



UNLEASHING THE GIRL EFFECT

DESIGNING SCALABLE
SOLUTIONS FOR GIRLS
LIVING IN POVERTY




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SOLUTIONS FOR GIRLS
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Hosted by
The Product Design Department
at Art Center College of Design



*Dedicated to our friend Bill Drenttel
(1953-2013) of Design Observer and
Winterhouse Institute. His passion for
design, education and social innovation
continues to inspire us all.*





In the fall of 2014, Designmatters and the Product Design Department collaborated with the Nike Foundation, Yale School of Management and fuseproject with the challenge of empowering and getting resources into the hands of adolescent girls living in poverty around the world.

Student teams on both coasts built on existing everyday practices and developed social impact design ideas for affordable, income-generating and time-saving tools and techniques that are widely accessible, and can be used intuitively by girls in diverse cultures all over the world.

In this innovative studio, Art Center's commitment to global social and economic justice was inspired by and dovetails with the Nike Foundation's belief that adolescent girls can play a crucial role in solving some of the toughest problems facing the world. When a girl living in poverty has the chance to reach her full potential, she isn't the only one who escapes the circumstances she was born into. She brings her family, community and country with her. This is called the Girl Effect.

OPPOSITE PAGE

From Day 1, students absorbed in-the-field experiences from the projects leads and guest speakers.

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Nike Foundation's Tom De Blasis speaking to the teams about his experience doing field research in Africa.



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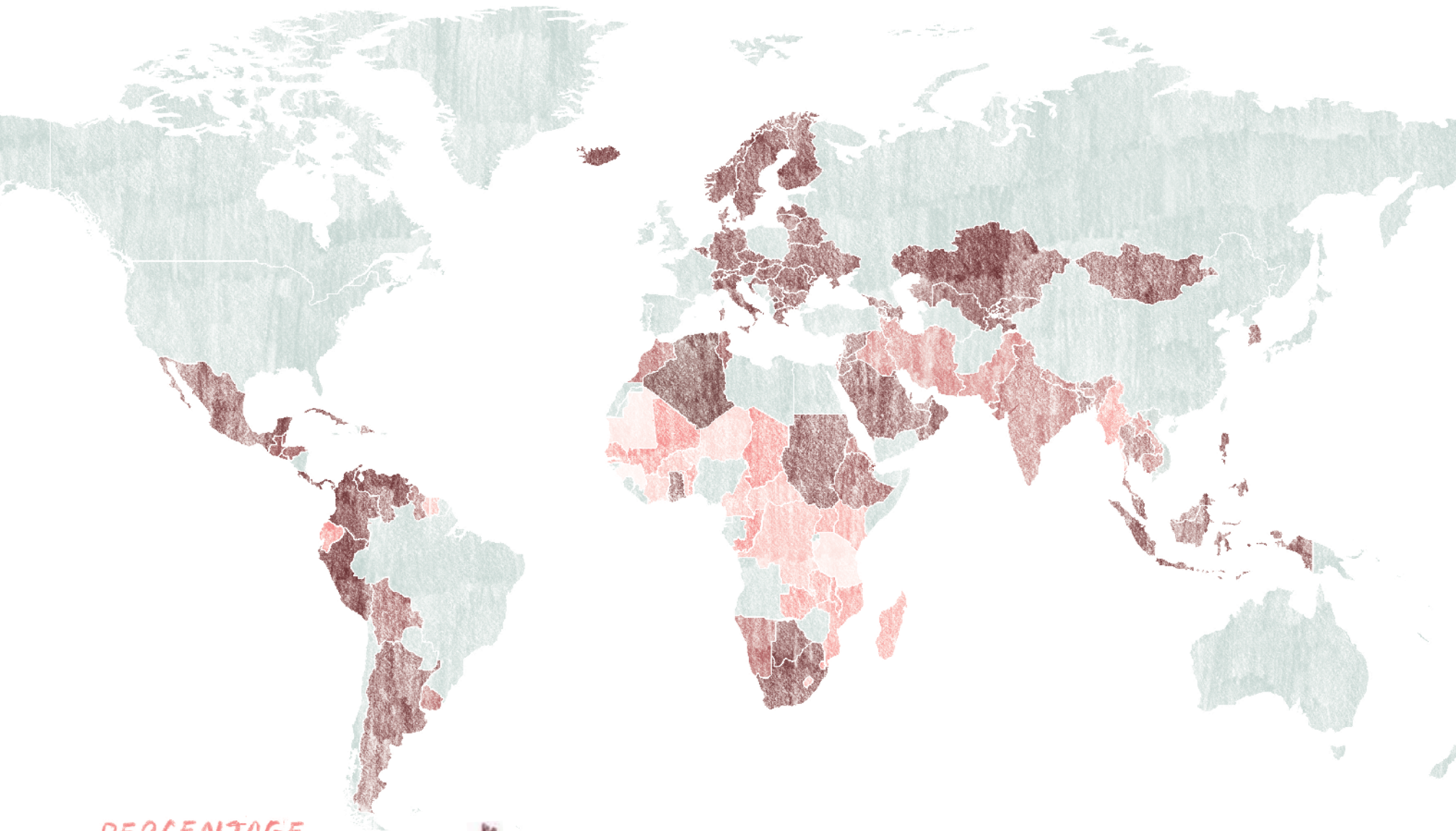


WHY
ADOLESCENT
GIRLS?

An estimated 250 million adolescent girls live in poverty around the world and struggle daily to perform labor-intensive chores and revenue-making traditions that often deplete their economic independence and human potential.

Research has shown that when a girl in poverty receives secondary schooling, marries and starts a family later in life, she greatly contributes to the economic growth and stability in her country.





PERCENTAGE
OF GIRLS
TRANSITIONING
TO SECONDARY
SCHOOL



SOURCE

The World Bank "Progression to
Secondary School, female (%)"
2010-2014



Students Carolina Rodríguez and Lori Nishikawa presenting their project "Girlsight."

Too often the reality for a girl in poverty is a life of limited education, unending household responsibilities and unfulfilling income-generating work to help support her family. However, research has shown that when an adolescent girl in poverty is able to stay in school, delay marriage and delay having children, not only do her life chances radically change, but the children she will later have are far more likely to be healthy and educated.

