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URBANISM NEXT EUROPE 2021

FURNISH: Co-creating new public spaces in times of pandemic

Necessity, the Mother of All Inventions

Speaker: Dr. Inés Aquilué Junyent, CARNET – CIT UPC

CARNET

@UrbanismNextEU #UNextEU

Our Streets

Daily streets

Source: the authors.

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Our open streets

Expanded streets in
pandemic times and beyond

Source: the authors.

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FURNISH

Fast Urban Responses for New Inclusive Spaces and Habitat

Source: Elisava Team.

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Consortium

Led by:

CARNET

CARNET

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

Iaac Institute for advanced architecture of Catalonia

Comune di Milano

AGENZIA MOBILITÀ AMBIENTE TERRITORIO

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Source: Elisava Team.

Main objective

The main objective of the project was to generate a series of **Mobile Urban Elements (MUE) designed to be temporarily installed in public space**, newly expanded to fight against COVID-19 while promoting social cohesion.

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OBJECTIVES

- To promote social cohesion;
- To adapt temporary public spaces to meet the new challenges and opportunities that arise from the COVID-19 crisis; and
- To merge the challenge of gaining public space through tactical urbanism with local digital manufacturing.

Source: Elisava Team.

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METHODS

- Designs and prototypes were produced in collaborative workshops featuring all FURNISH teams.
- The testing and creation process was based in the Urban Living Lab methodology (end-users).
- Prototypes were digitally manufactured.

Source: EUAM & I+Arq Team.

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Urban living lab

Urban living lab, co-creation and the 4-Phases Model

Source: Aquilué & Caicedo, et al., 2021.

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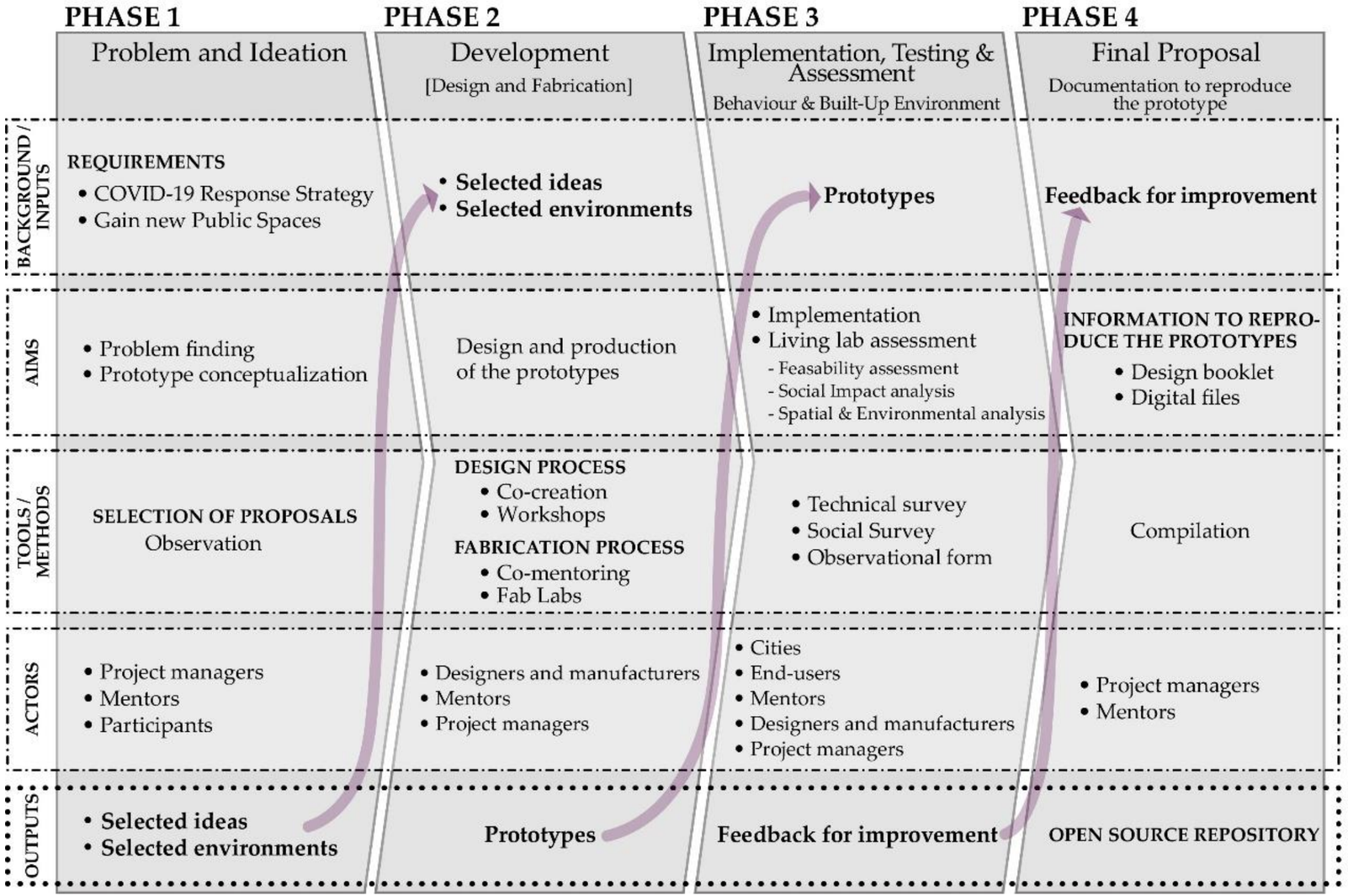
Urban living lab

