FURNITURE FOR FUN

CARTE

Music festival field report

125,000
daily Coachella attendees

54%
of adult Americans surveyed have been to at least one music festival

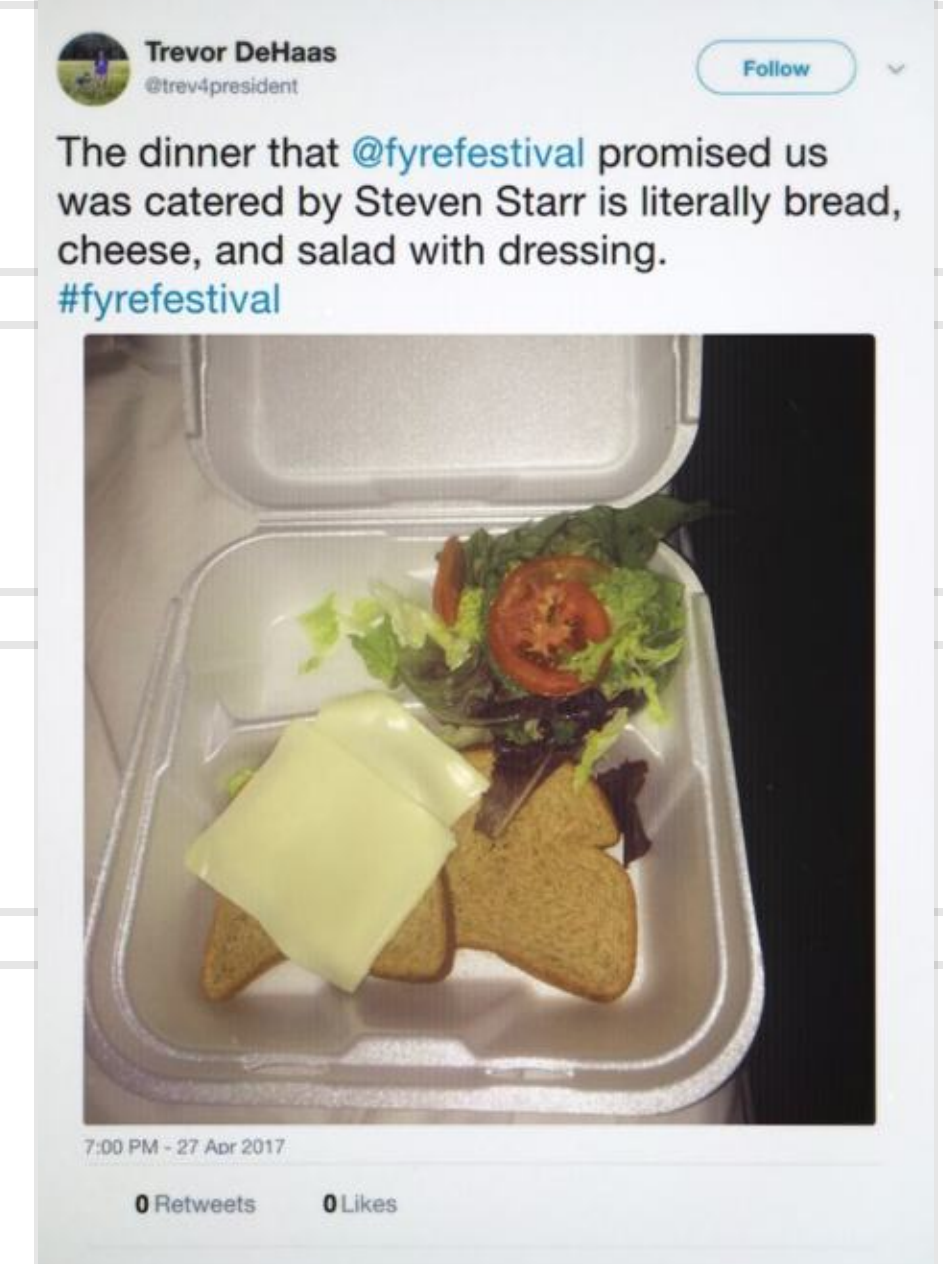Increased concern with festival aesthetics and the "instagramability" of branded environments

HOWEVER...

It's not always fun

Fyre Festival Disaster, 2017

How could this have been prevented?

The main thing that made everything at Fyre Festival go wrong was a lack of planning overall, from food, to accommodation, to attendee transport and finances.

Luck Reunion

I have some personal insight into festival planning from my experience as an art director. Just like during finals week, if you're not planning 10 steps ahead and prioritizing, things are going to slip through the cracks - except in this situation, people's jobs, reputations, and safety are on the line. One serious oversight I noticed time and time again was a lack of furniture - this isn't because it's not a priority, but because it's difficult to find furniture options that are affordable, durable, and easy to transport.

Austin, TX
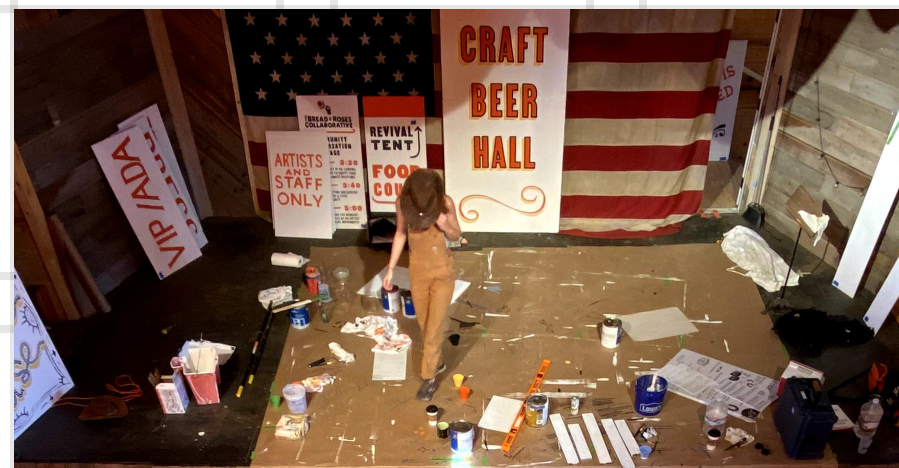
Furniture for rent

The current state of available rental furniture is cheap and aesthetically uninteresting. It's hard to imagine a festival organizer being excited about these options when the current standard of festival design being set by Coachella is so high.

After speaking to the organizer of Luck Reunion, he confirmed that a serious market gap exists in the world of rentable event furniture, and he provided a set of criteria that would make a new rental option a no-brainer.
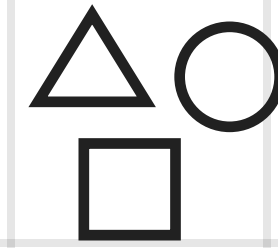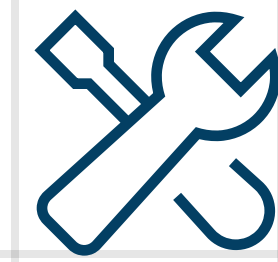
Criteria

Affordable

Durable

Atrractive

Easy to use

Now that I have my goals, I need a strategy to achieve them.
To do this, I looked to graphic design and architecture...

THE GRID

"To some designers, the grid is an inherent part of the craft of designing, as is joinery in the craft of furniture making."

THE GRID

The grid is a strategy for organizing space and information that can be applied to almost all forms of design practices.

It wasn't until my final quarter in graduate school that I realized I was the only one in my cohort designing off a strict grid, a vestige of my undergraduate and professional graphic design experience. I decided to lock myself into the grid to solve this problem, as it should provide a through-line to a visually harmonious and modular system.

THE GRID

Micro application:
Lego toys are a modular, unit based system that allows for great flexibility with minimal components

Abstract application:
The graphic design grid can be based on units, columns, or rows, and creates visual order and information hierarchies.
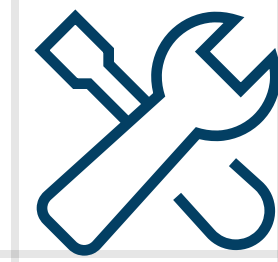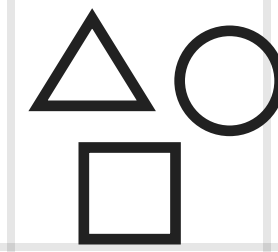
Macro application:
City planners and architects use grids to rationally organize space and streamline the flow of people and information.

Criteria

Affordable + Durable + Atractive + Easy to use

CARTE

A la Carte is a furniture collection designed within a graphic design framework.
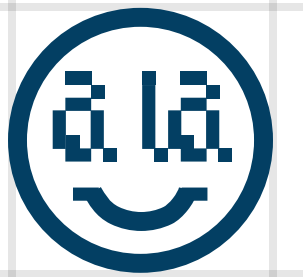
Blending hardware and software, the form and function of this collection are in communication with each other.

Sharing common factors between designs creates visual harmony, and allows for pieces to share components.

Every piece of A la Carte's system folds or disassembles into smaller, minimal parts without the use of hardware.
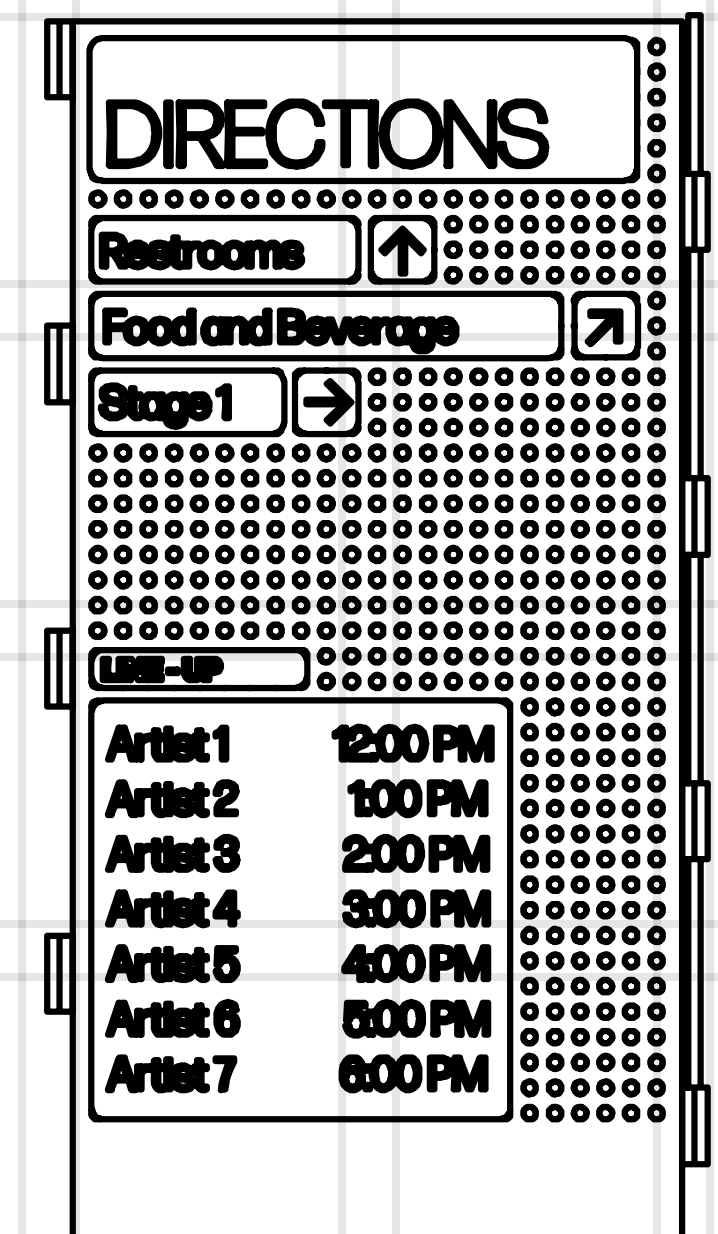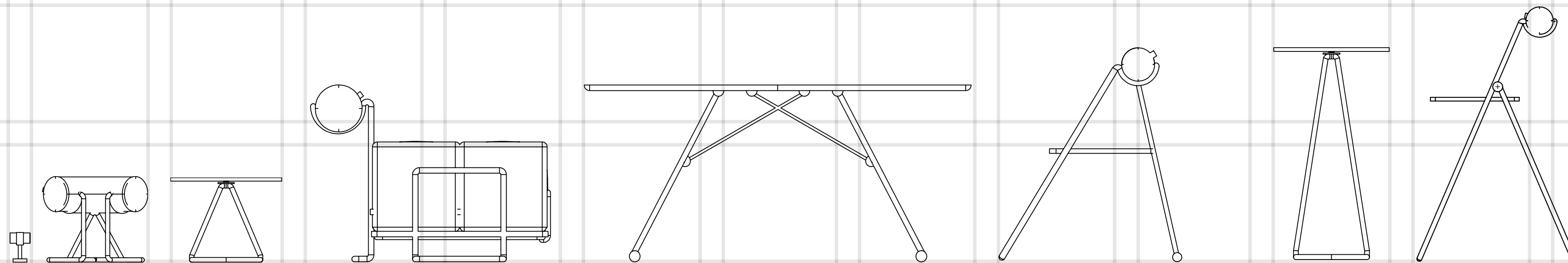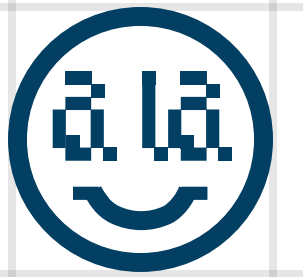
This piece was designed with strict base-8 proportions, which combined with the equation's requirements limited outcomes to this solution.

