘complex systemic entity’, it has been possible to define a three-stage interacting and recursive design process.

In a first heuristic phase of definition of the demand system and of conception and conceptualisation of the project idea, it was possible to recall Viktor Papanek’s lesson on the idea of “integrated design”, which considers all the factors and modulations

necessary for the decision-making process and which attempts to constantly take out trends from the scenarios of the future that it builds (Papanek, 1985). In this sense, it was considered useful to define the user profile through six-question interviews with off-site students, displayed in a three-minute video.

Drawing on Kenneth Frampton's critical analysis of the relationship between "construction and architecture" and the dialectic of the terms "tectonics" and "stereotomy" (Frampton, 2005), the theoretical approach of Gottfried Semper was then adopted, whose four actions of "stacking", "weaving", "folding" and "connecting" (Semper, 2004) became four possible processes and ways of assembling which, also combined with each other, made it possible to design complex structures and guide the students in the second and third phase of their project.

The second phase consisted of the functional and dimensional organisation of the design data, defining the production and assembly process and the relationship with the space in the aspects of functional integration; finally, the third phase analysed more closely the technological-constructive aspects, from the choice of materials to the movement mechanisms (figg. 6-7).

The students' autonomy, critical sense and creativity enabled them to excellently meet the project demand, through the expression of a motivated philosophy of the goals and the mixture of visual language and technical-executive skills.

References

- Collina, L., & Zucchi, C. (Eds.). (2016). *Sempering: Process and pattern in architecture and design*. Silvana Editoriale.
- Frampton, K. (2005). *Tettonica e architettura: Poetica della forma architettonica nel XIX e XX secolo*. Skira.
- Papanek, V. (1971). *Design for the Real World: Human Ecology and Social Change*. Pantheon Books.
- Quitzsch, H., & Semper, G. (1990). *La visione estetica di Sempe: I quattro elementi dell'architettura*. Jaca Book.
- Semper, G. (2004). *Style in the Technical and Tectonic Arts, Or, Practical Aesthetics*. Getty Publications. (First Edition 1860-63).

CASA MIRANDA_LIVING_ZONE HOSTEL FOR 33 STUDENTS

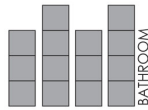
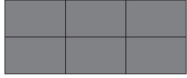


Content:
The Neapolitan hall of residence for students next to the Federico II Veterinary Faculty, between via Foria and the hill towards Moiriello and Reggia di Capodimonte, owned by the Region.

- 📍 Museo Anatomico di Veterinaria
- 📍 Ex Studentato "Casa Miranda"
- 📍 Università degli Studi di Napoli Federico II

