Refugees, Resiliency, and Public Space: The BSA Syria Initiative

Due Diligence Report, May 2018
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Figure 0: Children enjoy the various play elements in the playground, including items donated by Kompan.
The Syria Initiative (“the initiative”) was established in 2016 to facilitate the design and construction of space for refugee children and young adults living in temporary encampments to play and interact. It involved collaboration between members of the Boston Society of Architects (BSA) and Boston design community in partnership with the Karam Foundation (Karam) and Sawa for Development and Aid (SDA). There was also significant support by local practicing architects as well as faculty and students from Boston area design schools including Harvard University, Massachusetts College of Art and Design, Massachusetts Institute of Technology, Northeastern University, and Boston Architectural College.

On the surface, the initiative was to build a playground. In actuality, it was a first step towards developing a transnational, collaborative, and replicable process to design and construct child-focused spaces in the context of conflict or natural disasters. Building upon the work of humanitarians and peacebuilders who provide food, water, shelter, healthcare, and educational support, this initiative introduced child-focused public spaces to support positive interactions, social cohesion, and healing.

BACKGROUND AND CONTEXT
According to the United Nations High Commissioner for Refugees (UNHCR), between 2011 and 2018, since the start of the Syrian Civil War, over 5.6 million people have fled Syria seeking safety in Turkey, Lebanon, Jordan, Egypt, and Iraq. Lebanon, a country with a population of 4 million, hosts the highest number of Syrian refugees per capita in the world. More than 1.5 million of them have little or no financial resources and around 70 percent live below the poverty line. There are no formal refugee camps and, as a result, Syrians are scattered throughout more than 2,100 urban and rural communities and locations, often sharing small, overcrowded lodgings with other refugee families.

Global displacement has surpassed that witnessed in the wake of World War II, and children remain the most impacted victims. At least 3 million Syrian children under the age of six have been traumatized by war, and more than half of all Syrian refugees are under the age of 18. The average stay of refugees is 17 years, for many an entire childhood, and Human Rights Watch estimates that roughly half of the Syrian refugee children in Turkey, Jordan, and Lebanon do not have access to a formal education.

UNHCR estimates that the average stay for refugees in temporary encampments is 17 years, which for many is an entire childhood.

Play is inextricably linked to childhood education, as it helps their cognitive development, competence, gross motor skills and peer group leadership. It is also a basic
human right enshrined in the 1989 Convention on the Rights of the Child and the 1951 Refugee Convention. But the needs of children are not always adequately addressed by humanitarian aid, and without opportunities to learn and play in safe environments, a generation of Syrian children is at risk.

**A ROLE FOR DESIGN?**

Until recently, the design disciplines have had limited involvement in peacebuilding efforts. The possibility that spaces can be designed to foster stronger community and greater resilience in times and places of conflict remains under-explored. In light of current and ongoing conflicts, there is urgency to develop new tools, processes, and methods of exploration for two critical challenges at the nexus of humanitarian response and design: (a) building-in opportunities for normalcy and healing through the public realm, (b) strengthening social cohesion opportunities through participatory design. This raises the following questions:

1. **Can designers effectively contribute during international humanitarian crises?**

2. **Would the design of better public spaces in refugee camps address a real need?**

3. **What would a scalable and replicable model for designing and constructing public space for refugees entail?**

To explore these questions, the initiative was formed to develop a process for the design and implementation of child-focused spaces aimed at improving the quality of life for Syrian refugee children and their families. Building on existing networks operating in Lebanon, and through a collaborative design and construction process, this initiative seeks ways for space to strengthen social cohesion between and across communities by addressing the needs of the most vulnerable Syrian refugees: children.
THE INITIATIVE

In early 2016, the Board of the BSA agreed to support the development of an initiative to build a playground for Syrian refugees. An ad-hoc working committee was formed of design professionals, academics, and NGO actors in the Boston area. This committee initiated a series of public discussions; explored partnerships with academic institutions, professional organizations, international NGOs, and international designers; and established an international collaborative that designed, funded, and constructed a pilot project.

The entire process was focused on establishing a network, process, and toolkit, as a scalable and reproducible model. This primarily included:

1. Partnering: Identifying partners working on the ground with trusted financial ties to the United States and a child-focused mission
2. Site Selection: Identifying a country that could be relatively safely visited
3. Design Facilitation, Fundraising, and Logistics: Engaging designers, academics, builders, and funders across the globe through design charrettes and presentations. Providing jobs for the Syrians using the skill set and expertise of refugees living on the site.