It is important to note that this is not the only possible solution; the grid allows for vast creative solutions, and this design was chosen as it fits into the overall "brand guide" for A la Carte.

Outdoor upholstery

Powder coated aluminum frame

32in

8in

16in

32in

16in

8in

Recombinant bamboo panel

1in

16in
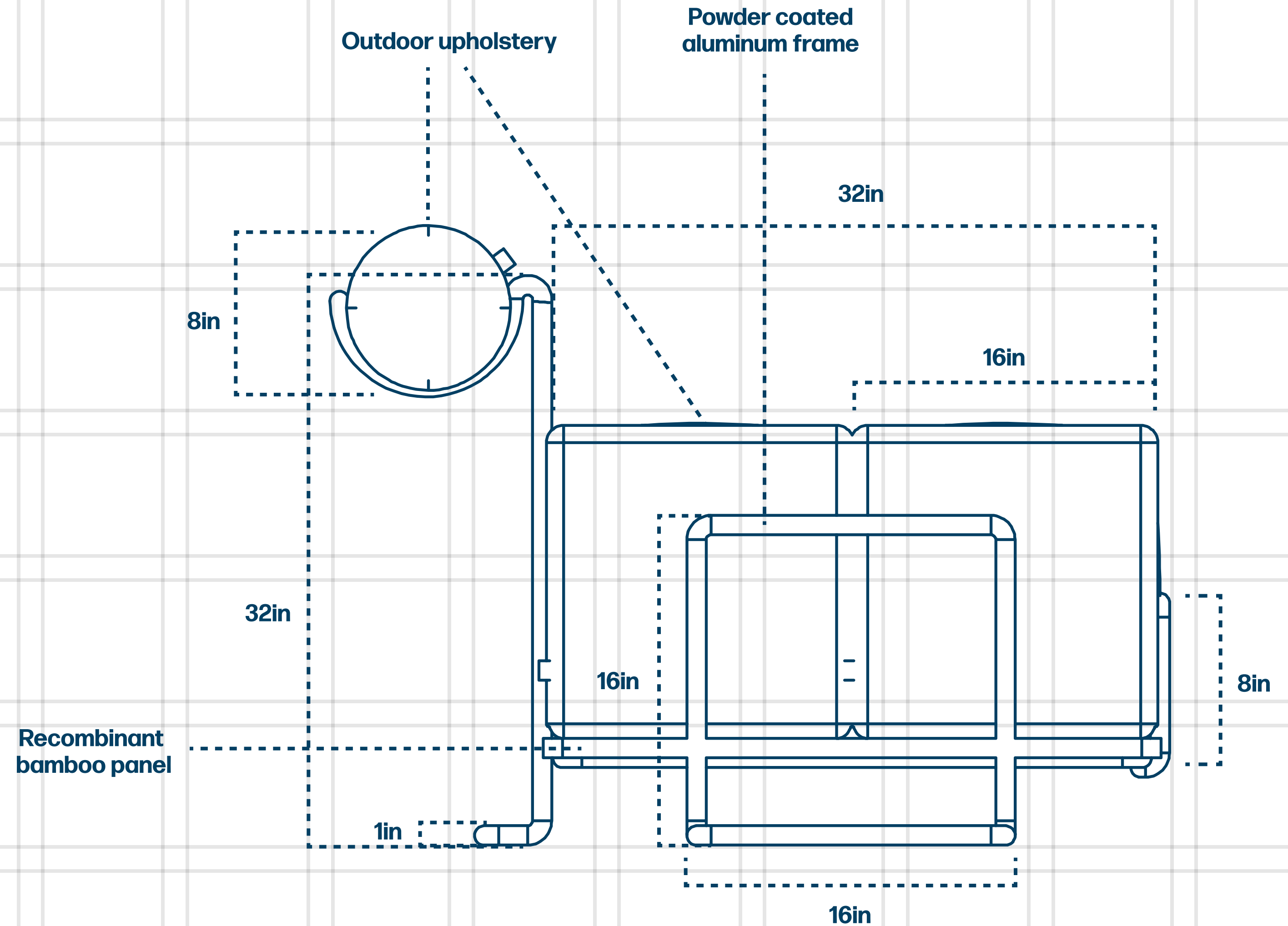
Introducing

À LA
CARTE

DIRECTIONS

Restrooms ↑
Food and Beverage ↗
Stage 1 →

LINE - UP

Artist 1   12:00 PM
Artist 2   1:00 PM
Artist 3   2:00 PM
Artist 4   3:00 PM
Artist 5   4:00 PM
Artist 6   5:00 PM
Artist 7   6:00 PM