4-Phases Model

Phase 1: Problem and Ideation
Phase 2: Development
Phase 3: Implementation & Assessment
Phase 4: Final Proposal



Source: Aquilué & Caicedo, et al., 2021.

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TEAMS

PROTOTYPE NAME	TEAM NAME	CITY	COUNTRY	DESIGN AND FABRICATION ENTITIES	No. DESIGNERS	No. MAKERS
AEIUO	EAUM & I+D+ARQ	Guimarães	Portugal	School of Architecture of the University of Minho / I+D+Arq Universitat Politècnica de València / Design Institute of Guimarães (IDEGUI)	12	8
KONCH	NOT-19 (Aalto Fablab)	Espoo	Finland	Aalto Studios / Aalto Fablab	4	4
THEATRON	BP Gang	Budapest	Hungary	Fabrikacios Laboratorium Ltd. / FabLab Budapest	8	5
MUE:SLI	UNPark	Milan	Italy	Studio Ghigos / IDEAS srl	9	6
EDUS	UPC Team	Barcelona	Spain	Universitat Politècnica de Catalunya (UPC) (ETSABEPSEB) / Model Laboratory of the Barcelona School of Architecture (ETSAB)	10	4
VORA	Elisava Team	Barcelona	Spain	Elisava Barcelona School of Design and Engineering	13	14
Open Terrace	IAAC Team	Barcelona	Spain	IAAC Valldaura Labs / Green Fab Lab	17	17

Source: Aquilué & Caicedo, et al., 2021.

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TEAMS

NOT-19 (Aalto Fablab) – Espoo – Finland

EAUM & I+D+ARQ – Guimarães – Portugal

BP Gang – Budapest – Hungary

UNPark – Milan – Italy

UPC Team – Barcelona – Spain

IAAC Team – Barcelona – Spain

Elisava Team – Barcelona – Spain

Source: Aquilué & Caicedo, et al., 2021.

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AGENTS

RESEARCH: Design teams & Fabrication Entities

COMMUNITY: End-users, neighbourhood communities and school students (depending on the project)

ADMINISTRATION: Local administration – Municipalities, Schools and Universities (depending on the project)

INDUSTRY: Fab Lab and Material Suppliers

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AGENTS

Design and fabrication teams are composed by: Fab Labs, research groups, designers or makers able to produce rapid solutions to the urgent spatial problems and opportunities posed by COVID-19 crisis.