The Girl Effect Studio represents a groundbreaking international challenge that builds on the pioneering efforts of the Girl Effect movement, created in 2008 by the Nike Foundation in partnership with the NoVo Foundation, United Nations Foundation and the Coalition for Adolescent Girls.

The Nike Foundation has played an important role in the international development community, where the plight of adolescent girls is receiving increasing attention, as attested by the 2009 World Economic Forum and initiatives from the World Bank and the Clinton Global Initiative, among others.

DESIGNING FOR THE GIRL EFFECT DIVIDEND

The outcomes of the Girl Effect studio reflect a diverse and empathic set of girl-centered projects that aspire to equip the adolescent girl of tomorrow. 77

Dr. Mariana Amatullo

VP Designmatters, Art Center College of Design

Despite mounting recognition that gender equality and the full realization of human rights for women and girls has a transformative effect on sustainable development and economic growth, the fate of adolescent girls around the world remains one often fraught with discrimination and profound inequities. The numbers paint a dire picture: 250 million adolescent girls in the developing world do not have the opportunity to become fully functioning members of society. The high risk of school dropout, early and forced marriage, premature pregnancy, and joblessness represent some of the principal factors that impact a continued cycle of inter-generational poverty, and constrain the ability of girls to learn, be safe from harm, and lead fulfilling lives.¹

In the fall of 2014, at the invitation of Tom De Blasis and the Nike Foundation, the Girl Effect design studio—a collaboration among that foundation, Designmatters at Art Center College of Design, the Yale School of Management and fuseproject—took on the challenge of exploring how to improve the lives of adolescent girls with life-enhancing tangible assets—products and services—that could scale and contribute with universal appeal to a healthier, safer and more skilled future for girls in the poorest parts of the world.

The projects assembled in this publication are the result of the creativity and dedicated partnership of the students, faculty and many experts who participated in this focused collaboration. As the essays that follow signal, the process of collaboration was itself an important part of the learning outcomes of the studio's complex brief, perhaps even more so than the lessons directly associated with the design of the projects proposed. This was a brief that stretched everyone's skill sets and forced the shedding of many assumptions: Students experienced the blurring of hard-set disciplinary boundaries between design and business expertise, and learned to operate in a dynamic interdisciplinary environment. They were asked to integrate and make sense of secondary research inputs into their designs. And they were expected to come to terms with the ebbs and flows of a generative process of ideation and making that, at times, was as much about problem-setting as about problem-solving.

The outcomes of the Girl Effect studio reflect a diverse and empathic set of girl-centered projects that aspire to equip the adolescent girl of tomorrow with the agency and knowledge that she needs to thrive, and the dignity she deserves. These projects are also singular examples of the expanded field of design for social innovation, and are a testament to the power of encouraging bold cross-fertilization of ideas and experimentation in our classrooms. Here's to the promise harnessed in these projects leading to actionable and positive change for girls the world over.

¹Chaaban, J., & Cunningham, W. 2011. Measuring the economic gain of investing in girls: the girl effect dividend. *The World Bank Policy Research Working Paper Series*.



WHO IS
THIS GIRL?

WHAT DOES
SHE WANT?



WHAT DOES
SHE NEED?

Because of the lack of field research, students had many questions during the studio's initial stages.

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Former IDEO.org fellow and Harvard Architecture alumna Marika Shiori Clark visits the Girl Effect Studio to share her experience applying Human-Centered Design to social impact challenges.







AN
INNOVATIVE
APPROACH

The Girl Effect Studio challenged student teams to envision and develop an ecosystem of access to tools, products and services “an ecosystem of access to things,” with integrated scalable and sustainable business models and strategies.

Due to the complexity of the project, the challenging curriculum and the lack of field research, many questions emerged in class during the early stages of the process.



The 'Girl Effect' Studio builds on the Nike Foundation's vision of the power and potential of girls around the world and brings together Art Center's Designmatters and Product Design Departments, Yale School of Management (SOM) and fuseproject, an award-winning industrial design and branding firm based in San Francisco.

With its humanitarian and global themes, the studio appealed to a wide variety of Art Center students majoring in Product Design, Photography, Advertising, Environmental Design, Industrial Design and Illustration.

Art Center students were teamed with MBA students from Yale SOM's Design and Innovation Club who offered concurrent strategic integration to the proposed design concepts during the ideation, development and making phases of the studio.

This unique and collaborative pairing informed the design students' understanding of the rationale behind developing viable business models. It also allowed their business counterparts to gain a deeper understanding of the iterative ideation and prototyping design processes necessary to bringing new products and services to life.



Thokozani Mabena, Team Tombikit, presenting an early concept idea for their premenstrual toolkit.

Since the students were unable to perform hands-on fieldwork due to the studio's global scope, the Nike Foundation and fuseproject provided initial detailed research and framework, allowing students to explore verticals and cross them with human benefits to create advantageous global strategies and prototypes.

Overall, working long distance with multiple teams through current technological avenues and leveraging preestablished research provided students with practical experience on the current state of design, where designers interface daily with transdisciplinary teams to develop concepts and strategies from different geographies.

STARTING AT SCALE

This experimental approach, while almost counter-intuitive and most definitely challenging, proved to be the foundation upon which the teams' proposals were built.))

Tom De Blasis

DESIGN INNOVATION DIRECTOR, NIKE FOUNDATION

Design Innovation Director, Nike Foundation

We are failing. So says the quiet but persistent voice in my gut. Social Impact Design, or Design for Social Innovation, is a nascent discipline within the established silos of design—one that has been emerging for decades but only fairly recently has become mainstream. We are still finding our way, and while we have so much to offer to both the well-worn pathways of international development and the tender sprouts of social entrepreneurship, it's hard to point to very many social impact design projects that are (or have been) very successful and long lasting—especially at scale.

Scale. The word of the day, and rightly so. It seems that it's not possible to have a single conversation about social innovation without the word coming up. But my question is always, "How do we define scale?" For me, in this work, I define it in context to the scale of the need. If we're trying to solve a problem that exists at the scale of hundreds of millions or billions, then that is the scale that we should be designing for.

