

SAFE

niños





ArtCenter Students Co-Create Innovative Healing Environments for Burned Children with Coaniquem Patients, Families and Staff

Above
Environmental Design student Alvin Oei wears the ArtCenter-designed Santi costume at COANIQUEM's Santiago campus.

Safe Niños



Extending the Collaboration

ArtCenter and COANIQUEM have forged a strong relationship. In 2013, they partnered on a global communications campaign focused on burn prevention and on raising awareness and support for children burn victims in low-resourced communities. Safe Niños joins ArtCenter's Designmatters and Environmental Design departments with COANIQUEM—an internationally recognized nonprofit that supports the long-term treatment and rehabilitation of pediatric burn victims in Latin America.

Designmatters

Designmatters, an educational Department at ArtCenter, leads educational initiatives, special projects and publications that demonstrate the power of design for social innovation. In 2002, Designmatters established the College's pioneering affiliation as a Non-Governmental Organization (NGO) with the United Nations. For 15 years, the department has built innovative collaborations with social, public and private sector organizations that are striving to design a better and more humane future for all.

COANIQUEM

COANIQUEM is a non-profit institution created by Dr. Jorge Rojas in 1979 to help children suffering from devastating and life altering burn injuries. Today, COANIQUEM is the leading humanitarian children's organization in South America working to bring medical attention, restorative healing and comprehensive rehabilitation free of charge to 8,000 of the most seriously injured children due to burns each year.

The Challenge



Engaging, empathic environments that support optimal healing for children who have suffered severe burns.

Context

Burn injuries in Latin America affect more than 7 million children per year. The damage can be long-lasting: injuries can inhibit children's bodies from growing normally. According to the WHO, the rate of child deaths from burns is 7 times higher in low- and middle-income countries than in high-income countries. Improving the healing process for kids who suffer from burns is an urgent global need, especially in areas with large populations living in poverty.

Design Brief

Interdisciplinary design students collaborate to envision innovative, empathic environments for the COANIQUEM campus in Santiago, Chile, to support optimal healing for children who have suffered severe burns. Projects may encompass systems, environments or products; ranging from waiting and therapy rooms, to exterior play areas, to interactive walls & way-finding, to furniture, fixtures & lighting.

Innovative Healing Enviroments for Kids

Driven by field research and co-creation, the team seeks to design new, engaging environments that are welcoming and therapeutic, as well as fun and interactive. Tailoring these designs to meet the needs of pediatric patients from underserved communities in Latin America provides an opportunity to develop resourceful, scalable, high-impact innovations.

Above
Coaniquem founder
Dr. Rojas displays the
custom, made-to-fit
compression garments
created on-campus.

Patient's Story

7+ million children a year suffer from burn injuries across Latin America. A child's healing process can take over 20 years, with multiple surgeries as children grow, and significant effects on the entire family.



The Burn

About 70% of burned children that visit COANIQUEM are under five years old. 90% of the burn accidents occur at home in the presence of adults and are caused by: hot liquids, open fires, electrical fires, and hot elements such as heaters and irons.



Hospital

Immediately after the burn, the family takes their child to the hospital, often for a 1-month stay for severe burns. It is here that the wound is initially addressed and the parents learn about the free long-term treat-



Emotions

Emotions are at their strongest and the parents are undergoing one of the worst events to happen in their lives. Following the burn event, the child and parent share a parallel journey of grief – rejection, self blame, depression, and finally acceptance. The healing period can take over twenty years, significantly affecting the entire family.

Healing at COANIQUEM

COANIQUEM embraces a holistic healing philosophy centered around the needs of the burned child as they grow—a rehabilitation process that spans an average of 12 years



COANIQUEM

The healing path begins as the new patient starts the process at COANIQUEM. Here, the patient is fitted with the proper sized garments, all done on-site. They also meet the staff, nurses, and doctors, many of which they will see consistently for their whole time at COANIQUEM.

Surgery

As the child gets older and their bodies grow, their skin grafts don't follow suit. To compensate, the patient must undergo several surgeries over their lives, usually around once a year. It is here that they stay at COANIQUEM's on-site residence, otherwise known as the Casabierta.

“

COANIQUEM doesn't just work with burned children, they work with families and communities too, helping them accept the children so they won't live a life that's defined by their scars.

CAROLYN SCHEUTZ
Director/Treasurer
COANIQUEM BCF,
US Foundation



Self

As the child gets older and returns to COANIQUEM again and again, what unfolds is a natural progression as a more aware teenager. At COANIQUEM, the patient is made aware of their condition, and must confront it. The nurses and doctors help them to once again be comfortable in their own bodies.