LEVELS OF ACTORS

1º PROJECT COORDINATORS
Academia, Public Administators & City Planners

PROTOTYPE NAME	2º DESIGN COMMUNITY		3º END USERS & CITIZENS						4º LOCAL ADMINISTRATION
	DESIGNERS	MAKERS	BEFORE	DURING THE IMPLEMENTATION					
AEIUO (Guimarães)	12	8	passing by: 193 staying: 0 gathering: 39 interacting: 0	passing by: 194 staying: 38 gathering: 23 interacting: 80	**55 surveyed** Women 56% Men 42% Non-binary 2% N.A. 0%	AGE <18 7% 19-35 65% 36-65 24% >65 4%	OCCUPATION Student 65% Employee 15% Entrepreneur 4% Public worker 15% Others 2% N.A. 2%		Câmara Municipal de Guimarães (Municipality)
KONCH (Espoo)	4	4	passing by: 351 staying: 16 gathering: 19 interacting: 18	passing by: 275 staying: 55 gathering: 32 interacting: 28	**20 surveyed** Women 45% Men 45% Non-binary 10% N.A. 0%	AGE <18 0% 19-35 30% 36-65 70% >65 0%	OCCUPATION Student 10% Employee 60% Entrepreneur 5% Public worker 0% Others 10% N.A. 15%		Aalto University (University)
THEATRON (Budapest)	8	5	passing by: 41 staying: 2 gathering: 0 interacting: 0	passing by: 41 staying: 27 gathering: 20 interacting: 21	**65 surveyed** Women 72% Men 28% Non-binary 0% N.A. 0%	AGE <18 no data 19-35 no data 36-65 no data >65 no data	OCCUPATION Student 85% Employee 9% Entrepreneur 5% Public worker 2% Others 0% N.A. 0%		None
MUE:SLI (Milan)	9	6	passing by: 621 staying: 6 gathering: 0 interacting: 0	passing by: 422 staying: 164 gathering: 113 interacting: 56	**59 surveyed** Women 41% Men 56% Non-binary 3% N.A. 0%	AGE <18 7% 19-35 17% 36-65 63% >65 14%	OCCUPATION Student 7% Employee 53% Entrepreneur 17% Public worker 2% Others 17% N.A. 5%		Comune di Milano (Municipality)
EDUS (Barcelona)	10	4	passing by: 496 staying: 26 gathering: 17 interacting: 17	passing by: 846 staying: 257 gathering: 200 interacting: 68	**18 surveyed** Women 67% Men 33% Non-binary 0% N.A. 0%	AGE <18 83% 19-35 17% 36-65 0% >65 0%	OCCUPATION Student 94% Employee 0% Entrepreneur 0% Public worker 6% Others 0% N.A. 0%		INS Barri Besòs (High School)
VORA (Barcelona)	13	14	passing by: 1.054 staying: 243 gathering: 231 interacting: 227	passing by: 2.159 staying: 215 gathering: 152 interacting: 217	**102 surveyed** Women 68% Men 31% Non-binary 0% N.A. 1%	AGE <18 10% 19-35 16% 36-65 72% >65 3%	OCCUPATION Student 13% Employee 40% Entrepreneur 11% Public worker 26% Others 8% N.A. 2%		Ajuntament de Barcelona (Municipality)
Open Terrace (Barcelona)	17	17	passing by: 208 staying: 32 gathering: 17 interacting: 17	passing by: 180 staying: 30 gathering: 18 interacting: 19	**13 surveyed** Women 38% Men 46% Non-binary 8% N.A. 8%	AGE <18 8% 19-35 58% 36-65 38% >65 0%	OCCUPATION Student 38% Employee 62% Entrepreneur 0% Public worker 6% Others 0% N.A. 0%		Ajuntament de Barcelona (Municipality)

Source: Aquilué & Caicedo, et al., 2021.

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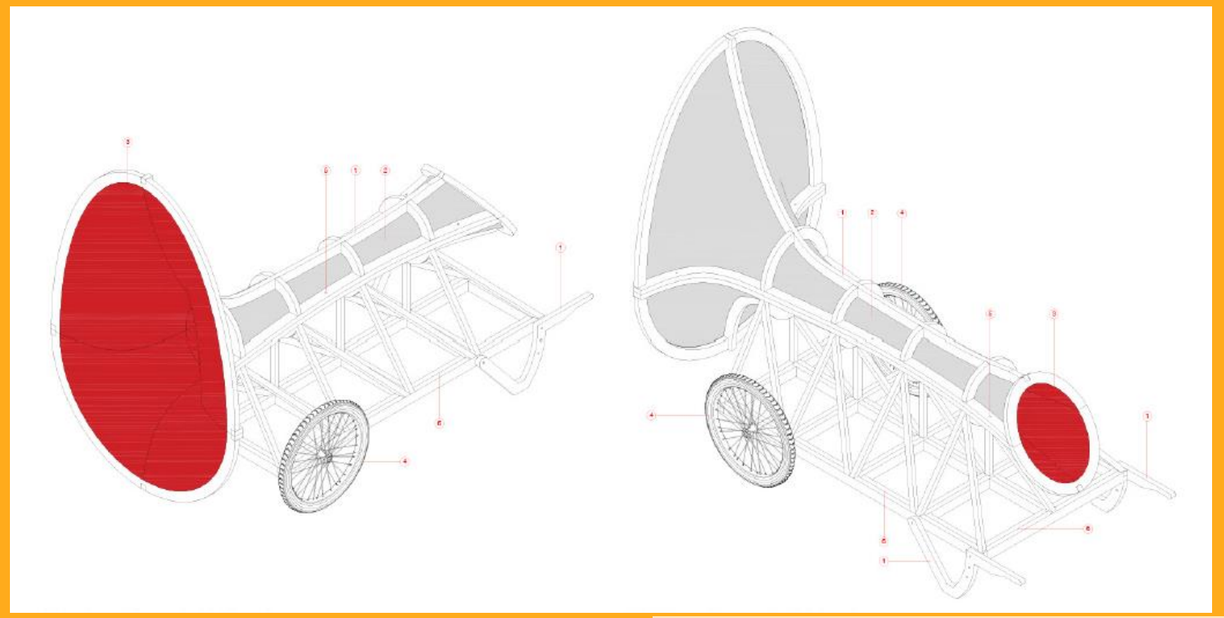
4-Phases