PARTNERING

The initiative began with a Memorandum of Understanding (MOU), outlining logistical and fiduciary responsibilities that would be shared among Karam, SDA, the Project Architects, and the BSA.

It provided a detailed description of each party’s responsibilities and coordinating roles:

The Boston Society of Architects (BSA) is a Boston-based local chapter of the American Institute of Architects, and a nonprofit professional-service organization. It sponsored a transnational process that included professional and academic members of the Boston architectural community, Lebanese architects, and the NGO partners to collaboratively develop design ideas for the initiative. The BSA acted as the convener for events related to the initiative: providing space for the panel, charrettes, and reception including in-kind donations for in staff time, marketing, acknowledgment of donations and refreshments. It was also signatory for the MOU representing the professional membership.

Karam is a Chicago-based nonprofit organization and is dedicated to restoring the dignity and quality of life for people affected by conflict through innovative education, entrepreneurial development, and community-driven aid. They acted as Financial Agent for the Initiative. As the financial agent of the Initiative, Karam Foundation undertook fundraising for the Initiative, recognition and issuance of tax-exempt receipts to donors in the United States, and disbursement of funds to SDA for labor and material expenses related to the Initiative.

Sawa for Development and Aid (SDA) is a Lebanon-based NGO that takes responsibility for various camps and maintains onsite logistics. It was founded in 2011 as a nonprofit, nonsectarian organization that supports the most underprivileged populations in Lebanon through various programs involving health care, psychosocial support, rural development, vocational training, child protection, and
promotion of human rights. They acted as the onsite Project Manager for the Initiative. As on-site logistics coordinator of the Initiative, SDA was responsible for managing land-lease of the site, providing construction administration services, as well as reporting on progress and allocation of funds.

The Project Architects in Lebanon were recruited by the Initiative to produce the final design of the playground. The team connected with the Boston architecture community through multiple brainstorming and working sessions that culminated in a series of design suggestions. The Project Architects applied these suggestions towards a final design proposal, for which they produced documents and conducted site visits to supervise the quality of construction.

The outreach effort conducted by the BSA included members of the architecture community and the landscape architecture community of greater Boston, and consisted of organizing design activities, orienting participants in understanding context and available resources, and distilling concepts for possible implementation on the ground within a given timeline.

SITE SELECTION
A site was identified in the Bekaa Valley, Lebanon, on the outskirts of the city of Bar Elias and less than 10 miles from the Syrian border. Lebanon was selected for the following reasons: (a) The Lebanese government allows free movement in and out of refugee encampments; (b) Refugee facilities exist in a tenuousness state, typically on private land with one to two years leases from local owners, and often managed by local NGO’s responsible for the land leases; and (c) One member of the committee – and many in the Boston metropolitan design community -- had professional contacts in Lebanon and is able to travel there regularly, allowing the committee to maintain personal connections to local partners for a higher likelihood that the process runs smoothly.

Partnering with Project Architects in the destination country was also a critical objective. Logistically it ensured that the community and site could be visited, easily and often, for purposes of engagement, research, and implementation. It was also seen as an opportunity to support capacity-building for local architects, carpenters, and NGOs.

DESIGN FACILITATION, FUNDRAISING, AND LOGISTICS
The design process and fundraising were inextricably linked. Starting January 2016, the committee supported the fundraising of construction costs. All aspects of the initiative—design, outreach, funding and technical expertise—were crowdsourced with academics and professionals in the US in partnership with the Project Architects in Lebanon and Karam. Ultimately, $50,377 were raised, covering the cost of construction and research. Those funds were sourced as follows:
Harvard Asia Center and GSD: $25,000
Chleck Foundation: $10,000
SEA-Dar: $5,000
Fundraiser Hosted by Shirine Boulos: $8,950
Committee Members: $1000
SDA: $427
The committee conducted weekly meetings and facilitated three international design charrettes via video conference. Between March and April of 2017, a schematic program and palette of materials was co-developed and refined with input from all parties. Working together, ideas were exchanged regarding site organization and material palettes, and construction techniques were developed that supported a culturally responsive, climatically appropriate, as well as technically feasible design.

More than 75 Boston area architects, designers, and allied professionals participated in three interactive videoconference charrettes that included the project architects and an SDA representative. The collaborative response was to develop a sense of public, shared space for groups to gather and play, leveraging modularity and readily available materials.