01

Lantern

01
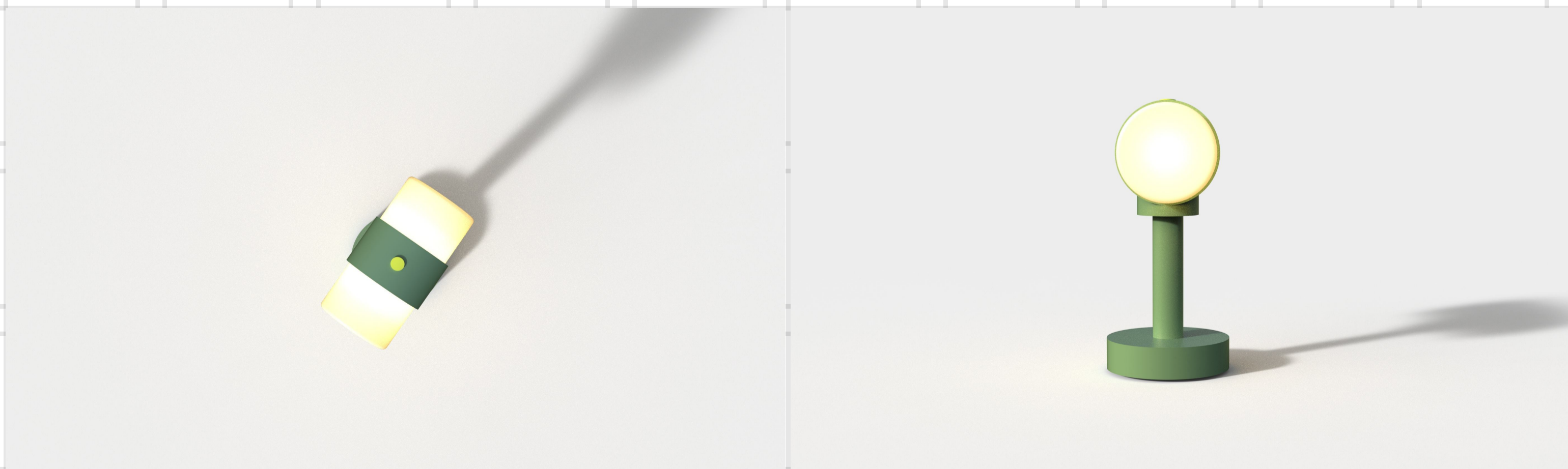
Lantern

01
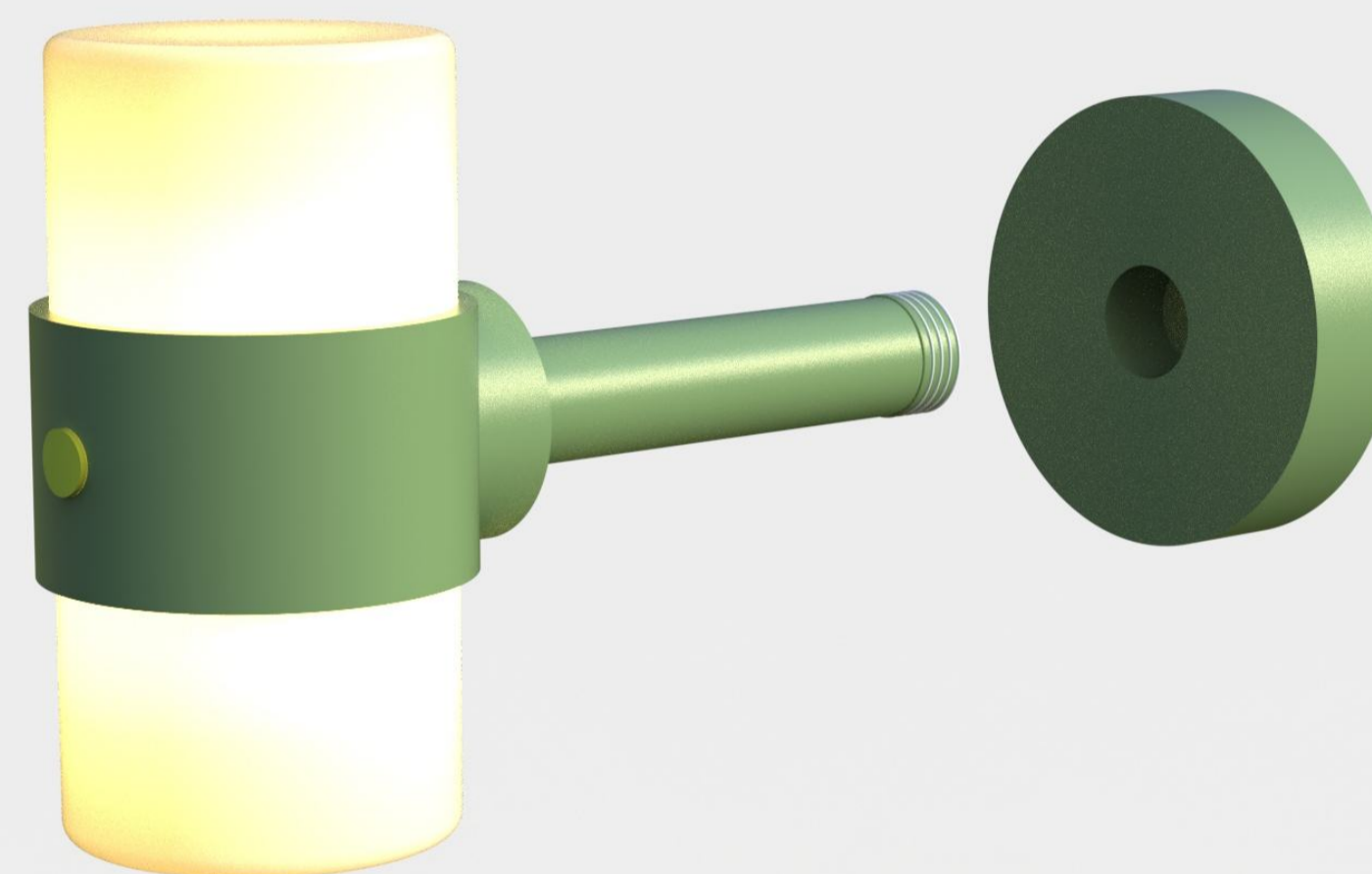
Lantern

02

Picnic Seat

02

Picnic Seat

02
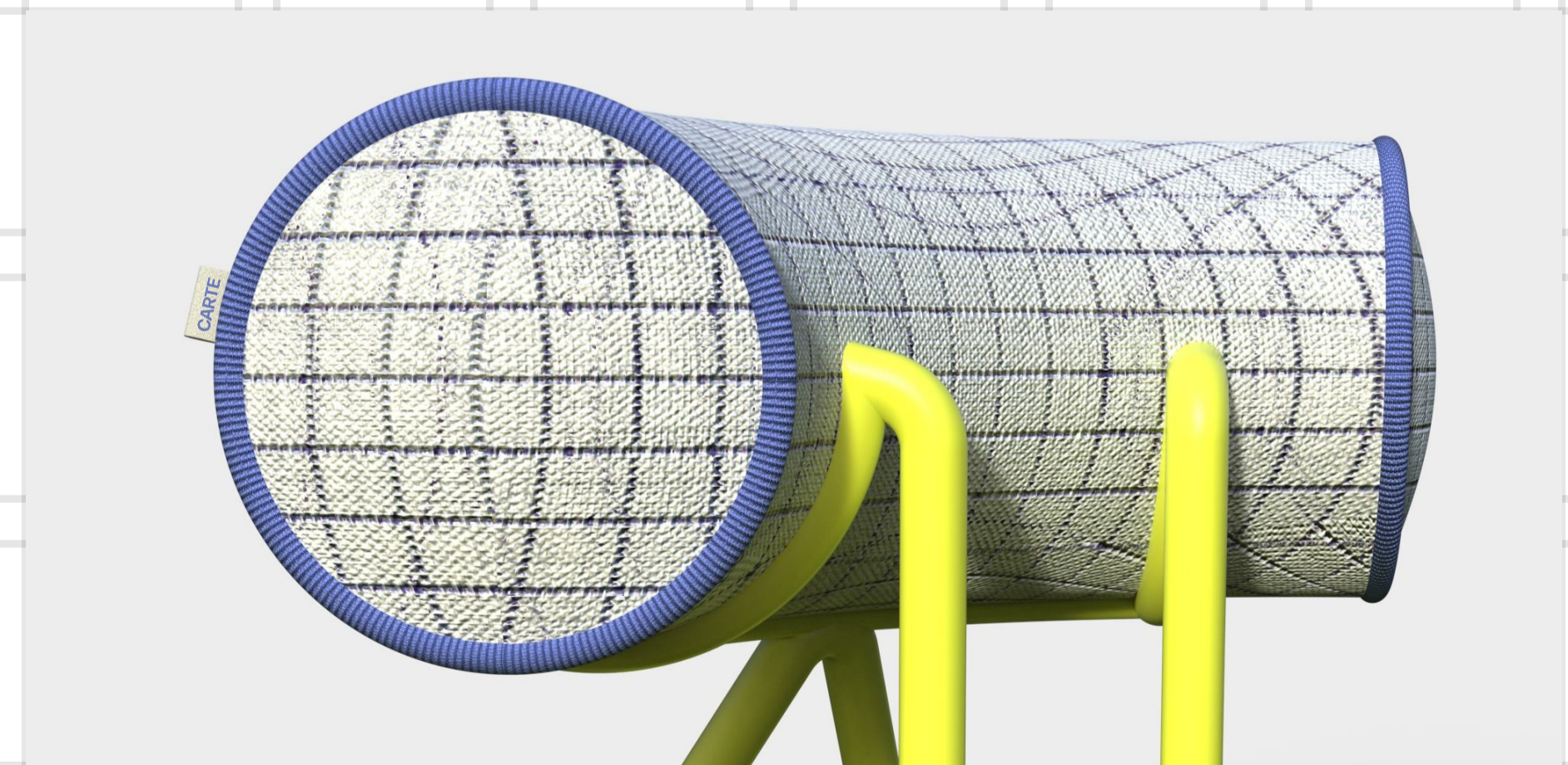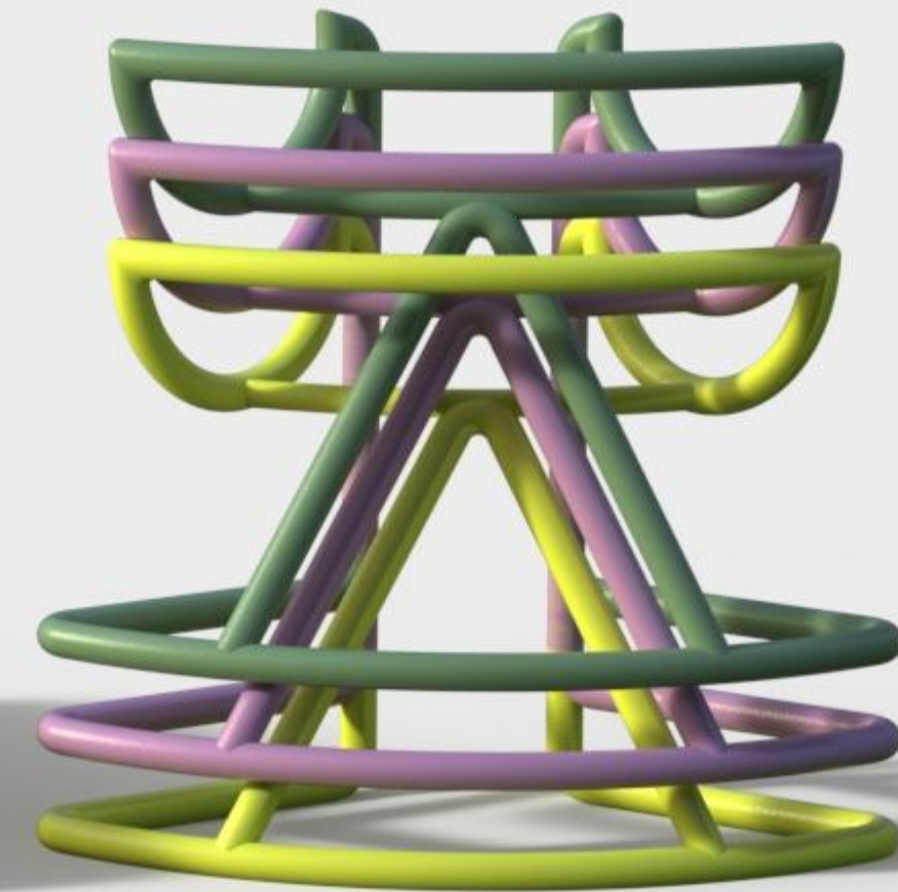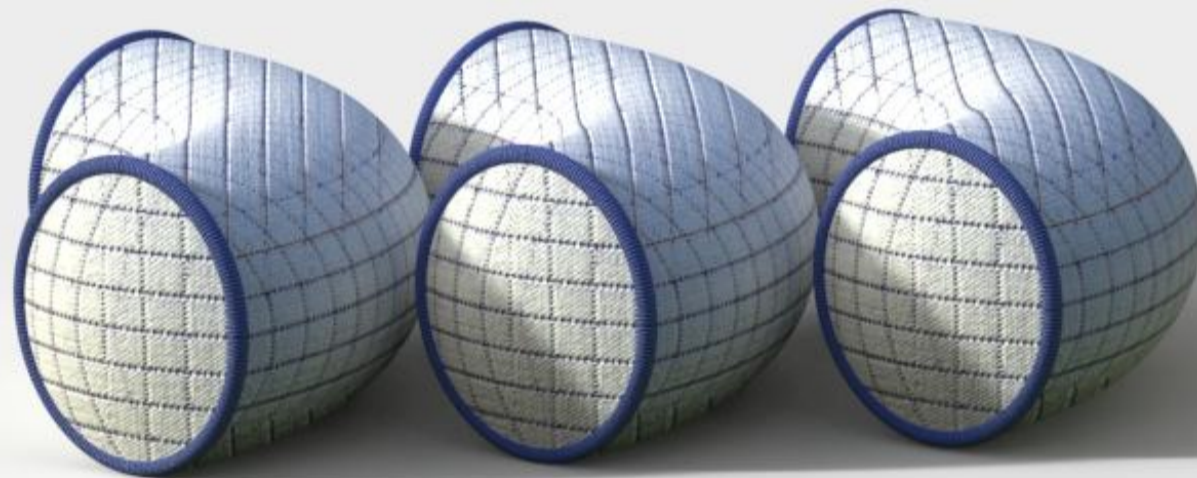
Picnic Seat