Urban Living Lab
Methodology



Source: EAUM & I+D+Arq Team.

Source: NOT-19 Team.

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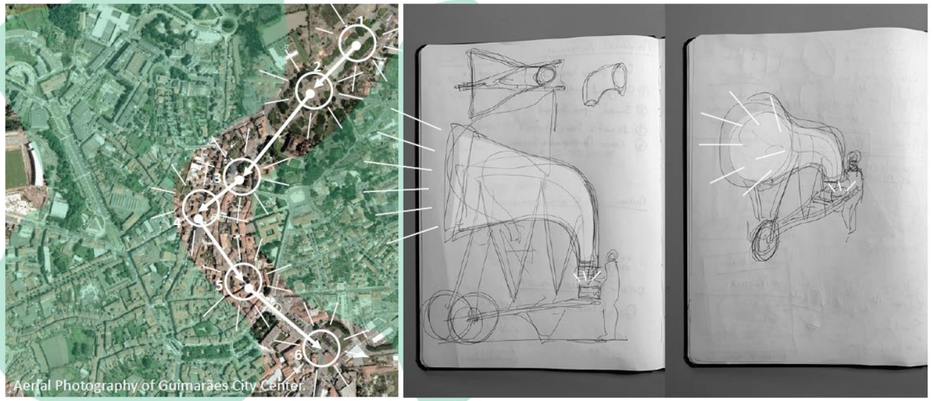
Phase 1: Problem and ideation

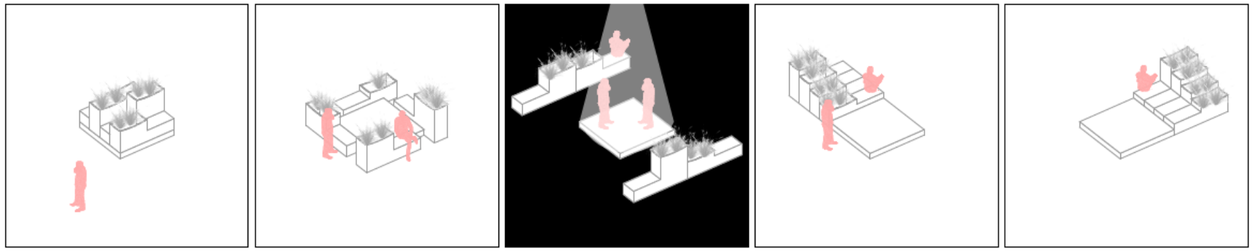
First design approach, co-creation workshops, sketches, discussions

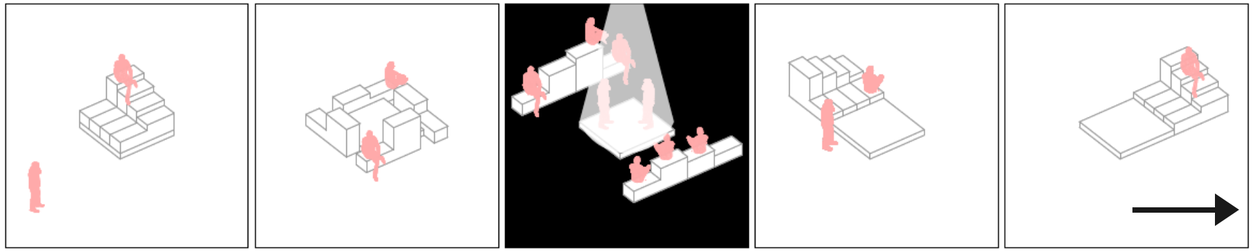
DESIGN PROPOSAL concept

It is proposed a performative device, in which anyone can perform, providing sound amplification to the nearby community. It is envisaged a mobile device, operated by one (or two) individual(s), being able of playing the drum with the sound propagation through a large-scale megaphone.



The project will take place in Guimarães urban and historic center at representative moments of the Pinheiro parade, namely at (1) Campo de São Mamede, (2) Castle, (3) Carmo Garden, (4) Palheiros Street (Humberto Delgado Av.), (5) Santiago Square and (6) São Gualter Church.





