OMNIA

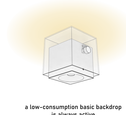
DOMOTIC SYSTEM

project type:	Bachelor's final syntesis project Academic Partnership with Artemide
end date:	jan 2023
duration:	4 months
teammates:	A. Cesa	A. Tomaghelli
academic partner	Artemide SpA

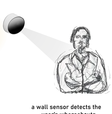
Omnia is a lighting system made up of six elements which share the same formal module, re-evaluated and sized according to the different task they ought to perform, in a total connection to a single unified system.
The work focused on designing an automatic domotic service, or smart mode: essentially a tracking system to which all the elements are connected, that will intensify the luminosity of the source based on practical needs, with a direct improvement in everyday life.

"WHEREVER YOU WILL BE. THERE WILL BE A LIGHT"

The automatic system has a dual purpose: on the one hand it considerably reduces unnecessary energy waste, and on the other it is an element of great comfort for the user, who is followed and accompanied during his daily activities without worrying about switching off anything.



a low-consumption basic backdrop is always active



a wall sensor detects the user's whereabouts

the light intensifies gradually, based on proximity

with movement, light softly dims following the user

if nothing is detected, the system deactivates

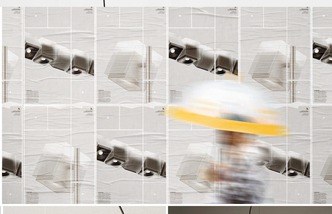
SIMPLE SHAPES FOR UNIVERSAL NEEDS

The formal reference for the lamps is a simple cube in extruded aluminum, in which two light sources are placed: the lower one provides a localized task light, while the upper one provides ambient light, damped and refracted by a second semi-transparent cube.

A VERSATILE FAMILY SYSTEM

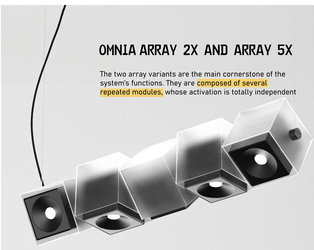
One of the objectives was to create a universal system that could be adapted to numerous environments: for this reason the formal line pursued was minimalist and essential, in line with Artemide's identity, and various different solutions have been conceived within the same system.

the family includes:
Omnia Standalone
Omnia Standalone XL
Omnia Array X5
Omnia Array X2
Omnia Floor
Omnia Wall



OMNIA ARRAY 2X AND ARRAY 5X

The two array variants are the main cornerstone of the system's functions. They are composed of several repeated modules, whose activation is totally independent



OMNIA FLOOR

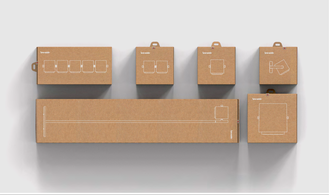
The luminous cube plays an absolute protagonist role: the thin rod supporting it highlights the formal value of the spotlight and raises it.

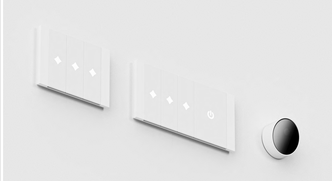
OMNIA WALL

A compact and adaptable element, designed for those narrow spaces that are difficult to spotlight.

OMNIA STAND-ALONES

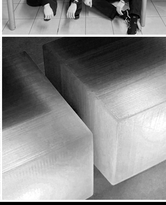
Versatile lights in two dimensional variants, embodying an elementariness designed to be placed on furniture or on the floor. They are equipped, like all the other elements, with switches for manually bypassing the smart mode.





PROTOTYPING

The Omnia system has been accurately recreated using dimmable led rods with wi-fi connection and various 3D printing technologies,



VLAD

LIFE ASSISTANT

project type:	academic solo project
end date:	feb 2022
duration:	2 weeks

Vlad is an anthropomorphic clothes hanger that cares to help users in every way possible: his broad sombrero can keep in reach your phone, wallet, keys and other such things, while his arms and legs will keep all the user's clothes safely off the ground. Being Vlad the humorous prankster that he is, however, there is a twist, as his wardrobe capability has a maximum limit: following a Machiavellian view, the more you are dull and careless, the worse the consequences will be, inviting you to act thoughtfully on time.

his broad sombrero can accommodate all your random junk,

and his arms will keep all the user's clothes safely off the ground...

...but don't overweight him, or he will feel tired and his arms will collapse!

You can also dress him up - he loves cosplay!

PARADOXICAL DESIGN

Vlad helps against letting you know when it's time to be productive and tidy up. To do so, he fails in his main purpose, ding clothes steadily: Vlad is a design that acts and educates through a counterintuitive - albeit programmed - inefficiency.