Picnic Table

03

Picnic Table

03

Picnic Table

04

Boss Lounge

04

Boss Lounge

04
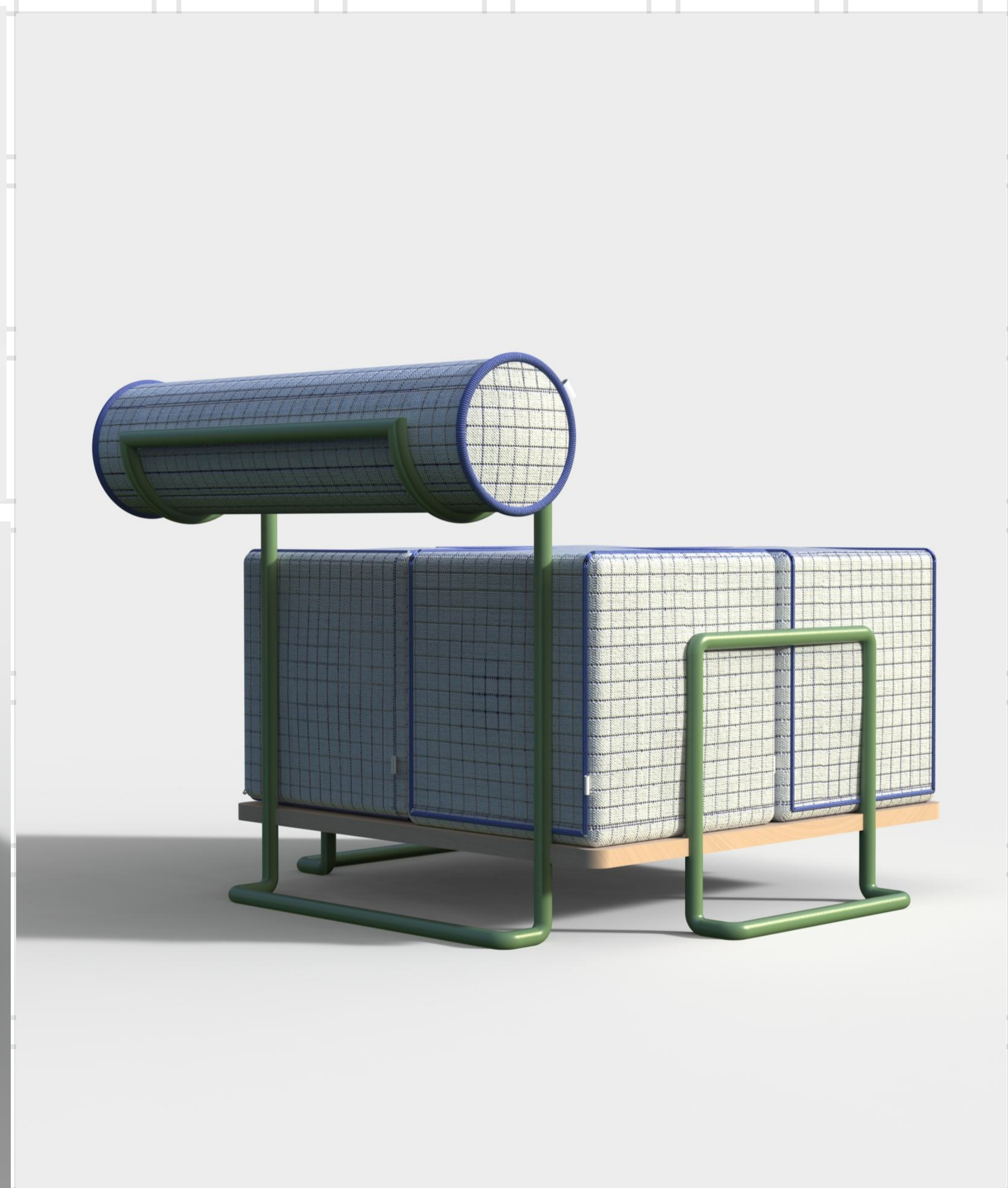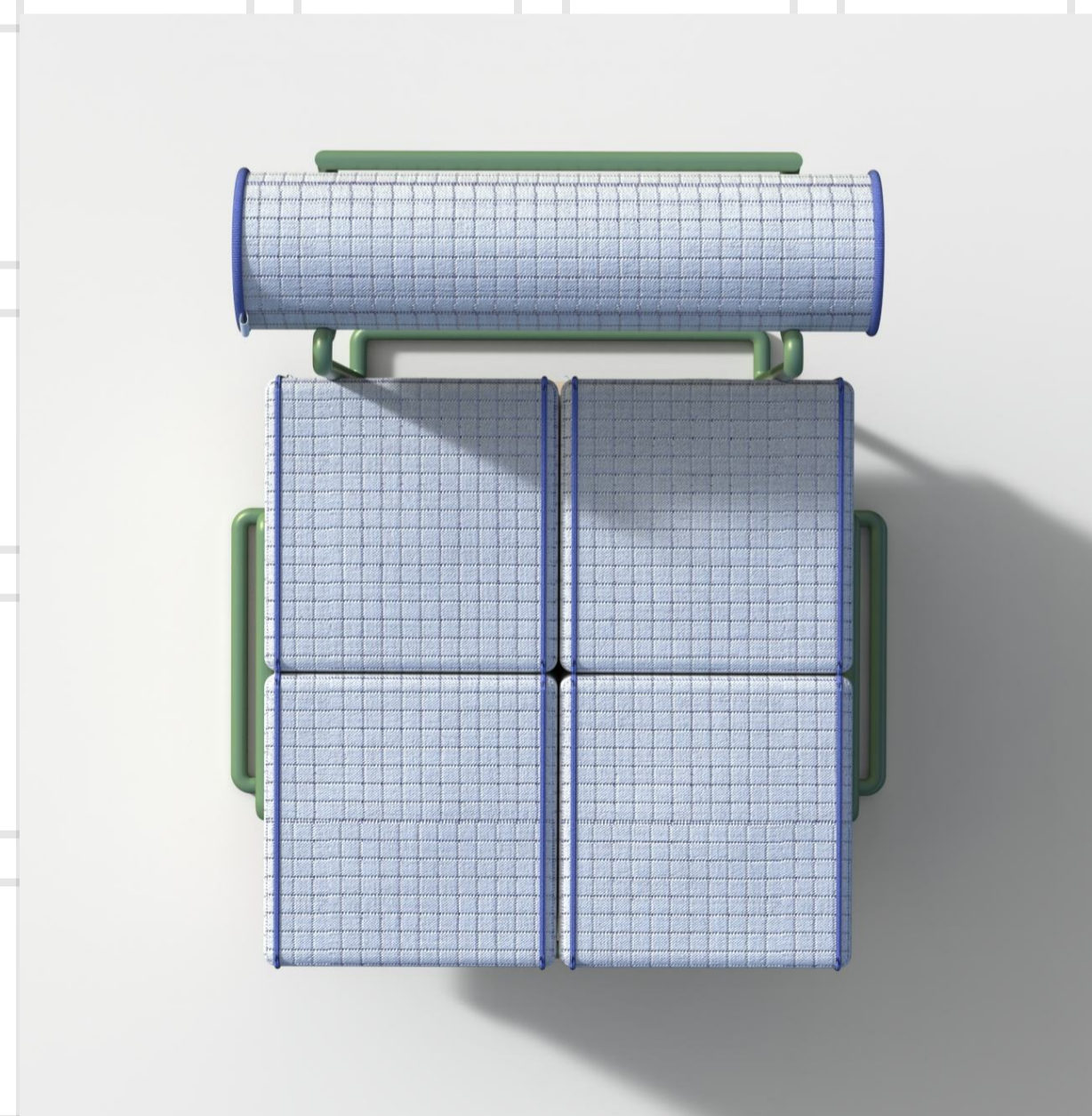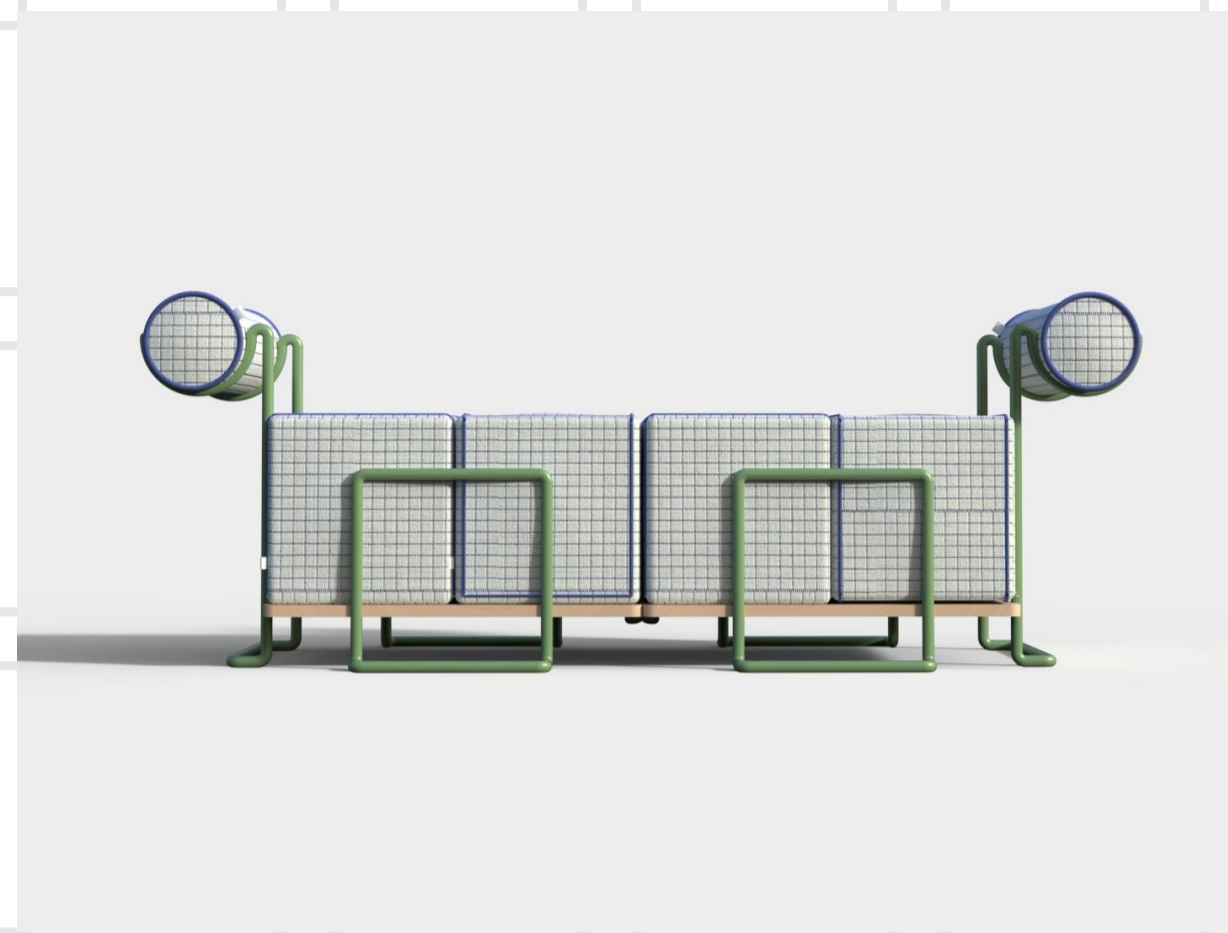
Boss Lounge