Source: EUAM & I+D+Arq Team; BP Gang Team.

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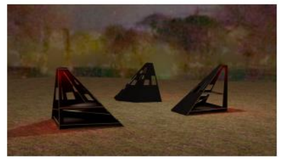
Phase 1: Problem and ideation

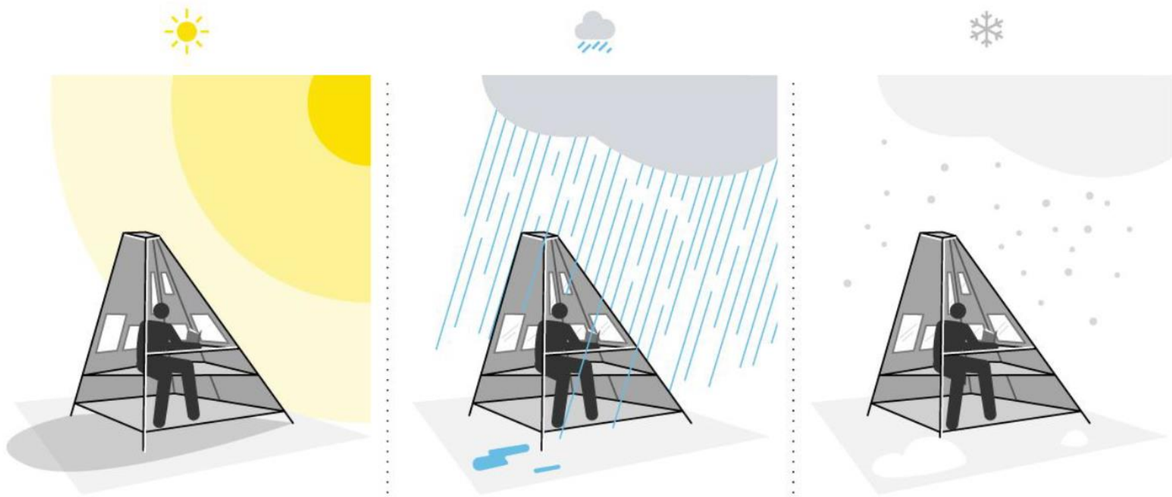
First design approach, co-creation workshops, sketches, discussions

What? Modular Outdoor Classroom, Connected via Radio Links

Initial Sketch



When? In Use Despite the Weather Conditions



Source: NOT-19 Team.

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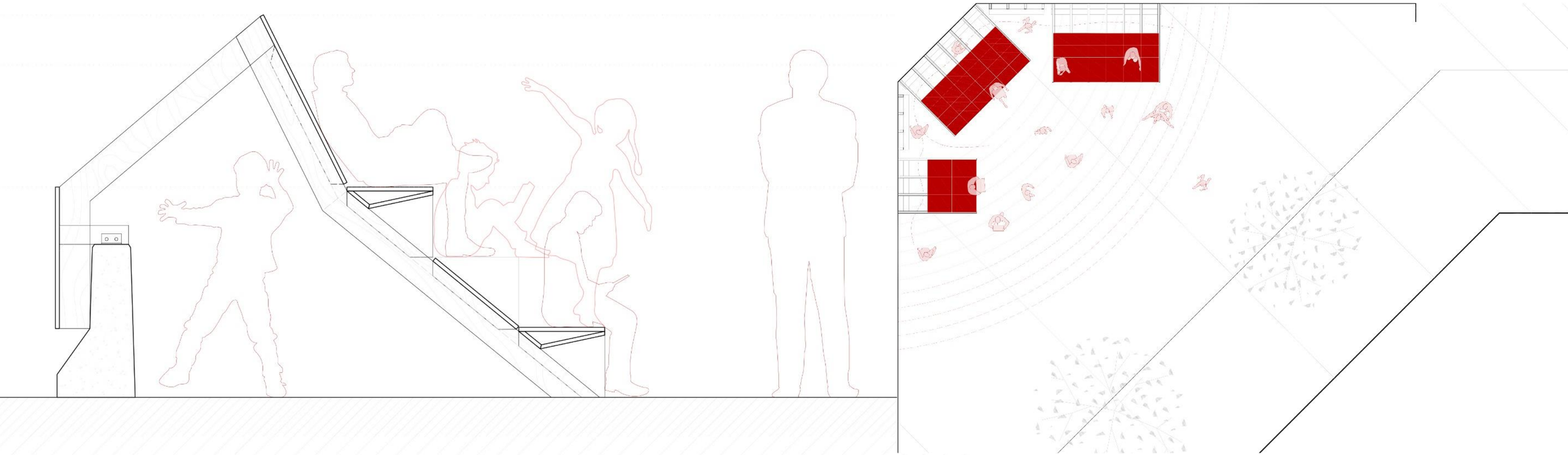
Phase 2: Development

Design, technical approach



Source: Elisava Team.