GUTA

DRINKING AID SYSTEM

project type:	Academic project
end date:	jun 2024
duration:	5 weeks
teammates:	S. Mengarelli	C. Piazzolla A. Salis	N. Tosello

Guta is a hacked product-service system designed with the aim of expanding overall accessibility and keeping track of the water quality in regards of the iconic Milan public fountains, the Vedovelle. Guta is composed of three add-ons and an integrated digital service that gets translated in a touch point via an app.
The main challenge with Guta was designing a hacking procedure that would not interfere too much with the iconicity of Milanese fountains.

TARGETING BOTH USERS AND MAINTAINERS

The research was conducted via a large scale data gathering and by directly collaborating with the foundries where Vedovelle are produced and with the maintenance company itself, MM.

IN MILAN THERE ARE 688 PUBLIC WATER FOUNTAINS, PUMPING UP TO 864.000 LITERS OF WATER A DAY

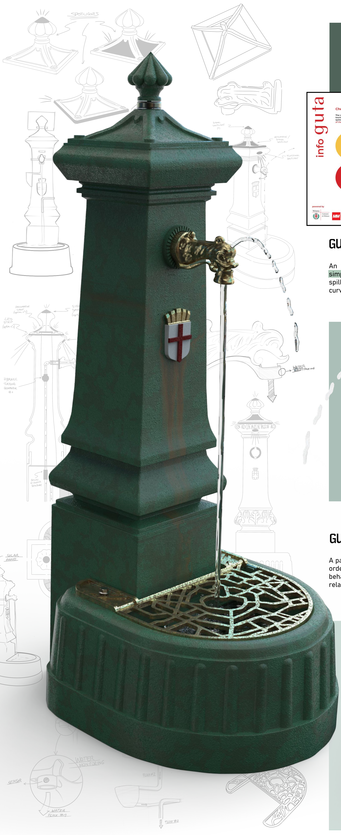
Milan's Vedovelle rich history and their iconic easily recognizable shape make them a staple of the city's identity that has to be left unaltered.

THE HACKING UPGRADE IS MADE OF THREE PHISICAL ADD-ONS AND A DIGITAL SERVICE

Vedovelle are to be fitted with add-ons that bring small improvements to the current uses, limit the need for maintenance and make monitoring easier.

GUTA LUZ

Milan's fountains are often hard to spot, and nor water quality nor interactions are monitored in real time. Guta Luz deepens user experience giving back in advance a complete report of each Vedovella.



GUTA CICININ

An easy to install parasitic product that regulates water flow through a simple twist in order to make the interaction with the fountain easier and spillage-free for all kinds of users. Lost wax casted shapes follow the lap curves without overshadowing too much past aesthetics.

GUTA BASIN

A parasitic casted brass grill, designed to cover perfectly the fountain tank in order to ensure functioning drainage, preventing debris or ill-mannered behaviours from clogging it. The city maps inspired pattern enhances the relationship between Milan and its fountains.

PCB NESTING

underneat the top cover there is a 5V battery, the PCB, the esp32 board and the BMS

TDS SENSOR

checking for water purity and constantly sends quality updates to the pcb

HYDRO-GENERATOR

mounted on the water pipes the turbine generates clean energy that powers the whole system

LED. PROX SENSORS

lighting up the fountain during the night and collecting data about use and vandalism times

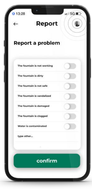
WATER LEVEL SENSOR

reporting irregular values linked to clogging in order to warn for immediate mantainance

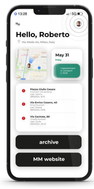
GUTA APP SERVICE

The app acts as a mapper for all the municipalities fountains and their status

Citizens can monitor water quality and use the built in navigator to get to the fountain

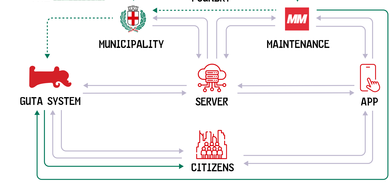


If there is a problem with the fountain, it can be easily reported directly in-app



A dedicated section for maintainers themselves has built-in report mapping and operations planning

RAISING THE FOUNTAINS TO THE NETWORK



MAIALINO

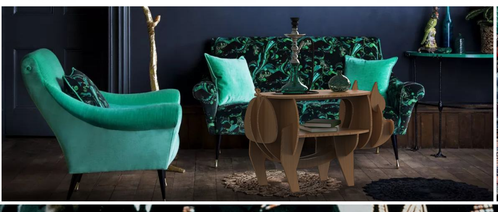
SUIFORME COFFE TABLE

project type:	Wood design prototypation
producer:	partnership with Artwood Academy (Camnago MB)
end date:	dec 2023
duration:	2 months
teammates:	S. Ciccia	F. Busani	M. Foieni

Maialino is an exuberant and histrionic piece of furniture, meant for the lounges of those who know how to not take themselves too seriously. It's a provocative statement piece made entirely of dry-assembled CNC-cut wood panels. Despite its rural appearance and the obvious satire behind it, it's still a completely functional coffee table.