Friends

No one really understands the struggles of a burn victim except for other burn victims who have undergone the long healing process themselves. At COANIQUEM, patients often schedule their surgeries with other friends who are patients. They are not alone in the healing process.

Forward

The patient has grown up with another family at COANIQUEM but the next phase of life continues, especially now that their body has stopped growing. Coaniquem's service starts at the age of 1 and ends at 20.



— Empathy

Empathy and human connection are the heart of the design process in seeking to create social impact. During a 2-week stay at the COANIQUEM burn rehabilitation campus in Santiago, Chile, students have an immersive experience living alongside pediatric patients and their families. They connect across language and culture, through play, art, dance & music.

Co-Creation: Working Together



How can we envision opportunities & creative solutions together? Co-creation between students and our partner community is essential to create value; innovation emerges out of this deep partnership.

Field Research in Santiago, Chile

Both students and faculty traveled to the COANIQUEM pediatric burn rehabilitation center in Santiago, Chile for two weeks to conduct hands-on research, collective brainstorming sessions, and creative collaboration with all stakeholders—including medical professionals, staff, pediatric patients and families—to understand key challenges, envision opportunities, and begin to create solutions together.

Goals of Field Research

- 1 Seek key opportunities for design to make an impact
- 2 Build empathy & deep connections with people
- 3 Consider all stakeholders: different age pediatric patients, parents, caregivers, medical professionals, staff of school/residence/clinic etc
- 4 Listen to people's stories, dreams & needs & desires
- 5 Collect both qualitative & quantitative data

Co-Creation Continues

While co-creation begins during field research, it does not comprise a single instance or phase, but rather serves as a guiding principle that drives every step in the design process. Ongoing community feedback becomes essential to build trust, understand stakeholders' priorities and create the most value for the partner community. After the midpoint of the studio, representative team members returned to COANIQUEM to share ideas, test prototypes and incubate & iterate designs.

Previous page

Behnia Rahmati, an Environmental Design student, breaks the language barrier with a COANIQUEM patient using Google Translate's voice features.

Above

Environmental Design student Rachel Moore creates paper bag puppets with Antonella during one of the art fairs.

Right, above

Environmental Design instructor Penny Herscovitch works with a young COANIQUEM patient during the 2nd trip to Chile.

Right, below

Students Ariane Fund and Emily Nyburg discuss new approaches for COANIQUEM with staff.



Field Research Narrative

To design in the best way possible for COANIQUEM, we need to understand the staff, patients, and their families. And to do that requires being there together.

Arrival

When we landed, we settled our belongings at the campus residence called Casabierta. And from there, our first impression of COANIQUEM was through its staff. We met with the founder, Dr. Rojas.

Campus Tour

The next day, we were immediately given a tour of COANIQUEM so we could begin to understand the environment and listen for key opportunities.



Co-Creation

After we became familiar with the generalities of COANIQUEM, we started to dig deeper. We held workshops with the staff and worked together to find out new directions for COANIQUEM.



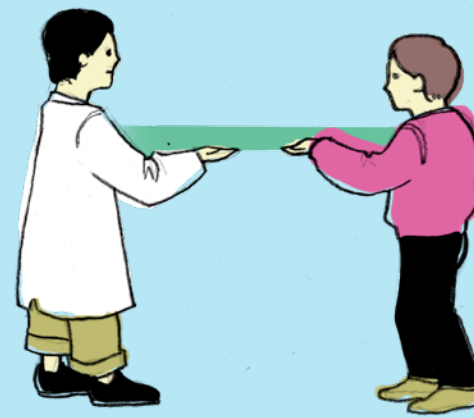
Art Workshops

We held art workshops for patients and their families in front of the entrance of the main lobby. Not only did this act as an icebreaker for our presence on the campus, but it also helped us to understand the waiting room process.



Significance

We held even more art workshops with the patients and their families. But this time, we wanted to find out what the perfect COANIQUEM meant to them. So that was exactly what we asked them to draw!



Zoning In

After each of these workshops, we would get together as a team and fill each other in with our respective insights. It was at this point that we started to get specific with our directions. In separate groups, the team narrowed down on the locations that needed the most work done.



Insights

Our last days at COANIQUEM focused on researching these specific parts we divided ourselves amongst. We had specific tours with the staff of each respective department, unlocking in-depth insights.