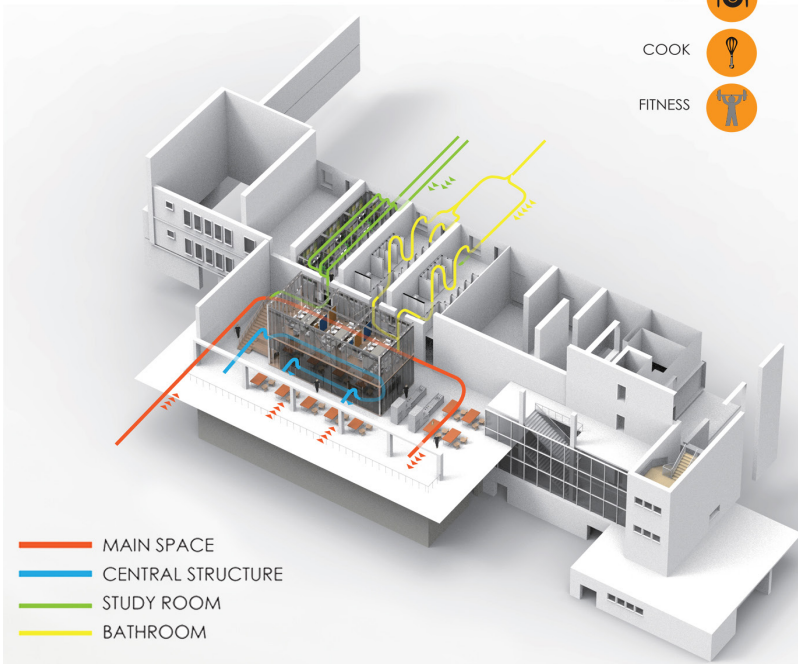
PRINCIPLE OF MODULARITY

CENTRAL STRUCTURE

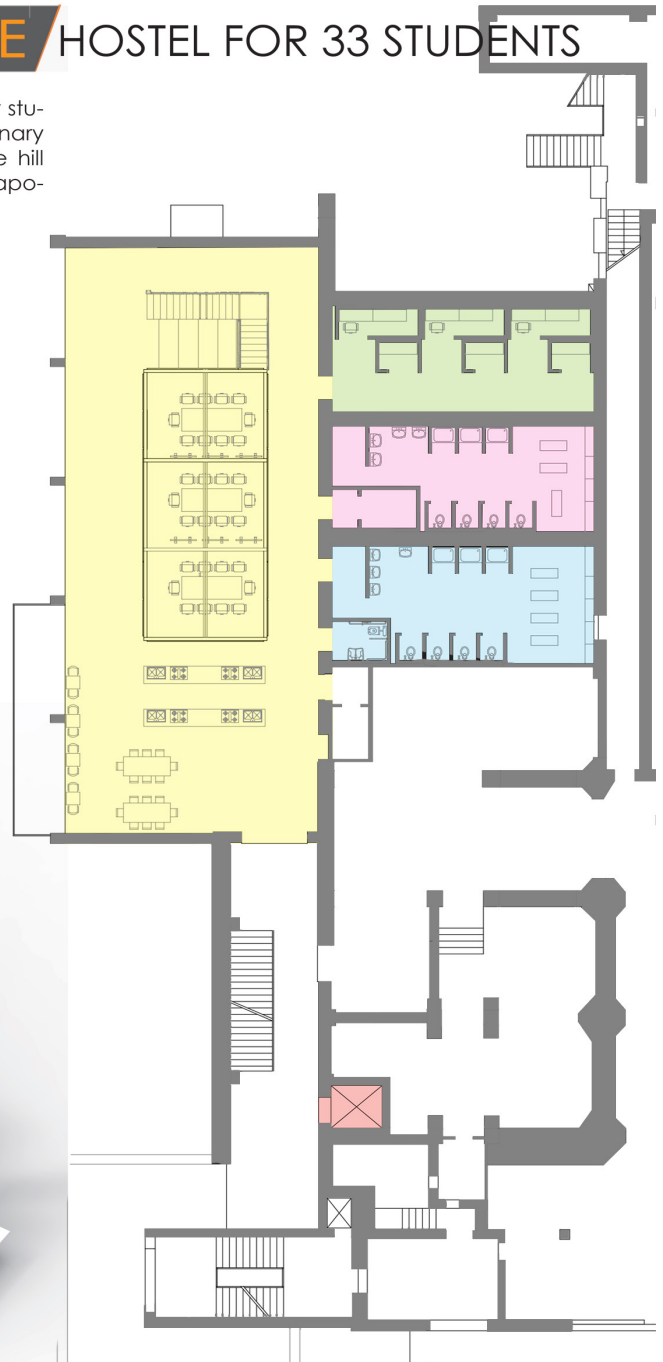


ACTIVITIES

- RELAX
- READ
- STUDY
- SOCIALIZE
- REST
- EAT
- COOK
- FITNESS



- MAIN SPACE
- CENTRAL STRUCTURE
- STUDY ROOM
- BATHROOM

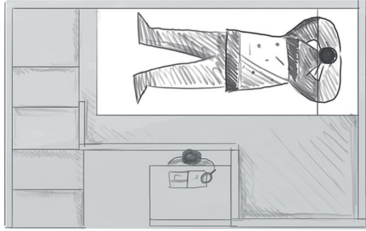


1

1. Example of 'servicepods' made off-site with cold-folded steel (CFS) systems and dry-assembled lightweight materials integrated into living spaces / Design by Carolina Spiezia, Xin Chen and Paola Tortora.