PRODUCTION

Maialino is assembled by its users from a total of 19 CNC-cut pieces, without the need of any nail, screw or glue. The project focused on the feasibility of the product with a practical approach;
Designers and technicians worked side by side trough multiple attempts trying to maximizing efficiency. CNC techniques were studied and applied directly by our team, thanks to our hosting partner.



PROTOTYPATION AND SALONE EXPOSITION

Maialino was produced in a small batch and exhibited by Artwood Academy, our partner, at the Salone Satellite during the 2023 Salone del Mobile.

FLUPPETE

CAMPERVAN INTERIORS

project type:	academic partnership with Trigano Spa
end date:	june 2022
duration:	4 months
teammates:	S. Boni, E. Teruzzi, M. Pasquini

Fluppete is a resourceful proposal for a new generation of long-term usage campervans, based on the FIAT's 5.9m Ducato minivan.
The concept, rooted in vandwellers' habits, aims to create a completely flexible and customizable environment that could adapt and evolve to better answer the user's needs; the outcome is a dynamic layout that can be mechanically arranged with very few operations, resulting in a lively, young solution.

ESSENTIALITY WITH NO COSTRAINTS

extendible toilet with pop-out shower to maximise space

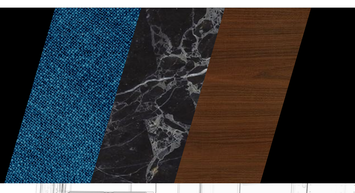
COMFORT IN A NEW WAY

MODULAR, PERSONALIZABLE FURNITURE

polyfuctional system based on wall mounted modules

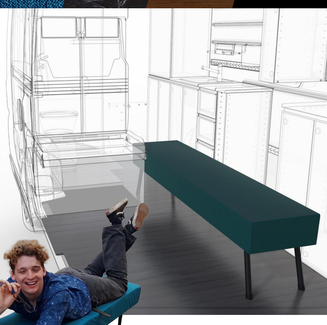
ELEGANCE
ADAPTABILITY
CUSTOMIZATION

The project represented a complex challenge: the goal was to merge the endless possibilities of a transformable space with the taste and prestige of the Trigano brand - an ambition that is reflected in the choice of the materials used.



FLUPPETE BENCH EXTENSION FOR A DISAPPEARING BED

The redesigned of the homologated back seats made them transformable into a queen-size bed. The Fluppete itself is a congenial piece of furniture that can be employed both as a bed extension or as a separate entity for sitting or relaxing during the day.



SPACE EFFICIENT BATHROOM

Mounting a pop-out shower on the back door not only creates an alternative entrance but also takes advantage of the tailgate volume to largely increase the bathroom's total area, which in other models is usually underrepresented.

POLYFUCTIONAL CUSTOMIZABLE MODULAR FURNITURE

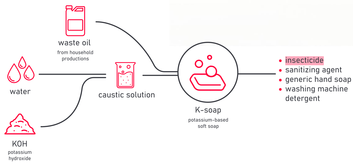
the side wall can be furnished by choosing within many interchangeable modules, in order to meet the most diverse needs through a variety of different element. With a few fairly simple operations it will thus be possible to transform and re-adapt the living space.

RESOAP

OPEN-SOURCE SAPONIFIER

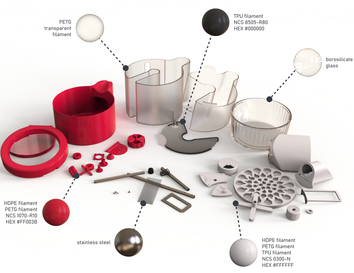
project type:	Academic project
end date:	apr 2024
duration:	6 weeks
teammates:	S. Mengarelli	C. Piazzolla A. Salis	N. Toselio

Resoap is a stackable, open source kit that transforms discarded oil wastes into a potassium-based non-toxic pesticide. The system exploits a simple saponification reaction, making it easier to replicate into urban gardens; each module has a specific function with the aim of making the whole process controlled, straightforward and easy to understand; all while including all safety measures.