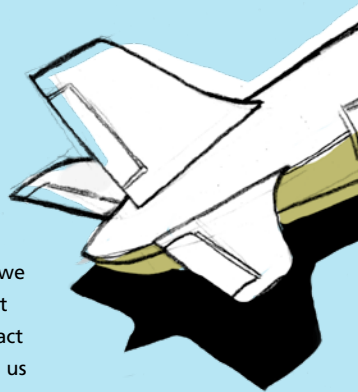


Prototypes

And we finished the field research with design prototypes. Using materials we had brought with us as well as found-objects, we sat passively watching patients interact with the prototypes. This allowed us to see how they respond to certain stimuli, which would later influence our designs.

Last Chance

Using materials we had brought with us as well as found-objects, we created design prototypes and sat passively watching patients interact with the prototypes. This allowed us to see how they respond to certain stimuli, which would later influence our designs.



The Ecosystem of Healing

COANIQUEM’s integrated, child-centric approach to rehabilitation inspired the Safe Niños team to:

Transform COANIQUEM into a magical ecosystem, inspired by Chile’s diversity, that empowers & nurtures patients and families through their healing journey.

COANIQUEM Child
Burn Treatment Center
Santiago, Chile
6 acres

- Casabierta

Free room + board
- School

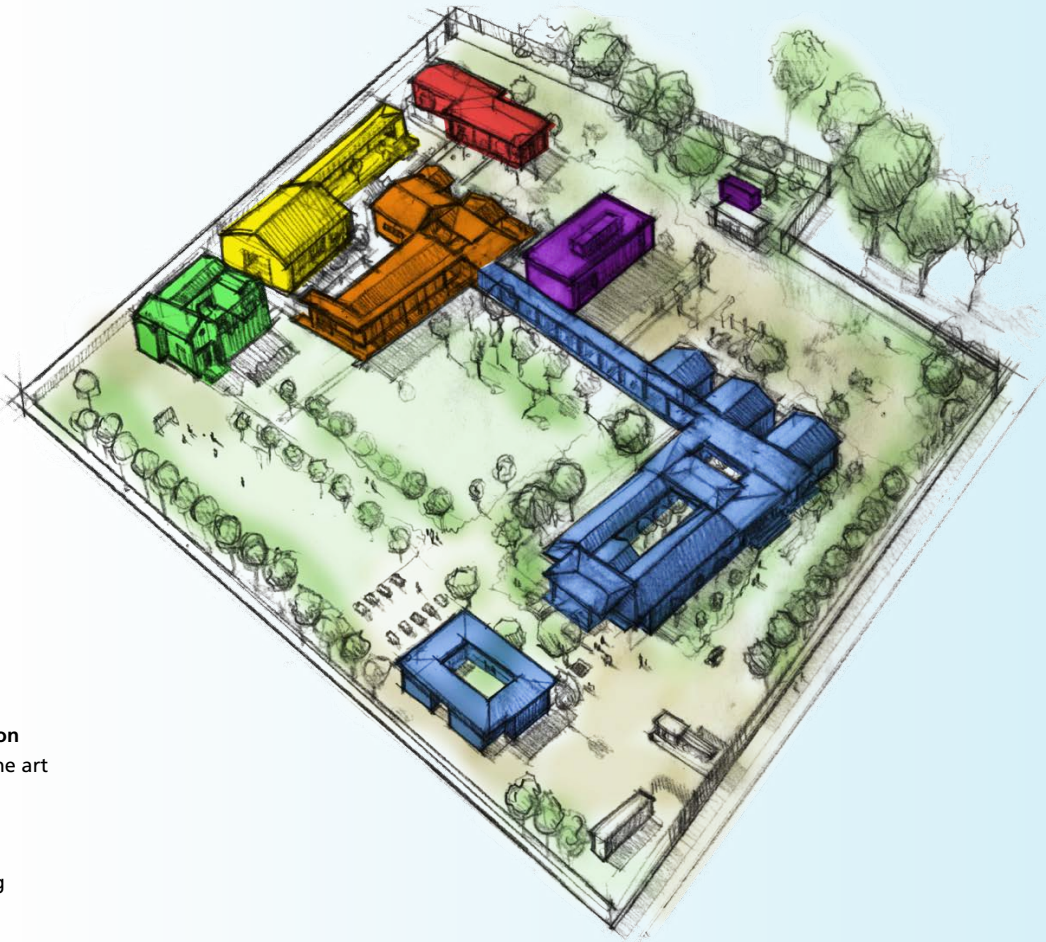
Free education
- Cafeteria

Nutrition
- Chapel

Spiritual
- Sterilization

State of the art
- Surgery

Expanding



The World of Santi & Friends

Alvin Oei
ENVIRONMENTAL DESIGN

Lori Nishikawa
PRODUCT DESIGN

Lauren Medina
INTERACTION DESIGN

A magical healing journey harnesses the power of story, taking young patients on an adventure through the Andes to encounter animal characters that serve as guides, role models & friends.