BOX.S

"s" for SHARING



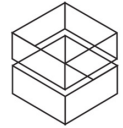
Upper view



Front view

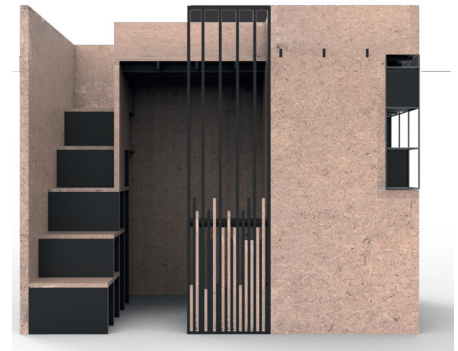
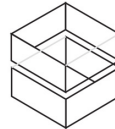
DISTRIBUTION

30 PODs for the floor



AGGREGATION

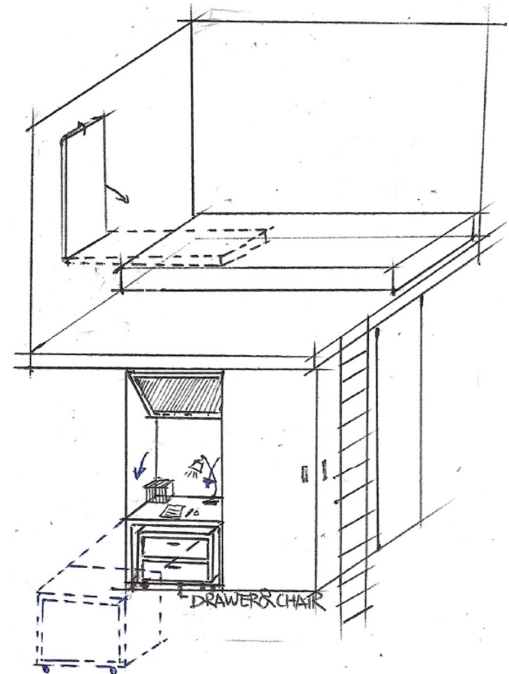
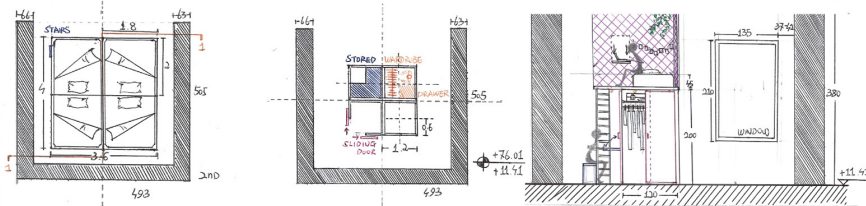
3 PODs for each room