04
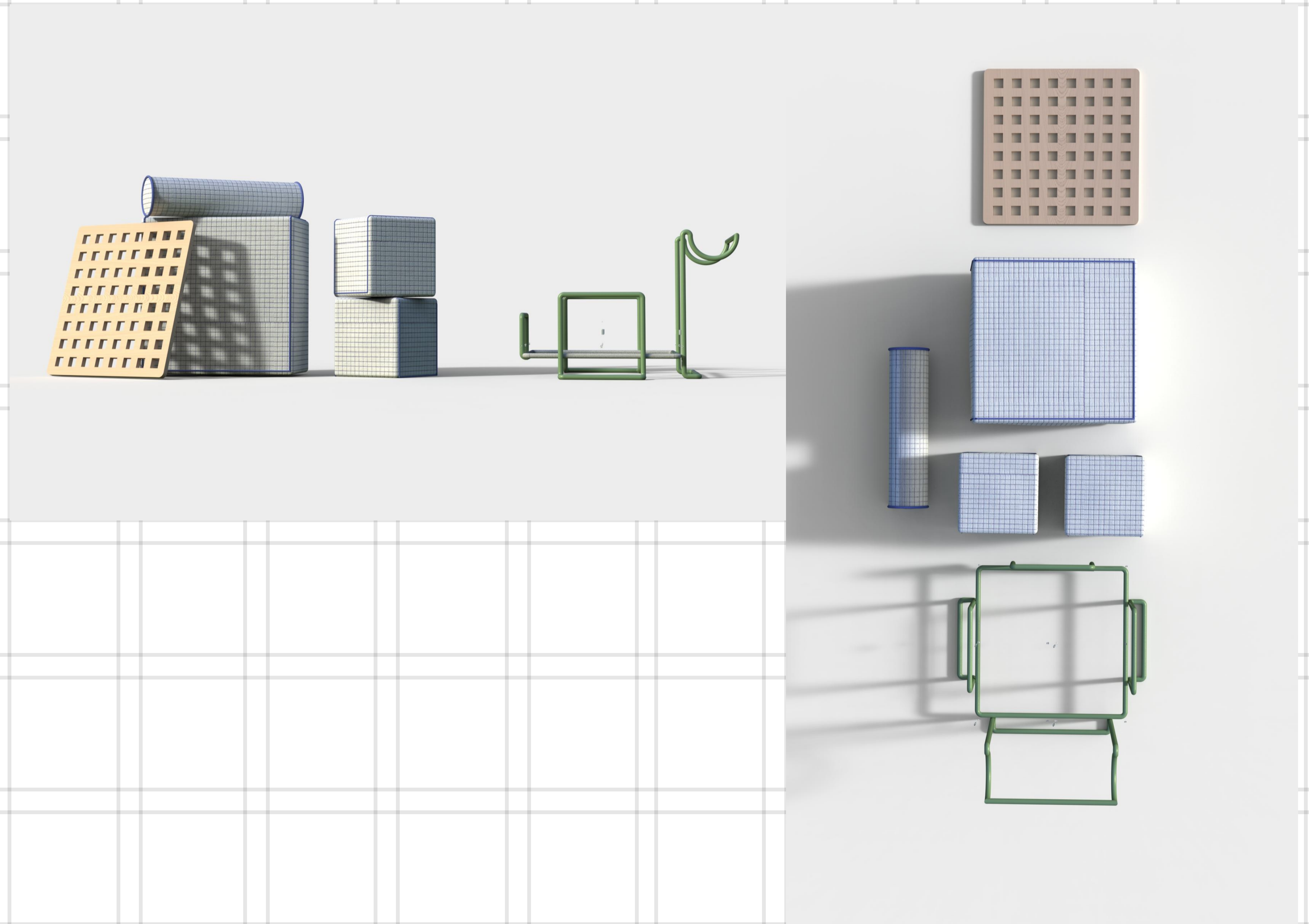
Boss Lounge

05

Camp Table

05

Camp Table

05

Camp Table

06

Illustrator Dining Chair

06

Illustrator Dining Chair

06

Illustrator Dining Chair

06
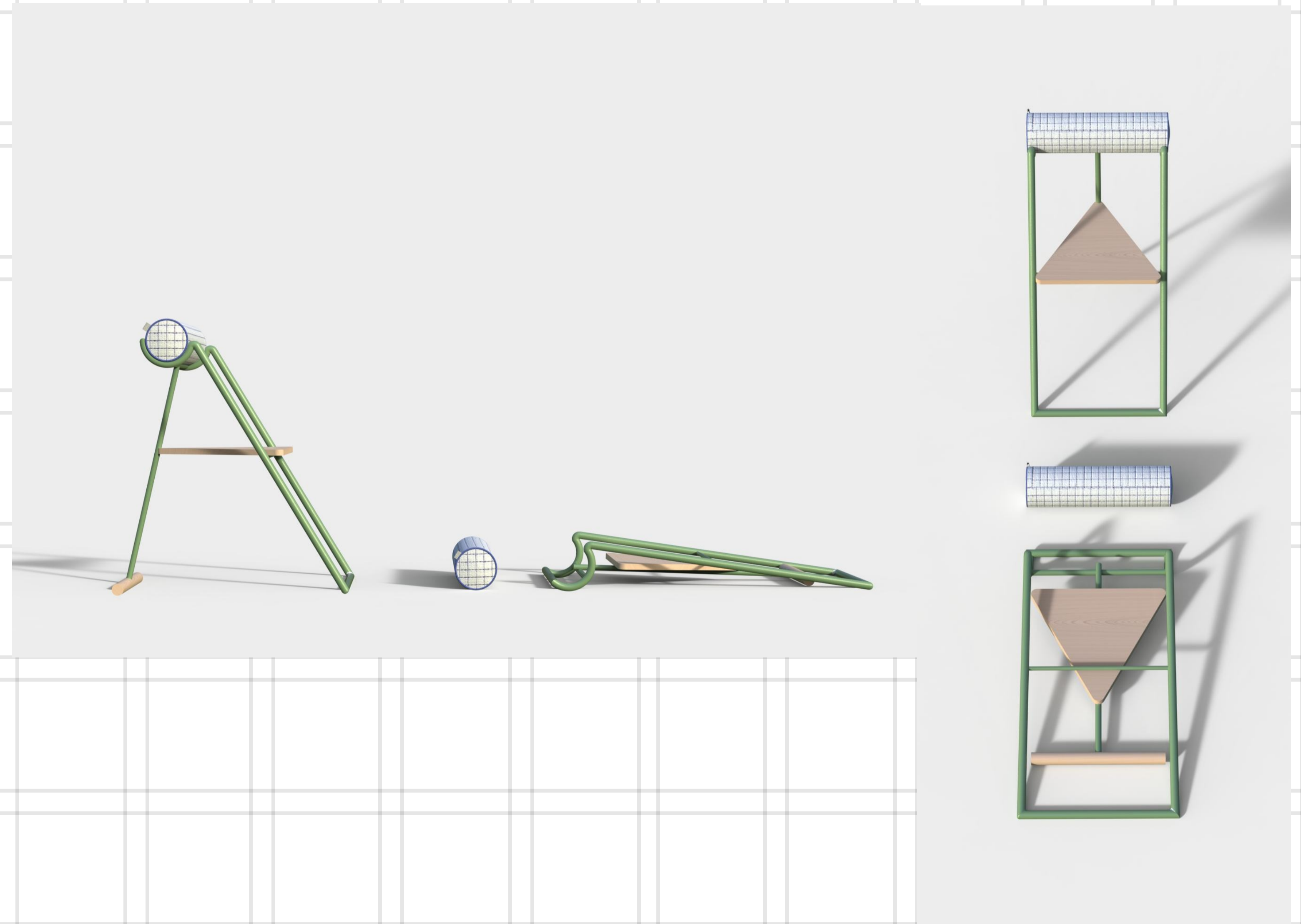
Illustrator Dining Chair

07

Illustrator Bar Set

07

Illustrator Bar Set

07
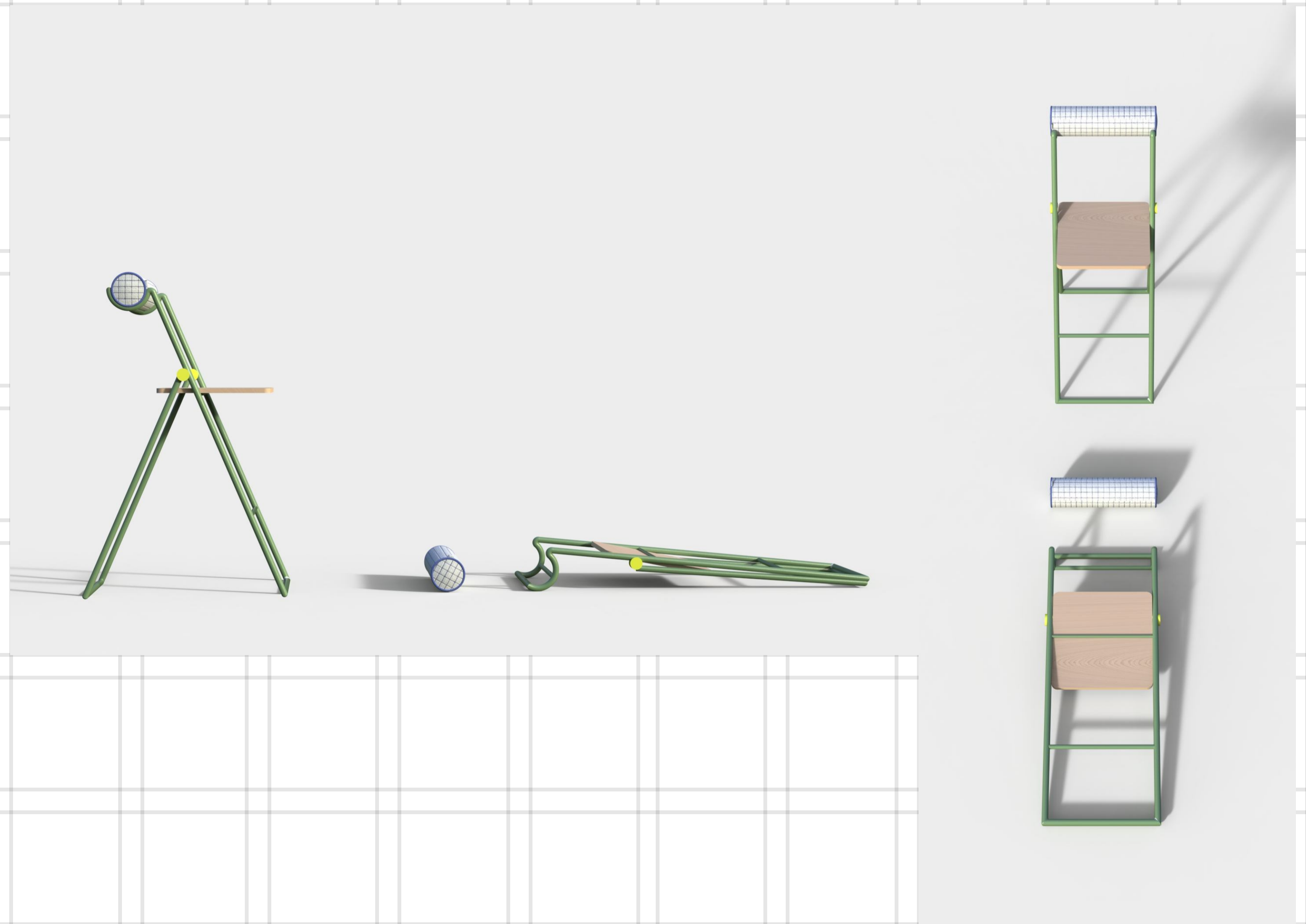
Illustrator Bar Set

08

The Grid

DIRECTIONS

Restrooms ↑

Food and Beverage ↗

Stage 1 →

LINE - UP

Artist 1	12:00 PM
Artist 2	1:00 PM
Artist 3	2:00 PM
Artist 4	3:00 PM
Artist 5	4:00 PM
Artist 6	5:00 PM
Artist 7	6:00 PM

08
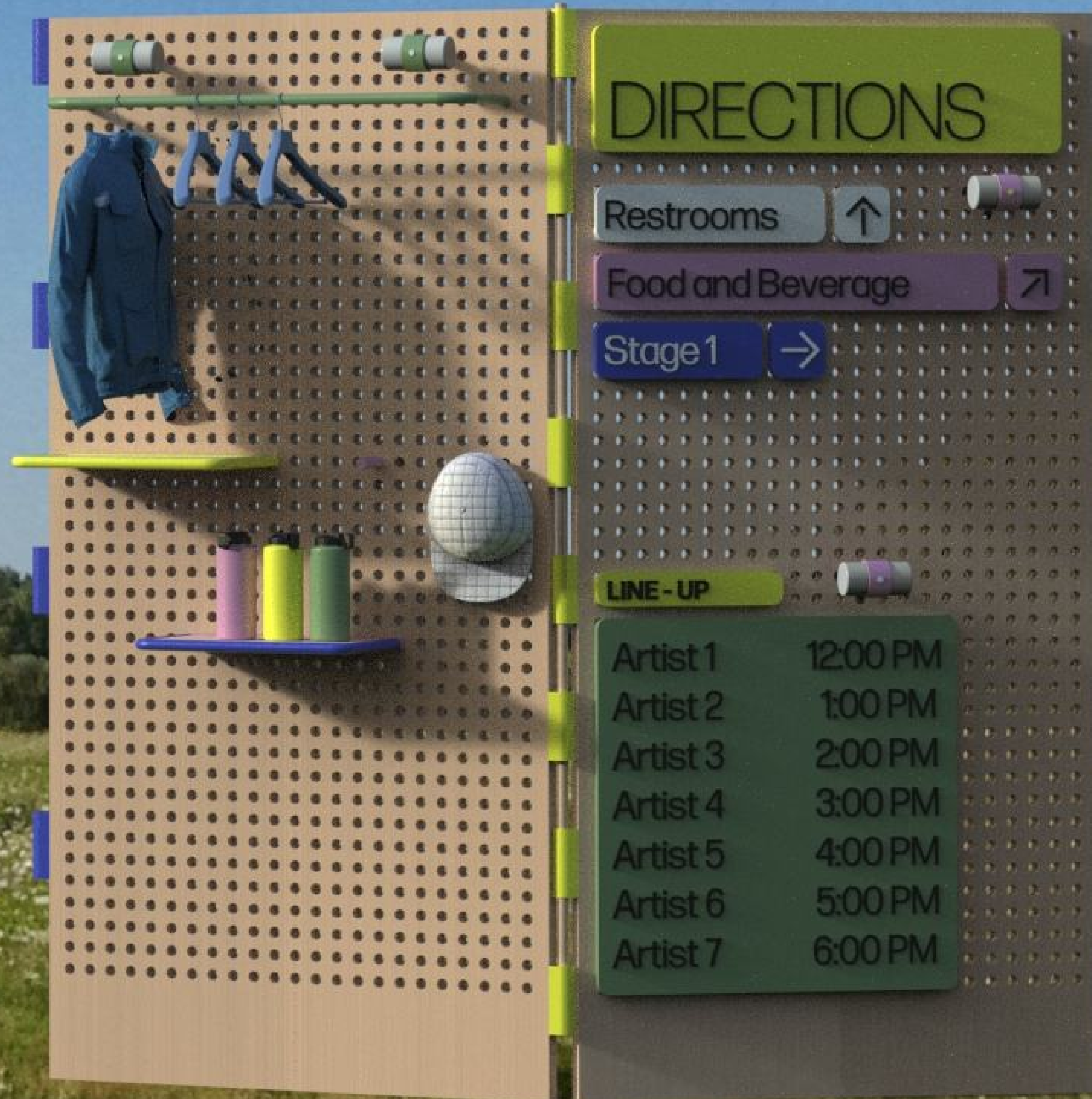
The Grid

08

The Grid

RESEARCH

Project Proposal
Literature Review
Case Studies
Interview
Sketch Development

Designer Bio

Project Proposal

INTRODUCTION

I've always hated math. I'd cry in Algebra I, nearly failed Algebra II, and skirted calculus altogether by taking geometry, trigonometry, and statistics. The "softer" mathematics served me well as a graphic design undergraduate, where I had no problem understanding grids, angles, and consumer data. I began to see math as a tool rather than a punishment, and multiplication and division became second nature as I committed common type scales and aspect ratios to memory.