AIDING URBAN GARDENS BY ELIMINATING WASTES

Waste Oils are an environment hazard and potassium soap is a circular, non-toxic and multi-purpose resource. A saponifier unit is thus particularly suited for communal spaces, as material collection is optimized and the product can be used in a more efficient form. A dual purpose is fulfilled: a difficult to discard waste is transformed into an useful alternative for the community.

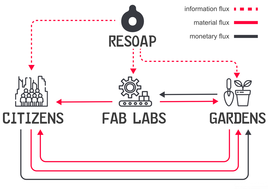


RESOAP IS OPEN SOURCE: ITS FABRICATION FILES ARE PUBLICLY AVAILABLE, AND IT'S DESIGNED TO BE DIY.

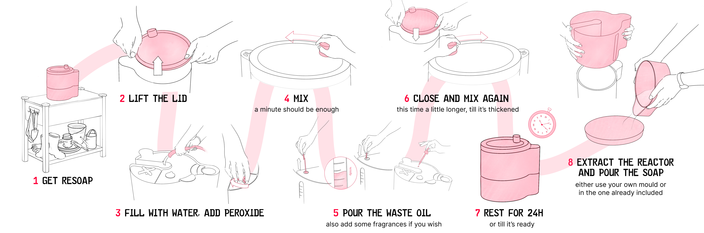
Included with the 3d files there are slicing instruction for the 3D printing, assembly instruction for putting the product together and detailed steps for recreating the saponification reaction safely.

FAB-LAB ORIENTED SERVICE

To complete the project, some hypothesis were carried out in terms of imagining how the online assistance and distribution service could work out.



CLICK TO VIEW FABRICATION INSTRUCTIONS AND USER GUIDE



OIL PISTON

oil pouring is activated by pulling a spring-based piston. A TPU cap secures hermetically the liquids.

KOH DISPENSER

a dosing mechanism in the dispenser allows to automatically portion the potassium hydroxide.

OIL FILTER

a metal mesh mounted on a sliding chassis gets inserted into the main strainer structure.

POURING SPOUT

the reactor end is funnel-like shaped in order to avoid spills

MIXING BLADE

the manually activated spinning blade blends all the components, while the reactor remains covered

SONORA

WAGON REFURBISHING

project type:	Academic partnership with various NGO organizations
end date:	jun 2023
duration:	3 months
teammates:	FADU's architecture and urbanism team
whereabouts:	Hurlingham, Buenos Aires; developed during an international exchange at UBA

Non-profit associations collaborated with students in the design and creation of a multifunctional space for underrepresented communities.
The reconditioned wagon, a symbol of rebirth in a marginalized neighborhood, offers a communal space that is equally suitable for children eager to play, for teens to stay off the streets and for the elderly to share their stories: here the recording headquarters of "Radio Sonora" produce socially committed media.

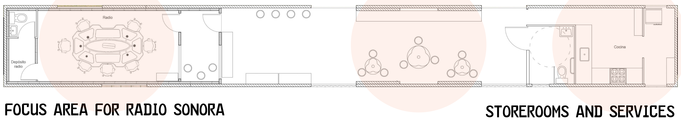
THE PROJECT IS A NON-PROFIT COLLAB BETWEEN THREE DIFFERENT ENTITIES WORKING TOWARDS A COMMON GOAL:

Sonora Social NGO promotes culture and equity in underdeveloped parts of the urban agglomeration, using visual and radio languages as a mediating tool.

The SiuS uni course gathers students from different disciplines, making them apply the skills learned during studies on a real case, with concrete limitations.

The state-owned rail company provided a disused wagon, the land ownership for placing it and volunteered the manpower and all materials for the refurbishment.

MAIN COMMUNITY SPACE



FOCUS AREA FOR RADIO SONORA

STOREROOMS AND SERVICES

MAIN COMMUNITY SPACE

The central area is conceived as a continuous space that can accommodate all of the many different cultural and educational activities organized by the Sonora: the open space promotes socialization and community aspects.

STOREROOMS AND SERVICES

A small kitchen and two bathrooms have also been added: the aim was to design an an attainable space for real life use, complete in every possible detail. Custom interiors are one of the means of pursuing an identity campaign.

FOCUS CABIN FOR RADIO SONORA

Radio broadcasting and podcasts are the heart of the association's activity: the space is designed to encourage dialogue between equals; through direct participations of the local population awareness is raised on sensitive issues. The table allows an unfiltered conversation where nobody shall be isolated.