2

mushROOM

hostel for 33 students_Dormitory

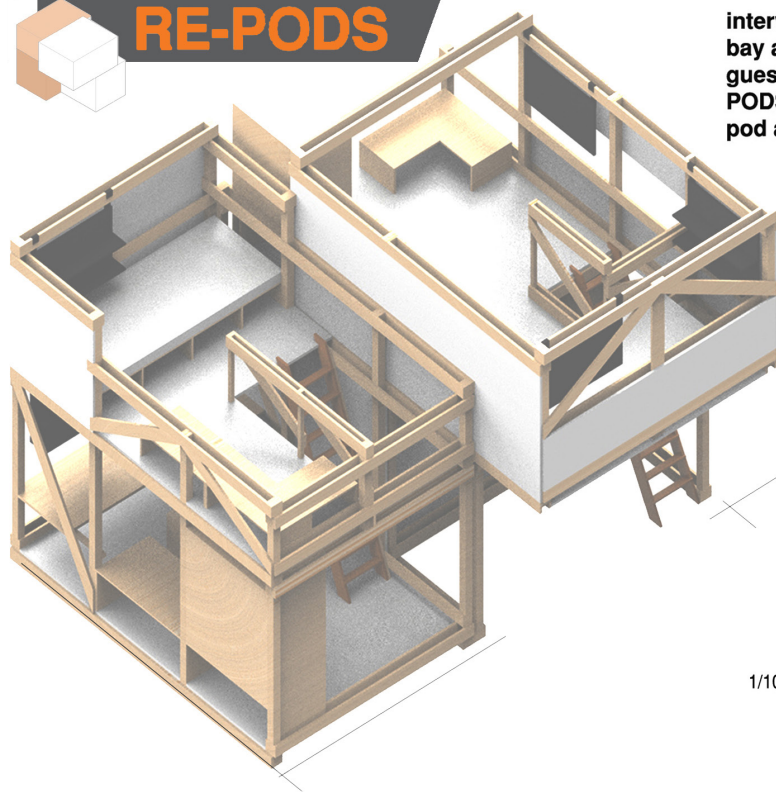


3

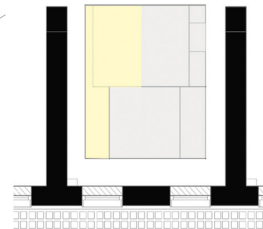
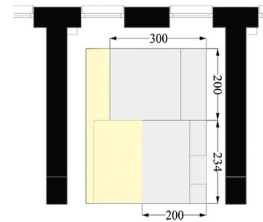
2. An example of living spaces falling into the 'cabin' category: "BOX.S" / Design by Domenico Aliberti, Alfonso Cirillo and Giacomo Cerutti;

3. An example of the 'cabin' category: "Mushroom" / Design by Carolina Spiezia, Xin Chen and Paola Tortora.

RE-PODS

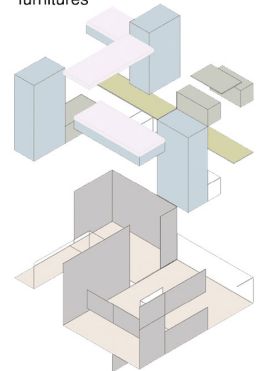


intervention area: 480sqm ca.
bay area: 52/55sqm ca.
guests: 30/33 students
PODS: 22
pod area: 6+4.7sqm

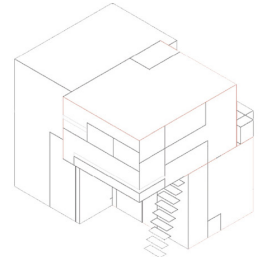


1/100

structural wardrobes and removable furnitures

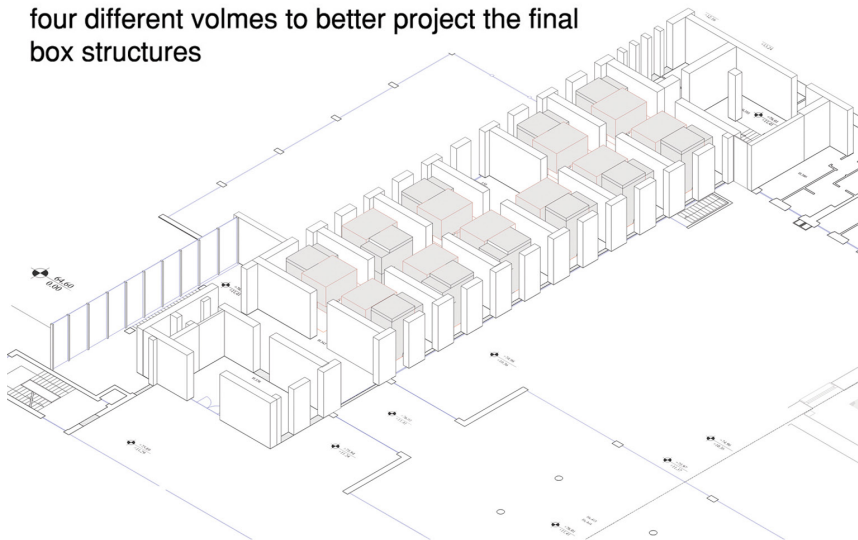


flooring and privacy panels



conceptual needs scheme

four different volmes to better project the final box structures



the footprint of the boxes is reduced to recreate with the corridor a common space for every room



4

4. Example of living space falling into the 'core' category: "RE-PODS" / Design by Giorgia Farina, Li Hodang e Riccardo Parmiciano Borgström.

