July 2024

# Faros Horizon Center

## Design Training Program for Refugee Youth: 2019-2024

## MIT D-Lab Report to Faros & The Velux Foundations




MIT D-Lab
designing for a more equitable world

faros
lighting their way

The Velux Foundations
Villum Fonden × Velux Fonden

## MIT D-Lab

MIT D-Lab works with people around the world to develop and advance collaborative approaches and practical solutions to global poverty challenges. The mission is pursued through our academics program of more than 15 MIT courses and student research and fieldwork opportunities; research groups spanning a variety of sectors and approaches; and a group of participatory innovation programs.

The MIT D-Lab Humanitarian Innovation Program has pioneered a new approach to humanitarian innovation, which is training refugees and displaced persons in the design process and the use of tools, so that they can create the kinds of things they need—cookstoves, fans, water coolers, and pumps, for example—to improve their lives and ultimately improve the way humanitarian work is delivered.

## Faros

Faros helps unaccompanied children and refugee youth find safety, discover their worth, and build a future perspective. They work holistically and take responsibility for each refugee child and youth and provide individual tailored care. Through this, they wish to see every unaccompanied child and refugee youth live with dignity and hope and to be equipped to make a positive change in society. They aim to contribute to a more efficient child protection system by conducting independent research, bringing best practices, and partnering with experts around the world.

---

Photos front cover: Top left: MIT D-Lab student teaching a refugee youth to safely use a table saw. Center left: A refugee student learning to create stop-motion videos. Center right: A chair designed by refugee youth students. Bottom (and rear cover): Faros staff with the proud students graduating from Part 1 of Design Your Future, showing their certificates. Photos: Courtesy MIT D-Lab

# Table of Contents

## Acknowledgments

We would like to thank Velux Foundations for the grant that made this work bringing design education to young refugees possible, and Dan Biswas and Patricia Kirk, co-directors of Faros, who worked closely with MIT D-Lab to turn the vision of this program a reality. Thanks to Horizon Center design instructors and staff who put the refugee youth at the center of all their work: Chris Lombard, Saye Farrokhbakhsh, Ebrahima Hosseinpur, Dimitiros Mallios, Ismini Papaioannou, Dorkas Ralli, Benyamin Zare, Kiki Serdaridou, Harry Fikas, Dafni Georgoula, Danae Baldwin, Dafni Papastylianou, Eleana Doupha, Maria Vasiloglou, John Nikolaides, Iman Ram, and Stavros Messinis, Georgia Tzamtzi, and Marianna Kosopoulou. Many thanks as well to the Faros staff: Maurice Jakesch, Kenneth Hansen, and Betina Wind. and to Faros volunteer Maurice Jakesch. Debora Leal, Lise Capet, Roy Ombati, Justine Boudrou, and Alejandra Villamil, all longtime D-Lab collaborators, contributed their time and expertise to shaping the project. Twenty-four D-Lab students from the Massachusetts Institute of Technology (MIT), Wellesley, and Harvard traveled to Greece to co-lead workshops. Among these students were Susy Tort, Hanna Kherzai, and Sally Beiruti, who made additional contributions to the program. In writing the report, we used information from Srimayi Tenali's 2020 MIT undergraduate thesis. We extend our appreciation to the Rhode Island School of Design (RISD) students who developed activities for the program. Thanks to Stavros Messinis and Mara Calafatias for hosting the very first Creative Capacity Building workshop with refugee youth in 2017 at The Cube, Jenny Jeon from the Samsung Foundation for donating Samsung phones to the Toolbox program, and the Jameel World Education Lab at MIT for additional funds in 2020. Many thanks also to Paul Schlag, author of an important market research study for the program, and to Lulu Tian for her wonderful program video. We are grateful to all the shelter staff in Athens who helped make the Toolbox program a success. Finally, thanks to the MIT D-Lab staff who made the program possible: Amy Smith for her vision and support, Heewon Lee for his tireless efforts and dedication leading the program, Richard Brewer and Asif Obaidee for their staunch administrative support and Asif for his additional work traveling twice to Greece to translate for D-Lab staff during workshops. Finally, thanks to Nancy Adams for her commendable work providing communications support, including the editing and design of this repor, and to Libby Hsu for her expert proofreading.

# Executive summary

MIT D-Lab student training refugee youth in safe woodworking skills at the Horizon Center, January 2019. Photo: Courtesy MIT D-Lab

In 2017, Faros, an NGO in Athens, Greece, had been running a shelter and drop-in center for unaccompanied refugee minors (UAMs) and refugee youth for a couple of years. They knew firsthand the mental and emotional toll on these young people who had crossed the Mediterranean to Greece as asylum seekers. When MIT D-Lab approached Faros about offering a participatory design workshop for the young refugees, Faros was ready to embrace design education as an innovative approach to serving refugee youth.

Faros was interested in an alternative way to look beyond the vulnerability of youth to see their potential. D-Lab thought that Creative Capacity Building (CCB), a participatory design curriculum developed at D-Lab in 2009, could provide these youth with skills to make things they could use and give them a grounding for vocational training. Both organizations felt that the outcomes for participants in CCB workshops in other countries could be achieved for refugee youth and would help catalyze their creativity and potential; enhance their confidence, resilience, and agency; and teach them problem solving and teamwork — all of which could help them navigate their futures.

The first CCB training that D-Lab led with Faros in Athens in 2017 had a transformative impact on the 15 refugee youths who participated, convincng Faros and D-Lab to collaborate on developing a longer-term program. Velux Foundations' grant to Faros in 2019 made it possible to establish the Horizon Center that year and launch a five-year program to teach design and vocational skills to refugee youth and UAMs. Faros ran the center, providing a safe space for youth, and connection to a wide array of services, and support.

MIT D-Lab developed the curricula, trained Faros staff as design and technical instructors, led specialized workshops on site with MIT staff and students, and continued to develop new content and modules.

The program began in 2019, at the height of the crisis of UAMs in Greece, when 5,000 youth were overwhelming the vastly inadequate services and supports available to them. They faced challenges meeting their most basic needs for food and shelter; they had suffered trauma, abuse and violence on the journey; and were subject to abuse and exploitation in Greece.

Over the five years of the project, two major drivers divided the project into three separate time periods, each with its own programmatic foci and slightly different subgroups within the refugee youth population. One driver was changes in the situation of refugee youth and UAMs during the life of the program because of geopolitics and attempts to stem migration to Europe. In 2024, the refugee youth and UAMs are a significantly smaller, more stable, and better supported population than they were in the crisis of 2019. The pandemic was the other major force shaping the program, closing the Horizon Center the second year of the project and forcing the staff to redesign the program.

In 2019, the overall project goal was to keep the UAM and refugee youth from getting lost in exploitation, depression, and neglect by providing a new kind of training that offered hard and soft skills. The *Horizon Center Design Program* combined design and vocational training, while connecting the youth to an array of support and services. The curriculum had a transformational impact on the young refugees who participated, noticeably changing behaviors, enhancing confidence, and shifting mindsets, while giving them vocational skills. However, it was hard to measure the depth and extent of these impacts since the yourths saw Greece as a way station and their transience meant no single cohort completed the six-to-nine month program in the first year.

The closure of the in-person program during the pandemic forced D-Lab and the Horizon Center staff to rework the original curriculum into a virtual, and eventually hybrid, program called the *Toolbox* program. At the request of other NGOs, the Horizon Center ran this virtual program in 11 shelters for 314 UAMs who were in more stable and supported situations than many of those who had attended the first year. The aim was to keep these youth tethered to some kind of educational experience that would keep them engaged in learning during the isolation of lockdowns and increase their confidence in their abilities. There was a 90% participation rate in these virtual classes and high numbers of participants joined the Horizon Center when it reopened in 2023.

The final iteration of the design program post-pandemic was divided into two tracks. The *Design Process Essentials* courses taught technical skills to solve a design challenge and served as an introductory experience for the broader population of refugee youth. *Design Your Future* was a program focused on job readiness and integration for older, motivated youth with certain qualifications who wanted to study or work in Greece. This was a highly successful program graduating five cohorts of a total of 81 youth, who aquired technical skills and teamwork experience and reported improved behavior, mindset, and confidence — all helping move them toward job readiness.

The tangible, quantifiable results from the program were as follows:

» 6 sets of curricula developed: *Activity Classes*, *Basic Training*, *Introduction to Design (levels 1, 2, and 3)*, the *Toolbox* program, *Design Process Essentials*, and *Design Your Future*.

» 4 D-Lab student-led workshops: two in August 2019, one in January 2020, and one in January 2024.

» 24 D-Lab students sent to Greece to co-lead the workshops.

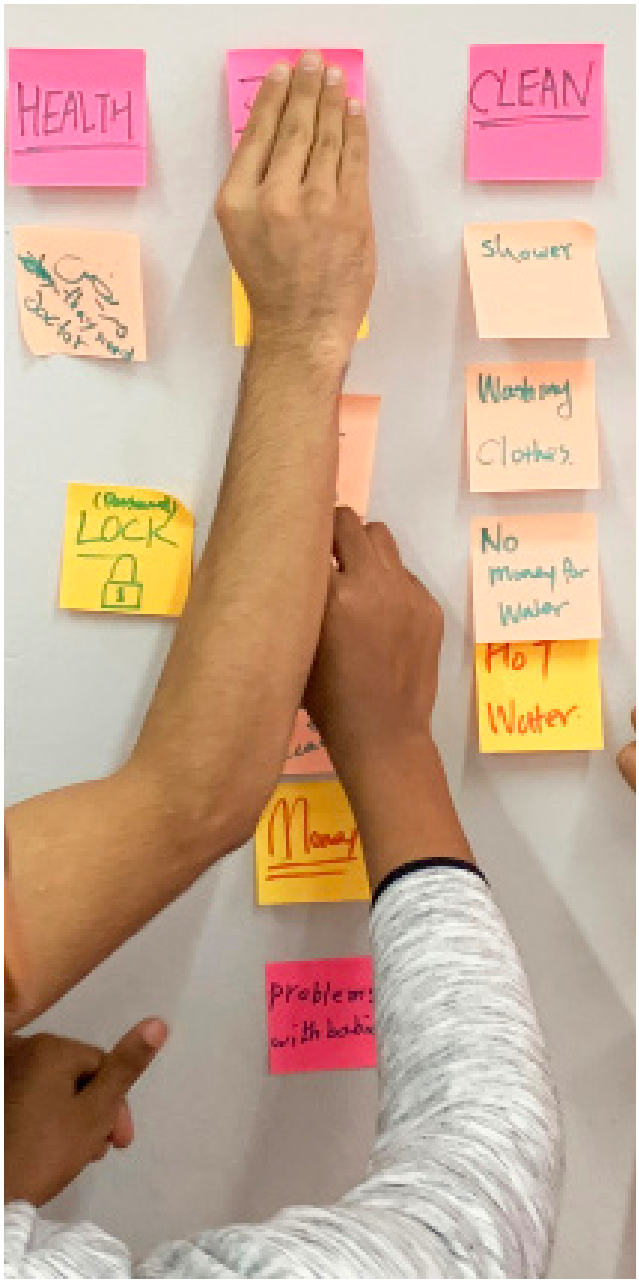
» 12 Horizon Center staff trained by D-Lab as design and technical instructors.

» 819 youth participated in the program:

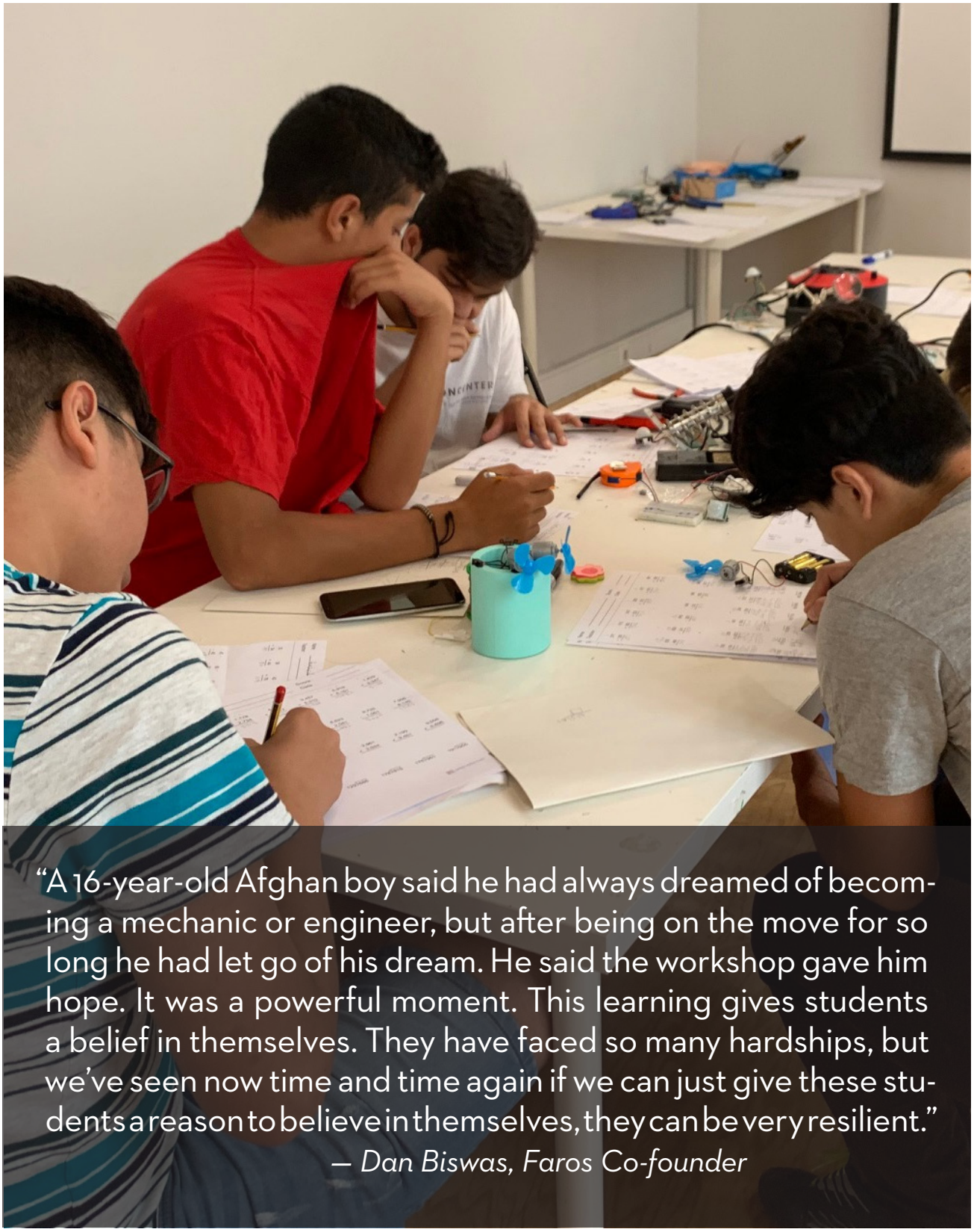
- 242 in Year 1 in *Activity Classes*, *Basic Training*, and *Introduction to Design*
- 314 in hybrid and virtual trainings in Years 2 and 3, including *Advanced Design*
- 81 in *Design Your Future* in Years 4 and 5
- 212 in *Design Process Essentials* in Years 4 and 5

The intangible results of the program were harder to quantify. Overall, income generation and job readiness were not significant outcomes of the program, except for the *Design Your Future* program in the last two years. Originally, Faros and D-Lab had envisioned that the vocational skills part of the program would lead to those outcomes, but the determination of the refugee youth to travel through Greece to Western Europe, the legal barriers to income generation, and lack of a skills accreditation process posed persistent challenges to achieving these goals.

The most significant outcomes of the program were the most intangible: the transformation around behavior, mindsets, and confidence, and expanding the youths' horizons. D-Lab and Faros staff were extremely agile in being reworking the program three times to respond to the crisis of vulnerable youth in 2019, the restrictions of the pandemic, and the need to support youth who were staying in Greece post-pandemic. Although the depth and extent of the transformation were hard to measure given the youths' transitory status in Greece, many participants went on to education and employment, and shared how the program changed their image of themselves and expanded their horizons. Faros and D-Lab's original vision — that a combination of design and technical training could help vulnerable youth in a precarious situation believe in their own potential — turned out to be fundamentally correct.




Refugee youth problem framing as part of the *Design Your Future* program. Photo: Courtesy MIT D-Lab



"A 16-year-old Afghan boy said he had always dreamed of becoming a mechanic or engineer, but after being on the move for so long he had let go of his dream. He said the workshop gave him hope. It was a powerful moment. This learning gives students a belief in themselves. They have faced so many hardships, but we've seen now time and time again if we can just give these students a reason to believe in themselves, they can be very resilient."

*— Dan Biswas, Faros Co-founder*

*Basic Training* class in progress at the Horizon Center. Photo: Courtesy MIT D-Lab

# I. An innovative program moving refugee youth towards confidence and resilience

In 2017, when Faros and MIT D-Lab began working together, unaccompanied refugee minors in Greece were living precariously and were highly vulnerable to risk and exploitation. This included both unaccompanied minors (UAMs) and refugee youth under the age of 18 who had some family with them in Greece.

In contrast to other emergency responses to refugee youth in Greece, Faros and D-Lab wanted to incorporate a transformational element in their programmatic response. It was obvious that youth needed support for basic needs, but both organizations felt that for the youth to chart a better future, they needed to learn useful skills, restore their self-confidence, improve their self-esteem, and believe in their own potential. These were necessary components to help vulnerable youth move towards the kinds of further education or employment that could improve their lives.

This idea of transformation was at the center of Faros and D-Lab's vision, and in 2018, the two organizations began to develop the project that became the *Horizon Center Design Program*.

In 2019, when the crisis of unaccompanied minors in Greece was at an all-time high, Faros received funding from the Velux Foundations to establish and run the Horizon Center for five years. They partnered with D-Lab to design the curriculum, mentor and train the Faros staff, and continue to develop new training content.

The global pandemic and the changing context of refugee youth in Greece were the two main factors that reshaped the contours of the program over its five years. This required dexterity in program planning and design to adapt to the changing situation while remaining steadfast to programmatic objectives. In order to adapt to the challenges precipitated by the Covid-19 pandemic in March 2020, D-Lab and Horizon Center staff had to redesign the existing program to one that could be taught remotely in the UAM shelters, and then adapt it again to a hybrid program once very limited in-person classes were sanctioned — first outdoors, and finally, in December 2022, back in the Horizon Center.

The changing situation of the UAMs in Greece was the other driving force reshaping the program. By 2022, the combined impact of the pandemic and the policies targeted at restricting migration to Greece by sea, sharply reduced the number of asylum seekers in Greece. While there are fewer UAMs now, services for these young refugees have increased and improved so that the majority of them now live in shelters, are enrolled in public school in Greece, and have greater access to services and support than most did in 2019. The overall emphasis for UAMs is now on completing their schooling in Greece and improving the English, Greek, and computer skills they need to do so.

These changes drove a transition in the Horizon Center in Year 5 of the project, from a design program to an alternative education center in Athens that offers academic support to refugee youth to enhance their formal education.

This report provides an overview of the development and evolution of the Horizon Center and MIT D-Lab's contributions to the five-year project including activities and achievements, the diverse ways the program was adapted and refined to meet the changing context, and lessons learned from the process.

A refugee youth participant from the first design workshop showing the sketch models he made for a power bank case. Photo: Courtesy MIT D-Lab

# II. Adressing the crisis of refugee youth in Greece in 2019

## A. Overall refugee crisis in Greece

In 2017, when MIT D-Lab and Faros began their partnership for working with refugee minors in Greece, Europe was still struggling to cope with a refugee crisis, with over 5.2 million refugees and migrants seeking asylum there beginning in 2015. Armed conflict, and the desperation of Syrian refugees marooned in refugee camps in Türkiye for years, motivated millions of refugees and asylum seekers to flee to Europe from war-torn regions of Afghanistan, Syria, and Iran. Typical migration routes into the Mediterranean region are shown in Figure 1, and both Greece and Italy have served as gateways into Europe.

In 2015, at the peak of this unprecedented migration, Greece was merely a transition country, an entry point into the European Union (EU). By 2019, however, many countries within the EU had adopted stricter border policies that prevented individuals seeking asylum from crossing their borders. By 2019, the responsibility of accommodating tens of thousands of refugees and asylum seekers gradually settled on Greece, transforming it from a transit country to a host country despite the long-term economic crisis it had suffered since 2011. In that year, Greece hosted approximately 186,200 refugees and asylum-seekers, with over 74,600 new arrivals. The

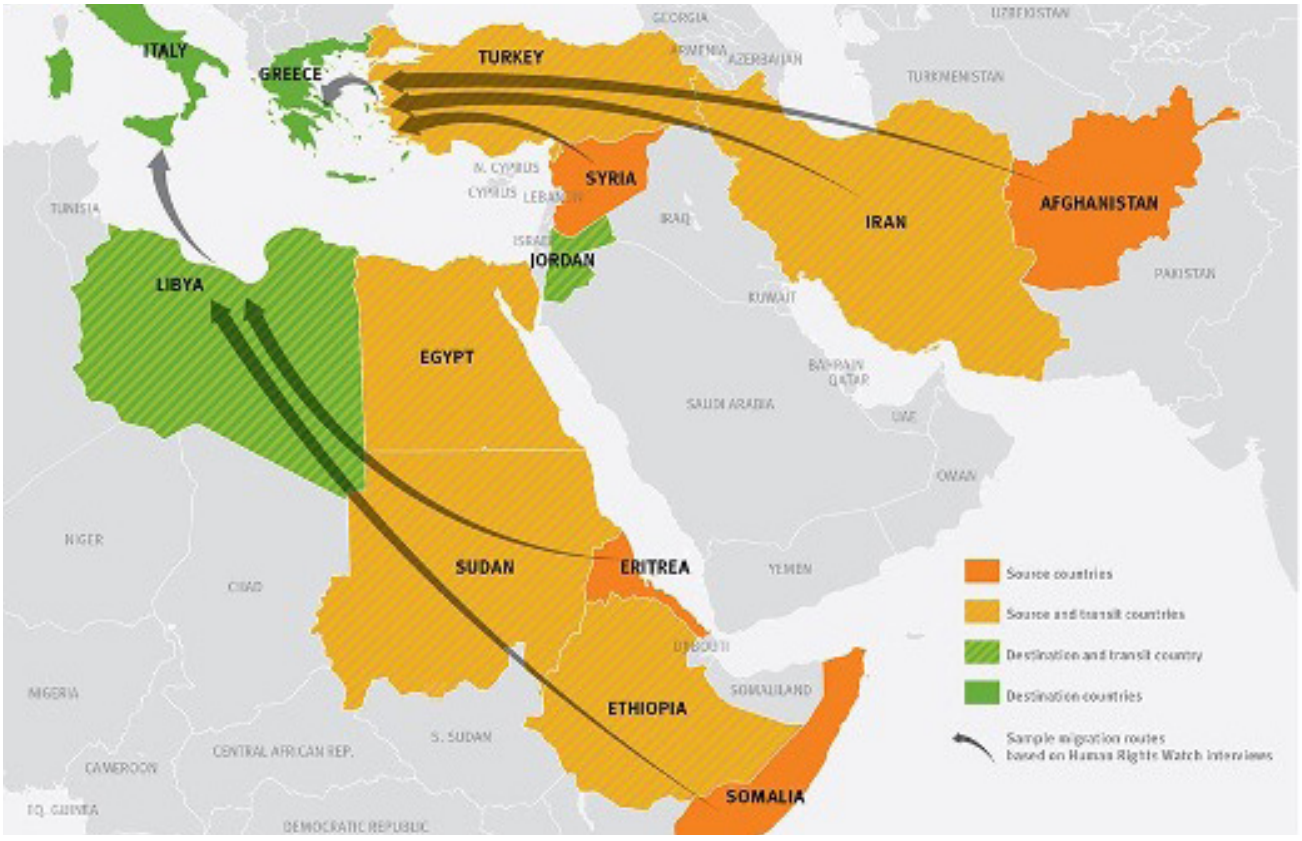



Figure 1: Sample refugee migration routes from violent regions. Afghanistan, Iran, and Syria were the most common source countries for refugees in Greece, which became a final destination for the vulnerable population. (Tenali, S. 2020 Design and evolution of creative capacity building program for refugee youth empowerment [Unpublished undergraduate thesis] Massachusetts Institute of Technology.)

majority were from Syria, Iraq, and Afghanistan, with a growing number from Pakistan as well. The only legal means of accessing the rest of Europe by that time was through family reunification, especially pertinent for minors. However, there continued to be a high rate of undocumented migration from Greece to the rest of Europe through trafficking routes.