Design for scale. From the start. The world needs solutions that are designed to reach hundreds of millions and/or billions, and this means moving beyond just context-specific artifact design and also into concurrently designing business models that enable both scalability and financial sustainability.

This is the hardest challenge and biggest opportunity in front of us right now, as well as the context and intention of the Girl Effect Design Studio—a collaboration among Art Center's Designmatters Department, Yale University School of Management, fuseproject and the Nike Foundation. Therefore, I deliberately and purposely challenged the teams to work through a human-centered design and insight-based approach, but not in a context-specific manner. There were no field visits or potential user interviews. Instead, the teams drew upon the years of girl-centric knowledge and insights within the Nike Foundation combined with their own secondary research, looking for commonalities and trends across cultures and continents.

This experimental approach, while almost counterintuitive and most definitely challenging, proved to be the foundation upon which the teams' proposals were built—leading to the creation of innovative tools and business models that are applicable and potentially transformative to girls in poverty all over the world.

Perhaps by asking the question and setting the ambition of scale from the start, we can all find a new pathway to both realize the full potential of social impact design and have the desired and needed impact in the real world.



Andrea Small and Tom De Blasis visit the Girl Effect Studio to offer feedback on student projects and to share their experiences with adolescent girls in rural Africa.



The students' questions to the fuseproject team started with the obvious ones, but quickly evolved to more nuanced and detailed questions, and then expanded to understanding the girl's experience as a whole. What would it take to get the product to girls? What would make it functional AND appealing? What is the overall benefit, so it's not just the object for the object's sake? How does it fit into the bigger picture of unleashing the Girl Effect? We're so impressed with how far they took it and how broad their thinking was. They didn't settle for the obvious answers, which resulted in some seriously unique solutions. ”

Andrea Small, fuseproject

A DAY IN THE LIFE OF AN ADOLESCENT GIRL

Students referenced "A Day in the Life" video, provided by Tom De Blasis, from the Nike Foundation. The video documents the cycle of never-ending chores a girl living in poverty goes through on a daily basis in rural Africa.

Student teams studied this piece of documentation and other real-life scenarios to establish a girl's needs and to identify opportunities.

Pray
04:30 — 06:00

Fetch water
06:00 — 07:15

Sweep and clean the house
07:15 — 08:00

Cook
08:00 — 09:00

Farm
09:00 — 10:30

Peel potatoes
10:30 — 12:00

Finish cooking
12:00 — 13:00



Wash dishes
13:00 — 13:30

Eat first meal
13:30 — 14:00



Fetch water again
14:00 — 15:15

Cut grasses for cow
15:30 — 16:00

Fetch firewood
16:00 — 17:00



Cook dinner
17:00 — 18:30

Eat second meal
18:30 — 19:00

Wash dishes
19:00 — 19:30



Keep working
17:00 — 18:30

Socialize with family after dark
18:30 — 19:00

Inspired by the Girl Effect—the unique potential of adolescent girls to end poverty for themselves and the world—the focus of the studio was to create innovative, affordable and accessible physical assets that are currently not available to girls living in poverty.

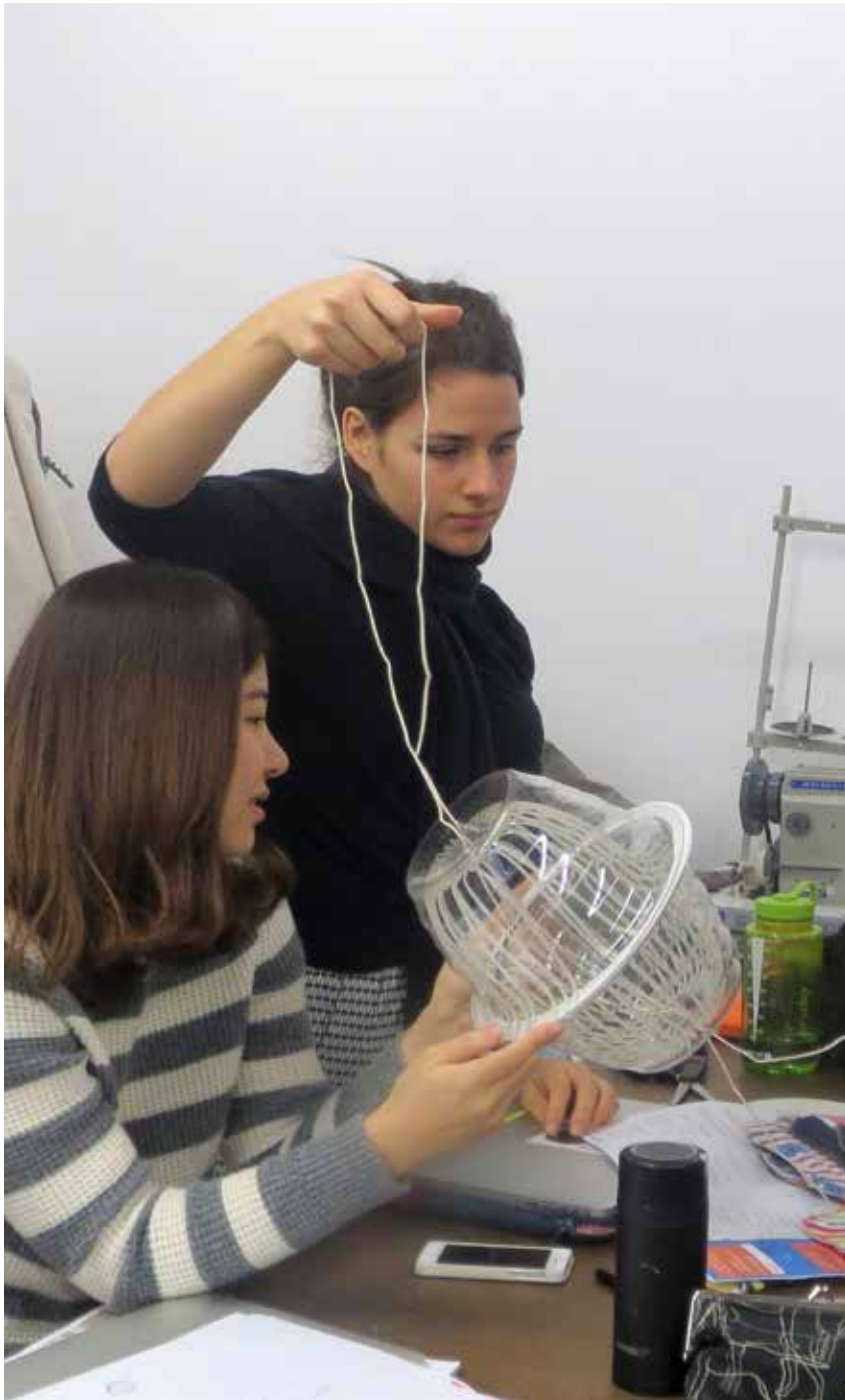
As part of their design research and conceptual development process, students explored many “A Day in the Life” scenarios and considered the current tools girls use daily for sewing, mending, cooking, cleaning, fetching water and firewood, as well as other tasks.