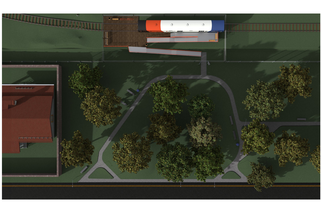
GIVING A VOICE TO THOSE WHO DON'T HAVE ONE

COMMUNICATING THE UPDATE

The graphic design team also focused on the communicative aspects, developing a new logo, ads and posters to better represent the refurbished identity of the NGO.

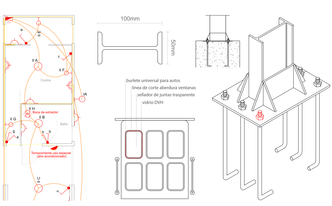
A WORK IN PROGRESS...

The wagon will occupy a space nearby the Hurlingham station, some 22 km deep into the suburbs. The project also consisted in designing the connections to the pedestrian paths, an access ramp and an outdoor patio with benches and racks.



...COMPLETE IN EVERY DETAIL

Since the work was needed by the ONG to proceed, detailed technical tables and charts had to been drawn for all of the furniture, for the hydraulic and electrical systems, for the insulation of the wagon and for the access ramp.



SAHMAT BAR

HISTORICAL SITE REPURPOSING

project type:	Academic exchange workshop
end date:	feb 2023
duration:	1 week
teammates:	E. Abdullayeva | G. Deangeli N. Mahmudova | R. Murtuzaliyev
whereabouts:	Old Karavenseraj, Baku city center, Azerbaijan

Italian and Azerbaijani students collaborated for the requalification of a city Caravanseraj, a fortified inn where historically travelers and merchants could rest and trade safely. The place has been redesigned as a club specifically dedicated to board games, especially chess and backgammon, which are very popular in the Caucasian region and which represent an important part of the local culture.

RECEPTION SPACE

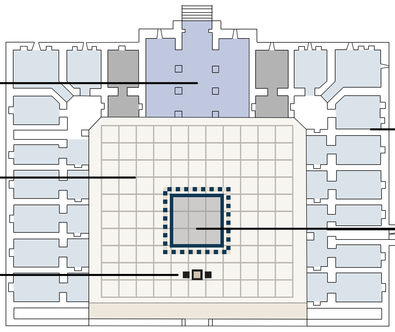
for welcoming guests at the entrance, wardrobe service is provided

LARGE CENTRAL HALL

the open epicenter of all social activities, where most of the seating is found.

SPOTLIGHT BOARD

reserved for games of public interest



BOOKABLE SIDE ROOMS

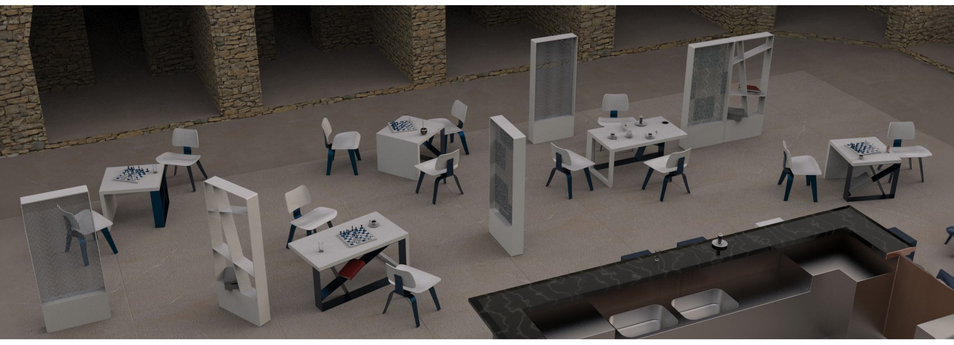
intimate spaces that can be requested and occupied by private groups

SQUARE BAR COUNTER

positioned in the planimetry center

FOSTERING INTERCONNECTION THROUGH CHALLENGES AND DIALOGUES

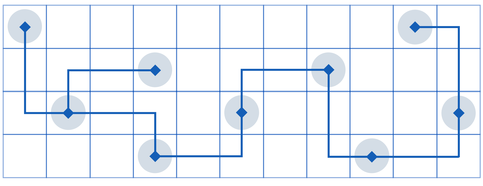
Caravanserais once supported the flow of cultures and people across a huge regional network. The team tried to preserve the same spirit of sociability by declining it in a new modern way, creating a space that favors dialogues. Board games are thus an opportunity to forge human relationships, in line with the original purpose of the environment.