From 2016 onwards, asylum seekers arriving in the Greek islands faced dire conditions that never really improved. They waited for processing as asylum seekers in unsanitary, unsafe, and vastly overcrowded processing centers with inhumane conditions. The refugees and asylum seekers continued to arrive and overwhelm the available resources, which meant they often lacked adequate healthcare, food, sanitation, and shelter. Under the pressure of the continued arrivals, the initial support and compassion shown by Greeks hardened into intolerance and hostility, and Greek government policy became more restrictive.

The refugee situation in Greece in 2024 is quite different from the situation in 2019, when the project began. The number of people seeking asylum in Greece have gradually decreased from 850,000 in 2015 to 74,000 in 2019, and to 36,000 in 2023. Increasingly, the only option for the asylum seekers who attained refugee status in Greece is to settle there or return to their countries of origin. Given the reduction in numbers, most international humanitarian organizations have left Greece. The robust array of organizations, programs, and services available to refugees and asylum seekers in Athens in 2019 is now drastically reduced.

## B. Unaccompanied minors and refugee youth

Unaccompanied minors (UAMs) are defined according to the Greek Presidential Decree 220/2007 as, "Any third-country national and stateless person below the age of eighteen who arrives in the territory of Greece unaccompanied by an adult responsible for him and for as long as he is not effectively taken into the care of such a person or a minor who was left unaccompanied after having entered Greece."

Increasing numbers of UAMs arrived each year in Greece within the overall refugee population until 2020. Most had suffered violence or conflict situations in their home country and additional violence and abuse en route. Many lost family members on the journey, arriving alone in a new country without the protection of an adult. Once in Greece, most could not easily connect to services, and as a result, lived in precarious situations that made them vulnerable to exploitation and sexual abuse by predators.

Homeless, engaging in risky survival strategies, and trying to move onward from Greece to other countries in Europe, the UAMs initially fell through the cracks of the humanitarian response. In 2016, international nongovernmental organizations (INGOs) began more targeted programs for the youth, such as shelters, drop-in centers, and soccer programs in the places where they congregated. The problems of connecting youth to a dramatically inadequate service structure, the lack of quality programming, and the challenge of keeping them safe persisted from 2015 through 2022, and were exacerbated by bureaucratic hurdles and a dearth of funding.

By 2019, the number of UAMs climbed to over 5,000, far outstripping the services available to them. With only 40% of UAMs living in safe situations (Figure 2), many lived in government-run detention centers, flophouses, or in the streets.

In 2018, a guardianship law passed in Greece requiring that every UAM have an established guardian to help the minor with administrative procedures and ensure their basic safety.

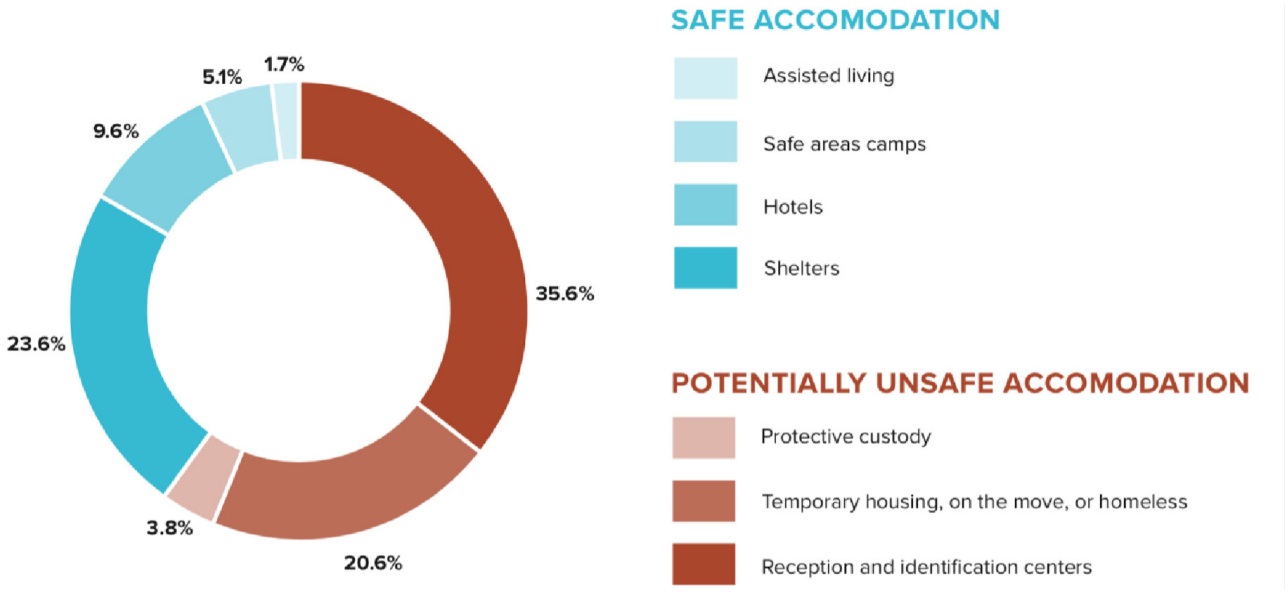



Figure 2: Living situation for unaccompanied minors in Greece 2019. 40% were in safe accommodation, whereas 60% were in potentially unsafe living conditions, as reported by Refugee International. Data from 31 December 2019. (Tenali, S. 2020 Design and evolution of creative capacity building program for refugee youth empowerment [Unpublished undergraduate thesis] Massachusetts Institute of Technology.)

However, implementation was delayed and the resources to comply with the law were inadequate, leaving hundreds of youths to navigate an increasingly hostile asylum system by themselves. Uncertain asylum status, familial separation, past trauma, and abuse and exploitation are threatening stressors on the emotional and psychological well-being of the youth, and ones that are rarely addressed. The relentless struggle that young refugees have faced to survive and keep moving forward has often damaged their sense of identity, self-esteem, and confidence. For many, being seen as a refugee in Greece became an increasingly negative identity that they despised.

The shelters for UAMs established between 2016 and 2019 provided an element of stability, but youth there often felt in limbo. It was illegal for them to find work until their paperwork was complete, and most did not have marketable skills or the languages needed to work. In a forced migration context, formal schooling and other educational experiences can be psychosocial interventions, powerful tools for reclaiming agency and improving resilience. However, in Greece, the resource-strapped public schools could not offer this kind of support to the UAMs. To even enroll in school, they needed a guardian, and there were far too few guardians for far too many youths. Refugee youth who have been through war and forced migration have significantly different developmental needs than children of their age group who grew up in stable situations. In Athens, the youth were put in classes with small children and struggled to learn in a language they could not speak. Even when they did persist, they often suffered humiliation and prejudice.

In 2019, when the *Horizon Center Design Program* began, the situation for both UAMs and refugee youth was still a crisis. There were services, legal aid, language and sports programs, shelters, and drop-in centers, and the guardian system was stabilizing. However, most of the approximately 5,000 UAMs in Greece at that time suffered from some or all of the following challenges: lack of stable housing, struggles to navigate the asylum system, antagonism from the general population, lack of language skills, hostile school environments, family separation, lack of marketable skills for employment, the frustration of living in limbo, and a paucity of mental health services.


Sign on the front of the the original Horizon Center advertising training programs for refugee youth. Photo: Courtesy MIT D-Lab

# III. A PROGRAMMATIC RESPONSE TO THE SITUATION OF UNACCOMPANIED MINORS AND REFUGEE YOUTH

## A. MIT D-Lab's approach: Creative Capacity Building

In August 2017, MIT D-Lab proposed to Faros that they lead a participatory design workshop in Athens as a summer program for refugee youth and UAMs. They wanted to see if teaching basic technical skills through the design cycle would be an effective way of engaging youth and building their confidence. D-Lab proposed using their Creative Capacity Building (CCB) methodology. CCB is an approach to strengthening the innovation capacity of individuals, teams, and local communities that D-Lab first piloted with internally displaced persons in Northern Uganda in 2009. Since then, CCB workshops have been held in 23 countries, with current CCB programs in 11 countries, including many humanitarian contexts.

Through CCB, a hands-on participatory design training, participants acquire practical skills by using basic hand tools while learning the design process. They work in teams to identify a problem they want to solve and design and build a functional prototype as a solution. It is a creative process that teaches both hard and soft skills. D-Lab staff have observed that CCB is a highly successful means of teaching people in low-resource contexts how to problem-solve, give and receive feedback, improve resilience and persistence, engage in teamwork, master basic skills with tools, and make practical items for use in daily life. Participants demonstrate enhanced confidence and increased creativity.

In the last few years, MIT D-Lab staff, the MIT D-Lab CITE program funded by USAID, and The Research People have completed studies on the impact of CCB on individuals, groups, and communities, adding to the academic literature and developing a *Theory of Change*. In 2021, MIT CITE conducted a series of key informant interviews to articulate and categorize the following outcomes of CCB training for individuals:

» Enhanced self-confidence
» Greater creativity
» New/enhanced knowledge
» Improved technical skills
» Changed mindset
» Improved analytical skills
» Enhanced motivation
» Strengthened sense of belonging[1]

In 2022, The Research People conducted an evaluation of hard and soft skills learned in the CCB program in Uganda's Rhino and Imvepi refugee camps, and identified key skills learned by CCB participants as: problem solving, resilience and persistence, improved technical skills, new knowledge and ideas, ability to give and receive feedback, improved public speaking, social cohesion, and ability to work in teams.[2] These are highly consistent with the CITE findings for outcomes.

Given the challenges faced by the refugee youth, all they had suffered in their places of origin, their journeys as refugees, and their precarious situations in Greece, D-Lab and Faros believed that using a participatory design approach like CCB could have a transformational impact. The hope was that CCB would help youth increase their confidence, build resilience, and develop problem solving abilities while teaching them practical hard skills they could use to improve daily life.

**1.** Hoffecker, E., Hegde M., (2021) "Identifying Common Outcomes of CCB: Key Informant Interviews with Practitioners" in MIT D-Lab CITE Evaluating Capacity for Local Innovation. Cambridge MA: MIT D-Lab.
**2.** Ahimbisibwe, L., Komuhangi, C and Tanner, L., (2022) CCB Evaluation Report MIT D-Lab. The Research People. London, UK.

## B. Piloting CCB with refugee youth

The 10-day CCB training for 15 UAMs and refugee youth in August 2017 was a remarkable success and delivered the hoped-for outcomes. The young refugees were highly engaged, they learned to use hand tools, were adept at using the design process to successfully identify and solve challenges, and worked well in teams to build and prototype solutions. In addition, staff noticed that the youth had increased confidence, expressed a new belief in their ability to solve problems, persisted until they mastered skills, showed pride in what they learned and built, and deeply appreciated the sense of belonging they got from the training.

On the final day, there was a showcase in which the participants presented the solutions they had designed to a group of NGOs and UN organizations. Audience members were unanimously impressed to see the youth acting from a position of confidence, explaining what they had learned, and demonstrating their prototypes. Several organizations approached Faros and D-Lab to say this gave them a completely new perspective on the refugee youth since it highlighted their potential and abilities rather than their vulnerabilities. A representative from the United Nations High Commissioner for Refugees (UNHCR) offered Faros financial support for developing ongoing trainings, and Faros and D-Lab began to plan a joint program using participatory design training as the framework.

## C. Envisioning a new program

Focusing on the potential, not just the vulnerability, of the UAMs and refugee youth became the touchstone for developing a joint vision between MIT D-Lab and Faros. For the next year and a half, D-Lab collaborated with Faros to lead a series of design workshops and hands-on activities for refugee youth and Faros staff, building the foundation for a permanent program. Below is a timeline with key events during that period:

» *December 2017:* Alejandra Villamil, a D-Lab collaborator from C-Innova in Colombia, led a two-week workshop of hands-on projects for UAMs and refugee youth in Athens.

» *April 2018:* D-Lab staff and consultants completed a visioning plan with Faros for a permanent program.

» *July 2018:* UNHCR provided Faros with initial funds to rehabilitate a school building for the Horizon Center and establish a skeleton staff to teach language, woodworking, and tailoring.

» *September 2018:* D-Lab staff and consultants ran an initial training in CCB for Faros staff to familiarize them with the methodology.

» *September-October 2018:* D-Lab consultants led a two-week workshop on building a 3D printer with refugee youth.

» *December 2018:* Alejandra Villamil conducted staff training on how to develop projects for the youth and ran a workshop for the youth.

» *January 2019:* D-Lab staff brought 6 MIT D-Lab students to run a 10-day design workshop for refugee youth and UAMs.

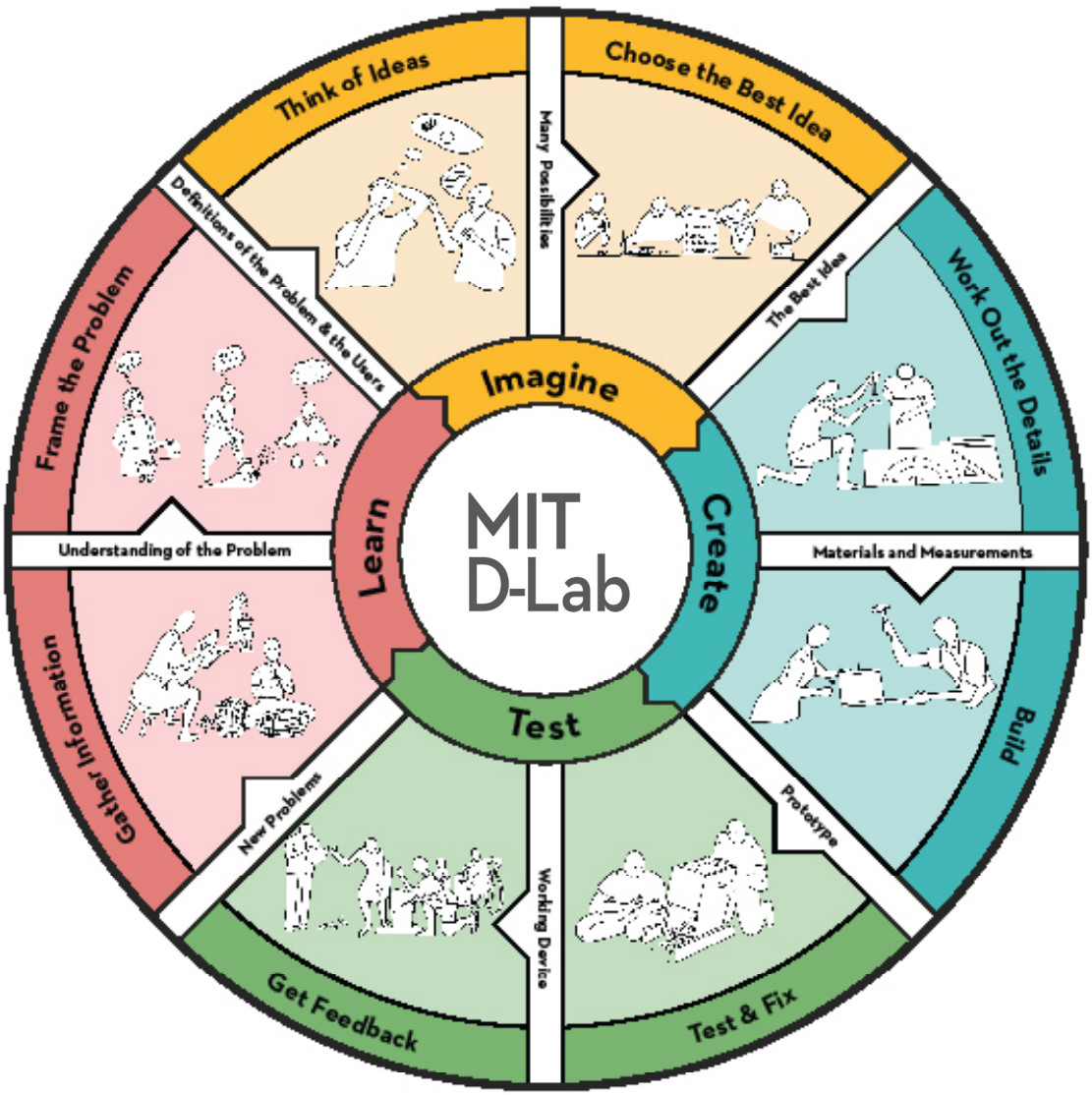
» *January-April 2019:* D-Lab's Heewon Lee worked with Faros to develop curriculum, train new staff, lead workshops, and begin implementation of the Horizon Center.

During this time, D-Lab and Faros staff were struck by impact the different workshops had on the refugee youth, even though they were of short duration. The young people who participated demonstrated increased pride and confidence by the end of each workshop, as well as an improved ability to focus and apply themselves. Despite an initial reluctance to collaborate with strangers, the youth quickly responded to the teamwork approach and began to collaborate across language and cultural barriers. In fo-

cus groups and interviews, D-Lab staff and MIT students also observed that the youth were now looking for new ways to use the design principles they were learning.

For example, in the 3D printer workshop, one student chose to design parts to fix his friend's glasses. Most workshops and activities focused on teaching students to make a useful object which filled them with pride and increased their interest in learning. Besides the obvious pride in learning to make things, by the end of each workshop, the youth showed a keen sense of belonging, an interest in learning, openness to try new things, persistence in developing new skills, and increased confidence in their own abilities — all desired outcomes.

In 2019, Faros secured a five-year grant from the Danish Velux Foundations, which made it possible to set up the permanent vocational and design training program for unaccompanied refugee minors, anchored in a new training space called the Horizon Center.




MIT D-Lab's Creative Capacity Building (CCB) design cycle. Graphic: MIT D-Lab

MIT D-Lab student supervising refugee youth engaged in a woodworking project at the Horizon Center in 2018. Photo: Courtesy MIT D-Lab

# IV. Relevance of the Horizon Center program as a response to the challenge

## A. Program objectives

When it began in 2019, the *Horizon Center Design Program* was a unique approach to working with the UAMs. While solidly rooted in an understanding and care for the vulnerability of the youth it served, the aspiration was transformational, with a focus was on recognizing and developing their potential. The overall goal was to keep the UAMs and refugee youth from getting lost in exploitation, abuse, depression, and neglect by offering a training program based on the design process that provided them with both the hard and soft skills that could set them on a new path for the future. In addition to D-Lab's CCB curriculum and training in vocational and computer skills, the Horizon Center program provided a warm and welcoming environment for youth, with a full range of the services needed by the young refugees.

The three primary objectives of the program were to:

» Engage the youth (bring them in)

» Have the youth go through a course of workshops and training designed to help them stabilize and get used to being in an educational setting again (keep them in)

» Send them out (help them chart a plan for their future)

D-Lab designed the curriculum, provided training resources, trained the Horizon Center staff in delivering the curriculum and led additional workshops. Faros provided a welcoming atmosphere with food and other necessary support, the design and vocational instruction team, psychological support, social workers, and connection to services such as housing, legal aid, and healthcare.

## B. Integrating lessons learned

D-Lab and Faros realized that they could not implement CCB the way it was implemented in other countries, where people in low-resource situations used CCB to develop appropriate technologies to improve their daily lives. It was necessary to use the approach as a blueprint, but adapt it to the reality of life for refugee youth in Athens. They designed the new five-year program based on the learnings gained from August 2017 through January 2019.

### Activities had to be designed to both sustain the engagement of youth and fit into the the program goals:

» Youth responded well to using the design process to make things, but needed more time to master and understand it than they could do through a short workshop.

» Youth liked doing fun activities, but what really engaged them was making things that were useful or needed for their daily life.

» Learning and mastering useful skills, both tangible and intangible, was important to them, even if they were initially frustrated in the process.

» Many youths were not used to being in structured learning environments and needed support.

» Their behavior demonstrated that working with their hands was therapeutic.

» The emphasis on working in teams on practical activities was crucial to success. As youth went through a workshop, their behavior noticeably changed for the better — less aggression, more self-control, improved ability to deal with frustration, and increased collaboration.


Finished lamp project designed by a refugee youth student in the *Introduction to Design* class at the Horizon Center. Photo: Courtesy MIT D-Lab

Teaching design and vocational training at the Horizon Center required a specialized approach. Many of these youth had faced traumas at home and on the journey to Greece, and had never had access to the kind of support they so critically needed. Abuse and exploitation ate away at their self-esteem and sense of self, prompting many of them to engage in harmful coping strategies, self-harm, and other difficult behaviors.

Despite the fact they were adrift, it was often challenging to engage youth in a sustained program of activities. Activities and programs had to be attractive and fun to engage them. They were no longer used to being in formal education programs or structured learning environments, and it was hard to make the shift when their future was so uncertain. They wanted to learn, but failure could easily discourage them. Many felt their experiences had robbed them of their adolescence, but they were still immature in many ways, and badly needed to learn life skills to cope with the challenges they faced.

The fact that many did not trust adults posed an additional challenge. They were facing continuing existential problems such as lack of shelter and food insecurity. Finally, many were focused on getting to other parts of Europe and were being pressured by their families to earn money.

This was a challenging context for running a design and vocational program. Staff had to be understanding of the youth, patient, and willing to provide a range of physical and emotional support. Youth sometimes arrived in crisis mode and needed immediate help from social workers, without which they could be very disruptive. Youth could become extremely frustrated when they struggled to learn things, and they could also be unexpectedly resilient. Staff had to find a continual balance between flexibility and maintaining a programmatic structure that could provide stability. It required patience, consistency, and perseverance to connect with the youth, and energy and creativity to continue to engage them in the program. Finally, staff had to be able to build trusting relationships with young people who had lost a lot of trust in adults.

In one-on-one interviews and in the post-workshop evaluation focus groups about the training workshops held between 2017 and 2020, the youth talked about the internal changes they experienced. The trainings helped them, "feel like people again," and have pride in what they accomplished. This returned some of their dignity, and many reported that in the workshops, they felt they were taken seriously as people with potential, and they now felt they could be scientists or designers. For youth living as best they could in makeshift conditions, the design workshops provided more than just survival or recreation, they also enabled the youth to re-engage with new or forgotten dimensions of themselves. This potential for transformation in the refugee youth was at the heart of the Horizon Center.

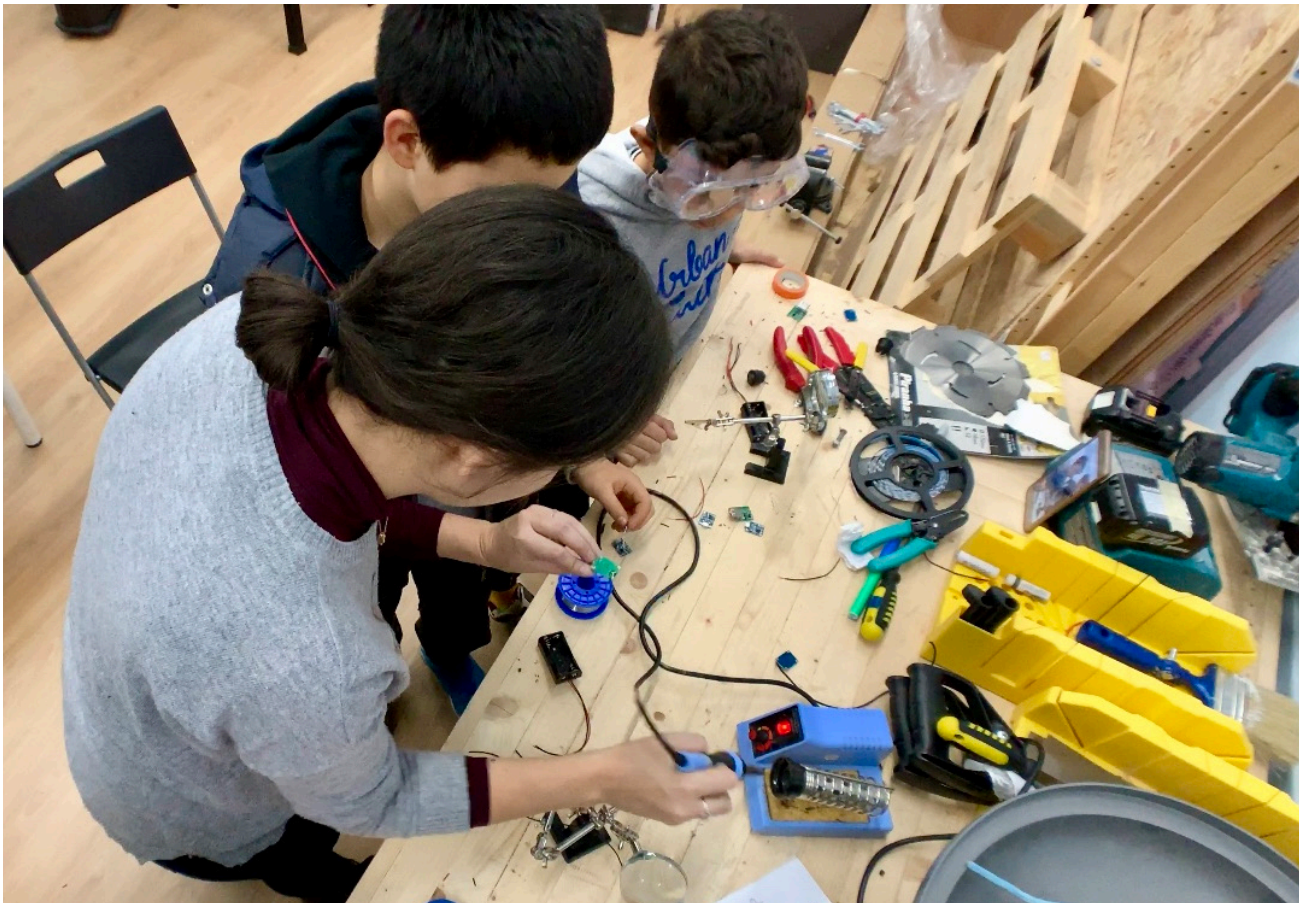
## C. The Horizon Center Theory of Change

The expected outcomes of the Horizon Center project developed in 2019 stated that, through a sustained and systemic curriculum of learning the design process and vocational skills, the refugee youth would:

- learn how to use design to solve problems they encounter and see themselves as problem solvers,
- build skills in carpentry, sewing, metalwork, fabrication, and electronics that would enable them to make products they needed or could develop as income-generating activities,
- develop technical and business skills to prepare them for employment,
- realize and demonstrate their potential and capacity as capable and skilled youth, and
- find a bridge to recover their identity and build their self-confidence so that they can improve their lives.