Opportunity

The treatment journey for a burn survivor is challenging. Patients come to COANIQUEM throughout their childhood, often going through surgery and multiple visits for rehabilitation. We seek to alleviate pain and anxiety and replace it with the joy, wonder and excitement that COANIQUEM brings to every patient.

During our research, we met families coming from all over Chile and South America, who share their stories and backgrounds to create the culture of COANIQUEM. Building on their stories and the diversity of the Chilean land and culture, El Mundo de Santi transforms COANIQUEM's clinical setting into a magical ecosystem.

Design Solution

El Mundo de Santi (The World of Santi and Friends) introduces story into COANIQUEM's campus through immersive environments, inspired by Chile's diverse ecosystems. A cast of animal characters live in these enchanted habitats and become friends and models for courage and values, to guide the young patients through their treatment. El Mundo de Santi builds on the successful burn prevention campaign Designmatters students created in partnership with COANIQUEM, where two young kids—Camila and Lucas—protect Santi the cat mascot from getting burned.

Patients accompany Camila and Lucas on an adventure flying over the Andes. Along their journey, they encounter animal characters in different habitats that represent core values specific to each of the ten areas of treatment. To engage young patients, a storybook introduces the narrative; each child receives a passport to stamp when they visit these habitats as they go through treatment; and each habitat features an interactive element that supports the message of that treatment area. is designed to foster interactive play, immersive environments and help alleviate pain and anxiety and replace it with the joy, wonder and excitement that COANIQUEM brings to every patient.

Left above & below
COANIQUEM patients
co-create during the team's
2nd field research trip and
show off their fresh ideas.

Right
The Wonderful World of
Santi is a magical land.



Welcoming Entry & Play Patio

Julia Altschul
ENVIRONMENTAL DESIGN

Eri Kawaguchi
ENVIRONMENTAL DESIGN



Transitioning visitors from the urban environment to COANIQUEM's world of magical ecosystems through a layered set of thresholds, while creating healing and play experiences.

Opportunity

During our field research in Chile, we were welcomed to COANIQUEM's campus by their incredibly attentive and loving staff. Co-creation and interviews with patients, families, and staff helped us understand key issues with the campus entrance and outdoor space, and sparked us to reimagine the entry gate and security as a magical passage for visitors. In the underutilized outdoor area, we saw great potential to design a beautiful landscape, to help visitors heal mentally and physically through a visual and sensorial therapeutic approach.

Design Proposal

A colorful painted fence and bold COANIQUEM sign welcome visitors into the magical story, while maintaining campus safety. Transforming the security zone into an enchanting garden, a shade structure inspired by Chilean flora filters warm light to the path below. Colored concrete pavers create a smooth, accessible, and traffic-safe path to the waiting area. Shade sails provide shelter from the sun and rain and welcome visitors to the new waiting room experience. Connected to the waiting room is a new outdoor patio, where children can play safely and adults can enjoy the refreshing outdoor environment. In this ship-themed environment, engaging play elements on the walls support specific therapies, such as physical and music therapy. Beyond, the "Path of Healing" leads to the chapel, offering the message that "after you pass these difficult times, there will be a release and complete healing waiting for you." Flowers are planted along the path and the ground is made of mosaic tiles, with a colorful centerpiece symbol of the "Tree of Life" indicating the beginning of the journey.

Left

The mosaic tile floor design that would be between the main building and garment building.

Right Above

Co-Creation with COANIQUEM staff, using the

Right, bottom right

Renderings of the outdoor play space.

Right, bottom left

Renderings of the gated entrance to COANIQUEM after the main gate.



Base Camp

Nicholas Jayanty

INTERACTION DESIGN

Dave Hansung Kim

PRODUCT DESIGN

Rachel Moore

ENVIRONMENTAL DESIGN

Every great journey starts at Base Camp.