A MODERN APPROACH LINKED TO TRADITIONS

A specific range of furniture has been designed for the club spaces; The simple modern tables, available in many dimensional variations, play on the contrast with the antiquity of the building itself. Some room dividers promote the privacy and tranquility of the players, taking inspiration from the key theme of traditionally woven carpets and maintaining continuity with the past

The position of the gaming stations is not casual: tables and dividers are positioned according to an L-shaped layout, like the movements of the knight in a game of chess. This way, waitering is favored and an optimal spacing is obtained for players' focus.



PARKSIDE

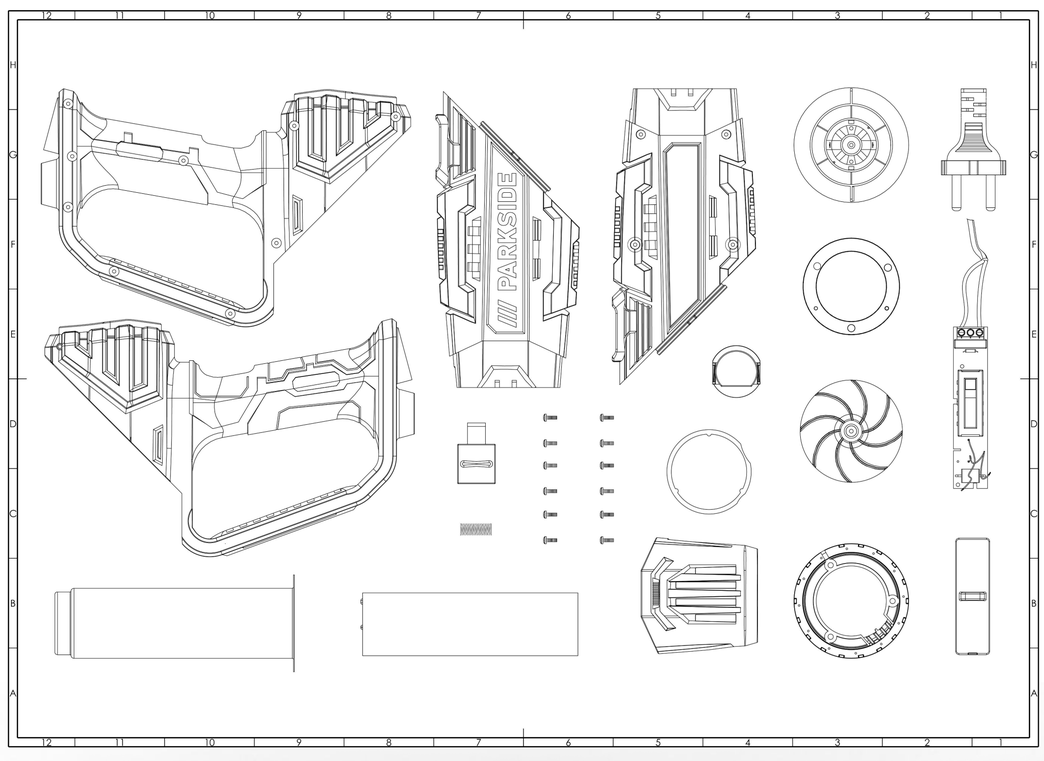
THERMAL GUN

project type:	Reverse engineering project
model name:	Parkside PHLHG2000 B2
end date:	sept 2022
duration:	3 months
teammates:	S. Boni	L. Mangili

As a modelling exercise, we measured and analyzed a common tool, in order to understand not only how it functions but how it was produced as well. It was then fully re-created from scratch using Solidworks. The resulting 3D model is accurate from an engineerical point of view and complete in every one of its part.

A METHODICAL WORK AIMED AT UNDERSTANDING INDUSTRIAL PRODUCTION

The final assembly included 18 parts, all precisely recreated with regard to the original manufacturing method. The tool is also transformable, as the handle can assume two different positions - part of the work consisted in animating the rotation of the two halves and making sure that the parts always fitted.