This *Theory of Change* was reworked through an intense collaborative process in 2021 to adapt to the new context and serve as the underpinning for the new *Design Your Future* program in Years 4 and 5.

The second version of the *Theory of Change* had 10 outcomes, with more specificity around incorporating a growth mindset and articulating specific skills that were needed in the job market of the future.



MIT D-Lab student teaching young refugee boys to solder at the Horizon Center in 2019. Photo: Courtesy MIT D-Lab

A team-building exercise in the *Activity Class* in 2020. Photo: Courtesy MIT D-Lab

# V. Program achievements, activities, challenges, and modifications by year

## A. Year 1: April 1, 2019 – March 31, 2020

D-Lab's program responsibilities during Year 1, July 2019 to April 2020, included:

» Development and delivery of the design program curriculum for Faros Horizon Center

» Development and delivery of monitoring and evaluation instruments for the design program

» Initial evaluation of the design program and delivery of report

» Delivery of multiple workshops in July and August 2019

» On-site training of Faros staff

» Remote support and mentoring of Faros staff

### Context

2019 was the year with the highest numbers of UAMs in Greece. Most existing programs in the country focused on engaging the youth in recreation rather than putting them on a path towards a future. In those programs, there were few requirements for the youth to show up consecutively or follow a sequenced program. Though there were one or two specialized programs providing training in computers or other technical skills, the applicants needed to be over 18, speak English, and have at least some high school education.

Most of the refugee youth did not meet these qualifications and subsequently were shut out of job training programs. The Horizon Center, on the other hand, offered a unique opportunity for UAMs and refugee youth of any nationality or educational level to enter a non-formal education process with a set curriculum that provided hard and soft skills, a sequential program for technical skills, and individualized attention.

### Achievements

» A viable design and vocational skills training curriculum, iterated twice over the course of the year to incorporate learnings and respond to challenges encountered in the first few months. The final program began with *Activity Classes*, offered nine *Basic Training* modules, and then moved into levels 1, 2, and 3 of *Introduction to Design*.

» Development and implementation of *Activity Classes* as an entry point to the design program. These shorter, simpler classes provided a way to introduce the program and help youth transition to a more structured learning environment.

» A strong and confident Faros Horizon Center instructor team trained by Heewon Lee, a designer and research associate from MIT D-Lab who led the development of the curriculum at the Horizon Center and the training of the staff members.

» A total of 242 youth engaged in the Horizon Center program during the course of this year.

» Youth reported they felt they gained both intangible and tangible benefits. They built friendships, regained self-confidence and pride in newly acquired skills, and achieved a belief that they were able to learn new things. On the tangible side, they learned practical skills in carpentry, sewing, computers, CD printing, and electronics, and learned to design and build objects for use in their daily lives.

### Activities

In Year 1, the program activities followed MIT's deliverables in the original contract:

### *1. Development and delivery of the design program curriculum for Faros Horizon Center*

Heewon Lee of D-Lab traveled to Athens with the MIT student team in January 2019, then stayed for three months to develop a curriculum, train the Faros team, and help them set up the design training program. The initial program was developed during this time, but it underwent two major changes during the first year. There were four different stages of the program during this first year.

#### Stage 1: April – July 2019

Heewon and the team established a three-month Basic training program that included classes in technical drawing, ideation, woodworking, tailoring, electronics, sketch modeling, CAD and 3D printing, and video. Once the boys in the classes completed the Basic Training, they moved into Introduction to Design classes with three levels, each with a project of increasing complexity.

*Introduction to Design 1: Design a Lamp for Yourself!*

In this level, the boys learned to apply the design process by designing a lamp for themselves. This gave them practical experience in the steps of the design process: collecting information, ideation, choosing the best idea, sketch modeling, building, giving and receiving feedback, iterating the design based on feedback, and utilizing/combining different Basic Training skills to design and build the final product.

*Introduction to Design 2: Design for a Friend!*

This project took the boys through the design cycle again, with two critical changes. They went to the market to source and cost materials for what they made. Designing for another person gave them a deeper experience of how to understand a user and think on another's behalf, to both make and receive something useful and enjoyable.

*Introduction to Design 3: Design a Chair Together!*

In this project, the participants all worked on the same team, gaining valuable lessons in communication, collaboration, and teamwork to design and build a chair. *Introduction to Design 3* culminated in a showcase for the public that gave the refugee students an opportunity to practice their presentation skills.

Following the summer workshops taught by MIT D-Lab students, the team paused the program to refine the curriculum. The boys who had completed the three levels of *Introduction to Design* were the program's strongest success. They formed strong bonds, worked well together, and demonstrated emotional growth that allowed them to adapt to the more formal work environment in *Introduction to Design*.

#### Stage 2: September – December 2019

Heewon and the Faros team adapted the program, adding the *Activity Classes* to introduce the students to a more structured learning environment before they went into *Basic Training*. These classes enabled the refugee youth to discover their learning style and potential under mentorship, and they could go at their own pace. A psychologist or social worker was present to offer support, take notes, and identify learning issues and problematic behaviors.

These classes helped build confidence and self-esteem, and the fun activities allowed the boys to expand friendships, build social networks, and process some of their feelings. The activity program was a key stabilizing force for transitioning boys into the rest of program.

#### Stage 3: January – March 2020

Heewon and the Faros team made two key changes to the program, a modular *Basic Training* program and the introduction of ideation earlier in the process. A bottleneck had developed in the *Basic Training* program, which had a linear structure. Some youth got discouraged going through all the qualifying technical classes in order, get-

ting stuck on ones they found particularly difficult or leaving the country before they finished. There was a long waiting list for the program, but no new boys could be admitted until the existing ones went through the entire *Basic Training* program. The staff transformed the *Basic Training* into a modular program where boys could sign up for classes as they wanted and proceed at their own pace. This broke the bottleneck and reduced the drop-out rate. Ideation was also introduced earlier in the program, which catalyzed the process once boys made it into the *Introduction to Design* levels. The changes in the new year were highly successful in terms of improved attendance, reduced waiting lists, and continually increasing demand for the program.

## Reflections from MIT D-Lab Student Shruthi Venkata

*"On the last day I was in Greece, the Monday after I taught my last class, I came into the Horizon Center to see a couple of the boys with whom I had become close. As we discussed gender norms and the feeling of safety within a community, he told me about how he felt he couldn't walk around Kabul at nighttime for fear of violent assault, and about how he had stopped going to school to start working at age eight.*

*His younger brother later told me that his greatest regret was coming to Greece at all. He and his brother were fending for themselves in Athens, physically and psychologically unsecure whether on the street or in a shelter, and unsure of when or where they would be going in the future, having left all their loved ones and family behind. Their situation in Greece presented new horrors that nullified the worth of the sacrifices they made to be there.*

*Teens, whose lives as refugees have made them believe it practical to aim lower, continue aspiring towards careers such as computer engineer or astronomer, as one of the boys very seriously did.*

*This last conversation put me—all along, I had coclasses do for kids who had much more immediate and grave concerns outside of the classroom? the classes we were offering at the Horizon Center templated the worth of lots into perspective for*

*As the Faros staff had pointed out during our week 2 debrief, the class was undoubtedly about much more than learning how to make videos. Being in a classroom is a return to normalcy for many of the boys who don't go to school, or who have less structure in their lives. The relationships we built with the boys, and that they built with each other, made it worth coming. Across our classes, from the video class to woodworking to Arduino, we experienced D-Lab's fundamental principle that design is empowerment.*

*The result is that teens, whose lives as refugees have made them believe it practical to aim lower, continue aspiring towards careers such as computer engineer or astronomer, as one of the boys very seriously did."*

**Stage 4: March 17 – March 31, 2020**

The global pandemic began to change the world in early March 2020. In mid-March, the Greek government, in concert with other governments worldwide, imposed a wide range of restrictions on the general population in the interest of public health, including shutting down all educational institutions. Accordingly, the Horizon Center shut down on March 17th, 2020.

### *2. Development and delivery of monitoring and evaluation instruments for the design program*

In addition to the constant process of monitoring the program by Heewon Lee and the Faros staff, who had twice weekly reflection sessions to feed their learning back into the design of the program, Horizon Center staff, D-Lab students, and D-Lab staff conducted individual interviews and focus groups with the youth to gauge the impact of the program on them.

In July 2019, D-Lab began to develop additional evaluation tools. Susy Tort, a consultant, worked with Heewon to develop visual and interactive surveys that they piloted with the boys in the Horizon Center in October 2019. It was challenging because written surveys were a completely new experience for the boys who felt they were being tested. Through the translators, they found out that the boys were very reluctant to say anything negative because they thought that was impolite. After thorough consultation, Susy and Heewon developed a second version and Heewon and a group of MIT students piloted it in January 2020 with the boys in the Horizon Center.

The new version was better, but still problematic. Boys copied each other and asked the translators for the "right answers." With input from participants and Horizon Center staff, Susy and Heewon worked on a third version (see Annex 2) that was to be piloted in March, but then put on hold for the duration of the pandemic.

### *3. Multiple workshops in July & August 2019*

A group of 11 D-Lab students traveled to Greece in July and August under the supervision of D-Lab Humanitarian Innovation Specialist Martha Thompson and Susy Tort. The team divided into two sub-teams, one offering two sequential one-week design summer camps for youth at the Horizon Center and the second offering two sequential *Introduction to Design* workshops for the refugee women in the Faros-run Blue Dot center. The summer design workshops at the Horizon Center focused on teaching some of the basic training classes, with the MIT students serving as additional instructors for classes in video, computer skills, carpentry, 3D printing, and introduction to Arduino. This also eased some of the bottlenecks in Horizon Center around the basic training courses.

### *4. On-site training of the Faros staff and remote mentoring*

Heewon Lee did the on-site training for the Horizon Center team from February to April. Once he returned to the US, he worked remotely with the Faros staff three mornings a week on debriefing, mentoring, continued training in teaching the design process, adapting the program based on a joint reflection process, and improving the curriculum. He returned to Greece for a two-week staff training in September to model leading the adapted design program, and returned in January with a group of MIT students to work with the staff on implementing the second set of changes to the program.

## Challenges

The bottlenecks and waiting lists were solved with adapted programming, but another key challenge remained: D-Lab and Faros had overestimated how long the youth would remain in Greece. Both organizations felt that the refugee youth needed a solid grounding to prepare them for the future. They estimated it would require six months to en-

Refugee youth building a project in the *Introduction to Design* class. Photo: Courtesy MIT D-Lab

gage youth, have them go through the program, and graduate them out to work or further education in Greece.

While D-Lab and Faros, in common with other organizations working with youth in Greece, thought that the increased restrictions on movement to Western Europe meant that the youth would remain in Greece, the youth themselves and their families turned to human traffickers to leave Greece. The young refugees felt that real opportunity was only possible in Germany or the Scandinavian countries. The restrictions on entry to Western Europe made them attempt extralegal (and highly risky) means of entry. Youth who were doing well in the program would disappear without warning to travel to western Europe without documentation. For obvious reasons, they would not alert people to their departure. There was a steady level of attrition due to this transience, and it was disruptive to the program. By March 2020, many of the first cohort of boys who had started *Advanced Design* at the Horizon Center were already in Western Europe.

## Conclusion

By February 2020, the refined modular curriculum provided a solid foundation of content, pedagogy, and approach that was very promising (see Annex 3). The boys were enthusiastic, the bottlenecks had cleared, and the activity program enabled a much smoother entry into the design program. Just as Faros and D-Lab were beginning to assess how to adjust the program to what was proving a transitory population, the Covid-19 pandemic shut down Greece on March 17th including the Horizon Center, and everything changed.

## B. Year 2: April 1, 2020 – March 31, 2021

D-Lab's responsibilities for Year 2 (April 1, 2020 to March 31, 2021) included:

- Mentoring of Faros in the development of the-Horizon Center
- Development and delivery of new design program curriculum for the Horizon Center (in collaboration with the Faros team)
- Delivery of adapted evaluation instruments for the design program
- Delivery of a progress report
- Sending two MIT D-Lab students with staff to lead a workshop in Greece

These responsibilities had to be adapted to the conditions of the pandemic. D-Lab continued to train the Horizon Center staff at Faros throughout the year. They designed a new curriculum that responded to the restrictions of the pandemic, rather than following the natural evolution of the existing program. The evaluation instruments had to be placed on hold as the pandemic effectively halted the in-person program. MIT suspended all student travel in the program until 2022.

### Context

The pandemic derailed the development of the original program for almost two years. Faros and D-Lab were determined to pursue the original goal of the program as best they could under the


The *Advanced Design* students using Miro to share ideas with each other during the online class. Photo: Courtesy MIT D-Lab

lockdown by switching to an online format but there were huge challenges. It wasn't possible to continue any in-person classes in the first few months, which meant safely teaching most vocational skills was impossible. The Horizon Center staff and D-Lab realized that it was not a simple matter of just switching content online, they had to reinvent how to teach it. Even after the most severe restrictions of the first lockdown were lifted in June 2020, there were new episodic national lockdowns, and at times, shelters were shut down because of Covid-19 cases. Since the youth kept moving in and out of isolation, Faros and D-Lab were continually adapting and changing the program activities as they switched back and forth from remote activities to hybrid to in-person during different stages of the pandemic.

The Horizon Center staff and Faros faced three key challenges in developing the first remote programs for the youth:

1. *Mobile phone data:* To participate remotely on phones, the refugee youth needed data, but they often couldn't pay for it. Initially, the government offered free internet, but after they rescinded it, many youths needed funds for data to access videos or upload their work.
2. *Isolation:* The lockdown immediately cut youth off from services, support, and relationships, causing many to lose some of the ground they had so clearly recovered in terms of rebuilding trust, confidence, and developing new social networks. Youth reported depression, uncertainty, feelings of disconnection, and being in limbo.
3. *Lack of basic needs:* the lockdowns and cutbacks on in-person services had an immediate negative impact on refugee youth's access to food, health, counseling, friendship, and shelter.

For Horizon Center staff, providing the youth with stability through meaningful activity, maintaining contact to connect them with essential supports, and continuing to stoke their interest in future education or employment were the key objectives driving the program throughout Year 2.

## Achievements

» A new remote teaching platform and design activities were developed in the first two months, allowing meaningful student-teacher interactions in a virtual environment.

» Each of the remote design activities incorporated reflection and socio-emotional elements to help students better navigate the crisis.

» D-Lab and Faros developed a stand-alone, remote training program called the *Toolbox* program, with physical kits of materials and equipment to engage youths in shelters and semi-independent living situations (SILS).

» 145 youth in nine shelters registered for the *Toolbox* program, expanding Faros' collaboration with other NGOs.

» Graduate students at the Rhode Island School of Design (RISD) collaborated with the Horizon Center staff to develop and pilot 11 new remote design activities.

» A nine-month remote *Advanced Design* program was delivered for transnational refugee minors (UAM who were in the original program but had left Greece for other countries).

## Activities by phase

There were four distinct program phases in this year to adapt to the changing situation.

### *Phase 1 — Remote teaching: March 2020 – mid-June 2020*

This was the most difficult time, when the Greek government imposed a comprehensive lockdown. This stage went through three phases.

*1. March 18 - March 29: Connecting and engaging with activities over Facebook*

This immediate response focused on reaching out to connect to the youth in the program and keep them engaged through fun activities over Facebook. The Horizon Center staff and Heewon immediately created a Faros Facebook page and posted simple hands-on activities that could be completed with paper, scissors, and tape.

*3. May 1 – June 10: Design activities with instructor-made YouTube videos*

Heewon and the Horizon Center staff returned to remote training with more advanced design and hands-on activities using YouTube videos. They introduced synchronous feedback sessions and initiated a Horizon Cup challenge, publicizing winners each week. However, making the videos was time-consuming and stressful for staff.

RISD *Humanitarian Innovation Design* students developing new activities for the Horizon Center Program. Photo: Courtesy MIT D-Lab

*2. March 30 – April 26: Education and pandemic awareness*

Seeing that the youth needed more challenging activities, the Horizon Center staff and D-Lab replaced all content with material educating and raising awareness about Covid-19. They also changed the medium used for instruction, making YouTube videos and vlogs about mask-making, Covid-19 transmission, and handwashing, Covid -19 updates, and myth busters based on science. To ameliorate the lack of data, they did screenshots and translated instructions into Farsi. While the pandemic-centered content was important, they soon realized they needed to expand and vary activities to continue to engage students.

*Collaboration with graduate students in the Rhode Island School of Design*: To expand program content and reduce stress on staff, Heewon created a class at the Rhode Island School of Design (RISD), which was dedicated to developing design activities for the Horizon Center. In the first year, 18 RISD students and the Horizon Center staff co-created 11 design activities. During the first two weeks of June, the Horizon Center staff piloted these activities with the youth. The new content provided relief to the Horizon Center staff and brought back many boys into the program over May and June. The RISD students initiated the use of GIF, which circumvented some of the data issues (see Annex 4).

### *Phase 2 - Hybrid programming: June 22, 2020 – March 31, 2021*

In mid-June, the government lifted some of the lockdown restrictions allowing people to gather in small groups. The Horizon Center staff prepared and distributed class-specific toolkits and materials to all participants and began a schedule of conducting outdoors team-based activities in a nearby park. This really brought youth back, who were thrilled to be in-person and happy to be using materials and tools again which allowed them to do more practical hands-on activities.

By July, the Horizon Center staff could pilot in-person classes in the Horizon Center for very small groups combined with remote instruction. They began with three weeks of intense hybrid classes, returning to *Activity Classes*, *Basic Training*, and *Introduction to Design*. Since only three to five people could be in a classroom at a time, in-person program numbers were quite low throughout the year.

### *Phase 3 - Design workshops for refugee youth in shelters in lockdown: September 2020 – March 2021*

Concerned by the impact of periodic government and shelter lockdowns on the refugee youth, a Greek NGO, Nostos Verona, requested that Faros organize a remote design workshop for UAMs in their shelters during a lockdown. Heewon and the Horizon Center staff designed a two-week virtual design workshop delivered by Horizon Center staff over Zoom. Faros prepared and delivered boxes of tools and materials to the shelter along with instructions for a staff member to support the youth during the Zoom classes.

Other NGOs, including Hellenic Red Cross, the International Organization for Migration Greece (IOM), and the Society for the Care of Minors and Youth in SILS, quickly requested that Faros run the program in their shelters and for youth in the SILS. By March 2021, the program was in nine shelters, girls were included for the first time, and attendance was consistently around 90%. This significantly expanded the reach of the program as boys and girls could do some hands-on work under supervision of the staff in their shelters and a limited number could come to the Horizon Center.

### *Phase 4 - Advanced Design classes for transnational refugee minors: December 9, 2020 – August 2021*

Former Horizon Center students who had migrated to other parts of Europe were isolated from services during the pandemic. Due to their strong connection to Heewon and the Horizon Center, these youth turned to them for help. Heewon created and led a nine-month *Advanced Design* class composed of 22 one-and-a-half-hour to three-hour classes over Zoom for eight of these students. They learned more advanced design and problem-solving skills, including collaboration and research tools such as Miro and Google Scholar, and creative design for social issues. One participant designed a solar-powered ceiling fan with a light kit for refugee camps, another a first aid kit for unaccompanied refugee children. These alumni from the *Advanced Design* class expressed that this class was a lifeline for them.

## Challenges

The beginning of the pandemic completely overturned the program. The loss of in-person classes in a well-equipped, safe indoor space severely restricted the kinds of essential activities that the program could offer. The staff had to continually adapt pedagogy and content to changing circumstances, while coping with the stresses of the pandemic. Throughout this year, the staff was under pressure to cope with the challenges of providing effective remote learning.

## Conclusion

The beginning of the year was incredibly stressful, but the work done to maintain connection with the boys while they were in isolation was extremely valuable. Resuming in-person classes allowed the Horizon Center to return to its original program structure, but at drastically reduced numbers and scope. The Horizon Center staff compensated for this by expanding their reach through the *Toolbox* program. By the end of Year 2, the situation began to stabilize, and the staff was no longer in emergency response.

# C. Year 3: April 1, 2021 – March 31, 2022

D-Lab's responsibilities in Year 3, April 1 2021 to March 31, 2022, included:

» Remote support and mentoring of Faros staff

» One student/staff member to travel and help lead a workshop with Faros staff

Rather than monitoring ongoing programs, this year was focused on adapting the in-person programs at the Horizon Center after the pandemic, while continuing some remote training. Heewon Lee traveled to Greece in February 2022 to lead a new *ICT Toolbox* workshop with Android phones, but MIT still did not permit student travel.

## Context

These 12 months signified the beginning of transition out of Covid restrictions and toward the formulation of a newly adapted in-person program at the Horizon Center. The year began with the Horizon Center staff still running a full suite of remote *Toolbox* classes in 11 shelters, supported by a set of in-person classes, and ended with the resumption of a new comprehensive in-person program at the Horizon Center

When the Velux program started in Year 1 (2019), the high number of UAMs in Greece (over 5,000), was overwhelming the available services. By October 2021, the number had fallen to a low of 2,149 — a 60% reduction. Although it climbed to over 3,000 in subsequent years, the crisis was over and no longer driving the response. The government was moving youth out of shelters into semi-independent living situations and there was a growing number of youth who concluded their best option was to stay in Greece.

## Achievements

» The *Toolbox* program was refined and expanded, reaching a total of 11 shelters.

» A new *Theory of Change* was developed with 10 program outcomes.

» The original six- to nine-month program was converted into two different programs: *Design Process Essentials*, a series of short introductory courses, and *Design Your Future (DYF)*, an intensive two-part program that helped participants develop relevant tangible and intangible skills for employment.

» A total of 244 participants took courses through the Horizon center, with 169 new registrants in 2021.

» A new two-week *Toolbox* program for training youth in ICT on Android phones was developed and piloted using phones donated by Samsung in February 2022.

» Eight new activities for the *Toolbox* program, tied to program outcomes, were developed by RISD students and piloted with youth by the Horizon Center staff.

» A new curriculum of *Activity Classes* was developed for the drop-in center and launched in December 2021.

## Activities

### *1. The Toolbox program*

D-Lab and the Horizon Center staff continued to develop and adapt content for the *Toolbox* program, expanding to two new shelters run by the


Design a Stool project, a component of the remote *Toolbox* program. Photo: Courtesty MIT D-Lab

IOM. Participants were enthusiastic, and the 169 new registrations represented an increase of 24 youth from the previous year. The *Toolbox* program became more consistently hybrid over the summer and fall, as the remote training was bolstered by in-person classes permitted by the easing of restrictions on social distancing.

### *2. Collaboration with the Rhode Island School of Design: additional activities for the curriculum*

This collaboration continued with Heewon Lee organizing a second graduate-level class on designing new activities with the Horizon Center staff. The students developed eight new activities that were piloted in the spring and incorporated into the program long-term.

### *3. A new curriculum of Activity Classes for the drop-in center*

In December 2021, the easing of pandemic restrictions made it possible for Faros to run the drop-in center again, transferring the activity program there to save space at the Horizon Center. D-Lab and the Horizon Center staff developed updated *Activity Classes*, introducing youth to simple creative problem-solving techniques and teamwork.

Sessions were designed to accommodate a broad range of participants in terms of age, language, education, and commitment level. They could be delivered in indoor or outdoor situations and required minimal equipment. As in Year 1, the *Activity Classes* were a positive way to transition youth into the Horizon Center program.