I was puzzled by my peers and professors' surprise that I could, or would even want to, convert my graphic design background into a furniture design masters degree. From my perspective, the two fields were much the same: shapes, grids, proportions, hierarchy - don't they all have a place in both? Granted, I had worked in a millwork studio as an undergraduate, so the connection between 2D and 3D was already formed. I understood that a router bit was to a radiused corner as a 12-pixel grid is to a foot. I also knew that 2D design programs such as Illustrator and Figma's interfaces are essentially the same as 3D programs. Both softwares utilize a Cartesian grid, and if you can use the line, shape, pathfinder and bezier curve tool on the X and Y axis in Illustrator, you can add features on the Z axis in Solidworks to create 3D designs. Furniture design was exactly that - adding a third dimension to my graphic design skills.

Considering how natural this transition seemed to me, and how much I thought I loathed math, I was shocked to learn that I was the only person in my cohort designing off of a strict grid. I introduced the idea of using "the grid" as my secondary thesis concept, and quickly dismissed it as too obvious, because isn't everyone thinking about the grid all the time? Apparently not. I explained that I design base 12, meaning I aim for dimensions like 24, 36, and 48, and if I absolutely have to I'll mix in base 8, meaning 16, 32, 64, etc. This way of interpreting the world seems essential, nay, unavoidable to me - designing without this framework seems like the Wild West. After swallowing the bitter pill that math is my lifeline in the creative field, I decided to lean all the way into it for my capstone project A la Carte.
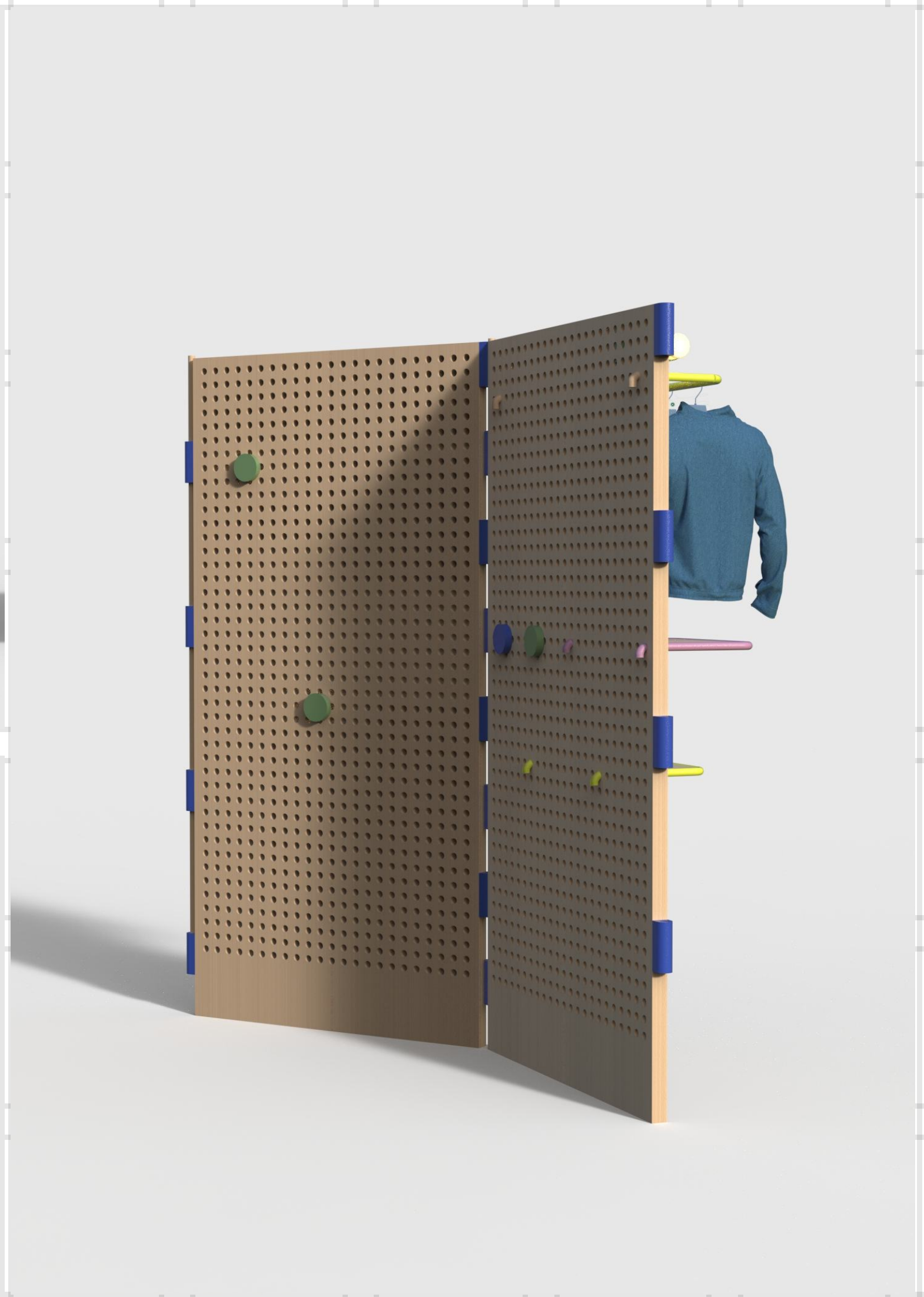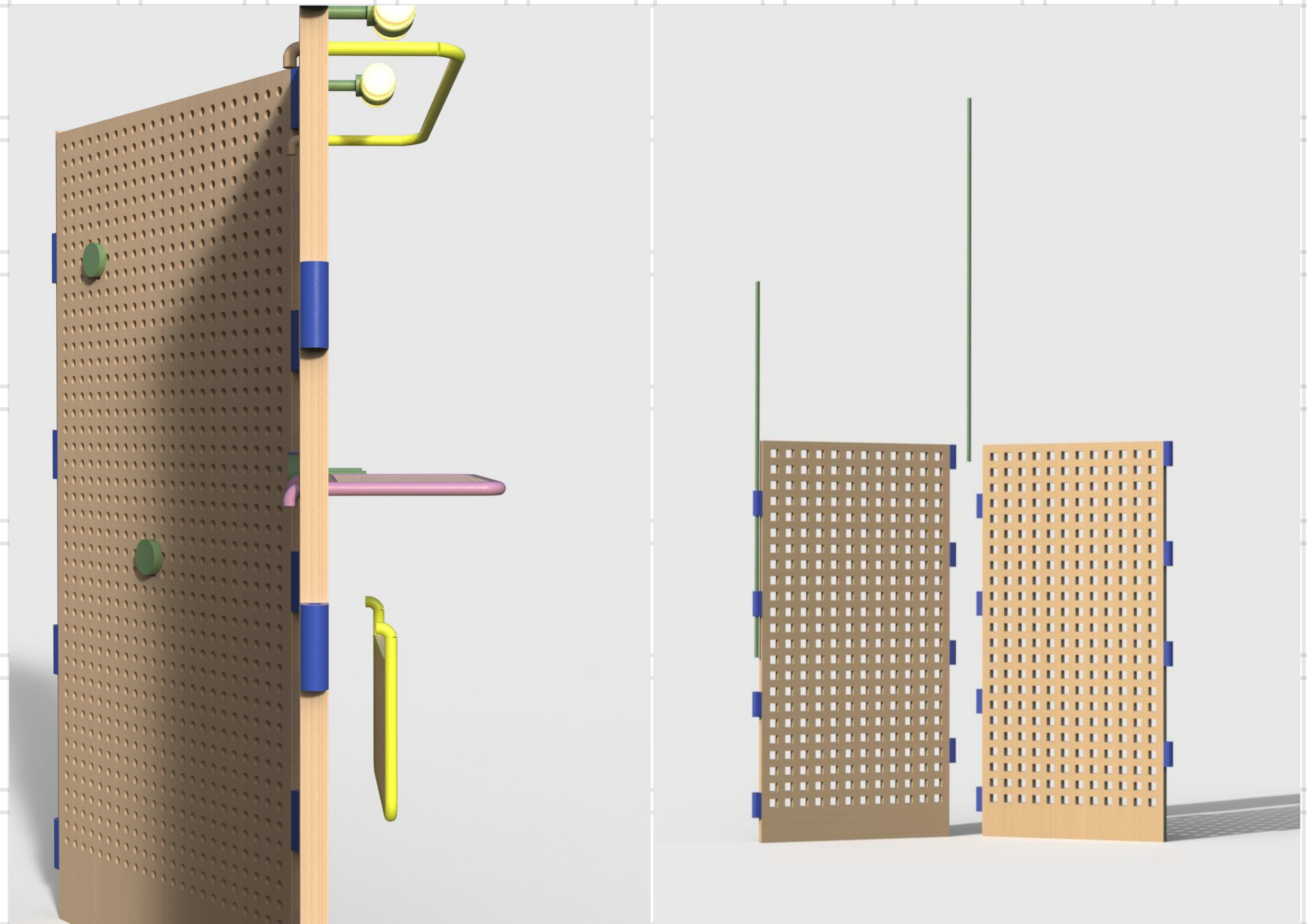
A LA CARTE

My initial capstone concept was based on my experience as a production artist at a music festival called Luck Reunion in Austin, TX. In 2022 and 2023, I spent two weeks working closely with festival management to plan and execute visual identity including signage and spatial design. A constant, seemingly unfulfillable need was sourcing furniture. Numerous pain points were at play: VIP lounge areas needed to be a visually distinct experience from the rest of the site without breaking the bank, seating for a charity dinner with 100+ guests needed to be brought in, assembled, and disassembled in one night (while still being comfortable and attractive), and a lack of infrastructure on the site made lighting, storage, and access to power daily issues. It seemed to me that a serious gap existed between the expensive, aesthetic, durable, and comfortable furniture available for local purchase and the cheap, uninteresting, widely available furniture for rent.

While developing my capstone topic, I reached out to Luck Reunion's organizer, Matt Bizer, who confirmed that a serious market gap exists in the world of rentable event furniture. According to Matt, local furniture rental is limited and expensive, meaning they have invested in their own furniture inventory that now takes up three storage containers on the property. The affordable rental options are cheap and unattractive, which requires extra time and money to dress up to event standards. According to Matt, if there were a furniture rental option that were affordable, durable, and aesthetically pleasing, using the service would be a no-brainer.

Now that I knew my high-end rental furniture idea had legs, I needed a foundation to build the collection upon: enter grids. I could use my grid-based worldview to address issues of modularity, transportability, and affordability in an aesthetic and user-friendly way. My graphic design background would come to the forefront, translating a 2D brand system of rigid dimensions and predetermined components into 3D furniture objects. I adopted a multi-tiered research approach to examine this acute issue, beginning with the role and necessary function of public furniture, the logic behind modular grid systems, and lastly the specific needs of a temporary cultural event such as a music festival or large conference.

Project Proposal

PUBLIC FURNITURE

Music festivals are becoming increasingly popular, with events like Coachella drawing over 125,000 attendees a day. The temporary flood of people to an area combined with the trend of festivals becoming more elaborate puts a tremendous toll on the physical environment. One can argue that a music festival is a temporary city that has all the infrastructure necessities of a built environment plus the added pressure to assemble and disassemble in a short time, ideally leaving no trace. Aside from infrastructure such as plumbing, shade, and power, there is a need to furnish these sites to make them usable and comfortable.

People usually think of public furniture as a scattering of park benches, and maybe a cafe table or two in a park. However, public furniture exists in many forms across urban environments, and serves a range of essential needs. Our tangible needs are the same whether we're indoors or outdoors, some basic like access to shade, rest and respite, and water, others more abstract like easy access to a telephone or charging station, the need to know the time, or the need to orient oneself in physical or social space. Public furniture also exists as a network of wayfinding and social cues, signaling the intended use of a space more immediately than written cues. For example, a small bench implies intimacy, while a circular arrangement of seating implies exchange of ideas and camaraderie, and a row arrangement of seating implies a formal event is taking place. In addition to serving basic needs and improving the flow and function of spaces, public furniture also has an oft-overlooked responsibility to improve user experience and beautify the space it inhabits. Festivals exacerbate all these functions; firstly attendees are restricted to a limited area for a long period of time without access to resources not provided by festival organizers, and secondly festival organizers often use furniture as elements to build a larger branded environment.