The teams were faced with the overall project goal of generating new time-saving tools and practices that could create potential income opportunities that girls could easily learn, acquire and leverage.



Student Mariko Iwai playing possible “day in the life” scenarios to empathize with a girl’s needs and tough living conditions.





I brought you the hardest problem that I'm working on and you wrestled with it with tenacity and determination: How might we increase access for ALL of the 250 billion adolescent girls living in poverty around the globe to the tools that they want and need to unleash their potential, thereby breaking the cycle of poverty for themselves and the world? Now that is a challenge worthy of your talents and worth wrestling with! ११

Tom De Blasis, Nike Foundation

Flo kit team testing one of their early prototypes in class.

FACILITATING COLLABORATION

I only had one small concern: Yale's beautiful Connecticut campus is situated clear across the country from Art Center's Pasadena home. ʘʘ

Jennifer May

Associate Director, Designmatters, Art Center College of Design

I've heard many Art Center students speak enthusiastically about the experience of taking a Designmatters studio, and the highlight is usually the same: the opportunity to work on teams with students from outside of their own disciplines. They love discovering the differences in design process across disciplines, and learning how to let those differences inform and improve their own work.

The months leading up to any studio kick-off are always busy, and the Girl Effect Studio team met often during the summer of 2014 to discuss the project and how to support the students in tackling such a challenging global brief. Tom De Blasis of the Nike Foundation suggested bringing in the Yale School of Management as a partner on the project, since he had previously worked with MBA students in the school's Design and Innovation Club. Having earned my MBA in 2013, I knew what MBA students could bring to the project, especially as our students addressed the sticky problems of feasibility, distribution and scalability. I only had one small concern: Yale's beautiful Connecticut campus is situated clear across the country from Art Center's Pasadena home.

Technology, however, came to the rescue and students were able to use a plethora of platforms to connect. The faculty started a Wordpress site, and teams used Google Hangout, Skype, Dropbox, and occasionally even phone calls to facilitate working together. The big challenge was connecting everyone for key sessions of the studio, including the kick-off, mid-term and final presentations, and for guest lectures. Special thanks must be given to the two schools' educational media teams, who researched and tested many different options before settling on Zoom, an online meeting platform, and a system of laptops, flat screen TVs, microphones and a tiny traveling camera to ensure students could see and hear each other clearly.

Although the studio kick-off suffered one technological mishap after another, the teams rallied, and by the next session everything was running smoothly—and everyone laughed as the design and business students shared their assumptions and stereotypes about each other. It was evident by the final presentation that the collaboration between design and business students led to a richer educational experience for all, and to strong project outcomes. The Girl Effect Studio has clearly laid the groundwork for more cross-institution, and cross-country, collaborations.



RESEARCH AND
IDEATION

My favorite moment in this course was when we did the follow-up research exercise to deconstruct the concept of the ideal user. We gave the students an unfamiliar product for 15 minutes and then asked them to go back to re-examine their scenario and think about ‘ideal users’ versus ‘real users’ and how would a real girl engage with this object that you are creating. I got to see a glimpse of the energy, humor and excitement that students would bring forward if they were to bring these projects to real users. ”