Opportunity

Despite receiving free treatment, families' opportunity cost of missing work, finding additional child care for siblings, and long distance travel is balanced by scheduling multiple appointments in a compressed time frame. As a result, families often wait between three - eight hours to see multiple specialists

Anxiety, boredom and sterility compound the already complex spectrum of emotions demanding the initial treatment touchpoint for Coaniquem be reimagined as a welcoming, engaging, efficient, and welcoming environment for patients, parent and staff.

Design Solution

Every great journey begins with a tremendous amount of support. Base Camp is no different. To prepare patients and families for the healing path ahead, Base Camp offers comfort to families traveling from near and far, acts as a hub for parents and patients to connect, and provides key information to unlock the magical ecosystem of Coaniquem.



Left middle & above
Differing views of the new waiting room.

Left Below
The proposed display for the tv monitors in the waiting room.

Right Above
Co-creation with a young COANIQUEM patient and his mom (orange long sleeve) and grandmother (black jacket) during the 2nd field research trip.

Right Below
The view in the waiting room from the perspective of the front desk staff.

Sensory & Therapeutic PlayScape

Ariane Fund
GRAD INDUSTRIAL DESIGN

David Hollo
PRODUCT DESIGN

Emily Nyburg
ENVIRONMENTAL DESIGN

Marie Stargala
ENVIRONMENTAL DESIGN

A therapeutic play space built around sensory experiences, with connected moments that engage children, teens, and their families.

Opportunity

While at COANIQUEM, we saw that the area behind the Casabiarta residence is an expansive and unused space, with great potential. COANIQUEM wants kids to feel like kids, and we saw an opportunity to bring in playful experiences that enhance the healing process for those patients who make Coaniquem their temporary home. There is also an opportunity to provide solutions for the family members who accompany their children year after year, and are an integral part of the COANIQUEM journey. Mothers told us they get bored on the weekends when there are no doctor's appointments, school, or workshops, and especially want a place to exercise. Through discussions with teenage girls, we learned they wanted a more private place to do their physical therapy exercises and stay in shape. And through observations with staff we learned that the healing process is ongoing, and children need to be engaged with their recovery.

Design Proposal

Building on research into the healing benefits of sensory play, this PlayScape reinforces COANIQUEM's physical, occupational, and musical therapies, supporting their holistic approach to care. It provides needed activity for parents and kids on evenings and weekends: musical, tactile & active play, exercise, spots to socialize, a chalk-drawing wall, and a court for Zumba, soccer & performances. Organic, sculptural shade structures provide much needed sun and rain protection along the pathways, critical for burn patients with sensitive skin. This PlayScape builds on COANIQUEM's mission to transform one of the most challenging experiences of your life into the best thing that ever happens to you. The goal is to provide patients lifelong lessons and values of community and friendship, foster social skills, and instill healthy lifestyles.

Left Above
The floor plan of the new PlaySpace surrounding the Casabiarta residence.

Left Below
A model detail of the pathway surrounding the Casabiarta residence.

Above
Using the models from midterm, the team co-created with COANIQUEM staff during the 2nd trip.

Right Above
Co-creation with COANIQUEM staff, using the imported design model as the basis of conversation.



El Club: TeenZone

Behnia Rahmati
ENVIRONMENTAL DESIGN

A fresh look at existing shipping containers on the site, through the eyes of the adolescents. Repurposing containers into a vibrant TeenZone—a place for teens to hang out and express what matters to them.

Opportunity

During our research, it became apparent that burn patients have a long treatment journey ahead of them; even though the accidents mostly happened when they were very young, the complete course of recovery extends for several years. One of the problems that physicians identified is that teenagers often don't return to continue their treatment, even though this is a crucial stage to complete their treatment process. We also learned that there is no dedicated space for teens on campus, and many of the teens shared with us that they were bored and wanted to feel understood.

Design Solution

How can the design of El Club achieve interactivity, control, and self-direction for the teens? Teens staying at the Casabierta residence can create their own environment at El Club by painting murals and collaborating on the graffiti wall, hanging their own re-configurable hammocks, and contributing to the sculptural shade structure. This empowering environment comes to life with teens' contribution and passion, which leads to teens gaining the power to express themselves, feeling like they belong, and giving back to the community.

Left Above

Co-Creation with a young COANIQUEM patient using Behnia Rahmati's template for the storage container.