Charrette 1: Brainstorming
The committee provided a general recap of the initiative and its activities to date. This was followed by information provided by the Project Architects regarding site, needs, expectations, and general regulations in the area. Participants began to form teams and brainstorm responses.

Charrette 2: Three Frameworks
After a week of work, participants presented their suggestions which were critiqued by the Project Architects and the Committee. By the end of the session, three framework concepts were developed: “The Street”, “The Square”, and “The Courtyard,” and a design palette was constructed using locally available materials.

Charrette 3: Details and Layout
An additional week of work led to more detailed elaboration of the three framework concepts. Furthermore, a variety of design elements were explored: landforms, shade structures, planting and gardens, play equipment, ground cover, modularity, theater, and games.

The following steps and considerations were necessary to receive new and continued financial and in-kind contributions:

1. Engaging with partners in project management, oversight, and decision-making and establishing long-term relationships for continued financial support.

2. Connecting with local chapters of AIA and ASLA who serve as project signatories and provide ongoing staff support for events, including promotion and sponsorship of charrettes, workshops, panels, receptions; and grant access to event spaces and meeting spaces.

3. Nurturing established relationships through streamlined digital communications with membership organizations and donors, including website updates, emails, thank-you letters and membership tracking at events.

4. Allotting considerable time for budgeting, management of funds, project oversight, and communication including the development and clarification of communications to and from the committee regarding the budget.

5. Establishing contact persons onsite, including within the NGO, project management and construction teams.

6. Acknowledging and embracing the diversity of the BSA architects, designers and builders’ community including many stakeholders with strong connection with the Middle East or being the first generation of immigrants in the US.

7. Continuing to develop communication and collaboration between refugee communities and local host populations in support of social cohesion through the design of public, child-focused play spaces.
Figure 3: Site strategies emerging from the charrettes.

Figure 4: The initial presentation from a participating team.

Figure 5: A schematic plan and mood board.

Figure 6: Discussion with the Project Architects during the charrette.
Members of the committee, the project manager, and a graduate researcher arrived in Lebanon in the summer of 2017 to meet with the Project Architects, conduct interviews, visit sites, meet with refugees living in nearby camps, and help initiate construction. They instead met with SDA’s local operations team in search of a new site for the entire encampment and spent time conducting interviews and meeting with refugees in nearby camps. SDA had to adjust the proposed site improvements to a new site, coming to a new agreement with a new landowner and ratifying it with local government officials, setting up a new water filtering system and electrical infrastructure, laying mud slabs and tent frames, and identifying a new location for the educational and playground programs.

Most design processes present unexpected challenges, and this initiative was no exception.

This unexpected disruption meant that the design needed to be as easily disassembled as it was assembled, and potentially reconstructed on another site at a moment’s notice. Fortunately the Project Architects had taken these challenges into account, and the final design accommodated the idiosyncrasies of any site and was easily expandable (or contractible) to fit spaces of all shapes and sizes.

CHALLENGES AND DESIGN RESPONSES

The primary challenges and corresponding design responses, orchestrated by the Project Architects and supported by the committee, can be parsed into three overarching categories. They profoundly impacted the design, and are structured as follows:

Challenge 1: Permanent Impermanence
Refugees can experience a prolonged state of limbo, and because refugee camps are intended to be temporary, permanent structures are discouraged, if not forbidden. Like the tents, everything is expected to be temporary, a requirement that is strongly enforced by government officials and upheld by large international NGOs. Additionally, private land leases last 1-2 years and may not be renewed. Furthermore, just before construction, the Lebanese military expanded their military security radius. The new extent included the camp and the site where the playground was to be constructed, affirming the unpredictability faced by refugees and consequently the playground being designed.

Design response: An 8x8 modular wood frame design was proposed. It would be simple, sturdy, and legally compliant in Lebanon. The frames can be easily assembled AND disassembled in case of relocation. They are placed without below grade footings.

Challenge 2: Irregular Spaces
Refugee camps are laid out as temporary communities of tents with only narrow walkways that serve as the “public realm.” There is very little
space for gathering or socializing, much less for children to play.

*Design response:* The response was a tessellating structural system that can expand and contract as necessary to fit any space. It is a rigid, surface-supported structure on a gravel base, optimized for a light touch approach.

**Challenge 3: Range of Needs**

Children of all ages live in camps. And with limited options for work, many adults spend significant time there as well.