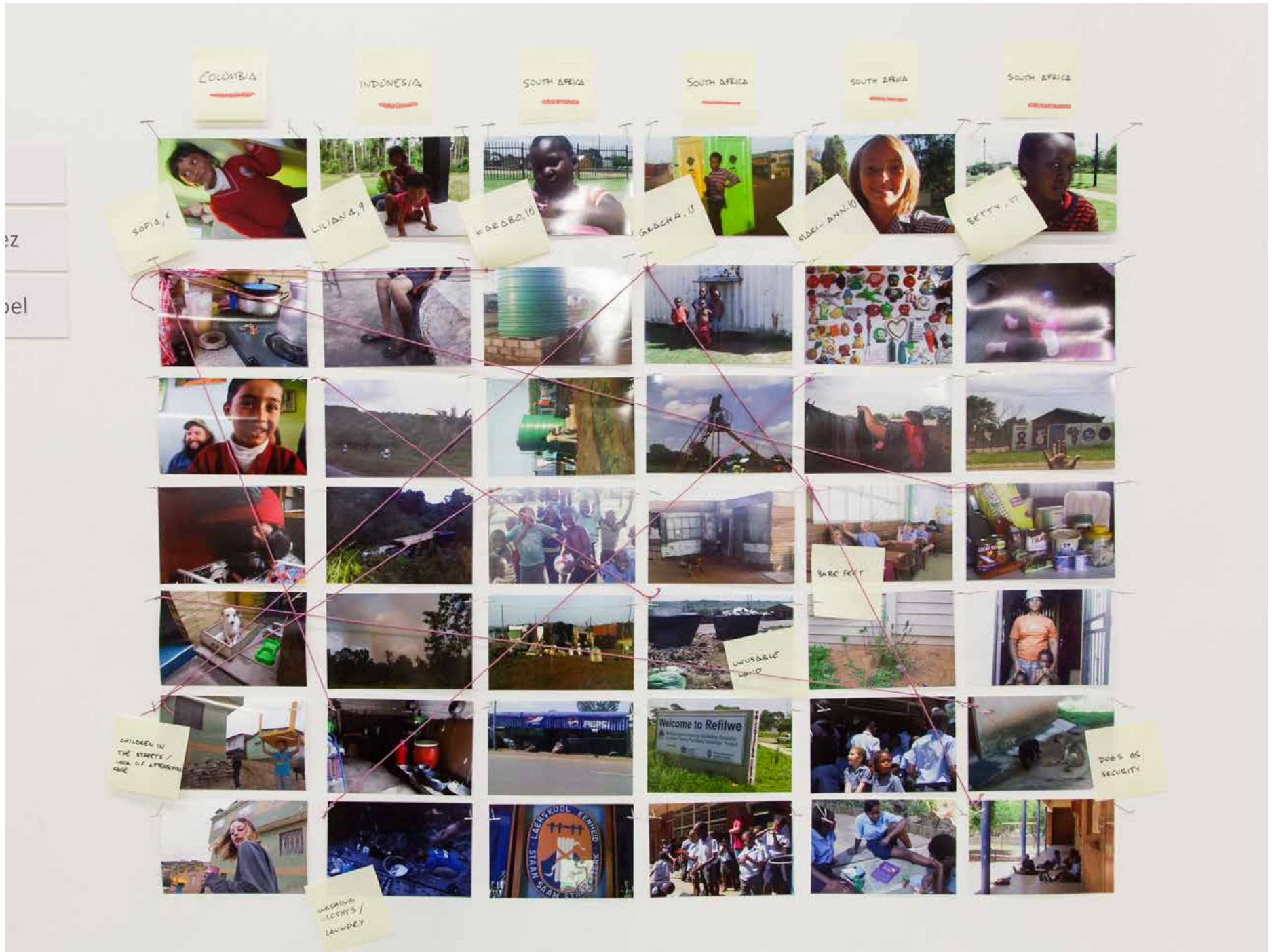
Arden Stern, Art Center Faculty

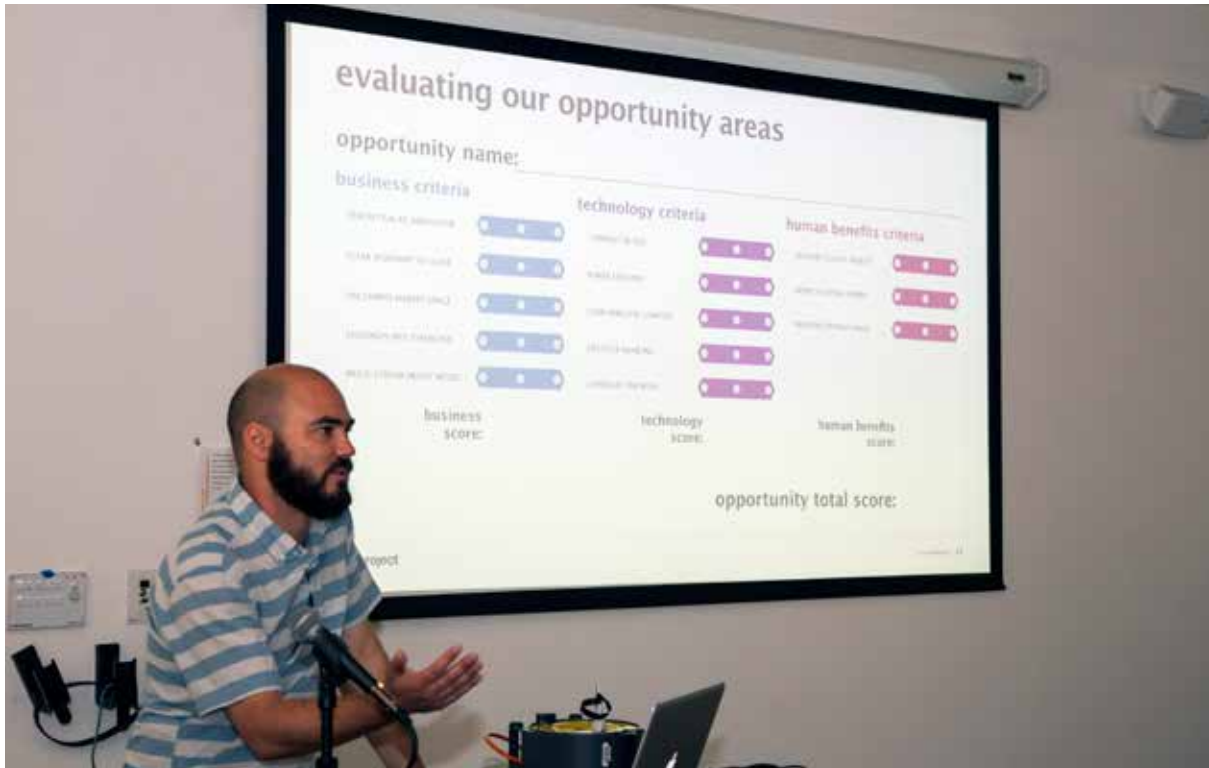


Team Flo kit holding the final iteration of their design during final presentation.

For the first half of the curriculum instructors fashioned multiple assignments involving hands-on prototypes that gave students a richer understanding into an item’s functionality, affordability, ergonomic design, and accessibility. These assignments spurred student thinking, refocusing their vision of how their typical tools/materials could be dramatically transformed into a new purpose and/or toolkit.

Students charted the landscape and users’ experience, including a step-by-step process of “How Can We Make This Better?”





Fuseproject's Design Director, Noah Murphy-Reinhertz, sharing insights and methodologies from the field.

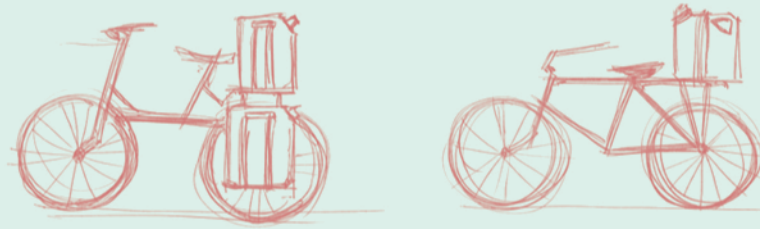
Given the complex nature of the multifaceted challenge, research was not limited to just the first part of the project, but continued as a thread throughout the whole course.