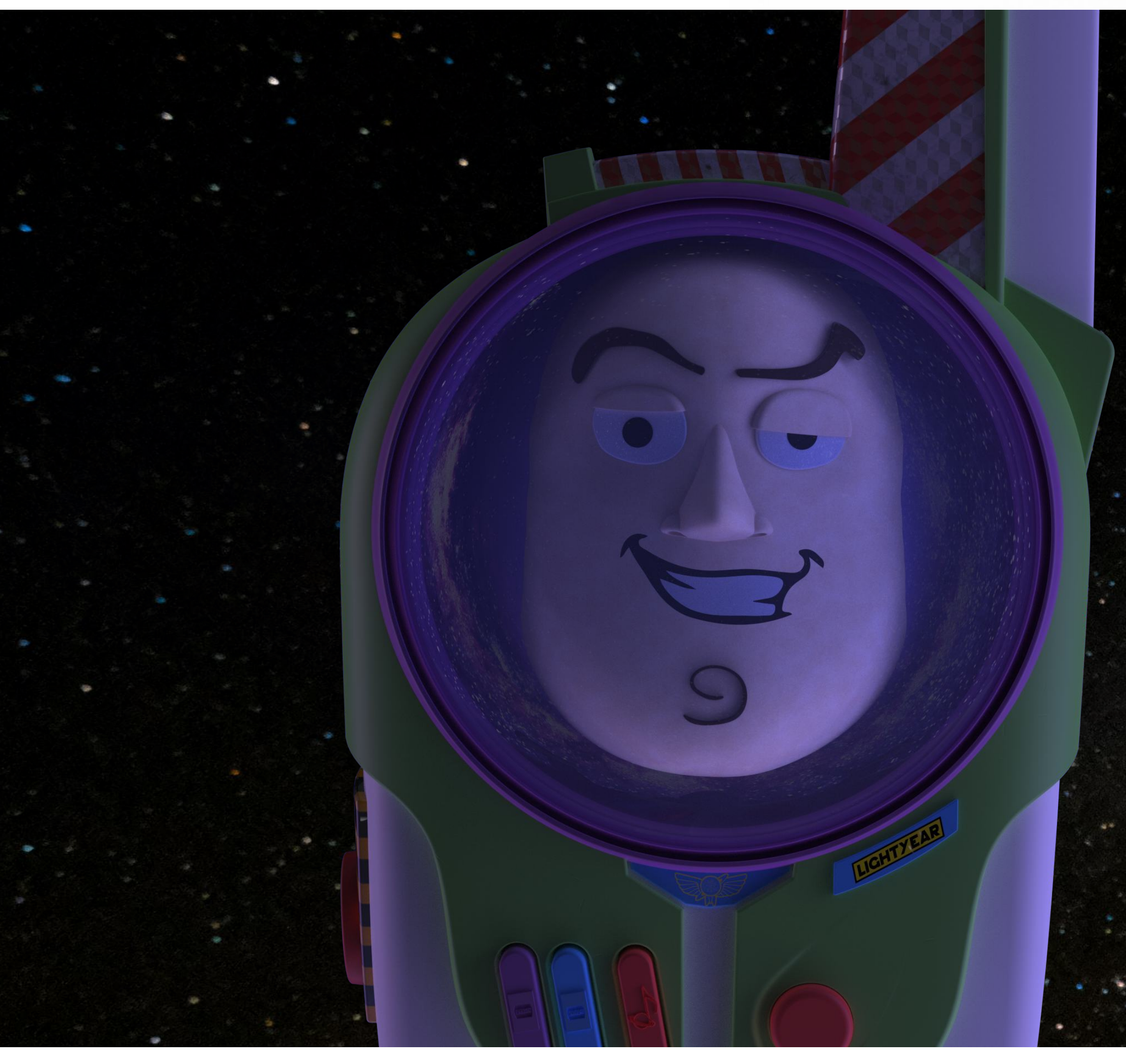


BUZZER

WALKIE TALKIE

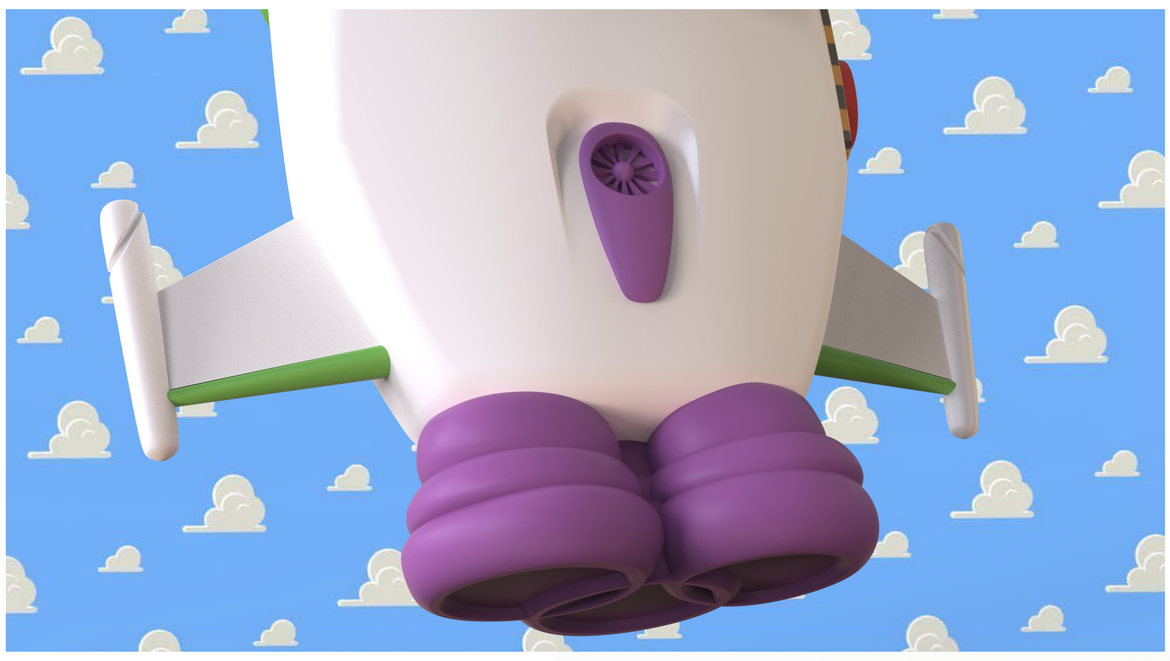
project type:	Digital representation exercise
end date:	jan 2022
duration:	1 months