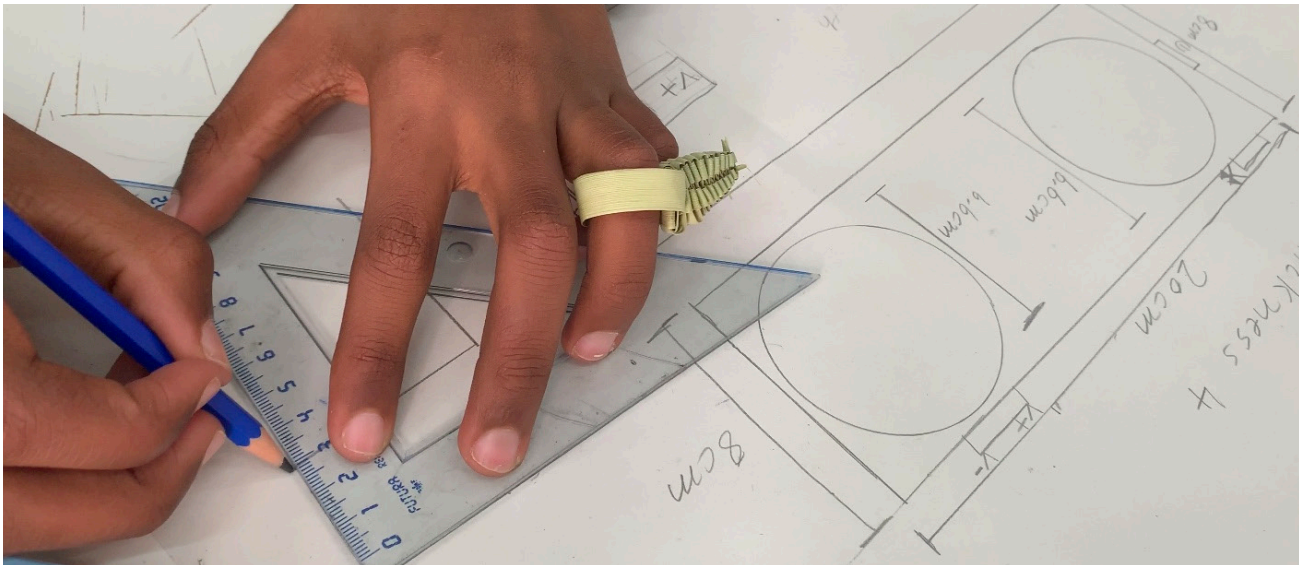
### *4. Resetting the Theory of Change and program outcomes*

The Horizon Center staff and D-Lab took several months in the middle of 2021 (Year 3) to articulate a *Theory of Change* and program outcomes that could serve as a basis for a revamped in-person design program that was relevant to the new context for UAMs and refugee youth. While the situation of refugee youth in Greece was more stable, most continued to suffer from a lack of formal education and a need to earn income.

To figure out how best to use the design training framework to equip refugee youth with the mindset and skills for employment, Faros commissioned a market study in mid-2021 to determine what soft skills are priorities in today's workforce. Working with D-Lab, they used the results of the market study as a basis for developing a new *Theory of Change* and more specific program outcomes for the design training program. The most important soft skills flagged by the market study included creative problem solving, teamwork, resiliency, and a creative mindset. In more stable situations, youth might acquire those soft skills through formal schooling, their parents and elders, and in supervised recreational activities. For refugee youth, the Horizon Center and D-Lab wanted the revamped design program to offer classes to develop these skills. They worked to align the new program outcomes with those articulated by the World Education Forum, the McKinsey Report, and the OECD.

According to the *Theory of Change*, outcomes for participants who completed the new program would include:

1. Comprehending and applying problem identification and solving methodologies in real-world situations
2. Understanding the methods required to effectively generate ideas and cultivating the generation of ideas in others
3. Developing many of the hallmarks of a "growth mindset," including:
   - » Active learning and the belief that their skills and abilities can be further developed
   - » Increased self-awareness of their strengths and shortcomings



Horizon Center refugee student using measurment techniques in a design class for a project. Photo: Courtesty MIT D-Lab

- » An appreciation of the benefits of learning from failure
- » An appreciation of process over outcome
- » Perseverance when confronted with challenges and a determination to discover a solution

4. Developing the ability to set attainable goals, the confidence to pursue them, and the understanding of how to achieve them
5. Understanding, through experience, how to positively contribute to teams, by knowing:
   - » The dynamic nature of roles in a team and the importance of fostering inclusiveness
   - » The importance of asking questions, active listening, and providing constructive feedback
   - » The importance of communicating productively with others, or presenting ideas publicly
   - » Appropriate initiative-taking and basic leadership qualities
   - » How conflicts can arise in teams, and approaches to resolving them
   - » The importance of time management
6. Having a deeper understanding of the benefits of formal and informal education
7. Developing basic competency in a diverse range of essential technical skills as a basis for confidently approaching further vocational training, leading to employment
8. Having a foundational proficiency in the use of digital tools, such as:
   - » Word processing apps/software
   - » Spreadsheet apps/software
   - » Digital communication, collaboration, and productivity apps/software
   - » Visual storytelling and video editing apps/software

   Along with these, developing an understanding of the internet as a useful researching tool and to identify reliable sources
9. Having knowledge of emerging technologies, their current uses, and possible future applications
10. Understanding the evolving nature of the global labor market and its relevance to them

Outcomes 1, 2, and 3 and parts of 5, 7, 8, and 9 were designated as outcomes of the design program and were the responsibility of MIT D-Lab. Outcomes 4, 6, and 10 were designated as outcomes of the job readiness and integration program, and were the responsibility of Faros along with elements of 5, 7, 8, and 9.

### *4. Revamping the Design Program into Design Your Future*

Learning from experience, D-Lab and the Horizon Center team wanted to develop a shorter program aimed at providing youth with hard and soft skills, prioritizing integration into Greece and training in job readiness. From September 2021 to January 2022, they worked to understand the needs of the future workforce; comprehend the current situation, goals, and interests of refugee youth through focus groups; reach out to possible employers; develop the curriculum; and pilot modules with youth and get feedback. They took the original six-month design program (activity class, basic skills, design training and advanced design) and,using the design framework as an educational pathway, they embedded the hard and soft skills they had identified in a concentrated two-part program called *Design Your Future* or *DYF*.

Part 1, *Design for Social Impact and Employment,* is a 10-week course that develops creative problem-solving mindsets and relevant technical skills by walking youth through the design process, including the core principles of design thinking, re-

search methods, problem-solving tools, and approaches to teamwork. Once the participants were familiar with the design process and learned the basic technical skills, they applied what they learned to address a concrete social problem in Greece. D-Lab was responsible for designing this curriculum.

Part 2, *Employment and Integration*, is a 15-week program for graduates of Part 1 and is aimed at comprehensively preparing the refugee youth to succeed in a rapidly evolving labor market, effectively integrate into Greek society, and help them prepare for job interviews and internships. The Faros team was responsible for designing this curriculum.

The *Design Your Future* program was aimed at youth committed to staying in Greece for at least a year after being hired in a job. To participate, they needed to be able to communicate in Greek and English and hold an asylum card.

#### *5. Two-week pilot Toolbox program with Samsung phones, February*

The quality of the available technology for video and audio was a continual challenge for the remote instruction in the *Toolbox* program. D-Lab saw an opportunity to improve that when Samsung offered to donate high-quality Android phones for use in the program. To make maximum use of these new devices, Heewon Lee traveled to Greece to pilot a two-week *ICT Toolbox* workshop with the phones in February 2022 in one of the Red Cross shelters. Aimed at giving youth a much more sophisticated understanding of electronics and multiple uses of devices, this became a highly popular program.

### Challenges

It was difficult for staff to balance supporting ongoing programs while also researching and designing a new program to fit the context. They were able to finalize the new *Design Your Future* curriculum but were not able to finalize the new *Design Process Essentials* curriculum, during this year.

### Conclusion

By the end of Year 3, the Horizon Center staff had developed a new version of the in-person design program at the Horizon Center that responded to the changing demographics of refugee youth. While the numbers of UAMs in Greece continued to decline, those over 18 who had aged out of most programs and services were still stuck in Greece, no longer eligible for family reunification and with few programs for their age group. The *Design Your Future* program was designed both for 17 year-old minors and youth over 18.

## D. Year 4: April 1, 2022 – March 31, 2023

D-Lab's responsibilities for Year 4, April 1, 2022 to March 31, 2023, included:

- Remote support and mentoring of Faros staff.
- One student/staff member to travel and help lead a workshop with Faros staff.
- Conduct final evaluation of design program and delivery of report.
- Feedback to content of project website

Rather than following a continuous thread of program development reflected in these outcomes, D-Lab's aims in Year 4 were to implement and support the new in-person programs in the Horizon Center.

### Context

The lower numbers of UAMs caused several shelters to shut down and some NGOs to close their programs during 2022. To support the majority of UAMs who were now in the Greek public school system, the remaining NGOs focused heavily on Greek and English language classes and homework support programs. Faros identified a new,

larger site and focused time and resources on renovating and preparing to move there. There were also staff changes as Faros expanded some of their educational offerings. As some staff transitioned out of the design program towards the latter half of the year, new staff were hired to provide language and homework support.

## Achievements

» Four cohorts completed Phase 1 of *Design Your Future*, *Design for Social Impact,* with a total of 63 youth in the program.

» The new *Design Process Essentials* course was launched at the Horizon Center in October 2022, and 91 youth completed courses between October and March 31st.

» Heewon Lee ran a comprehensive two-week workshop with Horizon Center staff and Heewon Lee to evaluate the new programs.

» A draft of the *Design Your Future* handbook completed.

## Activities

### *1. Transition from virtual and hybrid classes to in-person classes at the Horizon Center*

The remote *Toolbox and Toolkit* programs in the shelters wound down in May 2022 as youth transitioned back to in-person classes at the Horizon Center. The *Toolbox* activities were re-worked for use in the *Activity Classes* at the drop-in center.

### *2. Design Process Essentials courses*

Heewon Lee traveled to Greece to work with the Horizon Center staff on combining content from the original *Basic Training* courses and the *Introduction to Design 1* into the *Design Process Essentials* courses. These four-week to six-week courses began in October 2022 and combined technical training with basic design thinking. In each one, participants went through the design cycle, learning technical skills such as CAD and 3D printing, woodworking, tailoring, technical drawing, and electronics to solve a very simple design problem and produce a prototype solution. *Design Process Essentials* aimed at providing participants with an understanding of the design process and some basic technical skills. It also served as a conduit for those wishing to join the *Design Your Future,* or *DYF,* program.

### *3. Design Your Future program*

Many of the youth in *DYF* were originally UAMs or had experienced similar types of trauma in their places of origin and on the journey to Greece. These experiences, along with the lack of a family environment and other support, made it difficult for them move into adulthood. *DYF* was carefully designed to support them in that process and is subsequently a "high-touch" program requiring significant investment of staff time. It was somewhat challenging to find youth who had all the qualifications for participation, requiring a lot of work with other NGOs to identify them. Those who qualified and completed the program have been highly enthusiastic about the kinds of skills they learned and the level of preparedness and personal growth they felt they achieved by the end of the program.

Four cohorts successfully completed Part 1 of the *DYF* program, *Design for Social Impact*:

» Cohort 1 began in March 2022 and graduated in June 2022.

» Cohort 2 began in June 2022 and graduated in October 2022.

» Cohort 3 began in November 2022 and graduated in January 2023.

» Cohort 4 began in February 2023 and graduated in May 2023.

For their final team project in Phase 1 of *DYF*, participants designed a solution for a social problem. Cohorts 1 and 2 designed a variety of things needed by homeless people, working in coordination with the local NGO Home Away. Cohorts

3 and 4 designed culturally and contextually relevant activities for youth in the drop-in center.

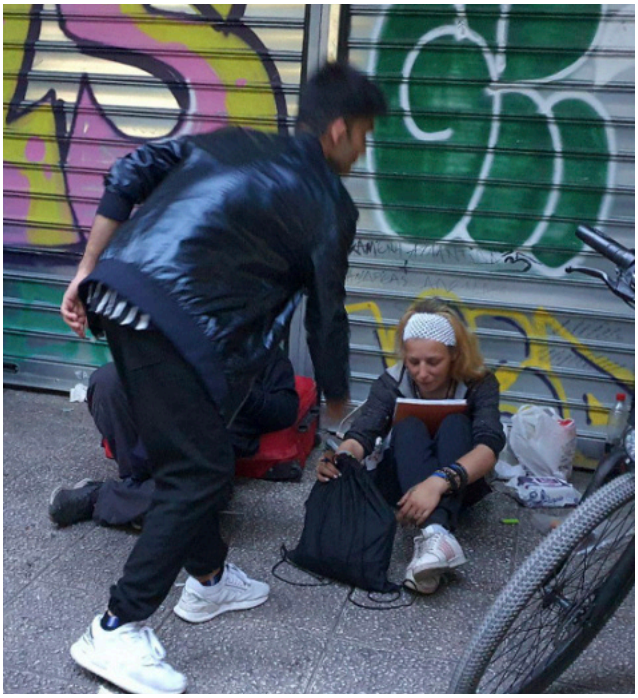
*DYF* cohorts completed Part 1 and moved to Part 2, *Employment and Integration*. The Horizon Center staff then helped transition some of them into internships in Greek businesses, such as Alfa-Beta Vassilopoulos, Alter-Ego Facilities Management, Manifest Services SA, Melia Hotel, Electra Hotels & Resorts, and Radisson Blu, or supported them in looking for a job.

### *4. A comprehensive two-week workshop to evaluate the new Horizon Center program*

Heewon Lee and the Horizon Center staff spent two weeks in 2022 performing a detailed analysis of the revised program, documenting successes, challenges, and key considerations for the future (see section VII Key learnings and Annex 6).

### *5. Completed draft of the Design Your Future handbook*

D-Lab and the Horizon Center staff developed an exceptional resource in the *DYF* curriculum with the potential to be used in other situations with vulnerable youth. A draft of the curriculum was consolidated as a handbook.



Design Your Future outreach project to people experiencing homelessness in Athens. Photo: Courtesy MIT D-Lab

## Challenges

The *DYF* program was highly successful, but it required heavy staff investment to recruit and find eligible youth, develop and maintain relationships with businesses to provide internships, and run the training. In this year, the *Design Process Essentials* program did not achieve the vibrancy and energy of previous iterations. With most of the youth in school, there were more competing demands on their time which reduced the frequency of their attendance, and their level of commitment. Finally, staff departures from the design program meant the loss of key people with experience and relationships for *DYF*.

## Conclusion

Given the new context, Faros had to make decisions by the end of this year about where to invest resources and time to best serve the emerging needs of the refugee youth. Towards the end of the year, they began to explore transitioning the design program into other kinds of educational support.

# Year 5: April 1, 2023 – March 31, 2024

## Context

Year 5 saw the end of the formal design program at the Horizon Center and the transition to an alternative education program driven by the changing context for UAMs in Greece. In April and May 2023, Faros moved the Horizon Center to a new, much larger, renovated site. In the fall they began to develop an alternative education program to support UAMs in homework, English and Greek language, and computer skills. Given the available resources, this meant a corresponding reduction in and eventual closure of the design program.

The *DYF* program delivered high value, but it required high investment. Faros made the decision to use available resources for an educational program more focused on academics. In accordance with this plan, as the design instructors' contracts came to an end, they were replaced with instructors for language and other academic subjects. The *Design Process Essentials* classes continued through the end of September 2023, but then wound down.

## Achievements

» 131 students completed *Design Process Essentials* courses.

» Cohorts 3 and 4 graduated from Phase 2 of the *DYF* program, and Cohort 5 completed both phases of the *DYF* program with a total of 31 completing the entire *DYF* program (13 of them are from the previous cohort taking more classes, and 18 are new students).

» A group of 5 MIT students traveled to Greece and delivered a workshop in January 2024 to 20 refugee youth.

## Activities

### *1. Move to new building: March - April 2023*

The move to a renovated, more spacious, and more commodious New Horizon Center near Victoria Square took up most of March and April. In September 2023, there was a formal inauguration of the new building.

### *2. Design Process Essentials courses*

A total of 131 students completed these courses. but they were gradually discontinued after the fall due to the move and the transition out of the design program. Participants in these programs showed the same positive change and mindset shifts that were evident in the *Basic Training* and *Introduction to Design* program in the first year, but at a slower rate due to a considerably lower frequency of attendance.

### *3. The Design Your Future program*

The final three cohorts successfully completed the program and graduated, and many went on to internships and further education. (See Section VI for more details on the outcomes of *DYF*).

### *4. MIT student-led workshop: January 2024*

January 2024 saw the first MIT D-Lab student-led workshop in the Horizon Center since January 2020. Six students led by D-Lab alum Caroline Morris facilitated a five-day workshop at the Horizon Center for 20 youth from Afghanistan, Sierra Leone, Palestine, Egypt, and Somalia called *Designing Dreams*. It used the design cycle as a path to identifying problems in their community, and coming up with solutions using artificial intelligence (AI).

Youth formed teams around issues including electricity, food and water, or health and environment; learned how to use AI to describe both problems and solutions; and went through the design process to frame the problem and develop a solution. This was the same design process used throughout the program, but focused on AI rather than physical building skills to devise a prototype solution. Through the workshop, youth learned the art of storytelling and how to leverage it to communicate problems they identified and solutions they developed.

## Conclusion

It was fitting to end the year with a workshop led by D-Lab collaborators and students, as the catalyst for beginning the program was a D-Lab-led workshop with students back in 2017.

Although these workshops were far apart in time and style, the fundamentals were the same. In each workshop, the design cycle served to teach refugee youth life skills, build confidence and resilience, learn problem solving, develop persistence, and work as a team.


Entrance to the new Horizon Center near Victoria Square in Athens, which opened spring 2023. Photo: Courtesty MIT D-Lab

# VI. Impact of the program on refugee youth: Theory of change and outcomes

The Horizon Center design program had three distinct periods with different expected outcomes and impacts on refugee youth.

| PERIOD | EXPECTED OUTCOMES | IMPACTS |
|---|---|---|
| Year 1: The first year of the original design program, when the UAM crisis was at its highest point. | Original five expected outcomes of the project | » Youth are stabilized<br>» Youth are connected to adult support and services<br>» Youth regain confidence in themselves<br>» Youth learn hard and soft skills<br>» Youth begin to see a path forward |
| Years 2 and 3: The pandemic, with remote classes and hybrid learning | Strong focus on connecting with dispersed youth and keeping them engaged with a program | » Staff maintain communication with youth during isolation<br>» Youth stay connected to a learning program<br>» Youth learn both hard and soft skills |
| Years 4 and 5: Redesigning the program with *Design Your Future* and *Design Process Essentials*. | New theory of change and the 10 new outcomes, some of which were specifically for *Design for Social Impact* and others including *Employment and Integration* | » Youth develop soft and hard skills<br>» Youth learn to work in teams<br>» Youth learn to develop a growth mindset<br>» Youth regain confidence in themselves<br>» Youth are prepared for the job market |

## A. Methodologies

Five main methodologies were used to evaluate the impact of the program on refugee youth at the Horizon Center.

» *Focus groups:* These were used throughout the program, after cohorts of youth completed different phases, to check how learning objectives were fulfilled, to assess the impact of modifications to the program, and with each cohort in the *DYF* program. Because having youth fill out written surveys presented challenges around veracity of information, the staff often used focus groups as a more reliable way to collect information or a means of triangulating it.

» *Surveys:* There were two rounds of written surveys used to evaluate learning. The first was in Year 1 for the original program and the second was in Years 4 and 5 with the *DYF* program.

Using the written survey in Year 1 was especially challenging, although there were three iterations of the form, each one incorporating feedback to be more user-friendly and simpler. The youth experienced great difficulty with the concept, felt any criticism was discourteous, consulted each other, copied each other's replies, and were convinced that there was a right answer they had to find.

The second application of written surveys in *DYF* was more successful, but some of the same issues persisted, albeit to a reduced degree. Spectrum mapping still seemed to be difficult for many participants, and they appeared to overestimate their skill levels on the pre-surveys and be more realistic on the post-survey.

» *Individual interviews:* These were carried out on a random basis (to ensure a general application) with different groups during the entire

program to gauge response to classes, levels of satisfaction, how participants could articulate what they learned, and changes they saw in themselves.

» *Observation and reflection:* Design instructors met regularly to discuss what they observed in class, the progress of individual students, and the overall success and challenges of different iterations of the program. In 2022, the Horizon Center staff and Heewon Lee met for two weeks to carry out a comprehensive in-depth evaluation of the existing program, the challenges, successes, and considerations for the future (see Annex 6).

» *Completion of design projects:* In all classes or phases of the design program, except for the *Activity Classes,* students are required to make a product that meets a basic set of standards to progress to the next phase of the program.

## B. Outcomes at different stages of the design program

The first year of the design program: original theory of change and outcomes:

### 1. Evaluation methodologies used

» Observation

» Focus groups

» Individual interviews

» Written survey

» Completion of design projects

The staff conducted focus groups and individual interviews with students covering these themes:

» How do they explain the design process? Can they apply it to other parts of their lives? How so?

» What were the most important things they had learned?

*Advance Design* class students refining the design of the chair they designed and built at right. Photo: Courtesy MIT D-Lab

» How did they feel about coming up with new ideas and brainstorming?
» Did they feel that they could transform those ideas into solutions?
» How did they feel about making mistakes?
» How did they feel about giving and receiving feedback?
» How did they feel about being at the Horizon Center?
» What did they learn about working on a team? What do they like and not like about it?
» Did the program change how they think? How so?
» Has their idea about what they want to do in the future changed?

At the end of the first year, the challenges posed by the survey prompted D-Lab and Horizon Center staff to rely more heavily on staff observation of students, completion of coursework, and the responses to individual interviews and focus groups to collect information about the five expected outcomes of the original program.

## 2. The five original outcomes of the design program

The overall goal was that the youth who attended the design program at the Horizon Center would:

### *i. Learn how to use design to solve problems they encounter and see themselves as problem solvers*

When asked in interviews and focus groups, the youth who were in levels 1, 2, and 3 of the *Introduction to Design* programs could describe the steps of the design process since they used it in each project and individuals could also easily highlight which stage of the design process, they liked best. Focus groups and interviews showed that approximately 60% of participants

### Design Thinking Empowers Refugee Student in Higher Education

*In early 2022, a graduate of the* Advanced Design *program at the Horizon Center achieved a significant milestone by gaining admission to one of Greece's top universities. This student, now studying computer science, stands out as the sole refugee in his class year and initially faced intimidation due to his unique circumstances.*

*During a semester-long project in one of his computer science classes, the professor assigned students to form groups and identify an everyday problem that could be addressed through coding. Facing a challenge where his teammates lacked direction and began discussing disparate ideas, the student applied the design process he had mastered at the Horizon Center.*

*Drawing on his training, he took the lead in guiding the team through problem definition, idea generation, testing, and, ultimately, the creation of an elegant solution. This proactive approach not only resolved their initial confusion but also bolstered his confidence in the classroom.*

*Today, he stands out as one of the brightest students in his cohort, illustrating how design thinking not only enhances problem-solving skills, but also empowers individuals to thrive in new and challenging academic environments.*

in the *Introduction to Design* classes considered the design process as a path to problem solving and could offer examples of how they used it. The same number felt they could solve problems more easily because of the program, with several stipulating that they could not completely solve a complicated problem, but they could at least solve part of a problem. This was a significant finding for a group that did not feel empowered when they entered the program.

> *"I see the design process as a way I can solve other problems in my life."* Male participant

> *"I use the design process to help me work through problems at school."* Male participant

> *"We are getting help from different organizations, but the homeless are not getting support; we want to help them with our design project, to give back to our community."* Goal for a project as articulated by the Advanced Design class

### *Build skills that enable them to make products that they need or could develop as income-generating activities*

To move into the *Introduction to Design* classes, the students had to be able to make a wooden box or phone stand in carpentry, use a computer to make a 3D-printed object, develop a functioning sketch model, sew a T-shirt or bag in tailoring, know how to take basic measurements, become familiar with using a computer, and learn basic electronics (simple electrical circuits, batteries, and soldering). They had to be able to use hand tools and one or two electrical tools in carpentry, as well as electric sewing machines, to graduate from basic skills to design classes. Once they graduated into *Introduction to Design*, they would develop and improve the basic skills needed for their specific project. By the end of the *Advanced Design* class, students were designing and building chairs, lamps, and other articles they could use or give to others,

At all stages of the program, youths were eager to make things they could use, such as T-shirts, bags, lock boxes, phone stands, and chess pieces, or simple things they could sell to other boys, such as plastic action figures, or key chains made with 3D printing. Making useful and tangible objects demonstrated their technical skills, but the pride and self-sufficiency they felt and articulated was equally important. In interviews and focus groups, all the students repeatedly talked about how

## Discovering a Passion: From Refugee to Aspiring Aerospace Engineer

*After graduating from the Horizon Center program, a student resettled in Germany and discovered a deep passion for design. His aspiration is to become an aerospace engineer specializing in building airplane engines. Recognizing the need for guidance, he reached out to us seeking mentorship to navigate his journey.*

*We connected him with a seasoned mentor—a PhD graduate from MIT's aerospace program—who now mentors him monthly. This mentorship has provided invaluable insights and guidance as the student prepares to apply to MIT himself.*

*With a clear goal in mind, he is determined to pursue his dream of studying aerospace engineering at MIT, driven by his newfound passion and the support of a dedicated mentor.*

proud they felt to know they could make something tangible and useful with their own hands.