Initially, students needed to discover as much as possible about the reality of living in poverty without the benefit of firsthand knowledge, research trips or face-face inquiries with specific communities.

These constraints required research and data collection outside the classroom as well as utilizing the knowledge of instructors, numerous guest speakers, appropriate case studies, online resources and local proxies who could serve as research subjects. In many cases, students contacted current experts in the field for supplemental in-depth questions and advice.

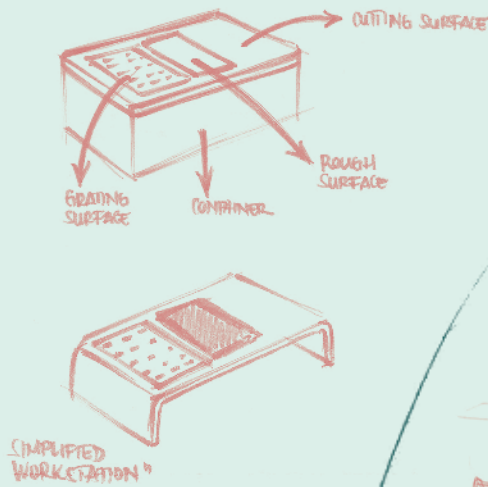
A team from fuseproject presented their field experience with the Nike Foundation in Rwanda to the students and were available to answer questions, provide context and offer specific insights and feedback throughout the course.

target price point
 positioning
 product landscape



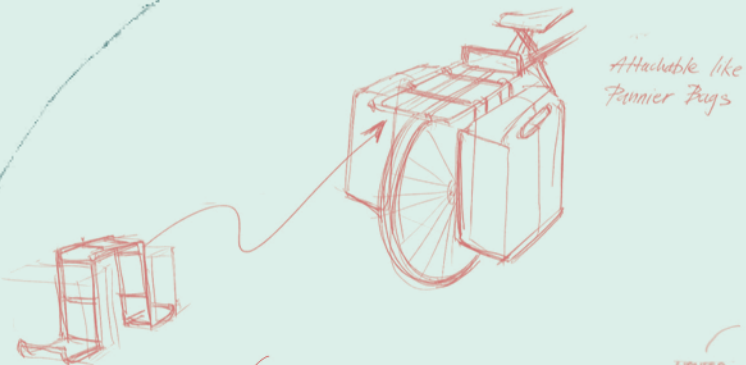
- What is important to make?
- Why should we make it?
- Where should it be made?
- How should it be made?
- Who should make it?

BRAINSTORMING AND SKETCHING



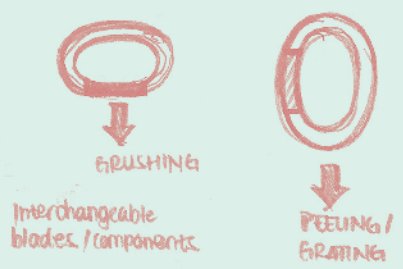
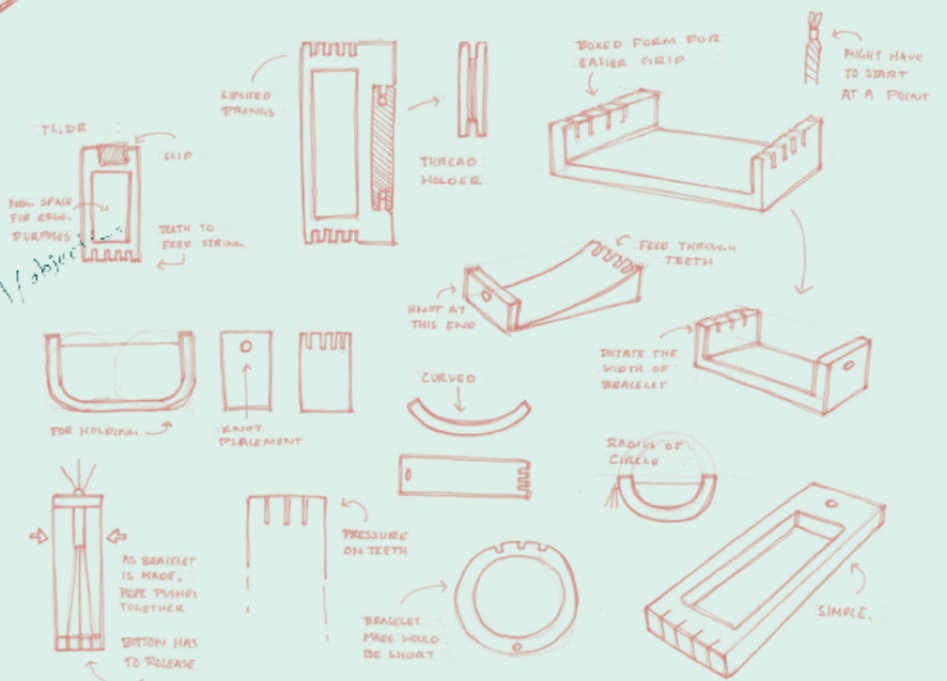
revenue streams — different ways of making money

business model
 Financing
 Where is the money
 profit
 no profit



Mission statement - goal/objective

project description
 Value proposition +
 target customer



OUR CHALLENGE, OUR LESSONS

Giving the students time and space to innovate allowed the teams to create unexpected breakthrough projects with depth, clarity and complexities that only happen in the context of valuable educational partnerships such as this. ”

Krystina Castella

Product Design Faculty, Art Center College of Design

The Girl Effect challenge: Access to physical assets are lacking, so let's design tools to lift girls out of poverty. Let's make the tools radically affordable, accessible at a global scale. Further, let's not define the tools; let the students figure out what is most needed. Let's allow students from every major into the course, collaborate with Yale grad students on the business strategy and work closely in melded teams. Let's do it using only secondary research.