The Buzzer was made as a creativity and modeling exercise within a course of digital representation: the product aimed at showing the personal skills in a unique and flamboyant way. The program used for the modeling was Autodesk Alias, while Luxion Keyshot was used for displaying the final results as renderings.
The project is a tribute to Pixar's Toy Story (1995), the first animated film made entirely in CGI.



TO INFINITY AND BEYOND: A WALKIE TALKIE FOR NOSTALGIC KIDS AND PLAYFUL GROWNUPS

The Buzzer is a futuristic piece of hardware that only the most expert space rangers may utilize: it allows you to communicate in a trendy new way with all your friends - as long as they are in a mile and a half radius and as long as you speak one at the time. And if you don't have any friends, don't worry! Lieutenant Buzz Lightyear will keep you company with his big bad face: as he always used to say, you've got a friend in me.



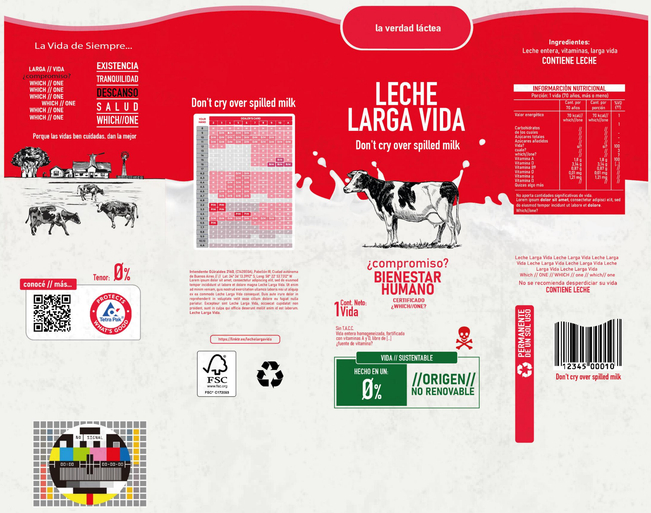
LV LECHE

PHOTOGRAPHIC PROJECT

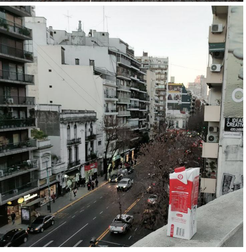
project type:	Photo gallery & webpage submitted for university
end date:	jul 2023
duration:	1 month

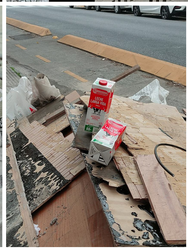
The series is based on the absurd and almost dadaist premise of creating an apparently serious artistic work on an unusually humble theme. The milk package and its frivolous claim to depth is a metaphor for all those attempts of existential reflections, so common in the contemporary world and in photography, that fail to scratch the real shell of being. The series follows an aesthetic of rejection, of abandonment; of the liminal, alienating, fleeting, which represents an existence as brief as arrogant in its title.

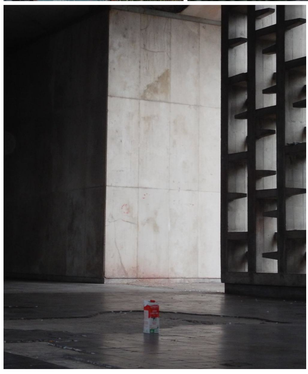
GHEGODESIGN.GITHUB.IO/LECHE-LARGA-WEB



LECHE LARGA VIDA







THAT'S IT.

THANK YOU.