> *"I would see my friends come back to the shelter and they would show me the things that they made, I wanted to try and make those things."* Male participant

> *"My friend dropped out and then he saw us coming back and showing all the things we made. He came back and asked if he could re-register."* Male participant

> *"I don't have to worry I can make a shirt if I need one."* Male participant

> *"I feel confident making things."* Male participant

However, making things for income generation proved an unrealistic outcome for the Horizon Center program. Legal restrictions prevented the youths from making things to sell for steady income. One cohort did make two copies of a chair they designed and sold them to visitors for 225 euros, which was a great success! A few boys also did a good trade in 3D keychains they made and sold to friends. However, Greek laws did not permit a nonprofit organization to produce goods for profit, and the prohibitions around refugee minors earning money were formidable barriers to making income generation a part of the program. Although D-Lab and Faros initially thought income generation could be a programmatic outcome, by the end of the first year, it was clear that this was not possible.

### *Develop technical and business skills to prepare them for employment*

This was envisioned as an outcome for the latter years of the program, not the first year. In Years 4 and 5, The *DYF* program focused on the development of these skills and preparation for employment (see section 3 below on *DYF*, Outcomes in Design for Social Impact).

### *Realize and demonstrate their potential and capacity as capable and skilled youth*

Through observation, interviews, and focus groups, staff saw that most of the youth, between 70% and 75%, noticeably increased their self-confidence as they moved from the *Activity Classes* through the completion of *Basic Skills* into *Introduction to Design*. In the *Activity Classes*, most youth did not want to present their work, and few wanted to speak up in front of others. By the time they completed a few *Basic Training* modules, almost all youth were confident in speaking in front of others and presenting their work. By

## Achieving Independent Living: From Refugee to Hotel Employee

*A participant in the* Design Your Future *program has successfully transitioned to independent living despite turning 19 and no longer receiving government or refugee organization support. Through the program's efforts, he secured a job placement at a hotel in Athens.*

*Employed now, he has attained financial stability and is diligently saving towards his goal of pursuing higher education. This job not only supports his immediate needs, but also empowers him to plan for a brighter future.*

*His journey exemplifies the program's effectiveness in facilitating self-sufficiency and empowering refugee youth to achieve their educational and personal aspirations.*

the time they got to *Introduction to Design*, they were willing to request feedback on their work from peers. Presenting in front of others was a new skill that they highly valued. Once they had completed three to four *Basic Training* modules, all of the youth in interviews and focus groups expressed an elevated level of positivity around their ability to learn new skills. They highly valued knowing that they could learn something new. Once in the *Introduction to Design* class, the boys expressed strong confidence that they could learn new things, even if they admittedly found them difficult.

> *"This makes me more confident and feel better in myself in front of other people."* Male participant

> *"This makes me more confident I can do things; I feel I can speak up in front of other people even if I don't know them."* Male participant

> *"I like making new things, I feel I can help my community."* Male participant

> *"Oh, ok, I do it again, until it is right."* Male participant

The Horizon Center policy was that those youth who finished any task or project first should help the others to complete theirs, and it was consistently observed that helping others built their confidence. Approximately a quarter of the youth in the *Activity Classes* or *Basic Training* would express some level of frustration or anger at themselves when they were trying to learn specific skills in the beginning stages of the program. However, repetition, support from other boys, patience of the staff, and the ability to work at their own pace visibly helped them overcome frustration, and a high percentage of the boys persisted through their difficulties in mastering the skills in each module.

Attrition in the program did not occur because students were frustrated, but rather because some would leave to travel to Western Europe.

### *Find a bridge to recover their identity and build their self-confidence so that they can improve their lives*

Enhanced confidence showed up in other behavior changes. From interviews and focus groups in the first year, almost all (more than 80% of the youth) highly valued working in teams. Their ability to work well in teams, to cooperate and collaborate with each other, increased noticeably the longer they stayed in the program. Giving and receiving feedback is part of each round of the design cycle, and youth learned to both do it respectfully and value it as they moved through the program. An even higher percentage (over 90%) highlighted the importance of the Horizon Center as a place to make friends. They expressed a sense of belonging and support there.

At the beginning of the program, in focus groups with MIT students, several boys articulated the importance of not being seen as "just a refugee." That label had a negative connotation for them, and they wanted people to see them as "something more." While the boys were in *Basic Training*, many talked about being tailors, carpenters, or electricians. These were familiar and reassuring occupations that they regarded as providing reliable income. Once they graduated into the second or third level of *Introduction to Design*, there was a noticeable change. Over 50% of the boys in levels 2 and 3 of *Introduction to Design* articulated new hopes for their future: they aspired to finish high school and go on to college to study science, design, engineering, or computers.

> *"I didn't know much before but now I feel I am a scientist!"* Male participant

> *"I like helping and mentoring the others when I know something."* Male participant

Faros provided a range of services including food,

psychological help, shelter, and connected youth with legal assistance and health services. The program became a doorway for youth to access other supports. Engaging youth in the design program was the primary goal but just bringing them in the door could help them solve ever-present existential problems and broaden their access to help and support. Staff were highly dedicated, and not only instructed youth but listened to them, showed care, provided material aid from the center and connected them to services. Youth frequently mentioned in the individual interviews how staff members helped them get health care, connected them to legal aid or helped them find a place to stay. This helped the youth rebuild trusting relationships with adults that were as important to their stabilization process as the concrete assistance.

> *"I feel safe at the Horizon Center."* Male participant

## 3. The pandemic: Year 2 outcomes

There were two separate stages of the program during the pandemic: the initial lockdown stage, where isolation was the major challenge, and the year and a half of shutdowns, reduced access, remote training, and limited hybrid classes.

During the first stage, the primary desired outcome was to maintain contact with the youth through devices, engaging them in activities as often as possible so that they had some kind of reference point in isolation. The initial shutdown immediately cut youth off from steady access to food, relationships, and a whole range of support including access to data and phone charging. For many of them, there was no place to "be." This significantly increased their vulnerability, especially for the 40% of UAMs, who were not in shelters but in camps, detention centers, or highly risky situations.

MIT D-Lab's Heewon Lee providing remote instruction for refugee youth in the *Design Your Future* program. Photo: Courtesy MIT D-Lab

It was not possible to do surveys, focus groups, or interviews during the first year of the pandemic. The clearest indicator of success in the program throughout the pandemic was simply whether youth participated remotely. If they were interested and engaged, they would show up. If they were not, they didn't. Horizon Center staff and D-Lab support were endlessly creative in their determination to develop viable ways to keep a core of youth engaged in the first months of the pandemic.

The second stage of the programmatic response to the pandemic was dominated by the virtual and hybrid classes through the *Toolbox* program. Again, this was a case where participants voted with their feet. Either youth in the shelters attended the program remotely or they opted not to. A total of 145 youth in shelters and SIMS participated consistently in the first year of the *Toolbox* program with a 90% participation rate and 169 participated in the second year. It was their interest and enthusiasm that motivated shelter administrators to reach out to Faros for the *Toolbox* program.

## 4. *Design Your Future:* Outcomes for design or social impact

### *Evaluation methodologies used*

» Observation
» Focus groups
» Individual interviews
» Written survey
» Completion of design projects

As explained earlier, in 2021, the Horizon Center staff and D-Lab reworked the theory of change and developed ten new outcomes, 6 of which are relevant to Part 1 of *DYF, Design for Social Impact*. Horizon Center staff held individual interviews or focus groups, both for the first four cohorts, and supplemented these with written surveys. By the time the fifth *DYF* cohort ended, there was only one Design instructor as the program was winding down, and that negatively affected documentation. As stated previously, there were some of the same problems existed with identical answers and issues with the spectrum mapping, which raised some concerns about veracity of information in the written surveys, so the data was triangulated with the information collected in focus groups, individual interviews, and staff observation.

### *Outcomes for Design for Social Impact*

*1. Comprehend and apply problem identification and solving methodologies in real-world situations*

In written surveys, on a scale of 1-10, over 65% of the participants moved from a value of below 5 in seeing problems more as challenges, to a value of 8 and above in seeing them as opportunities. In focus groups and interviews, the *DYF* participants clearly articulated that they felt they learned to identify and solve problems though the course. Over 70% of youth in *DYF* understood the design process as a problem-solving process that helped them get to a solution. In the words of one student from the first *DYF* cohort,

> *"In Design for our Future, they helped us to learn teamwork and to be able to face problems through the solutions we can provide."* Female participant

When *DYF* participants were asked if they just went out to do something to help the homeless, would they get the same quality of product without using the design process, they said:

> *"No because we don't have any plan and without the design process...we don't have anything. We don't have the [necessary] information, and we don't know how to do it."* Female participant

> *"When we use this process, we find some*

*solution, we can't find the whole [Solution], we find some solution and we make some things for the homeless. We managed to make something with this process."* Male Participant

*"The design process is affecting my life. I noticed that when I have many things where I mess up, what I have to do for example in one month, I put them in an order, so that is how it impacted my daily life."* Male participant

*2. Understand the methods required to effectively generate ideas and cultivate the generation of ideas in others*

Students in each cohort had to learn and use diverse types of ideation and brainstorming build off each other's ideas, and finally work together to organize ideas and choose the best one. The instructors saw that each team spontaneously experimented with separate ways of generating ideas and choosing the best one. For example, in the first *DYF* cohort, the staff made the following notes on how each of the three teams completed the ideation and sketch modeling process in diverse ways:

» **Team 1** worked very closely together from the beginning and produced two very similar sketch models. Team collaboration and consensus was achieved throughout the process.

» **Team 2** took a more individual approach. Each team member ideated and created four different sketch models and then combined them.

» **Team 3** split into two sub-teams and worked relatively independently from one another, producing two very different sketch models. This team relied heavily on the Pugh Chart process to finally come to an agreement over their final idea.

In focus groups, staff asked the participants, "You did research online for ideas for solutions, but then we did the 'Imagine' [brainstorming] stage. How do you think that helps you develop the solution as a team? Do you think it helps you design something different than something you might find online, or not?"

Participants responded:

*"It would be difficult to create something … if we didn't have [the] imagine [stage]. My idea and (X's) idea is not the same. It will be difficult to make something because we will have many ideas and we can't select one because I will come with my idea, (X) will come with his idea, and another student. It will be difficult. We need to make ideas together and choose."* Male participant

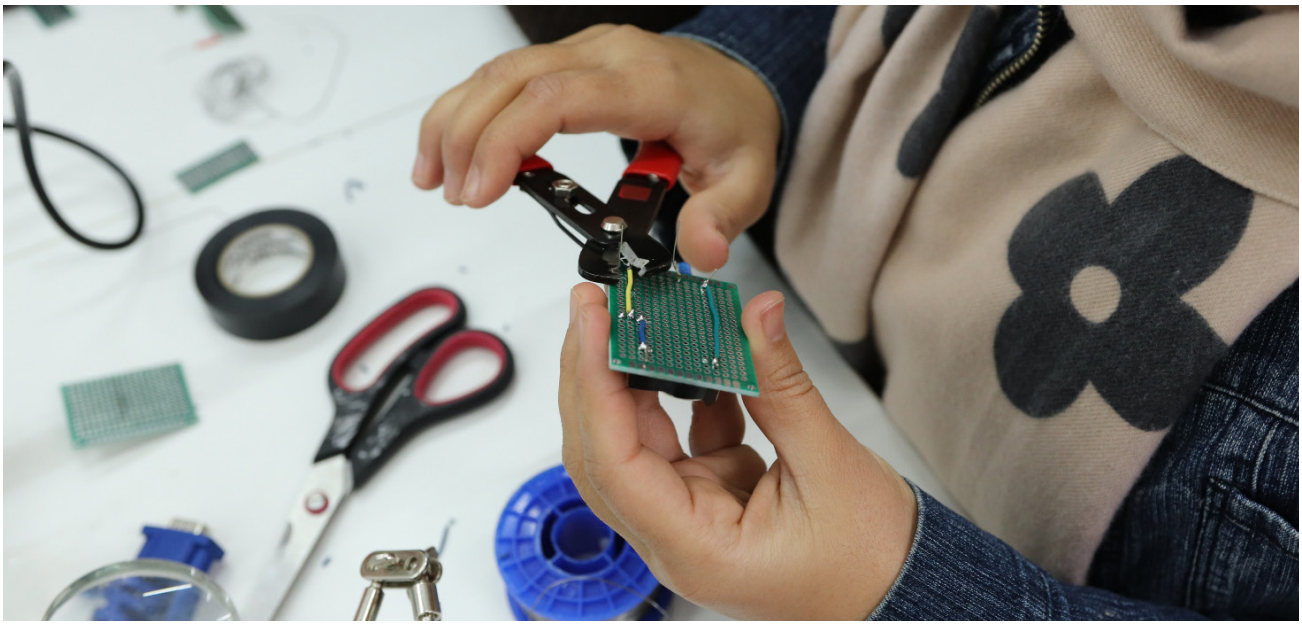
*"Yes, because if we don't have the ideation, we don't know what we have to make. It is so important."* Male participant

*"The most helpful of the Horizon Center was the discussion. Asking questions, getting answers, and making team work together. You know, brainstorming and thinking a lot about what the important thing was. You will get a lot [of ideas]. You know when we were doing this program, we were making a lot of brainstorming to get some ideas, which makes you grow in your mind. That was a very important thing."* Male participant

*3. Develop many of the hallmarks of a growth mindset, including:*

» Active learning and the belief that their skills and abilities can be further developed

Responses to this question showed an almost complete overlap with the written survey results and information collected from interviews and focus groups. Participants were strongly in agreement that they were active learners, and after the program ended, they could continue to learn new skills and develop their abilities.



A young refugee girl creating a circuit board for an LED flashlight in an *Introduction to Electronics* unit of the *Basic Training* program. Photo: Courtesy MIT D-Lab

> *"I just thank you because we learn something new and we didn't know anything, we didn't know tailoring, PowerPoint and now we know so many things and we know how to make some plans, even in life."* Female participant

» An appreciation for learning from failure

This seemed to be a difficult issue, because for many of them it meant moving from the strongly held belief that mistakes are negative and not allowed, to understanding they could learn from failure. From the written surveys, approximately 60% of participants moved from below a value of 5 (which were categorized as "never" to "seldom") on a scale of 1-10 towards values between 5 and 10 which were categorized as between "sometimes" and "always". The written surveys showed that the majority felt that they could sometimes learn from failure, with the preponderance in the middle of the scale, or "sometimes." Quotes from the focus groups and interviews show some stronger appreciation and more nuance around this concept.

> *"I used to get so upset when I made mistakes, I would get so angry at myself, now I try to see it different."* Female participant

> *"Yes, sometimes you are going to make mistakes, but you keep trying. I try that now."* Male participant

> *"I remember before when I play [soccer], I didn't like to take a penalty. When we talk about failing and the penalty, I'm not happy, I will lose every time when we have penalty, but now, it's good now, I take the penalty. If you're afraid, you can't do anything. You must fight."* Female participant

» An appreciation of process over outcome

Surveys showed that students made less progress on moving towards appreciating process over outcome, with a median of 5 out of 10 across all cohorts. It is not clear if they fully understood the questions, as many students answered the same on both the pre- and post-surveys. Information from interviews and focus groups demonstrated a higher level of understanding the question than the surveys, but participants did not demonstra-

bly articulate this conclusion, and they were still quite focused on outcome.

» Perseverance when confronted with challenges and a determination to discover a solution

*"I was learning how to imagine my goal and build my goal and these things are very valuable to me."* Female participant

*"This was my first time in a team, learning teamwork helps me in everything, it helps me in studies, I used to just study alone but now I understand how important it is to work and study in a team, it helps me more."* Male participant

In written surveys and focus groups, students put a high value on working as a team being the best way to persevere through difficulties and arrive at a solution. In the focus groups, over 70% of the participants identified working together as a team as the most helpful way to persevere, and in the surveys, they placed the highest value on teamwork.

*4. Understand, through experience, how to positively contribute to teams, by knowing:*

» The dynamic nature of roles in a team and the importance of fostering inclusiveness

» The importance of asking questions, actively listening, and providing constructive feedback

» The importance of communicating productively with others, or presenting ideas publicly

» Appropriate initiative-taking and basic leadership qualities

» How conflicts can arise in teams and approaches to resolve them

» The importance of time management

In the survey questions, the strongest focus was on team-building, working in teams, and the value of a diverse team. On the written surveys, over 90% percent of the respondents moved into the 8-10 range (out of 1-10) from the pre-surveys, to show their high appreciation for working in teams. These responses demonstrated their recognition of the high value not only of team work, but also the importance of teams made up of diverse people with distinct kinds of ideas. The quotes below from the interviews and focus groups show several aspects people valued about teamwork, including the importance of working through differences. Most students clarified that they had never worked in teams like this previously.

*"Every person has different ideas, but we can help each other make decisions. We can make mistakes by ourselves. But in a team if I do something wrong, someone can tell me, 'See if you do this it will not be a positive outcome.' We discuss and then we can make something better because some people have better ideas."* Male participant.

*"Teamwork helps me do things easy and fast."* Female participant

*"Teamwork is important because everyone has different ideas and it will help you learn things from someone, not only in the project you are doing but in everything."* Male participant

*"We learned how to work as a team through difficulties and in a short time as well."* Female participant

*"My experience in the classes was that we could collaborate in a group with anyone from any country and any language, and more importantly, we could think of and help people who are financially low."* Female participant

When asked in interviews and focus groups about how they felt about presenting or speaking in public, all respondents affirmed that the program helped them significantly improve in this

area. In focus group discussions, approximately 80% of participants felt they moved from being shy or uncertain to feeling comfortable speaking in front of others. This same group felt they had improved their communication skills with people they did not know.

> *"I know how to approach people, to talk with new people."* Male participant

## 5. Develop basic competency in a range of essential technical skills for confidently approaching further vocational training, leading to employment

Indicators for this outcome are performance based. Both *Design Process Essentials* students and *DYF* students must demonstrate that they can make things through tailoring, 3D printing, carpentry, etc., and meet basic standards of proficiency before they can move to the next program phase. Several of the *DYF* students emphasized how they enjoyed learning to make things and noted how it might help them in their future.

> *"I learned new things in this course, and I did not know how to sew at all, but I learned to sew."* Female participant

> *"I learned woodworking, how to make something with wood, and the last week with tailoring machine to make clothing. And before I didn't know how to speak as much but now, I know."* Male participant

> *"I have learned a lot in this program. The computer, 3D printing. I didn't know it when I came here. I learned a lot about the 3D printing that we have here and the woodworking. It was the first time that I did [them]. I didn't do it in my home country. It was my first time using my hands to do something and make something, using the computer with 3D printing. Yes, I learned a lot in this program."* Male participant

## 6. Have a foundational proficiency in the use of digital tools such as:

- Word processing apps/software
- Spreadsheet apps/software
- Digital communication, collaboration, and productivity apps/software
- Visual storytelling and video editing apps/software

Along with these tools, participants will develop an understanding of the internet as a useful research tool and learn to identify reliable sources of information.

In focus groups, testimonials, and interviews, students were keen on the importance of learning computer skills. In the pre-surveys, it seemed like many students overestimated their abilities in computer skills, especially in Microsoft Word, PowerPoint, and Excel, before they took the program. Over 50% of them were not used to using Google as a search engine. Most of them were more familiar with social platforms such as WhatsApp and Facebook.

In written surveys at the end of the program, over 60% of the students identified themselves as being in the middle of the 1-10 scale for proficiency, rating themselves as "somewhat comfortable," while about 14% were below 5 ("not very comfortable") and the rest (26%) were distributed evenly across the 6–10 point range ("pretty comfortable" to "very comfortable"). Most students, approximately 75%, fell within the 5-7 point range, from "somewhat comfortable" to "pretty comfortable." It is significant that some students rated their knowledge a little higher or the same on the pre-survey than on the post-survey, despite reporting that they learned new computer skills. In the focus groups, several students explained that once in the Horizon Center program, they learned that the computer programs were more complex than they originally thought. All con-

curred they would like more computer training and saw it as essential for further education.

### 7. Have knowledge of emerging technologies, their current uses, and potential future applications

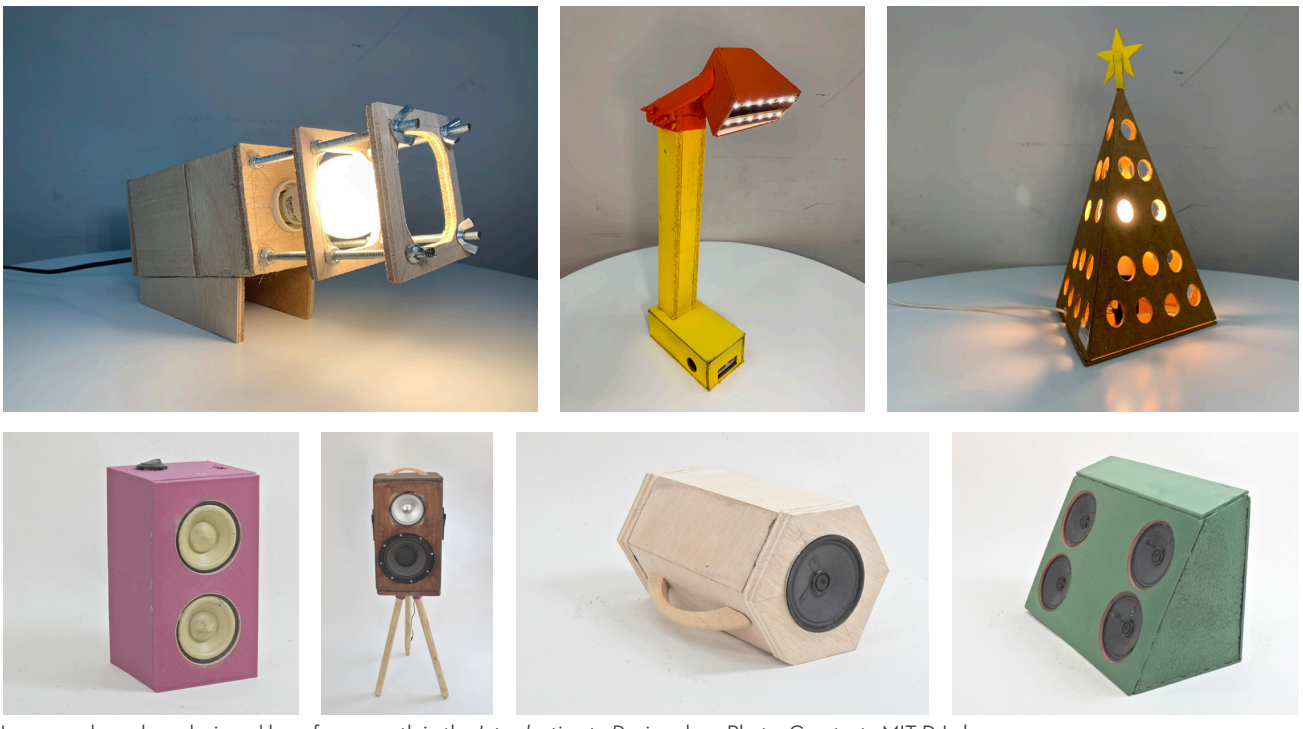
The written surveys demonstrated that over 75% of the *DYF* students felt that by the end of their course, they had knowledge of emerging technologies. In the focus groups. there was more discussion of how they had learned to see the value of emerging technologies, how they saw that having a positive impact on their life, and the importance of learning about and embracing recent technologies to improve life outcomes.

### 8. Develop empathy

Although empathy was not one of the articulated outcomes in the new *Theory of Change*, all the respondents in the focus groups and interviews talked about how the *Design for Social Impact* project changed their thinking about others and gave them a sense of empowerment about making positive change. From the responses, this appears to be one of the most transformative aspects of the *DYF* program, especially for the first cohorts who chose helping the homeless as their social change project.