Any one of these challenges would be more than enough for a 14-week class, but we all agreed to go broad and see what we could learn from the process. Everyone came to the course with a desire to help lift girls out of poverty, and their willingness to commit, to collaborate, to make, to think, to learn about social impact design and business led to countless lessons learned. Here are just a few:

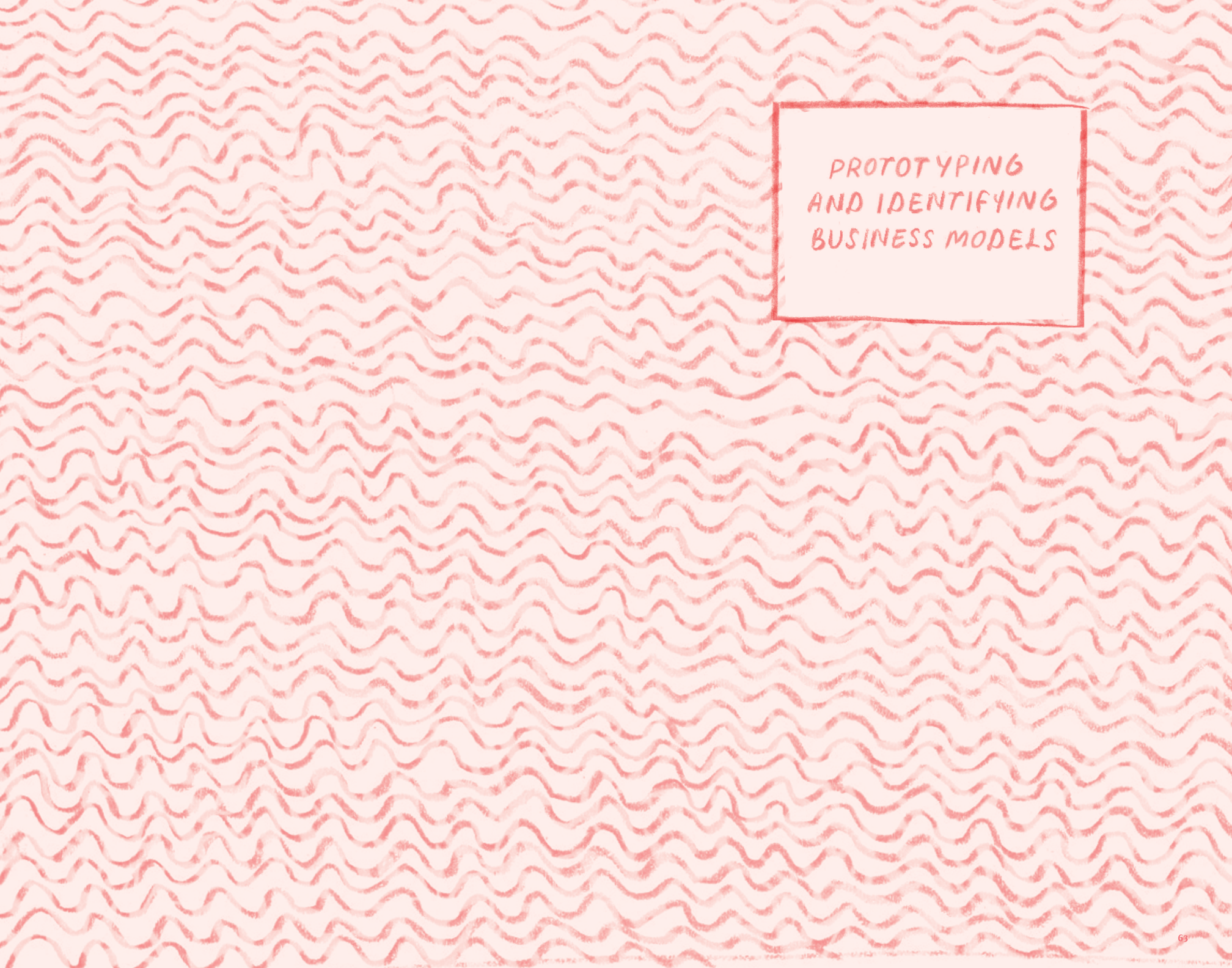
Get rid of labels. We are not business or design students or faculty. We are all thinkers and creatives. Approach challenges from our unique point of view, but see how other people think, learn and grow.

Communicate. The informed weekly discussions were just as valuable as the proposed outcomes. These sometimes difficult critiques lifted us above the obvious solutions; pushed us beyond the artifact for the artifact's sake, and toward something much more important for the girls.

Process. Our goal was the same, although the educational partners worked differently. The design process is iterative, not linear. So as we bounced countless ideas around, and changed them week after week to make the project stronger, it drove the business students a little crazy. They kept anticipating a final design, so they could get to work. As a byproduct of this joint effort, could we invent a new process that includes both ways of working for use in future collaborations?

Language. Design and business students communicate differently, employing unique vocabularies. A designer asks, "Who is going to manufacture it?" whereas a business school student wonders, "What does the supply chain look like?" For designers, drawings and models represented the same ideas contained in the charts and graphs of the business students. Let's develop a common language.

The Girl Effect's biggest takeaway for me was that we ended up in a very different place than where we initially imagined. At the start, I expected outcomes such as cook stoves, lighting solutions and water-carrying devices, and we didn't develop any such projects. Pushing this venture to this degree of challenge, and giving the students time and space to innovate, allowed the teams to create unexpected breakthrough projects with depth, clarity and complexities that only happen in the context of valuable educational partnerships such as this.



PROTOTYPING
AND IDENTIFYING
BUSINESS MODELS

Beginning with one product concept, student teams investigated different elements (technology, manufacturing, use, distribution, etc.) to imagine the multiple ways the product could exist. From there, students built a case to suggest a product/solution that would best fit their Value Criteria, business model and ultimate customer.

Design students established regular contact with their Yale counterparts via Skype and email to craft a viable business plan for their product.

NEXT PAGE

While students were given a specific demographic region for their projects, the uniniversality and scalability of the design was the top priority.





UNLEASHING OURSELVES TO REACH THE LAST GIRL

We approached the brief and the challenge in the same way we always do: by looking beyond the obvious and creating something unexpected with a rich context, story and purpose. ”

Sherry Hoffman

sherry@artcenter.edu

Product Design Faculty, Art Center College of Design

The Nike/Girl Effect design studio was an ambitious venture, even by Art Center standards. The sheer size—21 design students from seven diverse disciplines, as well as the long-distance collaboration with the dozen business students and faculty advisors from the Yale School of Management—was daunting. But the other important players—the Nike Foundation and the Girl Effect movement, supported by fuseproject, the technical staff and the incredible team from Designmatters—helped smooth both the expected and unanticipated bumps in the road.