MODULAR SYSTEMS

It may seem that the ideal goals of public furniture laid out here are too over-thought or cost-prohibitive to replicate in real life, especially in a temporary form; however, it is simply a case of working smarter, not harder. Radical Italian designers such as Superstudio and Gae Aluenti explored the idea of modular systems for a new way of living in the mid 20th century to "liberate architecture and design from their entrapment in a market-oriented, dead-end branch of modernism" (Rethinking the Modular: Squaring Up to Superstudio: Grids, modularity, and Utopianism in Italian Radical Design, Catherine Rossi). Superstudio in particular rigorously examined grids and defined a set of rules that outlined a successful modular system: define a base unit, whether that is a physical building block, a proportion, a material, or even human scale; create an "a la carte" system of parts that can be easily replicated; define an "equation" to limit and pre-determine possible outcomes; and merge hardware and software, meaning the form and the function of pieces are intrinsically and obviously linked.

This formal criteria can be examined at MoMa's 1972 exhibit Italy: The New Domestic Landscape. This exhibit showcased a variety of modular furniture objects and environments featuring recombinable parts with predefined arrangements. Additionally, and most notably, the entire show was designed as a modular system in order to "bring order to the diversity of contents...but it was also conceived as a touring show...all the display units had been designed for easy transportation and reassembly" (Rethinking the Modular...). Supertudio's a la carte system can be applied to entire environments and individual objects to order space and user interaction by providing a clear path from assembled object, user, disassembled object, easy transport, and easy reassembly.

Project Proposal

THE SOLUTION

This festival furniture solution's function has been defined as the need to cater to basic and social needs while improving user experience and beautifying space, and the method as a modular kit of parts that will ease attainability, transportation, and assembly woes. But what about the form? A la Carte is a brand kit of shared visual language and parts based on the grid and strict proportions. A limited range of shapes based on graphic design tools (circle, rectangle, line, and triangle) and standardized points of connection streamline the design and assembly process, while limiting the number of possible configurations through permanently welded frames to predetermined designs ensures a standard of quality and usability. All pieces of A la Carte are foldable, stackable, or disassemblable into minimal parts without the use of hardware. Durable, lightweight, and sustainable materials such as powder-coated aluminum, recombinant bamboo, and recycled plastics will create long-lasting products with minimal shipping costs. Aesthetics will be minimal, streamlined, with a range of color palette options that will allow the system to exist standalone in a variety of contexts without any secondary modification. A la Carte is designed with public, temporary applications in mind, but its simplicity, functionality, and attractive neutrality lends itself to a variety of uses, such as small apartment living, furniture for short-term rentals, or lifetime indoor/outdoor use.

In conclusion, A la Carte is a solution for an acute market gap for furniture in the large event industry. Treating festivals as temporary mini-cities, products are designed to satisfy physical and social needs for the duration of the event. The modular system makes A la Carte scalable, easily assembled and disassembled, and reduces overhead and transportation costs.

Literature review

Capomaggi, Julia. "The Houses that Don't Exist: Openness in Domestic Modular Systems." Interiors : Design, Architecture, Culture, vol. 12, no. 2-3, 2022, pp. 170-192.

- Prefabrication is developed as an "analogical software" and introduces visual programming into urban design, architecture, and furniture.
- Claudio Salocchi: developed an "algorithm" based on factors such as kitsch, globalization, new family, colonization of space, sleep, symbol, city, politics, distinct space, space of integration, space of rehabilitation and hygiene, space of movement, functional-work-study space, functional-free time-space, modulation, flexibility, centralization, functionality, and assigned each a value to determine the optimal grid for a home
- House becomes a network of "a la carte" rooms
- The more flexible a system, the more inflexible the aesthetics
- Total design is bipolar: either everything is obsessively detailed and over-designed to create a total work of art, or it is overly standardized to exist in every context
- Create a genetic structure, DNA that can allow the organism (system) to autonomously grow
- System is never finished and never closed
- Merging of hardware and software, the function is the form
- The use of neutral materials like plastic, which has no historical tradition

Kuwayama, Maki, and Joachim Käppeler. The Process of Making: Five Parameters to Shape Buildings. Edited by Joachim Käppeler. Birkhäuser Verlag, Basel, Switzerland, 2019;2018;.

- Anti-hierarchical
- "Following a grid does not predetermine a result"
- External conditions influence outcomes, or design; design has to function for its purpose
- Define a basic unit: by material, function, divine proportion, invention, human scale
- A brief is not an abstract, it can be project specs, instructions
- Good design is thorough, considers time, synchronicity, what happens and when, color and its function
- Repetition in construction details; reuse fasteners
- Designed impermanence?
- Priorities determine material

Literature review

Qiu, Qi, and Manman Dong. "Furniture Collapsible Design Optimization using Spatial Geometric Analysis." Applied Mathematics and Nonlinear Sciences, vol. 9, no. 1, 2024.

- "Foldable materials are used in high-tech, with high performance, new uses and new roles of each special structural and functional material, mainly including precision ceramics, carbon fiber, engineering plastics, amorphous materials, invisible materials, fine chemical products"
- Collapsible furniture should be as small as possible in collapsed state, and easily transition into desired exploded state with no collisions or improper configurations - the feasibility of this is proven through complex math that I don't understand, but the ideas are strong; I like the idea of reducing the system to "math", an algorithm or formula
- "Folding structures have become design trends for various space furniture products due to their numerous advantages, such as modularity, portability, multifunctionality, and efficient space utilization...Different spaces correspond to different folding structures, functional needs, and frequency of use and are used differently. Folding furniture that takes up less space is more frequently used in approximately 1/8 days, and this type of folding furniture is primarily used to enhance functionality."
- Studies showed that users preferred foldable furniture with obvious function and potential multi-function, and that the main functions were perceived to be increase the function of the object, improve convenience of storage, and save space
- Conclusion: making furniture foldable should improve the overall function of the object rather than being simply novel

Grabiec, Anna M., Agnieszka Łacka, and Weronika Wiza. "Material, Functional, and Aesthetic Solutions for Urban Furniture in Public Spaces." Sustainability (Basel, Switzerland), vol. 14, no. 23, 2022, pp. 16211.

- safety of movement at night (lighting carriers), orientation in space (information carriers), quick access to information (announcement poles, infomercials, displays with maps of the city and the course of the communication line), improved public transport (parking meters, bicycle racks, bus shelters, restrictor posts), and opportunities for rest (benches, platforms)
- Goals: improve functionality, user experience, and beautify
- Our needs remain the same from inside to outside: need to rest, know the time, have access to a phone, etc.
- Urban furniture creates visual order, subliminally designates functional areas more effectively than text, creates landmarks that connect spaces and routes, can also multi-task as public art
- Edward T. Hall's four dimensions of distance: intimate (touching or whispering), personal (good friends), social (integration with acquaintances), and public (for observation)
- Circular plan is more conducive to connection, interaction, and cohesion
- Aluminum and inflatable steel - inflatable steel may be a problem because it can't be undone
- Emerging use of bioplastics
- Color-coded systems are subliminally effective, see "Bristol Legible City"

Literature review

Liu, Xin, and Zhong F. Zhang. "Study on the Design of Outdoor Furniture made of Recombinant Bamboo." Applied Mechanics and Materials, vol. 397-400, 2013, pp. 907.

- Recombinant bamboo is made by stripping bamboo fibers, treating them, and pressing & binding into a natural-fiber plank material
- After treatment, recombinant bamboo is moisture resistant, durable, bendable, and easily shaped, cut, and processed
- Bamboo is the fastest growing plant on the planet, easy to grow, and endlessly renewable
- Recombinant bamboo preserves the look and feel of natural wood, ideal for outdoor environments
- Accepts finish, color, paint etc, well and can mimic look of plastic

Case studies

Lensrental.com

Market:
- High end camera equipment rental

Customer profile:
- Freelance or traveling professional photographers

Business model:
- Short and long term rentals with transparent pricing and terms, relies on third party shippers (Fedex, etc) for reduced cost and easy access for consumers
- Fully online platform

Pros:
- Simple, user-friendly system in place
- Makes use of existing shipping service
- Transparent pricing
- Good customer reviews (Matt)
- Fully online format
- Sustainable model, reduces electronic waste by eliminating need to purchase, replace, and update outdated models
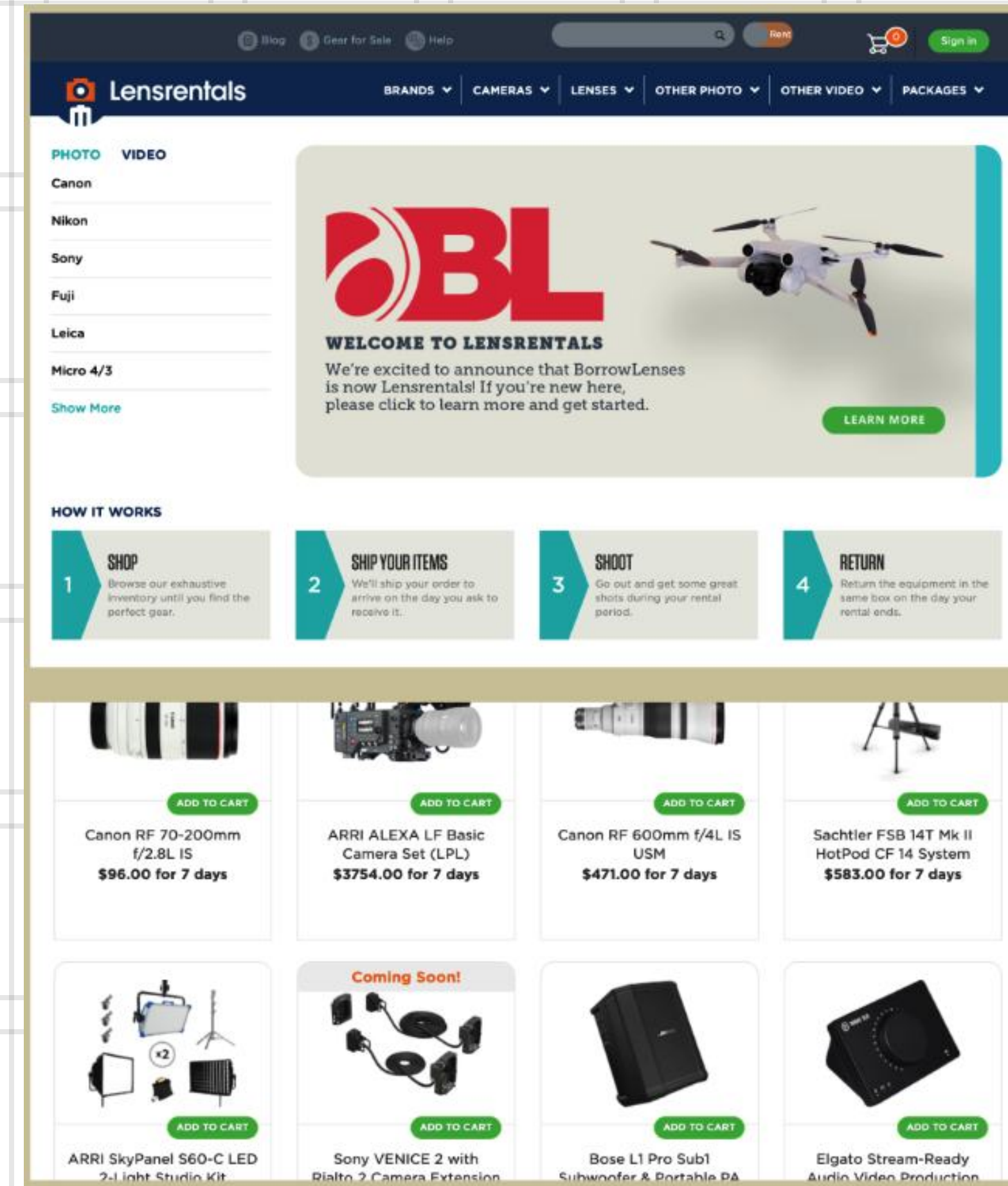
Case studies

IKEA

Market:
- Affordable furniture

Customer profile:
- College students, renters, consumers who need a quick and affordable furniture/storage solution

Business model:
- Low-cost, relatively reliable quality furniture
- Self-assembly allows for reduced shipping and labor costs
- Sell in person and online , ships internationally
- "to offer a wide range of well-designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them."