> *"The most exciting thing was to help the homeless people and meet their needs. It was a wonderful project."* Male participant

> *"I felt that I have gained more empathy, like as someone who has lived in Greece for some time. When we go outside, hang out with friends, we see homeless, but we don't really think of how they live and what they go through every day. So, in this process that we went and thought about homeless, we wrote down things and the next day for example, we went outside and some of us talked with them. I feel like I've gained more empathy towards the homeless and don't really think of them as drug addicts but more like people with hardships."* Male participant



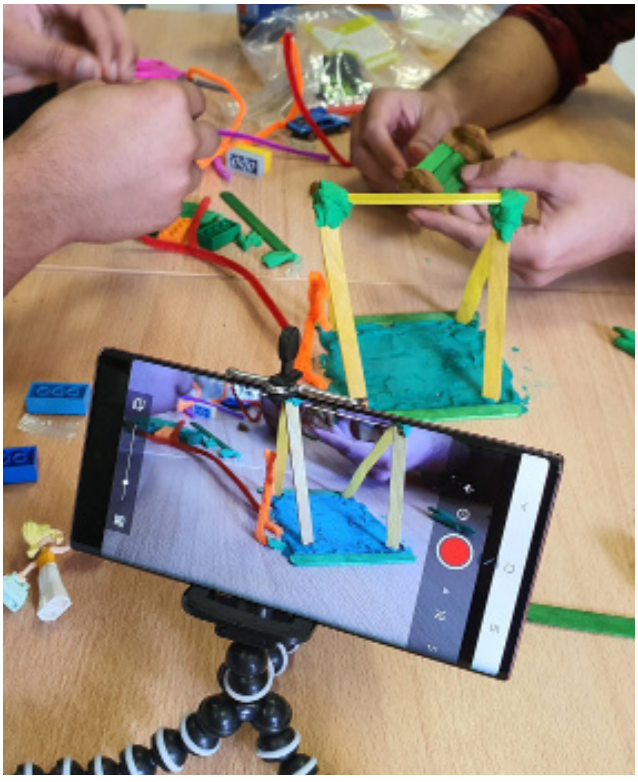
Lamps and speakers designed by refugee youth in the *Introduction to Design* class. Photo: Courtesty MIT D-Lab

> "I always wanted to help people who really needed it, but I did not know how. But with your help I was able to do it and I am very happy that I was finally able to do something and help people." Female participant

> "I have really learned a lot from the experience and knowledge of refugees and homeless people and how to help them." Male participant

> "In the future if I go back to my homeland or in another place, I will try to make this program to help others and to teach." Male participant

In the focus groups and interviews, *DYF* students returned repeatedly to this issue. They felt they were able "to stand in their [the homeless people's] shoes." They clearly articulated both the change this made in their own attitudes and the pride it gave them to do something positive for others. They understood that they could not make assumptions about the homeless, but that they had to talk to them and learn about their needs. These responses provide a valuable lesson about the transformative power generated by engaging youth in the kinds of projects where they become of aware of and reach out to people in need. Participants moved from feeling that they were people who needed help to becoming people capable of helping others.



Teaching refugee youth from a Red Cross shelter to create story boards and stop motion videos. Photo: Courtesy MIT D-Lab

## C. Reflections on outcomes

Both the original and revised outcomes of the program, which have to do with behavior change and acquiring technical skills, can be grouped in the following five categories:

1. Learning to be problem solvers through the design process
2. Learning technical skills to make useful objects, including:
   - » Computer skills
   - » New technologies
3. Learning technical and business skills to prepare them for employment
4. Developing a growth mindset, including:
   - » Enhanced confidence and ability to demonstrate potential
   - » Active learning
   - » Learning from failure
   - » Prioritizing process over outcome
   - » Perseverance
5. Learning to work in a team

The information collected through evaluations shows that the program had great success in achieving these outcomes. Participants could articulate the outcomes in their own words and

MIT D-Lab's Martha Thompson and D-Lab students in Athens together after completing the first of two workshops with refugee youth in August 2019. Photo: Courtesy MIT D-Lab

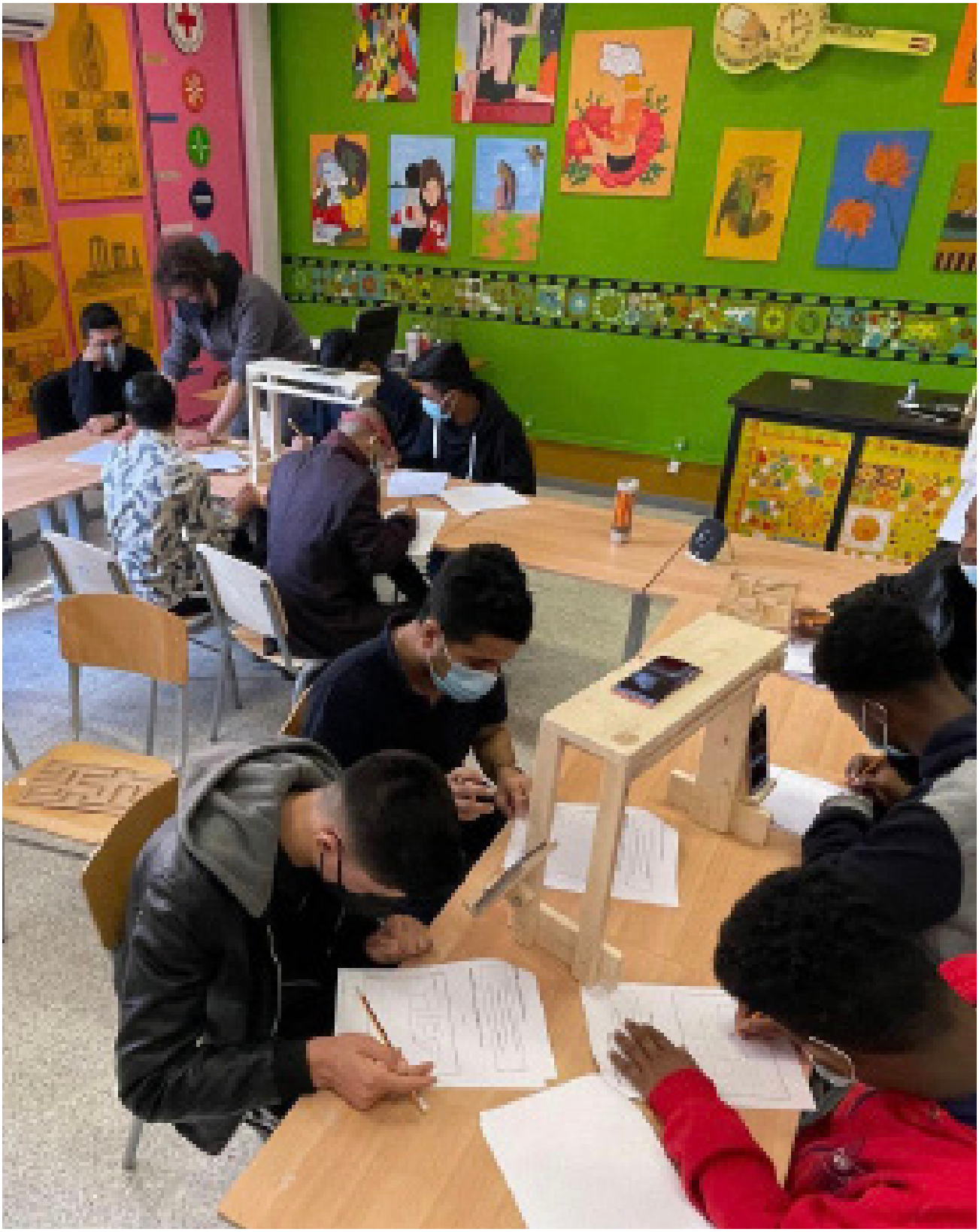
demonstrate their understanding of the soft skills and how they impacted their lives. This project aimed to incorporate a transformational aspect and this information shows that the design program achieved that for many of the youth in soft skills areas that Faros and D-Lab had identified as important: enhancing their confidence, helping them become problem solvers, building resilience and persistence, teamwork, speaking in public, and strengthening their belief in their ability to learn new things. These are all consistent with the outcomes in other parts of the world where D-Lab does trainings in participatory design, particularly in Creative Capacity Building (CCB). Participants across these diverse situations reported very similar outcomes: enhanced confidence, persistence and resilience, ability to problem solve, technical skills to make things, mindset shifts, enhanced learning, and ability to give and receive feedback.[3]

The one area of soft skills in the revised set of outcomes with no clear indication of progress is around two specific aspects of the growth mindsets: an appreciation of process over outcomes, and of learning from failure. In another iteration of *Design Your Future*, work could include how to better teach and improve outcomes around these aspects.

All participants clearly indicated they valued the technical skills, and those in *DYF* indicated they wanted more practice in computer skills. These skills are important in the job market, and in another iteration of the program, it would be good to explore how much additional practice and support is needed to better master them. For D-Lab, this program again demonstrates the importance of teaching soft and hard skills together as part of a design process. Allowing the youth to practice soft skills as they work together to produce something concrete seems to be an excellent pedagogy for developing life skills.

Comments and reflections from the refugee youth consistently make it clear that it is these mindset shifts that enable them to see themselves differently in relation to the world around them.

3. Ahimbisibwe, L., Baracaldo, L., Pearson, G., and Tanner, L. (2022) Building Social Cohesion through Local Innovation Systems in South Sudan, Local Innovation Ecosystem in South Sudan. The Research People. London, UK.



A weekly *Activity Class* at a Red Cross shelter in Athens as part of the remote *Toolbox* program in February 2022. Photo: Courtesty MIT D-Lab

# VII. Key learnings

The following are key learnings that Faros and D-Lab drew from the program on the methodology, the process, and discrete elements of the program. (For a more complete list, see Annex 6 from the two-week evaluation workshop that the Horizon Center team and Heewon Lee completed at the Horizon Center in 2022.)

## A. Participatory design combined with training in practical skills can be a transformational process to build the confidence and skills of refugee youth

Learning the design process consistently proved to be transformational for a significant number of youths going through the program even if they did not complete the entire set of classes. This was most apparent in the first year of the program and in the *Design Your Future* project.

- Using the design process as a program framework with refugee youth worked very well as an approach to engage disaffected youth and bring them into a more stable situation.
- The combination of tangible and intangible skills in the program is unique and promoted creativity, agency, and enhanced confidence in the youth.
- Deliberately weaving life skills (getting and receiving feedback, resilience, perseverance, teamwork) into the sessions on teaching the design process was an excellent way for youth to learn life skills in a practical application.

## B. Target beneficiaries

During the project, it became clear that there were two distinct populations among refugee youth and UAMs, and it was necessary to have a two-pronged approach to respond to both: those youth who were in transition through Greece and those who had no other option but to stay.

Faros and D-Lab did not really distinguish between the two populations at the beginning of the program because, like most NGOs working with youth in Greece, no one really understood that in 2019 and 2012, most of the UAMs in Greece saw it as a way station. Having such a transitory population was challenging. The fact that youth were traveling with traffickers and human smugglers meant that they would not divulge that they were leaving or when they left: they just disappeared. In the early part of the program, this meant that there were no cohort groups graduating and going on to jobs in Greece.

In the last two years of the program, when the context had changed and there was a group committed to staying longer in Greece, it made sense to develop a more targeted program for them, *DYF,* while retaining a more general program, *Design Process Essentials*. The *DYF* program ran for one and a half years. It is clear from the evaluations that the curriculum delivered; it provided important skills to the cohorts they didn't get in other places. They went through mindset shifts, gained confidence, and learned skills valued in the labor force. However, many other factors affected whether they would get a job as a result of *DYF*. It would be necessary to have at least one more year of follow-up and support in this program to figure out whether and how the program translates into jobs or higher education for the youth involved, and what additional kinds of support may be needed.

## C. Stability – what did it mean?

When Faros and D-Lab envisioned helping the refugee youth and UAMs stabilize, the understanding was that it meant going through a six-month program, learning technical skills, and graduating out to some kind of job or further schooling in Greece. This was seen as a successful outcome.

But this was not the case. In the first year, few youths stayed around for six months. Students who completed both parts of *DYF* and moved on to internships or jobs seemed to follow that blueprint for a trajectory towards stabilization, but it is still not clear as to what the final results of that program were in terms of employment.

After five years collecting data from interviews, focus groups, and surveys, as well as staff observations, it seems clear that the original idea of stabilization did not fit the aspirations of the youth in the beginning of the program (although the *DYF* cohorts are much closer to achieving this original vision).

The crux of the issue may be how we define what contributes to stabilization. It seems that Faros and D-Lab underestimated how effective and important the soft skills in the program were in terms of stabilization for all the youth who participated, even for a limited time. The behavior changes, mindset shifts, and renewed confidence that participants bring up consistently in all the data obviously contributed to helping them feel more stable in their situations.

The Horizon Center was a place where they felt they belonged, could find friends, could work with others, and discovered their ability to learn new skills and think differently about themselves. For many, it seemed to open their minds to the idea that there were paths forward for them out there. For many of the youth, although this did not translate to a job in Greece, these mindset shifts would serve them in other parts of their lives, wherever they landed. Faros and D-Lab attributes importance to these soft skills from the very beginning which is consistent with outcomes in all CCB programs. However, the responses of the participants give additional credence to the importance of these skills in stabilizing them in precarious and challenging environments, where they had lost some confidence, and felt vulnerable, even if their experience is much shorter and more fleeting than was originally envisioned.

## D. Maintaining curricular integrity in a challenging context

D-Lab and Horizon Center staff had to constantly balance the requirements of a cohesive sequential program containing substantial content with the realities of a transitory adolescent population, many of whom had experienced trauma and were facing difficulties in fulfilling their basic needs. They had to try to set rules for students to progress through the program, but also allow participants enough flexibility to remain, even when they couldn't always follow the rules. Instructors were always trying to balance quality of the program with flexibility to maintain engagement.

After the pandemic, youth were enthusiastic to return to the Horizon Center in person. At the end of Year 3 and during Year 4, the Horizon Center staff employed student mentors, opened mixed-gender classes, and re-aligned design projects to implement the in-person program. This clearly improved student outcomes in *DYF*. However, in Year 5 it became clear that the *Design Process Essentials* program was not achieving the elevated level of vibrancy that had been evident in the *Basic Training* courses in Year 1. The context had changed, and post-pandemic challenges persisted in the *Design Process Essentials* program, resulting in low commitment from many students. The difficulties of combining different age groups in cohorts caused some problems with collaboration. The competing demands for participants' time meant that youth came much less frequently to the center. Instead of coming three to five days a week, as they did in Year 1, they often came one afternoon per week which had a significant impact on the outcomes. There were limited opportunities for interaction among cohorts, and students did not easily bond in teams as they had before. Lower frequency of attendance meant

Student in the tailoring class as part of *Basic Training*. Photo: Courtesy MIT D-Lab

that students took longer to learn skills and finish their projects. In contrast, the *DYF* program had a highly motivated and slightly older group of youths with clear goals, it was much easier to maintain curricular integrity, even though this group also struggled with competing demands on their time.

## E. Certification and accreditation

The accreditation/certification process has not been resolved satisfactorily. The Horizon Center certificates given to youth when they complete a course have proven to be of some limited use. Youth have reported that certificates were useful in the asylum process because they showed youth were involved in an educational program. Since the Horizon Center was not on track to get accredited as a vocational, technical, or ICT training center, students skills' did not translate into formal accreditation. A formal certificate might have been an incentive for some refugee youth to remain in Greece, (although this was not researched or verified). D-Lab and Horizon Center also underestimated the time, energy, challenges, and resources needed to apply for and receive formal accreditation or a comparable alternative for the Horizon Center participants.

## F. The *Toolbox* and *Toolkit* program

This program was a highly creative and relevant response to the pandemic that demonstrated remarkable dedication to continuing the program. This successful project was highly valued by other NGOs and helped them understand the value of the *Horizon Center Design Program*. It proved to be an excellent way to expand the programmatic reach to new groups of refugee youth that might not have heard of the program and provided many of them with an educational and creative outlet when no other was available.

The *Toolbox* program is an unforeseen output of this project. It is now a standalone programmatic component with a curriculum, lists for necessary equipment and materials, and instruction guides. It has great potential for replication and implementation in remote learning programs for youth. Successful replication, however, would depend on having sufficient staff resources and strong commitment from on-site partners.

## G. *Design Your Future* program

The *Design Your Future* program was successful, enabling youth to acquire a variety of life skills, practical skills and job readiness training not available elsewhere. Linking *DYF* graduates to employment opportunities will continue to be challenging given the economic climate in Greece and the team needed more time to hone and improve this process. The small numbers in the program allowed the youth to work through some of their challenges in behavior, distrust, and lack of support that would not have been possible in larger programs. This program requires a high investment of time and resources but based on the evaluations, it provides essential focused support that youth really need but are not getting in other venues.


A toolkit distributed to Horizon Center youth that contained safe tools and materials for them to take home and utilize for activities during the height of the Covid-19 pandemic. Photo: Courtesy MIT D-Lab

# VIII. Conclusion

Faros and D-Lab's original vision for a design and vocational training program was a linear one. They envisioned that they would engage UAMs and refugee youth who would move through the entire program in sequence, and graduate cohorts of students every six to nine months, ready for future training, employment, or education.

Instead, the dramatic changes in the situation of refugee youth and the global pandemic divided the project into three discrete time periods, with distinct results for each. Rather than operate as a conveyor belt, the program functioned more like a map for three groups of youth, each beginning their journey from a different starting point with a distinct kind of map drawn up for their navigation needs.

## Year 1: Responding to the crisis

In the first year, the program was highly successful at engaging a significant number of vulnerable UAMs and refugee youth in the design and vocational training program. That year, the program connected 242 UAMs and refugee youth to services, provided them with a safe space, taught them both the design process and technical skills to make useful objects, and, throughout the program, helped them rebuild their confidence, enhance their creativity, and develop skills in teamwork, resilience, and perseverance. Making things by hand proved very therapeutic for these young refugees.

With the goal of trying to intervene positively in the lives of many as possible, the program cast a wide net and was open to all vulnerable youth who expressed interest. Repeatedly, in interviews and focus groups, participants highlighted the transformative aspect of engaging in the programming, noting how it changed the ways they thought and acted.

However, in this year, the program did not graduate defined cohorts of boys every six months to move on to vocational school, jobs, or school. No cohorts graduated that year. Since most of the refugee youth were passing through Greece, only a small group were moving towards the *Advanced Design* class when the pandemic shut the program down. This group demonstrated the changes mentioned above to a significant degree, but they did not remain in Greece to complete the classes offered. While there was consistency in the kinds of changes youths went through in the program, the degree to which those changes were assimilated is hard to know since so many did not stay in Greece to finish, limiting their experience of the program. However, in interviews and focus groups with boys in *Basic Training* courses, fairly early on in the program, responses indicated that they gained some or all of the following: confidence, new concepts of their potential, problem solving, resilience, practical skills, and teamwork, even with limited exposure.

It seems that many of the desired changes the program sought to have on behavior and mindsets wasn't dependent on the youths finishing the entire program, but its not possible to know the extent or depth of impact. There was no comparable program in Athens like this for the refugee youth in 2019, no program that supported them on a path of sequential trainings, building their capacities and skills, providing a range of other services and existential support, or a highly valued space to make friends and build a social network. What seems apparent is tha,t for vulnerable youth in precarious situations, this kind of program can have a significant impact. This argues that the impacts on behavior and mindsets were the main outcomes of this kind of program, more than employment or education.

## Years 2 and 3: The pandemic

The program had two different kinds of impact during the pandemic. For a varying core group of youth from the original Horizon Center, the set of virtual activities that Horizon Center staff and D-Lab quicky put together over Facebook and WhatsApp was a lifeline of connection and engagement for refugee youth in the first four to five months of the pandemic. The program's content was relatively simple and determined by the medium, but its value was the connection between the youth and people they trusted, who could support them and give them hope during those months of uncertainty and isolation.

As restrictions eased, the goal for the next year and a half was to engage refugee youth, mostly UAMs in shelters and slightly older youth in semi-independent living situations (SILS), keeping them involved in learning and ensuring they were tethered to some kind of educational process. These youth were not in the same types of crises as they had been in 2019, they were all in shelters or supported living situations, but many were not yet in school, had lost interest, or their schooling was continually interrupted by lockdowns. Through virtual and hybrid modules, Horizon Center staff led the *Toolbox* program for 314 youth in 11 shelters for a year and a half. For these youth, it provided mental stimulation, exposure to new content, confidence in learning, discovery of new abilities, acquisition of some technical skills, and a connection with learning. The fact that the majority of new youth enrolling in the Horizon Center after the pandemic came out of the *Toolbox* program is a clear measure of the success of *Toolbox* in achieving its aims.

## Years 4 and 5: The new post-pandemic Horizon Center program

After the pandemic, the basic skills classes were reorganized with more design content and converted into *Design Process Essentials*, a set of four- to six-week courses. Over a year and a half, 212 youth completed them. This program did not achieve the vibrancy and high-level impact of the first year for a number of reasons. Youth had many more support options in 2023 and 2024, and were on track to finish public school. While youth still learned and developed soft skills to varying extents, they did not need the program in the same way or have the same commitment to it as those in the first year. It seems that the original design program had higher value for vulnerable youth in a more precarious situation.

However, this was not the case for the 81 youth who went through the *Design Your Future* program. This new program was built on the original vision of bringing youth in, putting them through the program to ready them for employment and education, and sending them out. The programmatic goal was to prepare participants for the job market and equip them with the skills needed in the modern workplace. Five cohorts completed the two-part program, *Design for Social Impact* and *Employment and Integration,* so it was easier to measure the impact on participants. This period of the program was aimed at a very specific population in comparison to the other two periods. The participants had to be highly motivated, possess English and Greek language skills, and have asylum cards. Although many experienced some or all of the challenges of the first target group, they were in a stable situation with some resources by the time they arrived in this program.

The portion of the *DYF* program for which D-Lab was responsible, *Design for Social Impact*, clearly met the desired outcomes for these cohorts. Participants consistently articulated shifts in their mindsets and enhanced confidence, and demonstrated improved technical skills (although some needed more work in this), abilities in problem solving, success working in teams, perseverance,

and resilience, and felt they were active learners. One of the strongest outcomes of this program was the empathy participants developed for the homeless and the empowerment they felt in helping others through their design project. The outcomes in terms of behavior change and acquisition of skills were met. Several of the students went on to internships, jobs, and further education but the program ended before it was possible to monitor employment and educational outcomes over the subsequent year.

This report, outlining the outcomes and the results achieved, marks the end of the project for MIT D-Lab, Faros, and Velux Foundations. But this is not the end of the project's outcomes for the youth who were changed by it. There were tangible results: 819 youth went through the Horizon Center programs. Six different sets of curricula were developed and 12 Horizon Center staff were trained as design instructors. Many lamps, chairs, and other products were designed and built. Hundreds of youths learned basic skills in tailoring, carpentry, 3D printing, electrical circuitry, and computers.

Beyond these quantifiable results, the intangible impact of the program on the lives of the youth who participated will continue to unfold beyond our capacity to observe and monitor. For those youth who gained a new belief in their potential, those who feel they can learn anything they put their minds to, and those now willing to persevere through failure, we don't yet know what they will do or how this will shape their lives. The three stories of participants included in this report give us real confidence that those youth whose lives were deeply impacted by this program will go far.

Youth participant creating a sketch model in a workshop run by MIT D-Lab students, January 2024. Photo: Courtesty MIT D-Lab

## Annex 1: MIT News Article

MIT News
ON CAMPUS AND AROUND THE WORLD

# Giving refugees design education — and newfound hope

**MIT D-Lab workshops equip refugees in Greece and elsewhere with the skills and confidence to solve problems in their communities.**

Zach Winn | MIT News Office
March 23, 2023

They come by foot and by boat. Desperate, many bring nothing more than the clothes on their backs. They seek asylum and hope.

Since 2015, more than a million refugees have flooded into Greece. Syrians, Afghanis, Iraqis, and Kurds, they've been uprooted from their home countries by violence and oppression. Political gridlock traps them in a country with longstanding economic woes and persistently high unemployment. The situation leaves them in overcrowded shelters, camps, slums – or unhoused entirely.

Among them are thousands of unaccompanied minors. Especially vulnerable to exploitation and abuse, minors can slip through the cracks of traditional support structures offered by nonprofits and international organizations.

In the summer of 2017, a group of students and instructors from MIT D-Lab partnered with the nonprofit organization Faros to offer a group of refugee boys a design thinking workshop. Almost immediately, the organizers noticed a change in the boys. Throughout the 10-day training, they stayed late in the teaching space and came in early. One boy designed an irrigation system for his father's farm in Afghanistan. Others built tools that could be useful in the camps they called home.

When they presented their work, the boys exhibited a confidence and pride that transcended language barriers.

"I remember the evaluations at the end of the project clearly," Faros co-founder Dan Biswas says. "A 16-year-old Afghan boy said he had always dreamed of becoming a mechanic or engineer, but after being on the move for so long he had let go of his dream. He said the workshop gave him hope. It was a powerful moment. This learning gives students a belief in themselves. They've faced so many hardships, but we've seen now time and time again if we can just give these students a reason to believe in themselves, they can be very resilient."