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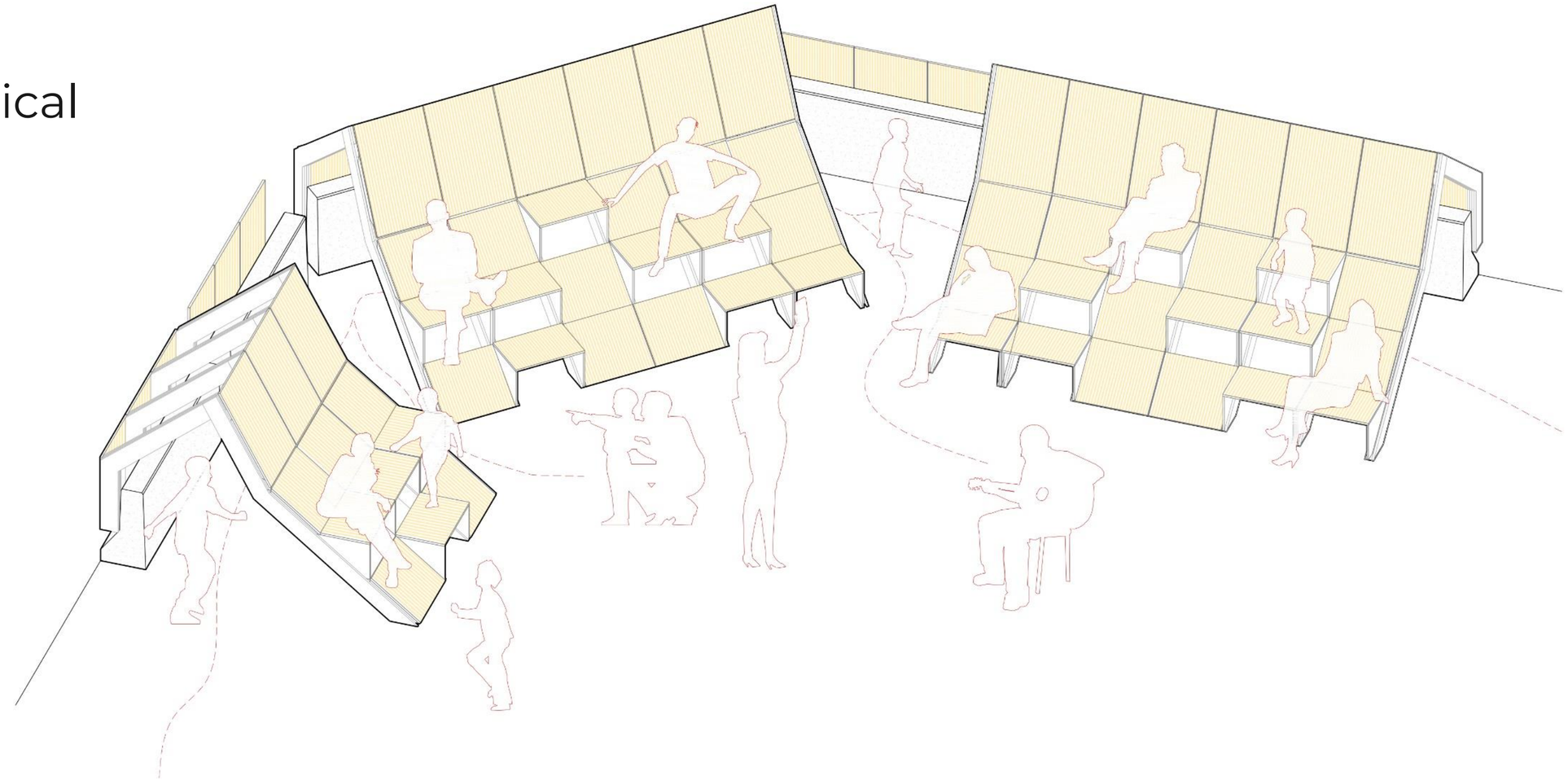
Phase 2: Development