3 it's the magic number



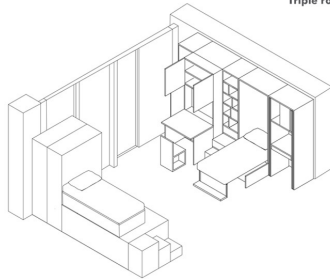
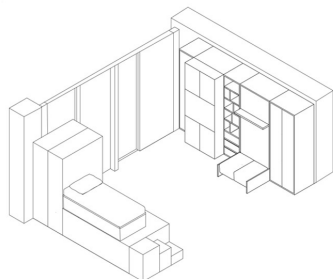
30

First solution.
The equipped wall is closed

First solution.
The equipped wall is partly open

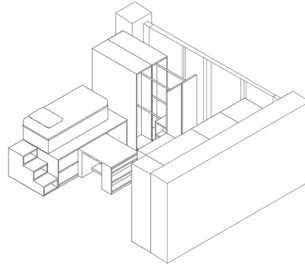
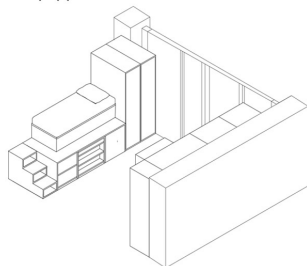