MIT D-Lab students at the Faros Horizon Center in Athens, Greece, teaching the design process through hands-on learning to refugee youth from Afghanistan, Syria, Pakistan, and Bangladesh. Photo: Faros Horizon Center

*The collaboration has helped MIT students discover a passion for humanitarian projects and gain experience working with vulnerable populations. It has also equipped more than a thousand refugee youth with the confidence and skills to solve problems in their communities.*

That first workshop has blossomed into a years-long collaboration between D-Lab and Faros that has seen the creation of a permanent school in Athens and the development of a curriculum that has given refugees of all genders and backgrounds a crash course on D-Lab's design process.

The collaboration has helped MIT students discover a passion for humanitarian projects and gain experience working with vulnerable populations. It has also equipped more than a thousand refugee youth with the confidence and skills to solve problems in their communities.

### Tapping into potential

Following the 2017 workshop, Faros began exploring ways to integrate D-Lab's teachings into its other ser-

- continued -

vices, which include outreach to vulnerable populations, connecting minors with social workers, helping them navigate asylum processes, and working with them to find employment.

In 2018, D-Lab worked with Faros to create the Horizon Center, a school to formalize the trainings and replicate the promising early results.

"It's hard, when you're told that you're vulnerable all the time, to believe in yourself," D-Lab founding director Amy Smith says. "In conversations after [the early workshops] the kids talked about how it helped them restore their hope for their future and got them thinking about themselves differently."

Another early project tasked students with finding a problem in their community to solve. The students decided to build something for the city's homeless.

"It changed the narrative, because these youth are so used to being on the recipient side, but now they were in a position to help someone else," Biswas says. "It's powerful. We're working on changing mindsets."

Heewon Lee joined D-Lab's team in 2018 and introduced a workshop teaching students how to build and use 3D printers.

"When we explained it, some were excited, some thought there was no way it could work," Lee recalls. "But by day two or three, everyone was really hooked, and you could just see how fast they transformed. They went from 'I don't want to be here,' to 'I don't want you to leave, can this be open 24/7 so I can finish this?' It was a shocking moment for me. I'd done a lot of design workshops and I'd never seen such a dramatic transformation from participants in such a short period of time. The boys were soaking up all the knowledge like a sponge, from electronics to coding. It was amazing."

Faros soon expanded the design workshops to involve local women's shelters and other refugee camps. Lee also brought in students from the Rhode Island School of Design, where he teaches.

Students travel to Greece in the summers or during MIT's Independent Activities Period after taking the course EC.750 / EC.785 (D-Lab: Humanitarian Innovation), which doubles as a large D-Lab program that includes students from Harvard University and Wellesley College. The program also carries out design training in refugee camps in Uganda, to displaced communities in South Sudan, and is beginning a program in rural villages in Mali.

Some students travel to Greece already envisioning careers in humanitarian work. For others, the experience compels them to stay involved longer than expected. Several MIT students who graduated years ago are still helping out.

"There were many MIT students who said it changed their direction," says Martha Thompson, who teaches the Humanitarian Innovation class with Smith and has helped scale D-Lab's work in Greece. "It's very transformative for students because these are youth who are close to their own age but living in very different circumstances. They often form strong bonds with them, so I think it's life-changing for students."

**Exporting the model**

The Horizon Center recently relocated to a new, 2,300-square-foot building in the center of Athens.

"It's now a permanent center, and the dream is to see how this can be a hub for refugee learning and empowerment," Biswas says.

Through the Humanitarian Innovation program, Lee and another D-Lab instructor recently held a workshop with students in Turkey that they say also showed promise, and D-Lab is working to train more instructors in its methodology at organizations like the Red Cross and the International Organization for Migration.

Meanwhile, the impact of the original Greece workshops continues to grow. Today there are refugees across Europe who have participated in the program. Many have gone on to careers in science and engineering. Some have reached back out to Horizon Center to get help teaching others in D-Lab's design methodology.

"Before we started this program it was hard to find a good pathway to direct these youth — not just telling them to go here or there, but actually giving them real experience within a supportive network where we can empower them," Biswas says. "These youth are learning about themselves, learning about others, and gaining invaluable life skills along the way."

---

https://news.mit.edu/2023/giving-refugees-design-education-d-lab-0323

## Annex 2: Horizon Center Design Program Pre-Survey - Sample Pages

# Horizon Center / Boys Design Program

☐ Pre survey
☐ Post survey

Phase/program:

_____

# HELLO!

The following questions will help us to better understand your goals and priorities for this program.

This survey is not required, and you can choose to only answer questions you are comfortable with. However, your responses will help inform and improve the Horizon Center program, so we appreciate as much information as you are willing to share with us.

When we analyze and share this data, your name will be removed so that your answers are anonymous. These results will then be used by D-Lab and Faros to improve programs, to report to funders, and possibly to inform future research.

Thank you for taking the time to complete this survey!

## Annex 2: Horizon Center Design Program Pre-Survey - Sample Pages

# NAME: _____

# TODAY'S DATE: _____

# 1. What grade are you in?

Primary School: 1 2 3 4 5 6

Middle School: 1 2 3

High School: 1 2 3

circle your year

2. I am currently in the _____ phase of the Horizon Center Design Program.

ACTIVITY CLASS | BASIC TRAINNING | INTRO TO DESIGN | ADVANCED DESIGN | TRAINING & PORTFOLIO

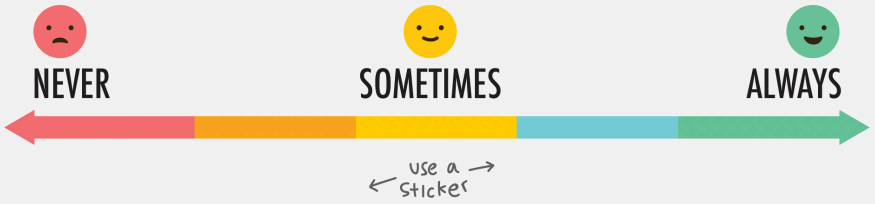
circle your response

## Annex 2: Horizon Center Design Program Pre-Survey - Sample Pages

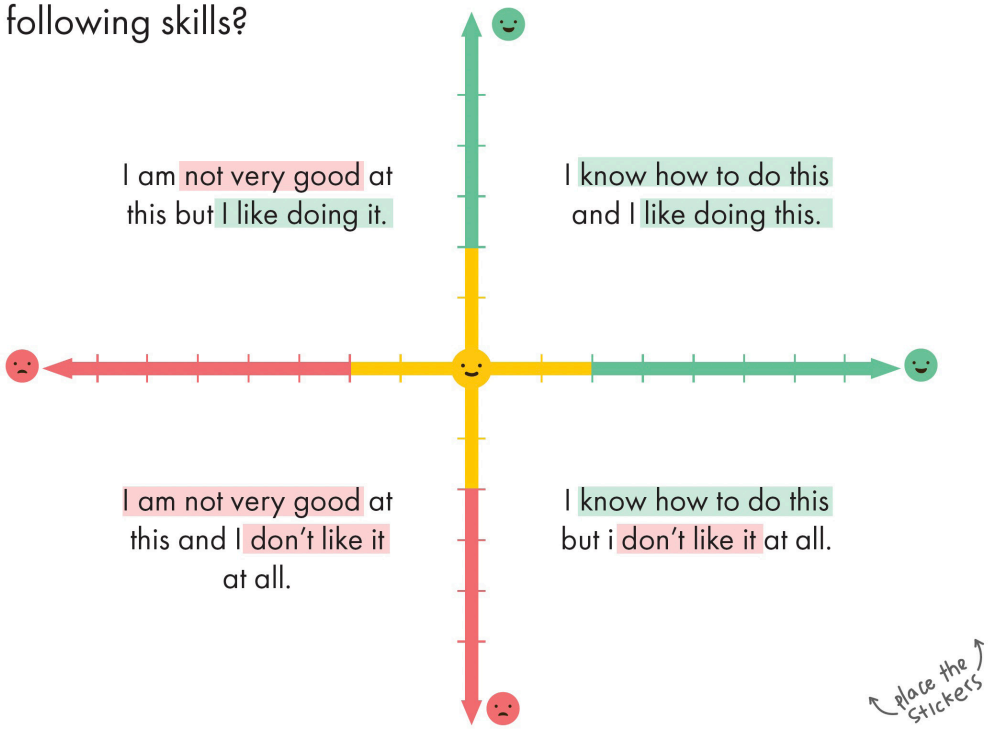
CREATIVE CONFIDENCE

3. I can easily come up with new ideas.

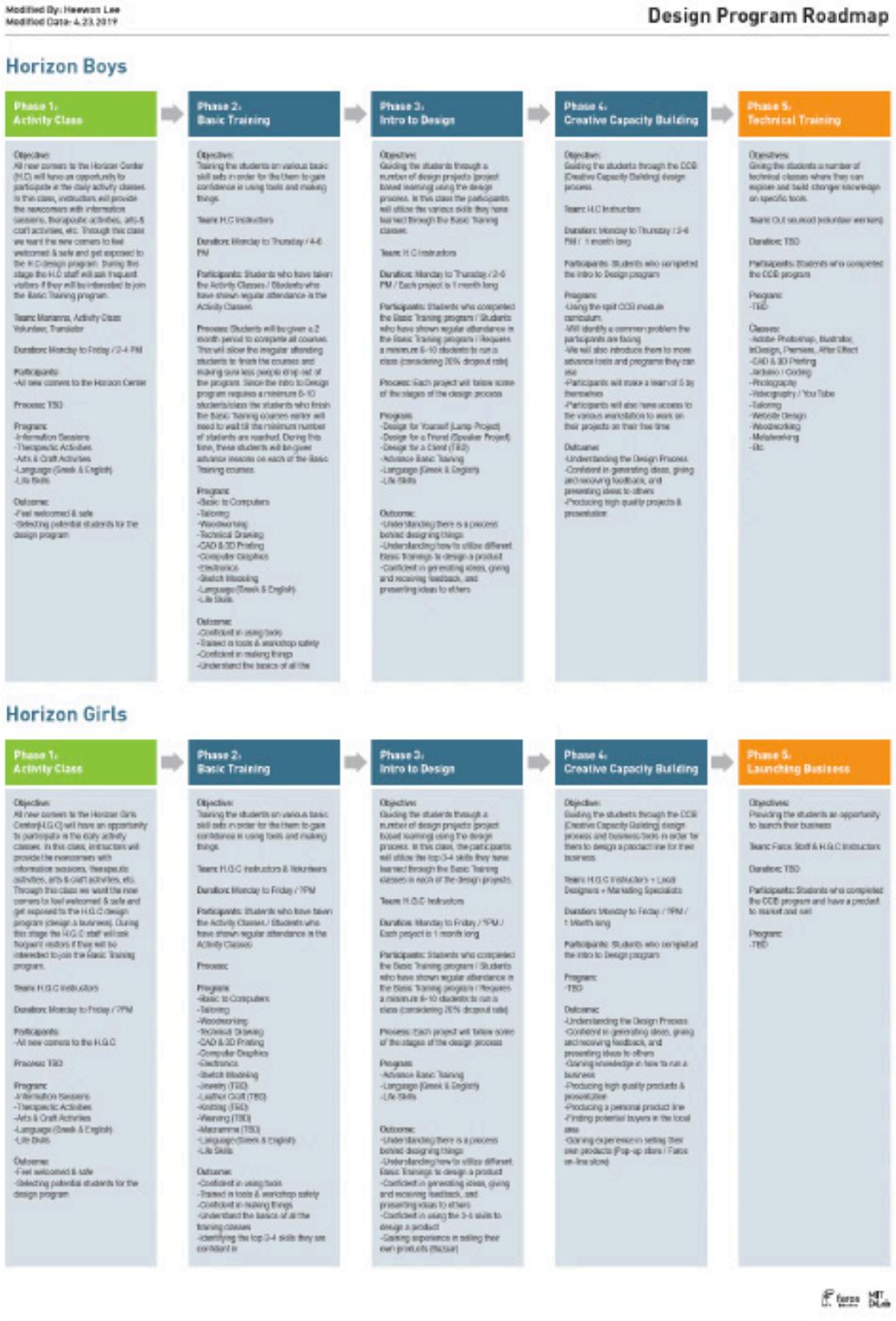

4. I can easily make the ideas in my head become real.




5. How do you feel about the following skills?



# Annex 3: Design Program Roadmap



# Annex 4: Activities Co-Created by Faros and RISD Students

Heewon Lee taught two different courses at the Rhode Island School of Design (RISD) between 2019 and 2023: **MIT Studio**, and *Humanitarian Innovation Design*. During those years, as part of their coursework, RISD students developed 19 different design activities under Heewon's tutelage with the guidance of the Horizon Center staff. These were implemented through Horizon Center's virtual training, The *Toolbox* program, as part of the sessions delivered in 11 different shelters for unaccompanied minors during the pandemic. Some of these were later adapted for the Activities program in the drop-in center.

**1. Collaborative Maze Making:** In this activity, students learn about teamwork and the basic design process (Learn, Imagine, Create, Test) through maze design. Students work in teams to create their own mazes, with each team member contributing their ideas. The goal is to create a maze that is challenging but not impossible to solve. Through this activity, students learn about the importance of teamwork, communication, and collaboration in the design process.

**2. Inventor Card Game:** This activity is designed to teach rapid idea generation and communication skills through a card game. The game involves drawing cards that contain different prompts, such as "design a tool for gardening" or "create a new type of transportation." Players then have a limited amount of time to come up with an idea and present it to the group. Through this activity, students learn to think creatively and express their ideas clearly and succinctly.

**3. Looking Card:** In this activity, students learn about the basics of how colour and materials can trigger different emotional responses that can be applied to design. The activity uses a custom-designed Instagram filter for the refugee youth to use their phones to capture assorted colors and materials then share with their classmates. Through this activity, students learn how to use color and materials to evoke specific emotions in their designs.

**4. Land of adVentuRe:** This activity involves a virtual reality (VR) experience and construction activity. Students use new technology to comprehend and apply problem identification and solving methodologies in real-world situations. Through this activity, students learn about emerging technologies and how they can use them to solve problems.

**5. Animal Mixing:** In this activity, students learn how to use the design process (Learn, Imagine, Create, Test) to design their own animal character and make it into an animation. Through this activity, students learn about the importance of iteration and testing in the design process.

**6. Let's Get it! Factory!** This activity involves a higher level of teamwork and physical prototyping throughout the activity. Students work in teams to design and build a prototype of a product, such as a toy or a piece of furniture. Through this activity, students learn about the importance of collaboration, communication, and physical prototyping in the design process.

**7. Launch the Ball:** In this activity, students design a ball-launching tool out of limited materials and build a model to test it and shoot a ball into a goal. Through this activity, students learn about the ideation process, modeling skills, testing, and reiterating the design process.

**8. Cardboard Chair:** In this activity, students learn the basic properties of materials and techniques to design a cardboard chair. Through this activity, students learn about the importance of sustainability and using materials in a creative way.

**9. Better Chopstick:** This design challenge is for new students to experience the design process and how to work in teams. Students design a better chopstick, considering aspects such as functionality, aesthetics, and

sustainability. Through this activity, students learn about the importance of empathy, problem identification, and iteration in the design process.

**10. Strong Wind:** This design challenge is for new students to experience the design process and how to work in teams. Students design a wind turbine that can generate energy in strong winds. Through this activity, students learn about the importance of renewable energy and designing for the environment.

**11. I am the Star:** In this activity, students use videography techniques and technology to create their own emojis for WhatsApp. Students learn about several types of emotions and express them using green screen technology to capture themselves and turn them into emojis they can use. Through this activity, students learn about the importance of self-expression and using technology creatively.

**12. Horizon Center Magic School:** In this activity, students at the Horizon Center learn how to perform and create magic tricks, which they can showcase in front of an audience. The goal of the activity is to help students develop their interpersonal skills, build confidence, and improve their public speaking abilities.

**13. AR Shoes:** This activity is designed for students at the Horizon Center (Greece) and involves designing a pair of shoes based on a specific design constraint, such as for rainy days or hiking. Using the AR Canvas App, students can bring their shoe designs to life and try on their own and other designs.

**14. Empathy Design:** This design activity involves students at the Horizon Center working in pairs to design either a pair of headphones or a piece of jewelery for their partner. Students ask questions to understand their partner's design preferences, and then create a design for them. The design is imported into an AI image generator that generates variations of the design, and the partner chooses their favourite.

**15. AI Can Show Us the World:** This activity is designed for drop-in center students and aims to improve language acquisition skills and provide better systems for ideating. Utilizing technology such as QR codes and AI imagery generators, students collaborate and share ideas without relying on verbal instruction. Through the activity, students gain exposure to various elements of design and have fun while doing so.

**16. Critical Thought and Conversation:** This activity encourages idea generation through multiple-choice questions, aiming to provoke critical thought and conversation. The activity utilizes Google's translation technology and a custom digital drawing interface to help students overcome language barriers. Students justify their design choices and gain confidence in their ability to generate creative solutions to emotional, physical, and social design problems. This activity lays the foundation for successful design practice.

**17. MINI SYNTH:** This activity has an accompanying web app called MINI SYNTH, a beginner-friendly music composition tool. The app simplifies music creation and aims to break language barriers. The activities that accompany the app teach basic music theory and help convey emotions through music.

**18. AI Drawing Tool:** This activity is about teaching students to use Midjourney, an AI drawing tool, through a mode of combining creative design challenges using themed cards. The activity has a regular and advanced version and aims to show how AI tools can amplify personal work efficiency and make previously difficult professions more accessible.

**19. NFC Button Pins:** This activity instructs students about the programming and design of NFC (Near Field Communication) tags while creating personalized button pins. Students learn about the capabilities of NFC tags and how to program them, and they can take home their NFC-tagged button pins as a tangible result of the activity.

## Annex 5: RISD News Article

# RISD Students Create Design-Learning Activities for Refugee Youth

The award will support development-oriented research through a Center for Innovation and Technology at Universidad del Valle de Guatemala.

Isabel Roberts
June 2, 2023

In a spring Industrial Design studio called Humanitarian Innovation Design, 12 students set out to create technology-based learning activities for refugee youth in Greece and Uganda. Led by faculty members Heewon Lee and Sally Beiruti and instructors from NGOs Faros and Youth Social Advocacy Team

(YSAT), students spent the semester designing digital activities to help children of varying ages, education levels and lived experience learn about design and technology using phones donated by the Samsung Electronics Galaxy Upcycling Program.

The studio grew out of Lee's work as a staff member on the Humanitarian Innovation team at MIT D-Lab, where Beiruti enrolled in a Humanitarian Innovation class while an undergraduate at MIT. "It's not just designing a simple product and hoping it sells well," explains Lee, "but more about how we can alleviate current issues [like language barriers] and create change in livelihood."

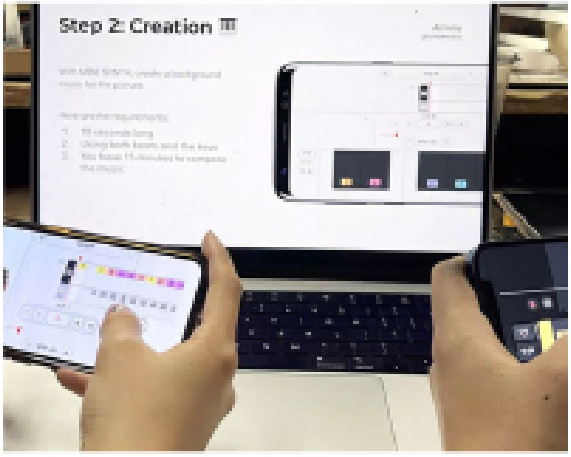



Photo: Jo Stinsfeld

Before any designing took place, Lee and Beiruti made sure that students had a thorough understanding of humanitarian innovation and participatory design. "We emphasize to the students that you aren't supposed to go into these contexts thinking that you know better," says Beiruti. "You're bringing your own skill set, but you're not an expert in the situation. Designing with other people who are experts in their own situation is so important."

> "You're bringing your own skill set, but you're not an expert in the situation. Designing with other people who are experts in their own situation is so important."
>
> –Sally Beiruti, Instructor

Richard Fu 24 ID, Ashley Fan 24 ID, and Sean Lee 24 ID, one of the teams working with YSAT in Uganda, centered their learning activities around music and developed a web-based synthesizer. The tool includes a beat track and a color-coded keyboard that uses numbers to represent musical notes. Fu—whose coding skills are entirely self-taught—programmed the application, which has run just under 6,000 lines of code.

"To overcome the language barrier, we decided against using the traditional alphabetical notation," Fu says. "Instead, we numbered the notes from 1–36 and then color-coded each octave so that a student could, for example, find the C note in any octave." After familiarizing themselves with the keyboard, children were tasked with composing their own melodies based on an emotion before asking their classmates to guess which emotion their songs represented.

The second YSAT team—Bobby Chen 24 ID, Sishu Wu MID 23 and Claire Guo 24 ID— combined drawing and AI to encourage collaboration and teach children about the potential of AI tools. Utilizing Midjourney, an AI tool available on communications platform Discord, children used keywords provided to them to create design sketches, which they then uploaded to Midjourney to create more refined AI-generated images.

In another exercise, children used Near Field Communication (NFC)—a wireless technology for transferring data and sharing media between two devices—to create digital "tags" of their interests such as music videos or photos. Users then designed physical pins for other students to scan and view their tags.

Also centering their designs around drawing were Cindy Li 25 ID, Gary Li 24 ID and Jessie Zhang 24 ID, who worked with Faros to design for children in Greece. Using the AI-powered drawing tool dreamlike.art, users sketched models of custom headphones and jewelry and then used the platform to create AI-generated images of the designs. In a second exercise, children designed pairs of shoes based on their own sketches before using AI Canvas to "try on" the shoes that they designed in real life.


Students Muskan Jain, Mito Smith and Amelia Strickland developed a series of color-coded cards to help youth with English language-learning. Photo: Courtesy RISD

"Overall, [teaching the kids] went pretty smoothly," says Gary Li. "The experience was very rewarding and it was great to see this activity finally come to life after we worked through all the iterations and finished finalizing each part of the design."

Muskan Jain 24 ID, Mito Smith 24 ID and Amelia Strickland 24 ID, the second team designing with Faros, focused their designs on English language-learning skills. "We wanted to devise an activity that circumnavigated barriers and helped them tap into the learning process," Strickland explains. "We decided that in order to do that, it made sense to design a language-teaching activity."

One of the team's activities, AI Can Show You the World, involves color-coded cards featuring images, words and QR codes. When users scan the codes on their phones, a GIF image and soundbite appear. Users can then create simple phrases with the words they've learned and enter them into Deep AI to generate their own images.

"Design itself is a very therapeutic experience," Lee explains. "A lot of students focused their designs around empathy generation. Apart from the language and cultural barriers, they were also tasked with providing learning outcomes identified by 'client organizations' like APEX and World Economic Forum. We want to provide these youth with skills that are

https://www.risd.edu/news/stories/risd-students-create-design-learning-activities-for-refugee-youth

# Annex 6: LESSONS LEARNED TOWARDS DESIGNING A COMPREHENSIVE CURRICULUM FOR THE NEW HORIZON CENTER

During March and April 2023, Heewon Lee and the Horizon Center staff engaged in a two-week-long deliberation to reflect on the lessons learned from the Horizon Center spanning from 2019 to the present. The objective of this discussion was to assess successful aspects, identify encountered challenges, and determine key considerations for further enhancing the current program. By thoroughly examining these matters, they were able to pinpoint crucial categories that significantly contribute to the program's success. Each category has been organized around successful aspects, challenges, and key considerations. (Martha Thompson edited this document for the Annex.)

## 1. Program/Class Learning Outcome and Goals

The Horizon Center has dedicated extensive time and collaboration to develop explicit learning outcomes and goals for its program and classes. However, challenges have arisen, including a lack of clarity among students regarding their learning objectives and occasional lapses in emphasizing these objectives during instruction. To address these challenges, effective communication of learning outcomes to students is crucial, ensuring their understanding and appreciation of the purpose behind their attendance. Equipping staff members with a comprehensive understanding of the learning outcomes for each class and emphasizing these objectives during instruction is essential. Additionally, implementing a robust assessment framework allows for accurate measurement of student progress and necessary adjustments to facilitate individual growth. By addressing these challenges and considering key aspects, the Horizon Center aims to enhance learning outcomes and goals, creating a vibrant learning environment for its students.

*Successes*

- The Horizon Center has meticulously developed learning outcomes through an extensive collaborative effort spanning several months.
- We have formulated explicit learning outcomes and goals for every activity we have designed, and they are thoroughly documented.