Design, technical approach



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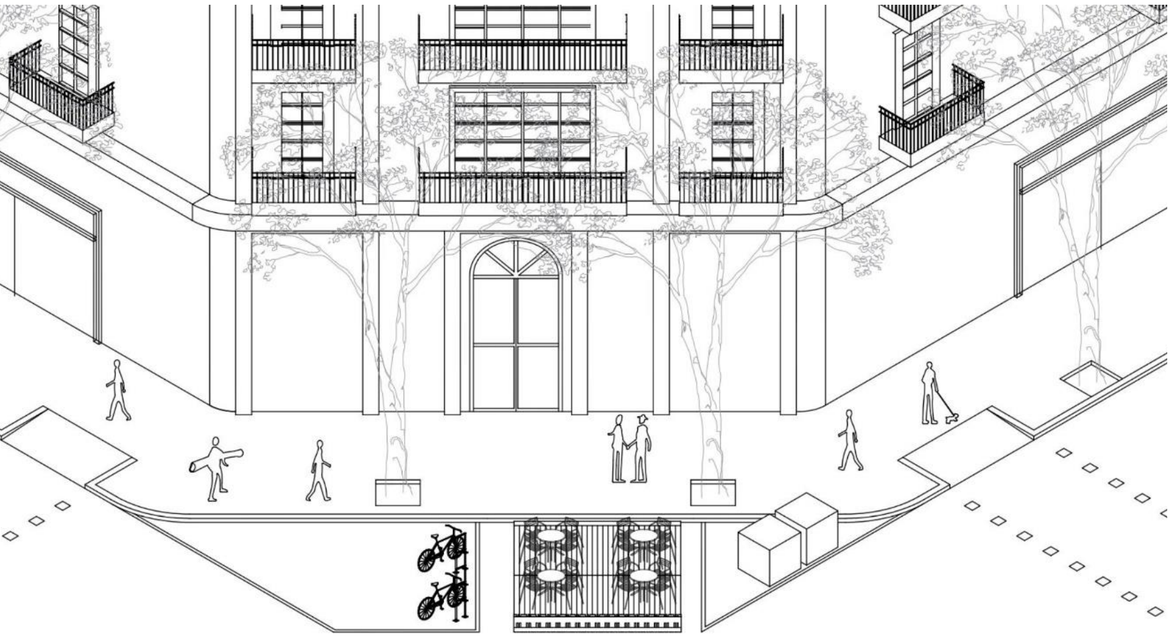
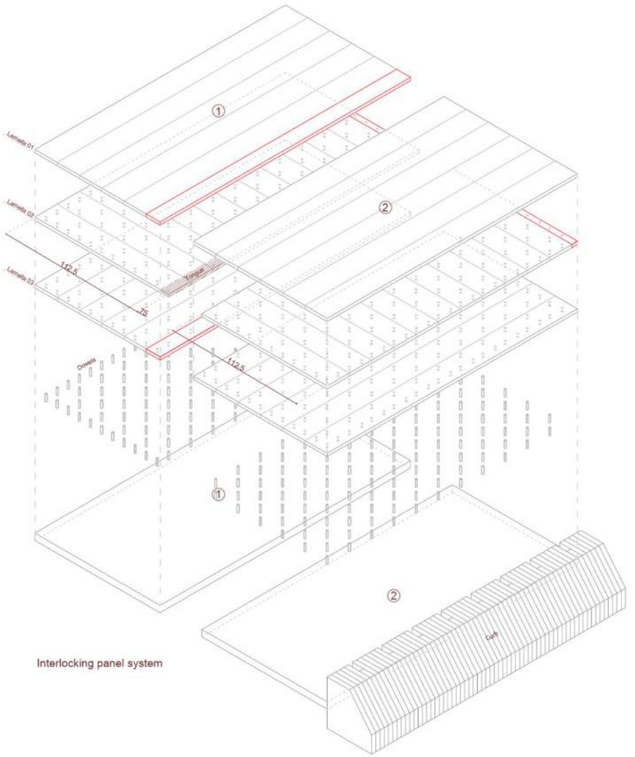
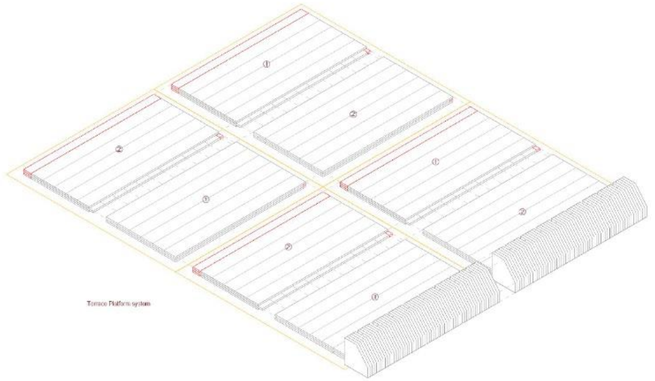
Source: Elisava Team.