*Design response:* A variety of spaces for large groups or individuals would be created such that they are inviting for all ages of children and adults. They benefit from active and passive uses including (a) a place for the children to play safely, (b) an abutting place for the parents and guardians to meet/network while watching their children play, and (c) spaces for young adults to play actively. The ability to be adapted over time with replaceable and interchangeable equipment was also a key response to the variable and varying needs.

**EXECUTION**

The final design was made to be flexible enough to accommodate a wide range of elements. The Bekaa Valley is at an altitude ranging between 900 to 1,200 meters (2,900 and 3,900 feet), the winters are cold by Lebanese norms and summers are very hot despite the altitude. To address seasonal extremes, shade structures were built to protect from summer heat, as well as trenches and gravel bases to prevent standing water during rainy seasons.
Construction began in December 2017 with leveling the ground, pouring a gravel base, and milling the modular structural system at three heights (1 meter, 2.5 meters, and 3.5 meters) to support swings, climbing structures, shading devices, hammocks, seating, gardens, seesaws, and other play items. The design was finalized by the Project Architects to include:

1. Tessellated 3-dimensional grid of three heights with base buried in gravel. 8x8in wood frame construction (20x20cm)
2. Shade developed through elevated wind canopies on the highest modules
3. Hammock style slings used for seating, resting, and play
4. Swings hung from portions of the grid
5. Seesaws and staggered seating
6. Gardening areas with fertile soil
7. Climbing ropes, nets, and steps
8. A basketball court with several hoops

Through the construction period the project manager, a member of our committee, made regular site visits with the Project Architects. Most of the people hired and paid during construction were Syrian refugees living in the camps, which was another central goal of the initiative.
A central goal of the initiative was to develop a replicable model to effectively support the construction of playgrounds in areas of crisis. It was also important to focus our attention on early childhood development through play and social space while engaging the Boston design community in these efforts. Emulating this process could help create global communities of designers, academics, and builders between the U.S. and post-disaster populations across the world.

The preliminary lessons learned are listed below and highlight immediate areas for improvement. A deeper reflection is underway through a series of questionnaires asking our partners, donors, and colleagues in Lebanon to reflect on the successes and areas for improvement which will inform future initiatives.

- **Allow for Extra Time for Logistics** including budgeting, fund management, initiative oversight, and communication requires. The imagined time frame of 3 months only accounted for actual construction. In reality, a variety of setbacks, not least among them the weather, extended the time to over a year.

- **Develop and Nurture Long-Term Relationships** with membership organizations as signatories for the initiative and donors as support for events and construction. Managing and responding to membership organizations and donors was a slower process than expected.

- **Be on the Ground** with partners and stay involved with process management and oversight. It was exceedingly valuable for members of the committee to communicate with site personnel and visit the site regularly.

- **Give Agency** to the Project Architects, engaging them more closely with the construction process to support the committee's supervision efforts. SDA's supervision abilities were limited, and the architects, despite not being sufficiently funded, had to intervene in this.

- **Make Time for Engagement** with the users (children) through deeper and more meaningful involvement at every stage of the process. The unexpected site and schedule changes raised complications, which inhibited engagement.

*Figure 13: Project Architects actively participated in the construction effort, engaging with camp residents and children.*
Considering the positive reception by both the local community and the Boston design community, several new projects are already in the pipeline:

(1) A new partnership with Kayany, an NGO running 7 schools in Lebanon. This partnership will include the construction of at least one playground in Summer 2018, and a total of six playgrounds in the school courtyards. The BSA will continue as a partner for this project.

(2) A continuation of our partnership with Karam, this time in Reyhanli, Turkey. This project will see the construction of a large playground in the context of a small town with a 140,000 strong population of urban refugees from Syria. The Boston Society of Landscape Architects (BLSA) will be our community design partner.

(3) A collaboration with BSA and BSLA. This will include local initiatives with the City of Boston to develop safe spaces for children and families through Community Preservation Act Funds for immigrant communities in the neighborhoods.

(4) Launch of a 501c3 non-profit that raises funds to design and build safe play spaces for children of refugees and others, displaced by conflict and natural disasters in the Middle East and around the world. Important goals will be to support participatory design with non-profit partners and to create an open, creative community of people, NGOs, and other organizations seeking to build playgrounds for refugee children. We will employ various techniques ranging from prototyping, fabrication, community design concepts, participatory planning methodologies and fundraising strategies.