*Challenges*

- The students at the Horizon Center are experiencing a lack of clarity regarding their learning objectives. It is crucial for the staff to provide comprehensive information about the content and purpose of each class and the overall program.
- Although we have well-defined learning outcomes and goals for our classes, the instructors occasionally fail to effectively emphasize these objectives during their teaching. It is imperative that instructors are fully aware of the learning outcomes for each class they teach and possess the ability to highlight these objectives appropriately. Additionally, depending on the students' current progress, the learning outcomes may need to be adjusted accordingly.

*Key considerations*

- How can we effectively communicate the learning outcomes and goals to our students, ensuring their understanding and appreciation of the purpose behind their attendance at the Horizon Center?
- How can we ensure that every staff member possesses a comprehensive understanding of the learning outcomes associated with each class they teach and is equipped to emphasize these objectives during their instructional sessions?

- How can we accurately assess the progress of each student across all classes and make necessary adjustments to the learning outcomes to facilitate their individual growth?

## 2. Design Process: Learn-Imagine-Create-Test

The design process (Learn-Imagine-Create-Test) has been successfully integrated into activities and programs at the Horizon Center, enabling refugee youth to learn and apply it to their projects. Design instructors proficiently teach the process, emphasizing hands-on activities and practical application. Challenges include ensuring students' comprehension of the design process, showcasing real-life examples of its application, and bridging the integration phase of the DYF program with the design process. Key considerations involve creating prime examples that effectively demonstrate the design process, refining the curriculum to create a seamless learning experience, and exploring ways to apply the design process in the integration program. By addressing these considerations, the Horizon Center aims to enhance students' understanding and application of the design process, fostering their problem-solving and creative abilities.

*Successes*

- The design process (Learn-Imagine-Create-Test) has been successfully integrated into most of our activities and programs at the Horizon Center, enabling refugee youth to learn and apply the design process to their projects.
- Each phase of the design program delves into the design process at varying depths, allowing refugee youth to grasp the intricacies of the process.
- Our design instructors at the Horizon Center are proficient and confident in teaching the design process to the students.
- The design process heavily emphasizes hands-on activities, prioritizing "doing" over lectures. This approach enhances refugee youths' understanding of the process through active engagement.
- In addition to learning the design process, our design activities and projects also incorporate various life skills, such as teamwork, communication, creativity, and conflict resolution, further reinforcing these skills through hands-on projects.

*Challenges*

- Some refugee students find it challenging to comprehend how the design process works in the creation of a project. To address this, we need to develop prime example projects that effectively demonstrate how the design process is utilized in project development.
- It is important to showcase examples of how the design process can be applied in the daily lives of refugee youth. Illustrating how these principles can be used to solve problems and create opportunities is crucial.
- The integration phase of the DYF program, focused on job training, sometimes feels disconnected from the design process that students have been learning. We need to find ways to bridge these programs more effectively, such as by using the design process to facilitate goal-setting within the Integration Program.

*Key considerations*

- What types of prime examples should we create to effectively demonstrate and explain how the design process is used to identify problems and develop solutions? Would examples like the charcoal briquette press used in MIT D-Lab's CCB be relevant and relatable to the refugee youth?

- How can we refine the curriculum of the DYF Integration Program to ensure that similar teachings bridge over from the DYF Design Program, creating a cohesive and seamless learning experience for the students?

## 3. Program/Class Duration

The Horizon Center has implemented program adjustments to cater specifically to the needs of refugee students, considering their average length of stay in Greece, which is approximately three months. Advanced programs are tailored for individuals intending to settle in Greece, providing comprehensive training in creative problem-solving and job skills. However, challenges arise regarding communication of program duration, project time frames, varying class durations, and program efficiency. Clear communication of program duration and modifications to align projects with class time frames are crucial. Considerations include evaluating sufficient time for learning outcomes, balancing quantity and quality of students, and streamlining program phases. By addressing these challenges and considerations, the Horizon Center aims to optimize the program duration, offering a quality educational experience that supports refugee students' integration and equips them for success.

*Successes*

- The Horizon Center has implemented program adjustments to specifically cater to the needs of refugee students.
- The duration of our program is based on the average length of stay for refugee youth in Greece, which is approximately three months.
- Advanced programs are tailored for individuals who have been residing in Greece for a longer duration and intend to settle there.
- Many refugee youth have expressed a desire to remain in Greece due to improved language skills, school attendance, cultural understanding, and community ties.
- To facilitate the integration of these students into Greek society and the job market, the Horizon Center extends its program to provide comprehensive training in creative problem-solving and job skills.

*Challenges*

- Some students at the Horizon Center are uncertain about the duration of their enrollment in the program. It is essential for the staff to clearly communicate the number of classes required for program completion.
- Certain projects within our curriculum are exceeding their ideal time frames. We must design projects that align with different learning levels, allowing students to complete them within the designated time frame.
- Depending on the student group, we occasionally assign varying durations to individual classes. It is necessary to determine appropriate time allocations for each class, considering that some students may find an hour too long, while others may find it too short.
- We have observed that having an excessive number of program phases at the Horizon Center does not yield optimal results. We should explore strategies to streamline or consolidate certain components of our existing programs.

*Key considerations*

- How can we effectively communicate the program duration to our students at the Horizon Center, ensuring they understand the number of classes required for program completion?

- How can we modify our design projects to align with the number of classes students need to take, enabling them to complete the projects within the designated time frame?
- Considering that some students only attend once a week, is this sufficient time for them to achieve the intended learning outcomes and successfully finish their projects?
- Are we prioritizing the quantity of students over the quality of their educational experience, or vice versa?

## 4. Language

Language at the Horizon Center presents both successful practices and challenges. The hands-on approach and use of visual materials reduce reliance on translators and overcome language barriers. Offering Greek and English classes attracts new students who recognize the value of learning these languages. However, mixing students with different language skills can lead to loss of non-English-speaking students. The changing demographic of students poses challenges in effective communication. While language classes are attractive, the Horizon Center is not certified for language instruction, and other institutions specialize in teaching languages. Key considerations involve determining which language courses to offer, hiring certified instructors if integrated into core programs, defining eligibility criteria, and integrating language curriculum with design programs. By addressing these considerations, the Horizon Center aims to optimize language instruction and enhance students' language skills in alignment with their educational and professional goals.

*Successes*

- The hands-on approach of the design activities and projects reduces the reliance on translators in the classroom, as the students can understand what they need to do through visual cues and demonstrations.
- The use of visual materials and low-literacy-friendly designs facilitates better understanding among students, overcoming language barriers.
- Offering Greek and English classes attracts new students to the Horizon Center, as many refugee youth recognize the value of learning these languages, depending on their plans for the future.
- Having instructors who can speak some of the languages spoken by the refugee students is advantageous in facilitating communication and understanding.

*Challenges*

- Mixing students who have strong English language skills with those who do not may lead to the loss of non-English-speaking students who struggle to keep up.
- The changing demographic of refugee students, particularly from North African countries, presents language challenges in effectively communicating with them during classes.
- While language classes are attractive to students, the Horizon Center is not a certified institute for language instruction, and there are other certified institutions that focus on teaching languages.

*Key Considerations*

- Determining which language courses to offer (Greek, English, or both) requires careful consideration and assessment of student needs and preferences.
- If language classes are integrated into the core programs, hiring certified instructors proficient in teaching the chosen languages becomes necessary.

- Defining the eligibility criteria for students allowed to participate in language classes, such as limiting it to Design Your Future (DYF) students, helps maintain focus and allocate resources effectively.
- Exploring ways to integrate the language curriculum with the design program, such as teaching English vocabulary related to design tools during English classes, can enhance students' understanding and application of design concepts.

### 5. Differentiated Instruction

Implementing differentiated instruction at the Horizon Center has yielded successful outcomes by adapting teaching materials to cater to different learning levels and designing specialized curriculum for specific student groups. However, challenges arise when mixing students with varying learning levels, leading to an unfavorable learning environment and disrupting program schedules. Key considerations involve developing a simple assessment tool to effectively group students based on their learning levels at the beginning of the program and utilizing activity classes as a means of conducting assessments to identify key skills. By addressing these considerations, the Horizon Center aims to create a more tailored and effective learning experience for refugee students.

*Successes*

- Adapting teaching materials based on the learning levels and dynamics of student groups has proven effective.
- Designing curriculum specifically for certain student groups has resulted in longer program engagement.

*Challenges*:

- Mixing students with different learning levels can create an unfavorable learning environment for refugee students.
- Constantly adapting to individual student needs disrupts the program schedule and can lead to a lack of stability for the refugee students.
- Determining the learning level of each student from the beginning without prior knowledge can be challenging.

*Key considerations*

- To address the issue of mixed learning levels, we need to develop a simple assessment tool that allows us to group students effectively at the beginning of the program.
- Activity Classes can serve as a means of conducting simple assessments by instructors. We need to identify the key soft and hard skills we want to assess in order to implement this approach effectively.

### 6. Student Dynamics: Mindsets, Relationships, and Commitment

The dynamics of student mindsets, relationships, and commitment at the Horizon Center have led to successful outcomes, including close relationships, therapeutic experiences, positive behavior changes, confidence-building, and collaborative learning. Clear program structures, student mentors, mixed-gender classes, and aligned projects have contributed to student commitment and mindset shifts. Challenges include low commitment, age differences hindering collaboration, disruptions from new students, limited opportunities for interaction among cohorts, and insufficient class frequency for effective learning. Key considerations involve finding a balance in class sizes, determining class capacities, fostering broader student connections, developing

a clear program structure, reassessing class attendance frequency, and providing guidelines for staff to build positive relationships. By addressing these considerations, the Horizon Center aims to enhance student dynamics, foster commitment, and create an inclusive and supportive environment for refugee students.

*Successes*

- Small groups of students foster close relationships and enable deeper learning experiences.
- Engaging in hands-on activities and creating things by themselves provides a therapeutic experience for the refugee students, boosting their self-esteem.
- Acceptance of the Horizon Center culture (welcoming, working together, open-minded, fun, sense of belonging, etc.) leads to positive transformations in student behavior.
- Having refugee students serve as mentors or teaching assistants enhances their confidence and works well.
- Mixing gender in classes, despite cultural norms, has been successful in promoting collaboration and learning among refugee students.
- Students who come to the Horizon Center of their own volition demonstrate higher commitment and longer-term engagement.
- Clear program structures facilitate student commitment.
- Adjusting class compositions based on learning paces helps ensure effective learning experiences.
- A welcoming space and positive relationships with staff contribute to a supportive environment that encourages student commitment.
- Introducing projects (e.g., Social Impact Design projects where they focus on helping the homeless in Athens) aligned with student interests boosts their commitment and fosters mindset and relationship changes.
- Studio classes are implemented as a valuable addition to the regular curriculum at the Horizon Center. By offering students an open workspace to collaborate with their peers, work on projects, and seek guidance from instructors, the center promotes increased attendance and active participation. This extended time allocation enables students to enhance their comprehension of the subject matter, foster closer connections with their classmates, and dedicate more energy to their projects.

*Challenges*

- Low student commitment disrupts classes and hampers the learning experience for others.
- Mixing groups with significant age differences hinders collaboration and learning.
- Students missing classes in project-based courses pose challenges in catching up and maintaining team dynamics.
- New students joining ongoing classes can cause disruptions.
- Cohorts moving together to different phases of the design program limit opportunities for students to meet and interact with other refugee students.
- The current practice of having refugee youth attend the program only once a week is insufficient for effective learning, building relationships, and fostering commitment. This limited frequency has resulted in

a significant number of new students leaving the program. Recognizing this challenge, it is essential to reevaluate the scheduling to provide increased opportunities for learning, relationship-building, and sustained engagement.

*Key considerations*

- Finding a balance between smaller class sizes, which facilitate better learning experiences, and the number of students accepted into the program requires careful consideration.
- Determining the capacity for each class in the new Horizon Center, considering factors such as activity class size, basic training, essentials class, and DYF, helps ensure optimal class compositions.
- Creating opportunities for small groups of students to interact with other Horizon Center students is important to foster broader connections.
- Developing a clear program structure that outlines student activities, accomplishments, and progress can enhance student commitment and understanding of their journey within the program.
- The limited number of classes attended per week by refugee youth leads to reduced commitment and fewer learning opportunities. It is crucial to thoroughly reassess the frequency of their attendance in both regular classes and studio sessions. By reevaluating the number of days students are expected to participate, we can provide them with increased commitment and a more extensive learning experience.
- Establishing guidelines for staff, including new staff members, on building positive relationships with refugee students helps maintain a supportive and inclusive environment.

## 7. Activity Classes

Activity classes at the Horizon Center have been successful in promoting team building, integrating new refugee students, and teaching essential soft skills. The simplicity and accessibility of the materials allow anyone to effectively engage students, while following the design process provides a step-by-step approach. The alignment with learning outcomes ensures coherence in the program, and mixing students of different levels fosters collaborative learning. Challenges include students initially struggling to grasp the purpose of activity classes and maintaining the interest of those who perceive them as too easy. Key considerations involve emphasizing the value of activity classes, refining materials for alignment and optimization, utilizing them as pre-assessments, providing training for activity class leaders, and exploring opportunities for sharing materials with other organizations. By addressing these considerations, the Horizon Center aims to enhance the impact of activity classes and provide a strong foundation for students' learning journey.

*Successes*

- Activity classes have proven successful in promoting team building and helping new refugee students feel comfortable and integrated into the Horizon Center program.
- The simplicity and accessibility of the activity class materials have allowed anyone, regardless of prior design knowledge, to effectively teach and engage students.
- By following the design process in activity classes, students gain an understanding of the step-by-step approach that will be further developed in subsequent program phases.
- Activity classes have provided a platform for teaching and developing essential soft skills, such as teamwork and communication, which are valuable for the refugee youths' personal and professional growth.

- The connection between activity class materials and the Horizon Center's learning outcomes ensures alignment and reinforces the program's objectives.
- Incorporating a mix of current and new students in activity class teams has fostered collaborative learning, with experienced students guiding and supporting newcomers while valuing their input and ideas.
- The availability of different learning level materials in activity classes caters to the diverse capabilities and needs of the students.
- Reflection sessions at the end of activity classes have facilitated meaningful discussions about students' learnings, fostering a deeper understanding of the design process and its application.

*Challenges*

- Some students may initially struggle to grasp the purpose of activity classes, as they focus on shorter design challenges that do not result in finished products.
- Sustaining the interest of students who perceive activity classes as too easy and not beneficial to their development poses a challenge in maintaining their engagement with the Horizon Center program.
- Assessing the readiness and dynamics of new students before presenting them with activity class materials can be challenging, particularly if instructors have limited interaction with them.

*Key considerations*

- Emphasizing the value of activity classes to new students is crucial to maintain their interest and ensure they understand the foundational role these classes play in their learning journey.
- Reviewing and refining the existing bundle of activity class materials should be prioritized to reinforce the alignment with learning outcomes and optimize the learning experience.
- Activity classes can serve as effective pre-assessments, providing valuable insights into students' language levels, teamwork abilities, communication skills, creativity, and practical aptitude. This information can inform the formation of cohesive and productive student groups for subsequent design classes.
- Providing training and support for leaders in activity class teams will enhance their facilitation skills and enable them to effectively guide and engage students.
- Exploring opportunities to share activity class materials with other organizations focused on refugee youth can amplify the impact of the Horizon Center program and benefit a broader audience.

## 8. Design Your Future Program

The Design Your Future (DYF) program at the Horizon Center has emerged as a successful flagship program, combining design education and integration-focused job training. It features a well-defined curriculum, explicit learning outcomes, and projects focused on Social Impact Design. Students develop a transformative mindset by addressing real-world problems and engaging with local organizations. However, challenges include identifying eligible students, language proficiency barriers, limited class availability for beginners, and difficulties in securing full-time positions for graduates. Key considerations involve evaluating the entry criteria, prioritizing the DYF program, facilitating job opportunities or internships, and establishing effective procedures for hiring program graduates as interns or volunteers. By addressing these challenges and considerations, the Horizon Center aims to enhance the DYF program's impact and support the career aspirations of refugee youth.

*Successes*

- Design Your Future (DYF) currently stands as the flagship program at the Horizon Center.
- Students appreciate this class for its unique blend of design education (creative problem-solving) and integration-focused job training.
- The program boasts a well-defined curriculum, duration, and explicit learning outcomes and goals.
- Participation in the class requires students to meet minimum criteria, ensuring that classes comprise individuals with similar learning levels and commitment to the program.
- The design projects within DYF concentrate on Social Impact Design, addressing real-world problems in collaboration with local organizations.
- By tackling community issues and presenting self-designed solutions, students develop a transformative mindset, realizing their potential as creative problem solvers capable of effecting change and making an impact in their community.
- Learning experiences outside the classroom, such as engaging with stakeholders and conducting interviews, deepen student immersion in their projects. Field trips, whether related or unrelated to their projects, broaden their perspectives.
- Organizing career days featuring previous students sharing their learning experiences and showcasing their jobs inspires current students. Additionally, inviting professionals from fields of interest to students helps them gain insights into those industries.

*Challenges*

- Identifying students who meet the criteria to participate in the DYF program can be a challenge.
- Students with limited English proficiency may struggle to keep up with the class.
- Depending on each DYF cohort, some students attend classes 2-3 times a week, which reduces the number of classes available to beginner-level students.
- Despite graduating from the DYF program, many students have faced difficulties securing full-time positions with local partners who have signed MOUs with the Horizon Center. Most companies seek full-time employees, while students prefer part-time positions to balance work and school commitments.
- There is a need to provide clearer explanations on labor rights and how the labor market functions within the DYF program.

*Key considerations*

- Should we maintain the current criteria for the DYF program, or should we consider lowering the entry requirements to allow more students to participate?
- Given the substantial focus and resources allocated to the DYF program, should we continue to prioritize it over other programs?
- How can we facilitate job opportunities or internships for refugee youth who have successfully completed the DYF program? If job placements are challenging, are there alternative means of support we can provide?
- We aim to maintain the practice of hiring interns and volunteers from among the Horizon Center program

graduates. What is the most effective approach to accomplish this, and what qualifications and procedures should be followed?

## 9. Horizon Center Toolkit & Toolbox

The Horizon Center successfully collaborated with local refugee youth organizations through the Toolkit & Toolbox initiative during the pandemic, extending support to a larger number of refugee youth and raising awareness of the center within the humanitarian sector in Greece. Challenges include the time and effort required for class preparation and the capacity of partner organizations to effectively deliver activities. Key considerations involve the continuation and expansion of the Toolkit & Toolbox program, potential transfer of knowledge and resources to other organizations as an open-source solution, and the feasibility of creating education packages for distribution to other humanitarian crisis locations. By addressing these considerations, the Horizon Center aims to sustain and potentially replicate the success of the Toolkit & Toolbox program, benefiting a broader range of beneficiaries and organizations.

*Successful*

- The Horizon Center successfully collaborated with numerous local refugee youth organizations, such as Red Cross and IOM, during the pandemic to extend support to a larger number of refugee youth.
- The Toolkit & Toolbox initiative facilitated the establishment of relationships with multiple local refugee youth organizations, raising awareness of the Horizon Center within the humanitarian sector in Greece.
- The Toolkit & Toolbox program has proven effective in reaching out to refugee youth who may not have the means to physically attend the center, allowing them to enroll in our classes remotely.

*Challenges*

- The preparation of classes for the Toolkit & Toolbox program requires a significant amount of time and effort from Horizon Center design instructors and staff. Similarly, partnering organizations need to invest effort in preparing their students to participate.
- During the pandemic, teaching activities to refugee youth solely through conference calls or in-person sessions presented challenges. Although attempts were made to train partner organization staff on delivering activities, many lacked the capacity and incentive to effectively learn and teach them.

*Key considerations*

- Should we continue to explore and expand the Toolkit and Toolbox program? Given its value in reaching out to beneficiaries and organizations, continuing this program seems beneficial. However, it requires dedicated staff, both full-time instructors and support personnel, to run online and in-person classes for other beneficiaries.
- If we lack the capacity and financial support to sustain the program, can we transfer the knowledge and resources of the Toolkit & Toolbox program to other humanitarian organizations as an open-source solution for their own programs?
- Is it feasible to create Toolkit & Toolbox education packages that can be distributed to humanitarian crisis locations or organizations? While this would require financial support, it could enable the replication of our successful model with the assistance of a full-time staff dedicated to designing and teaching these kits.

## 10. Certificates

Certificates at the Horizon Center have proven useful for refugee youth when applying for asylum cards and serve as motivation for program participation. However, the lack of official recognition by government authorities, other EU countries, and certified organizations diminishes their value compared to certified certificates. Reviewers may struggle to understand the content and significance of Horizon Center certificates due to insufficient information.

Key considerations involve exploring ways to make the certificates more official and recognized, establishing connections with organizations offering internationally recognized certificates, awarding certificates upon progression in the program, incorporating additional information desired by reviewers, and assessing the feasibility of having certified instructors to guide students towards obtaining official certificates.

By addressing these considerations, the Horizon Center aims to enhance the value and usefulness of certificates for refugee students, providing them with valuable credentials for their future endeavors.

*Successes*

- Certificates (hard copy) from the Horizon Center are useful for refugee youth when applying for their asylum cards, providing motivation for them to participate in the program.
- Providing digital copies of certificates upon request helps prevent loss or damage.
- Documenting the types of classes and skills learned before issuing certificates ensures clarity for the students.

*Challenges*

- The certificates provided by the Horizon Center are not officially recognized by the Greek government, other European Union countries, or certified organizations, diminishing their value compared to certified certificates.
- Reviewers such as immigration officers, lawyers, and teachers may have difficulty understanding the content and significance of the Horizon Center certificates due to insufficient information.

*Key considerations*

- Exploring ways to make the Horizon Center certificates more official and recognized would increase their usefulness for refugee youth.
- Establishing connections with organizations that offer internationally recognized and certified certificates could provide refugee students with additional opportunities to acquire valuable credentials.
- Considering the option of awarding certificates to students when they progress to different phases of the design program would account for the short duration of many students' stays in Greece.
- Identifying the additional information that immigration officers, lawyers, social workers, and teachers would like to see on the Horizon Center certificates would help them gain a better understanding of the students' accomplishments.
- We should assess the feasibility of having certified instructors in the Horizon Center program, such as certified coding or language teachers, who can guide and prepare refugee students to obtain official certificates that hold value for their future.

## Conclusion: Achievements in Empowering Refugee Youth Through Design

The Horizon Center Design Program has achieved remarkable milestones through its dedicated efforts and collaborations over the past two years, from June 2021 to June 2023. Despite the unprecedented challenges posed by the Covid-19 pandemic and government restrictions, the program not only adapted but thrived in its mission to empower refugee youth in Greece, leaving a lasting impact on their lives.

In response to the limitations imposed by the pandemic, the program swiftly transitioned to a blended learning approach, combining online and in-person activities to ensure continuity in education and skill-building. While online programs were implemented, the program team also organized in-person classes at partner NGOs, prioritizing the safety and well-being of participants. This flexibility and commitment to finding alternative solutions enabled the program to continue reaching out to refugee youth even during uncertain times.

Through strategic partnerships with local NGOs like the Red Cross and the International Organization for Migration (IOM), the Horizon Center program expanded its reach and established stronger connections within the community. By collaborating with these organizations, the program effectively reached a broader audience, enabling more refugee youth to benefit from the empowering opportunities it provided.

The program's comprehensive curriculum catered to individuals with varying levels of design knowledge and skills. The Tool Box courses, Activity Class courses, and Design Process Essential courses offered a wide range of learning opportunities, covering diverse areas such as problem-solving methodologies, transferable skills, and technical training in fields like CAD & 3D printing, woodworking, tailoring, technical drawing, and electronics. By tailoring the courses to different proficiency levels, the program ensured that participants could engage at their own pace and build a strong foundation in design.

The flagship initiative, the Design Your Future (DYF) program, was developed and improved during this period. The program's curriculum combined design education with job training and integration-focused services, offering a holistic approach to preparing refugee youth for employment and successful integration into Greek society. The Design for Social Impact and Integration Course equipped students with creative problem-solving mindsets, technical skills, and a deep understanding of the design process. Simultaneously, the Integration Services component focused on job market readiness and supporting students in their journey towards becoming productive members of society. Through strategic partnerships with Greek businesses, the program facilitated job placements for graduates, fostering economic independence and self-sustainability.

The Horizon Center program's collaboration with Rhode Island School of Design (RISD) students brought valuable expertise and fresh perspectives to the program. Co-creation of 19 new design activities by RISD students and Horizon Center design instructors enhanced the program's hands-on learning experiences. These activities not only incorporated emerging technologies but also focused on critical areas such as teamwork, idea generation, color theory, and virtual reality. This collaboration enriched the program's learning outcomes and ensured its alignment with the needs and aspirations of the refugee youth.

FAROS

# Horizon Center

## DESIGN EDUCATION PROGRAM FOR REFUGEE YOUTH: 2019-2024

design | nancy adams

MIT D-Lab 265 Massachusetts Ave 3rd floor cambridge ma 02139 US