9 + 1
Triple rooms



Second solution.
The equipped wall is closed

Second solution.
The equipped wall is partly open

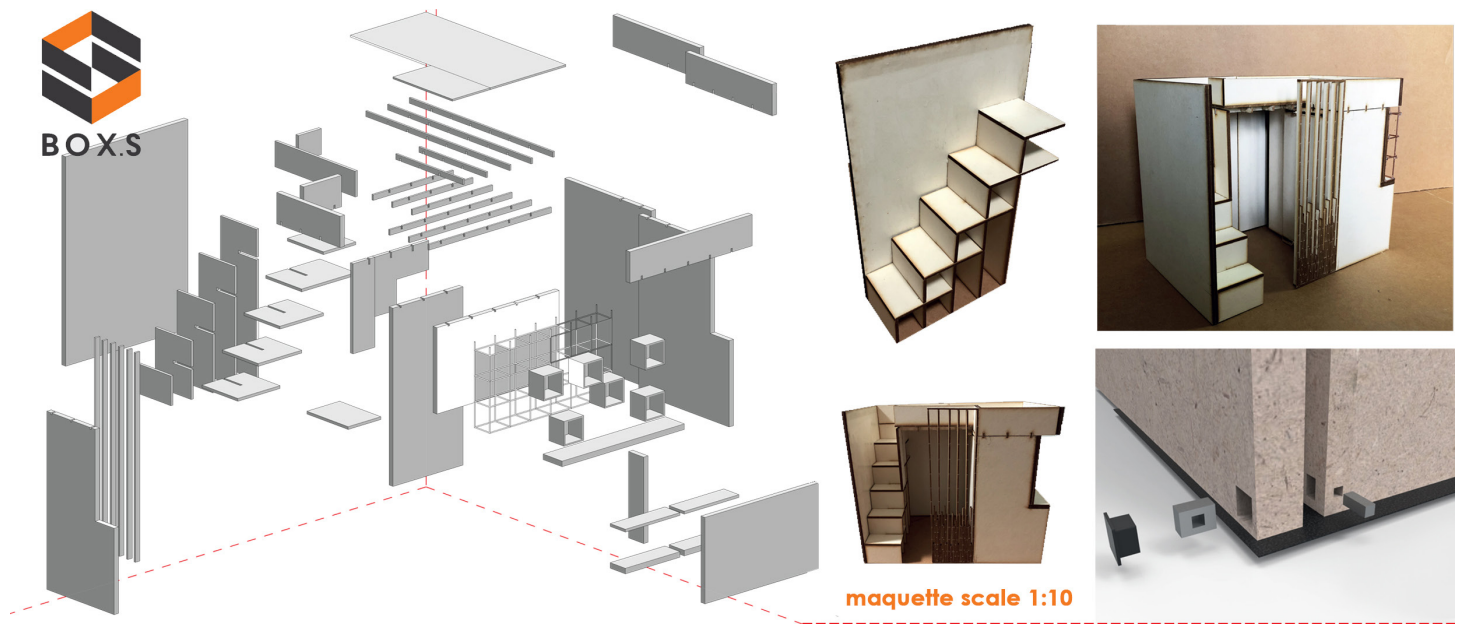


5

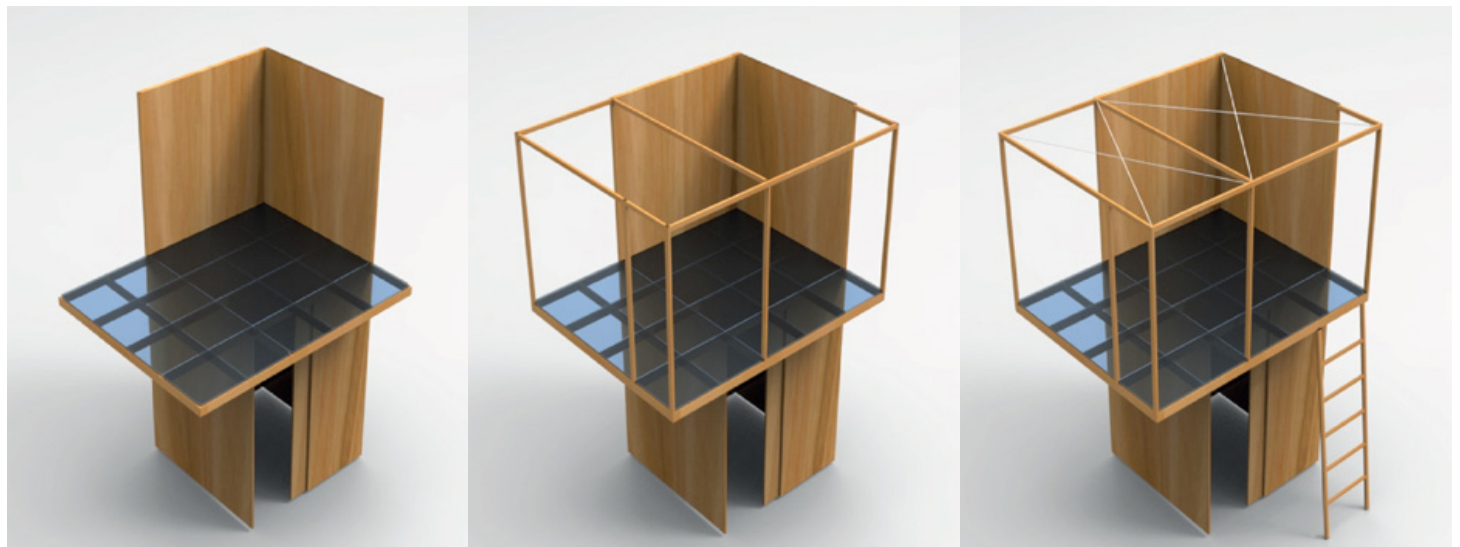


6

5. Example of living space falling into the 'equipped wall' category: "3 it's the magic number" / Design by Stephanie Bart-Mensah, Simona De Felice e Valentina Perrone; 6. Rendered views of the 'equipped wall'.



7



8

7. Defining the production and assembly process and relations with the space in terms of functional integration, provided through isometric exploded views and maquettes / Design by Domenico Aliberti, Alfonso Cirillo and Giacomo Cerutti; 8. Rendered three-dimensional views / Design by Carolina Spiezia, Xin Chen and Paola Tortora.