Left Below

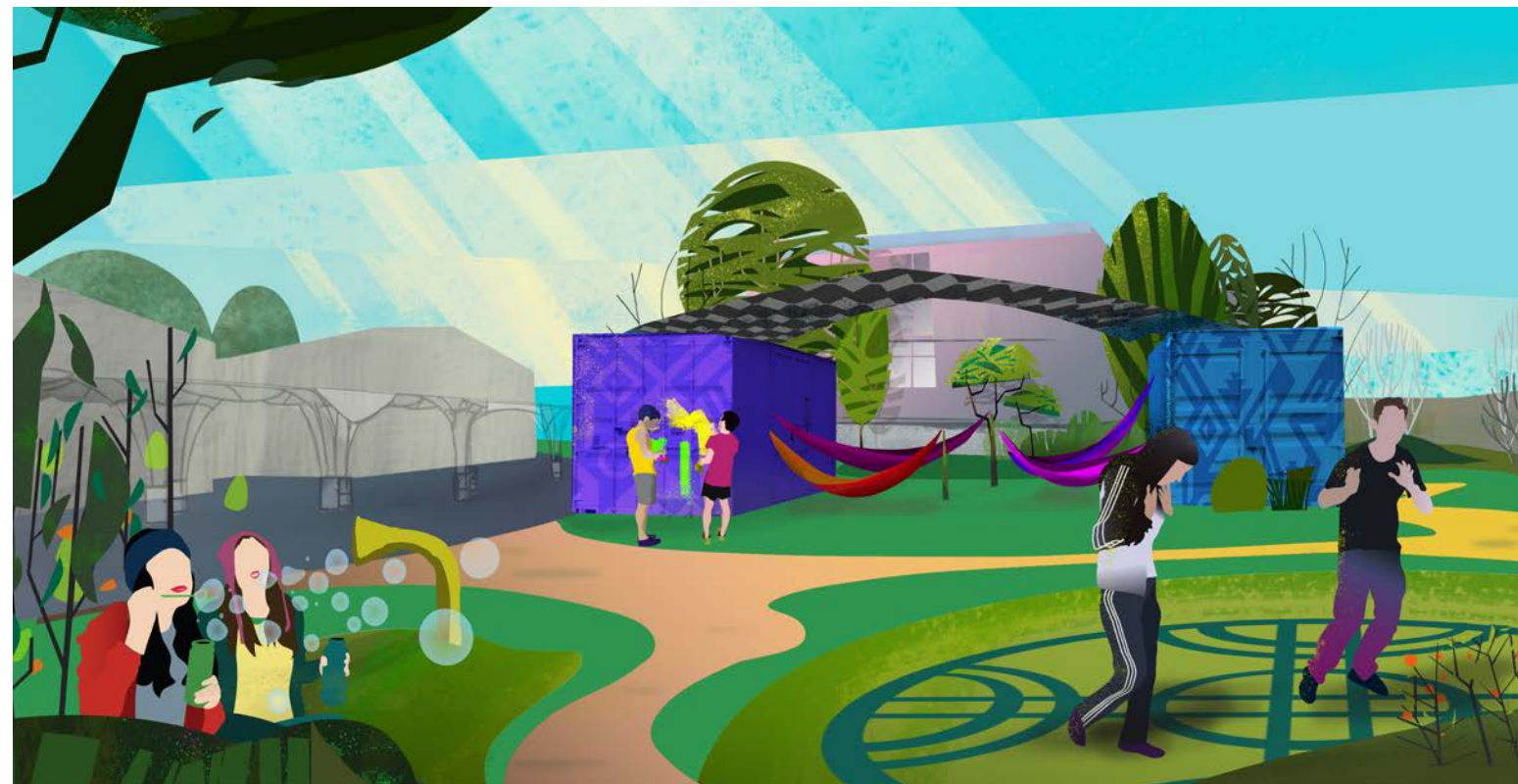
The finished drawing of what would be the drawn surface of the shipping containers.

Right Above

Long-term COANIQUEM patient, Paz, enjoying a hammock during the second SafeNiños visit.

Right Below

The one and only El Club.



Moving Forward

This vision could not be possible without the immense contribution of the patients, families and staff of COANIQUEM. Together with the extended COANIQUEM family, we seek to create a new healing journey for all the children who have inspired us.



Safe Niños is a Designmatters at ArtCenter educational partnership for social impact, hosted by the Environmental Design Department.

www.designmattersatartcenter.org

COANIQUEM is a leading, internationally recognized nonprofit based in Santiago, Chile that provides free long-term treatment to burned children across Latin America

www.coaniquem.cl
www.burnedchildren.org

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