Figure 14: Once deemed safe, and outside of working hours, children began to use the playground only days after construction began. Here they enjoy the modular system itself as a full sized play structure, also playing and gathering around low hanging hammocks.
TEAM & COLLABORATORS

Steering Committee
Nathalie Beauvais, Committee Lead, Int’l AIA, AICP, Principal at Kleinfelder
Shirine Boulos Anderson, AIA, Principal at Ellenzweig Architecture Planning
Dana Arazi, Assoc. AIA, Independent Architect
Stephen Gray, Assistant Professor of Urban Design, Harvard University
James Kostaras, AIA, AICP, Senior Fellow at the Institute for Urban Development
Ramzi Naja, Project Manager, Assoc. AIA, OEA, Designer at NuVu
Gretchen Rabinkin, AIA, Executive Director, Boston Society of Landscape Architects
Mitch Ryerson, Furniture-maker, Adjunct Assistant Professor, MassArt
Patricia Seitz, AIA, Professor and Head of Graduate Architecture Program, MassArt

Project Architects in Lebanon
Layal Merhi, Lead Architect, RIBA, OEA, Faculty at Lebanese American University, MArch Bartlett
Ahmad Al Mahairy, Architect at Khatib and Alami, BArch Damascus University
Wael Sinno, Architect and Coordinator at UN Habitat, BArch Lebanese American University

SDA Working Group in Lebanon
Rouba Mhaisen, Ph.D., Founder and Director at Sawa for Development and Aid
Doha Adi, Grants Officer at Sawa for Development and Aid
Omar Alluis, Site Supervisor at Sawa for Development and Aid
Haidar Hammoud, Project Manager at Sawa for Development and Aid

Karam Foundation Working Group
Lina Sergie Attar, Co-Founder/CEO at Karam Foundation
Nada Hashem, Director of Operations and Programs at Karam Foundation
Lilah Khoja, Higher Education Coordinator at Karam Foundation

Student Contributors
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Amna Khan, BArch, Massachusetts College of Art and Design
Mariya Lupandita, BArch, Northeastern University
Hazal Seval, MDes, Harvard University

Boston Society of Architects
75 members of the BSA community joined for workshops to develop design concepts for the playground

Academic Partners
Harvard University Graduate School of Design
Massachusetts College of Art and Design
Massachusetts Institute of Technology
Northeastern University

Key Financial Contributors
Chleck Foundation
Ellenzweig Architects
Harvard University Asia Center
Harvard University Graduate School of Design
Sea-DAR Group

In-Kind Contributors
Boston Society of Architects
Kompan Playground Solutions
MAY-JUNE 2016
A. Identify team of recognized international not-for-profit partners and local designers with experience in working with refugees in designing and building facilities. This team should be able to:
(1) Assist the Steering Committee in development of a program best suitable for the community and site and with transparent and adequate means to receive contributions and provide accountability for how the money is used
(2) Help select materials and construction techniques adapted to the specific area
(3) Mobilize a team for design, permitting and construction including implementation for the selected site
(4) Incorporate construction oversight and project management into their work

B. Identify partner with recognized international experience in transferring funds overseas to Lebanon and to act as the fundraising arm for our committee. Plus: Working with refugees in designing and building facilities.

JULY-AUGUST + FALL 2016
Develop Budget and Fundraising Plan
A. Contact key donors and hold fundraising events combined with a design workshop for the local design community.
B. The preliminary budget metrics were $25K-$30K, based on a comparable project by a group of Canadian architects for a playground in a refugee camp in Syria (Through the process we learned that estimates provided by SDA were inaccurate, and had to make adjustments to fall within the budget). Total preliminary cost summary included the following:
(1) Fee for management team / design team
(2) Purchasing and transporting material
(3) Site preparation
(4) Construction including labor – specialized and non-specialized. Non-specialized labor to be completed by residents of the camp – providing temporary jobs and skills training
(5) Purchasing equipment and furniture
(6) Budget for 2 years of maintenance

FALL-WINTER 2016
Education, Mobilization, and Partnerships
A. Developed opportunities to mobilize local designers to brainstorm approaches and design solutions, selected overseas architects, partner NGO, and financial agent. The Steering Committee researched local NGOs and Architects, visited them onsite, vetted each organization and made final selections, found a US-based financial agent who could raise and transfer funds, developed MOU’s (organizations signed with the BSA), and provided project support
B. Developed pages within BSA website https://www.architects.org/programs-and-events/refugees-resiliency-and-public-space bringing initiative attention to design professionals within the BSA
C. Finalized NGO, Financial Agent and project architectspartnerships
D. Proposed Future Workshop and/or Design Charrette at ABX or BSA
E. Held public panel discussion introducing the initiative at the BSA Space
F. Provided educational opportunities for Boston designers
G. Video conferenced with on-the-ground architects to provide context and collectively develop the program
WINTER-SUMMER 2017