Design philosophy:
- Low cost and high quality: "Our low prices – by far the lowest in the land – are possible thanks to a high turnover, direct delivery from the factory and very low overheads."
- Democratic design
- "To create a better everyday life for the many people."

Cons:
- While self-assembly has its benefits, users find it frustrating and difficult when the piece is large or has many components
- Often bought as a short-term solution, buyer is then burdened with disposal, moving hassle and costs

Lessons:
- Self-assembly can work if there aren't too many components, instructions are clear, and assembly is self-evident; obvious how parts can and should fit together
- Low production cost is necessary to encourage short and long term rentals
- Opportunity to provide a take-back program in addition to rental, users can return their purchase after an extended period of time to be reused or rented back out
- Approachable, recognizable, and fun branding
- Provide neutral and colorful affordable options

Case studies

ELLO

Market:
▪ Children's toys

Customer profile:
▪ Parents of young girls wanting a building toy that encourages freeform explorative play

Business model:
▪ Sells kits of recombinable parts with a theme, such as "Jungle", with plastic parts and stickers that give kids the freedom to build their own environment or stick to a predetermined design
▪ Each kit can be combined with others

Design philosophy:
▪ Low cost and high quality
▪ Colorful and fun, inviting girls to participate in building play like Legos and Lincoln Logs, which are more marketed towards boys

Interview notes

Questions

1. What difficulties have you faced when trying to source furniture (seating, tables, shelving, etc.) for events?
2. What would you say is the main obstacle to procuring furniture for events? For example: cost, transportation, or storage.
3. What is the most critical furniture object you need to source for events, and how difficult is it to get?
4. Are your furniture needs similar from event to event, year to year, or does it differ depending on the event?
5. Can you identify some needs that are consistent from event to event, such as artist lounge seating, displays for vendors, etc.?
6. Who do you usually need to source furniture for? Attendees, artists, or vendors? How are their needs different?
7. Would you prefer owning or renting furniture, assuming it was easy to assemble/disassemble and could be stored flat?
8. What are the aesthetic limitations/needs for event furniture? Should it stand out or blend in? For example, would the furniture be more desirable to festival organizers if it came in bold colors/patterns, or if it came in white, black, wood tones, etc., or options for both?
9. What aesthetic would suit a broad range of events in your opinion, i.e. Luck has a Texan/American country music aesthetic, but SXSW is bold and modern. Is there a solution that could work for both?
10. Is it possible that a one-style-fits-all solution is a negative, for example SXSW wouldn't want something that was also seen at Art Basel and Lollapalooza?

Matt Bizer, Luck Reunion Organizer

Furniture needs/wants:
- Seating chairs are most difficult to source
- Dining sets 6-8 people
- Need to be collapsible, shrinkable
- Seating vignettes, such as couches, coffee tables, lounge chairs
- Bar High tops
- Shelving and displays for vendors
- Charging stations are a nice to have, not need to have
- Lighting and power access always an issue
- Would be interested in trash sorting stations

Issues:
- Currently have 3 shipping containers full of stored furniture
- Would prefer to rent
- Affordable, rentable furniture is cheap and ugly, needs to be dressed up which ends up being expensive anyway
- Weight and simplicity of assembly are priority
- Sustainability would be a bonus, ethically and from an image perspective
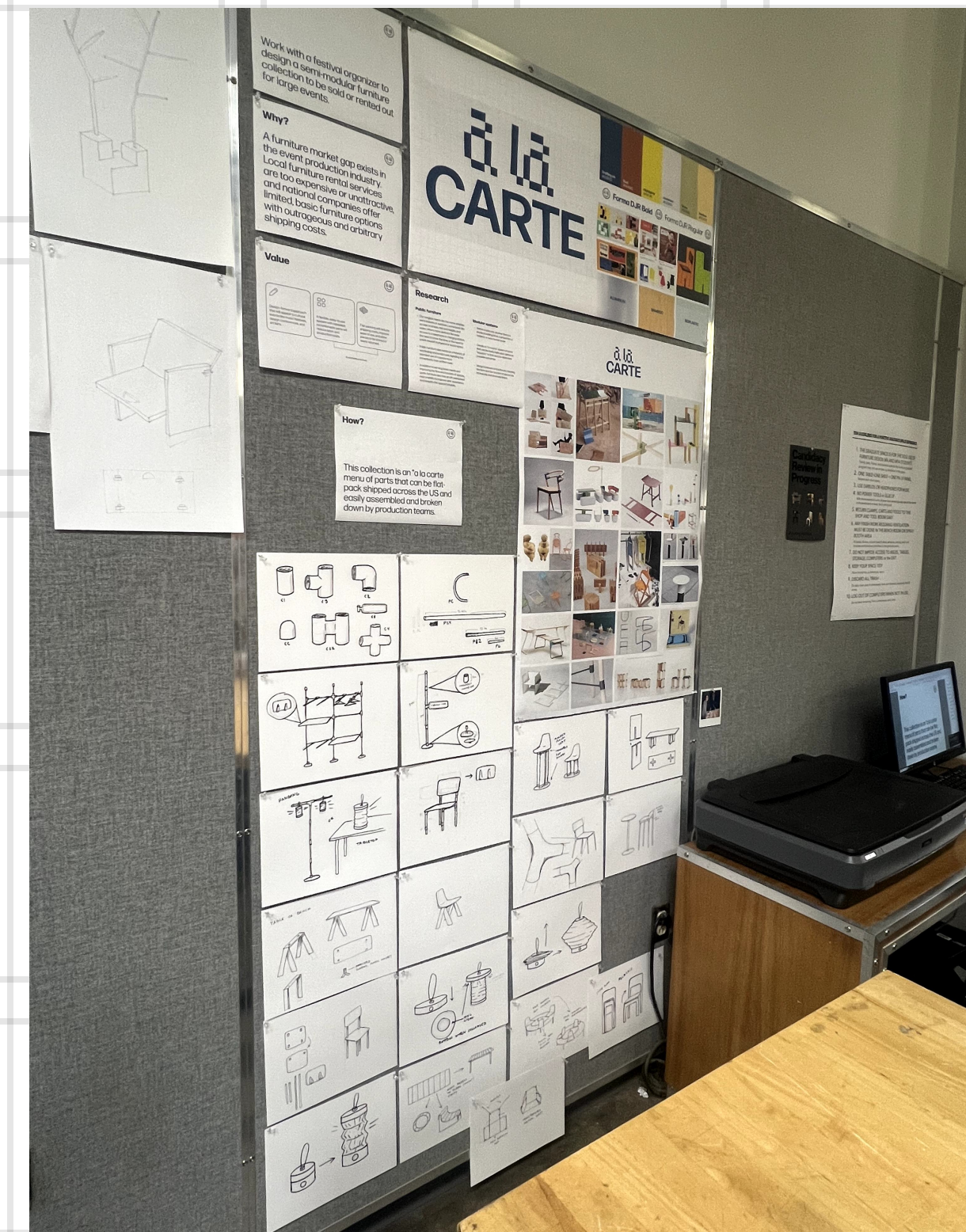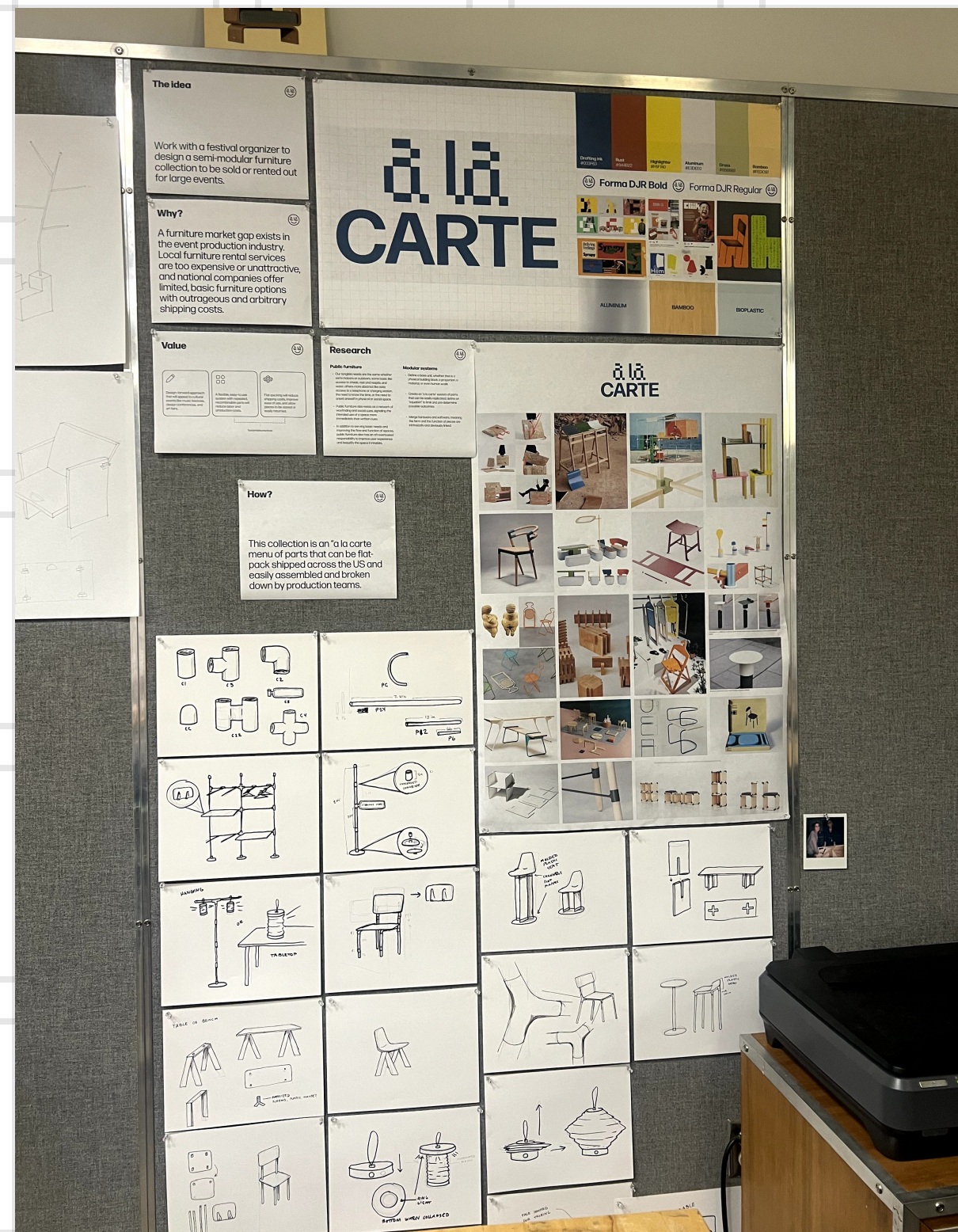- Need to consider front and back of house needs

Aesthetics:
- More neutral options are a must
- Natural materials would be most flexible
- Plastic would work if neutrals or organic tones

CRITICAL:
- Three boxes to check: affordable, durable, aesthetically pleasing
- If it checks these boxes, Matt says using this service/product would be a no-brainer

Sketch development

About Claire Casper

Claire began her career as a studio art major at University of South Carolina, where she became interested in printmaking and commercial illustration. After spending a summer shadowing classes at University of South Florida, she transferred schools and focus to USF's Graphic Arts Program, where she graduated with a concentration in graphic design and a minor in art history.

During her studies at USF, Claire worked as a fabrication assistant in art and millwork studios, and formed a close relationship with local studio Wax & Hive where she helped develop their largely succesful mural program. Post-graduation, she worked as a web and graphics production designer at non-profit startups, and on a national construction/engineering company's marketing team. Claire also continued her freelance mural work, assisting and leading projects for clients including Outback Steakhouse, Velvet Taco, and Willie Nelson's Luck Reunion Festival.

EDUCATION

Savannah College of Art and Design (SCAD)
Master of the Arts Furniture Design (June 2024)

University of South Florida Bachelor of Fine Arts
Graphic Arts w/ Concentration in Graphic Design, minor in Art History (May 2021)

CONTACT

Email: clairecasper26@gmail.com
Instagram: @claire._.casper
Website: clairecasperportfolio.com