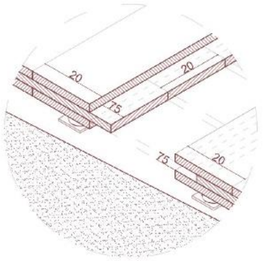
Phase 2: Development

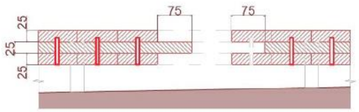


AXONOMETRIC
OF PROPOSAL WITH WOODEN PLATFORMS MATCHING THE LEVEL OF THE SIDEWALK









EXPLODED AXONOMETRIC AND
CONNECTION DETAILS
OF CLT PLATFORMS

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Source: IAAC Team.

Phase 2: Development

Fabrication, technical approach

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Source: NOT-19 Team.

Phase 2: Development

Fabrication, technical approach

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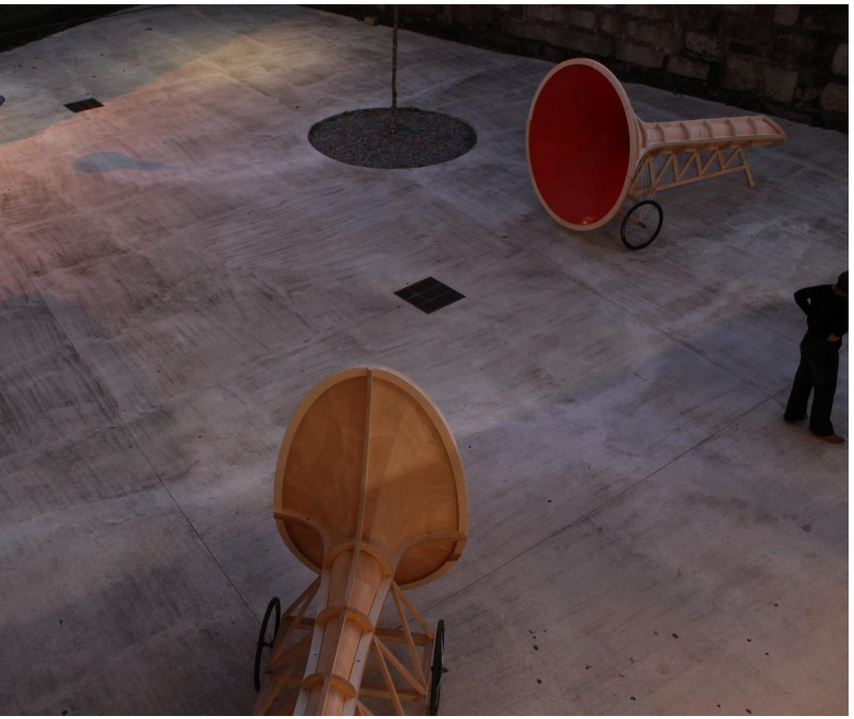
Source: EUAM & I+D+Arq Team.

Phase 3: Implementation, testing and assessment

Implementation in public space



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Source: EUAM & I+D+Arq Team; NOT-19 Team; Elisava Team.

Phase 3: Implementation, testing and assessment

- Impact analysis I—Feasibility: confirming each prototype's fabrication assessment;
- Impact analysis II—Social impact: evaluating the social impact involving end-users (gets their direct feedback);
- Impact analysis III—Spatial impact: analyzing the prototypes' spatial impact in the allocation spaces (changes, mobility patterns, etc.).

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Phase 4: Final proposal

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Source: EUAM & I+D+Arq Team; BP Gang Team, NOT-19 Team, UN Park Team, UPC Team, Elisava Team IAAC Team.

Phase 4: Final proposal

RESULTS: https://furnish.tech/results/

The FURNISH consortium is delighted to announce that all 7 design teams have successfully developed, fabricated, installed and tested their prototype urban elements, which combine tactical urbanism with local digital manufacturing to make public spaces safer, more comfortable, and more engaging for use during COVID-19.

Link to Design Booklet PDF
Link to complete open source design and fabrication package

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Expanding our public space

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FURNISH: Transforming our public space

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FURNISH PROJECT

Visit our website: **https://furnish.tech/results/**

FURNISH is a project supported by EIT Urban Mobility, an initiative of the European Institute of Innovation and Technology (EIT), a body of the European Union.

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Thank you!

Do you have any question?

Ask Dr. Inés Aquilué Junyent, ines.aquilue@carnetbarcelona.com

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