Public Educational Events and Logistics
Developed to provide opportunity for the public as well as the local design community through, a design charrette, and private fundraising events.
(1) March-April 2017: Refugees, Resilience, and Public Space: The BSA Syria Initiative 3-week Charrette (March 24, April 1 & 7)
(2) April 19: BSA Reception for charrette participants and fundraisers: Refugees, Resilience, and Public Space
(3) Connected with Kompan US, an international provider of play and spots solutions then exhibiting at the BSA Gallery as possible donor

MAY-JUNE 2017
A. The project architects further developed design in Lebanon for Bekaa Valley camp
B. Local academic committee members developed mapping and background materials (MIT, Northeastern)
C. Government required Bekaa Valley camp residents to relocate due to new restrictions of site

JULY 2017
Initial Visits to Lebanon
(1) SDA hosts Academic partners and participants (Harvard, MassArt)
(2) New camp opportunities identified
(3) Interviews, conversations with refugees and NGOs, on program and similar initiatives in Lebanon
(4) Development of the playground structure: discussions with architects, testing and prototyping

AUGUST-NOVEMBER 2017
A. Lease development
B. Workshops for Training of Refugees by SDA

DECEMBER 2017 – APRIL 2018
Intermittent Construction due to Severe Weather
(1) Materials sourcing and purchase
(2) Grading, site preparation, and modular structure construction
(3) Installation of play structures and equipment
(4) Completion of the first project and reception at the BSA

SPRING 2018
Celebration of Accomplishments with Partners
Boston Celebration for completion of the project and discussion on possible next steps:
(1) Continue to build partnerships locally and nationally
(2) Initiation of new partnership with Boston Society of Landscape Architects
(3) June 22, AIA Conference, Panel on the project
(4) Proposed Summer 2018 Celebration on site: Lebanon Festival and events with local musicians from Lebanon and Boston

Figure 15: Children begin to enjoy the swings as architects continue to detail the play space.
The 2016 Venice Biennale theme focused on architects “reporting from the front,” and asking such questions as: What roles can design and designers play in the face of overwhelming challenges? What is the agency of architects in establishing stability in these contexts?

Can the design of space support human resilience?

The following examples demonstrate the potential for good that can come from a successful interface between design and humanitarian aid:

(1) In Montréal the architect’s association “les Architectes de l’Urgence et de la Cooperation” (Architects for Humanity http://innomagazine.com/fr/architectes-de-lurgence/ has worked in collaboration with the Quebec Architects Association and the Canadian Center of Architecture to support the design and construction of playgrounds in Syrian refugee camps. https://indiegogo.com/projects/un-parc-de-jeux-pour-les-enfants-syriens-refugies#/story

(2) Catalytic Action, a London-based design studio that works on projects that catalyze change in society. They are currently developing projects in refugee camps in Lebanon and Greece. http://www.catalyticaction.org/about-us/

(3) The Fab Foundation is a US non-profit 501(c) 3 organization that emerged from MIT’s Center for Bits & Atoms Fab Lab Program. Their mission is to provide access to the tools, the knowledge and the financial means to educate, innovate and invent using technology and digital fabrication to allow anyone to make (almost) anything, and thereby creating opportunities to improve lives and livelihoods around the world. The Foundation’s programs focus on: education (.edu), organizational capacity building and services (.org), and business opportunity (.com) http://www.fabfoundation.org/

(4) Mass Design Group is as a 501(c)(3) non-profit organization with a practice optimized to deliver maximum impact to partners and the communities they serve. It began in 2008 as an idea for a different way of practice by a group of students at the Harvard Graduate School of Design. Initially formed by GSD graduates, it grew to include many colleagues and contributors who worked together to design and build the Butaro District Hospital in Rwanda, a project of Partners in Health and the Rwandan Ministry of Health. https://massdesigngroup.org/

Figure 16: Children gather in the space, testing the structure and enjoying an elevated view of the Bekaa.
Figure 17 (next page): Part of the structure photographed shortly before completion.