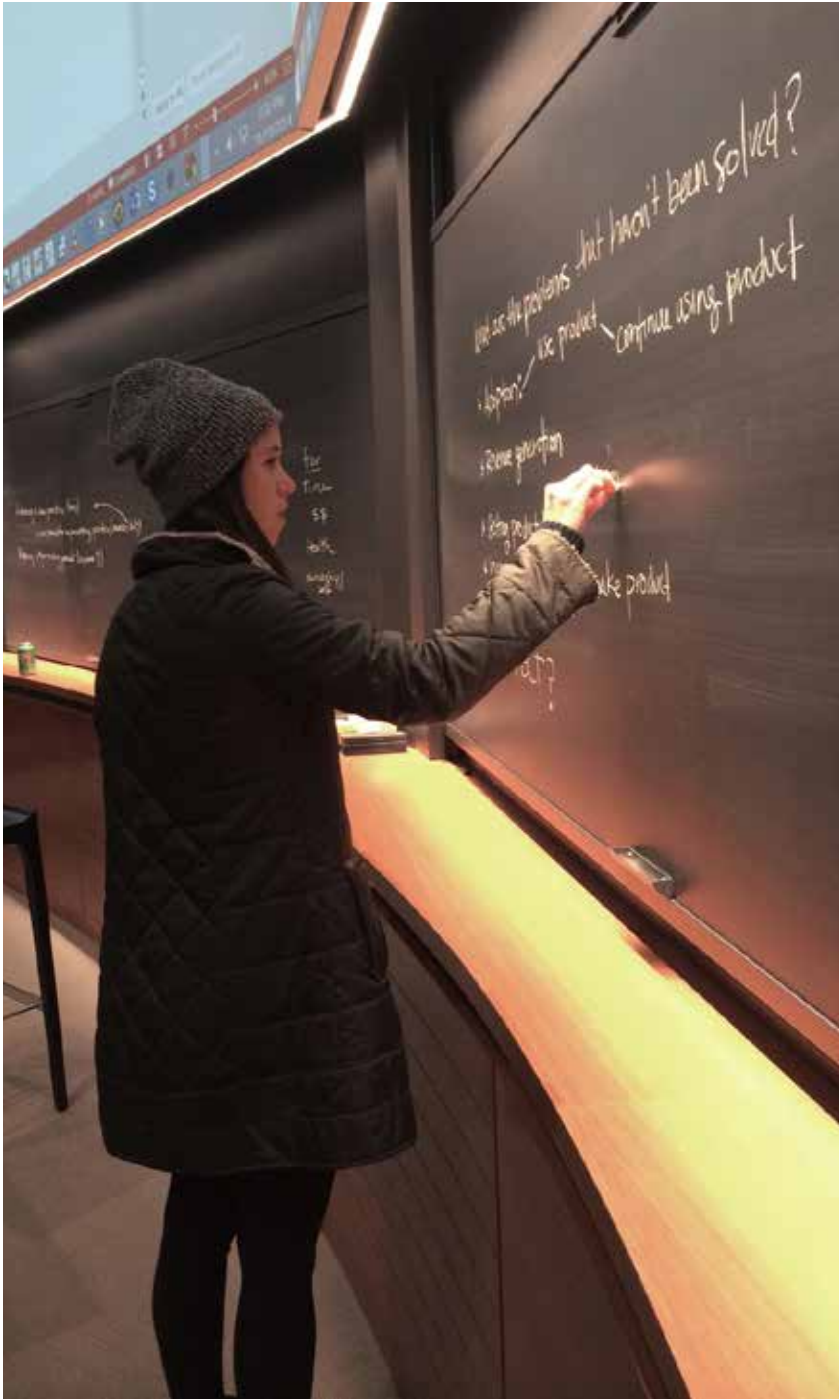
The collaboration with Yale was a high priority for us. We had countless conversations with their faculty and our partner to clarify our understanding of both the brief and how we planned to go about meeting the formidable challenge, “How might we increase access for the quarter-billion adolescent girls living in poverty around the globe to the tools that they need to unleash the Girl Effect?” We spent a lot of time clarifying and unpacking our process and how we—designers and business students—might best collaborate and support one another. What is the timing? What are the critical points? How might we best communicate as a studio and as teams?

Early on, we had a video session with Yale and shared our assumptions about one another—“designers wear cool glasses” and “business students like spreadsheets.” We laughed at both the truths and the stereotypes. At the end of the final review, one of the Yale students said that he was impressed with the way the Art Center students engaged deeply in feedback (detailed and honest) and continued to ideate to better their outcomes. In contrast, the culture of business school was to drive much more directly toward the solution. Our students, at times paralyzed by the sheer volume of information, benefited from the type of “business school” questions that they were constantly asked to address regarding pricing, distribution and product positioning.

The students, while completely passionate and engaged in the subject, sometimes focused on the assets that we didn’t have—like access to the field or to the audience that we were designing for. But ultimately we relied on videos and stories from the field that Tom (Nike), fuseproject and other invited guests shared with us. We also learned to identify research proxies to help us better understand our audience and their needs.

We constantly asked ourselves, “What makes this ‘girl’?” and “How does it unleash the girl effect?” We learned that when designing in the world of social innovation and global poverty, best intentions and design solutions are often met with both intended and unintended consequences for our audience.

Looking back at our lofty hopes, we approached the brief and the challenge in the same way we always do: by looking beyond the obvious and creating something unexpected with a rich context, story and purpose. But to get there, we had to struggle a bit—stretch, go beyond our comfort zones and, yes, unleash ourselves.



The Girl Effect collaboration with Art Center College of Design and the Nike Foundation offered our students a unique opportunity to immerse themselves in a kind of thinking and work that is not common in business school. Fundamentally, the project was about creating THINGS, real tangible products. This is a departure from our usual fare of business plans, financial models and marketing strategies, although clearly these all played important roles in the joint work. ”

Anthony Sheldon, Yale SOM Faculty

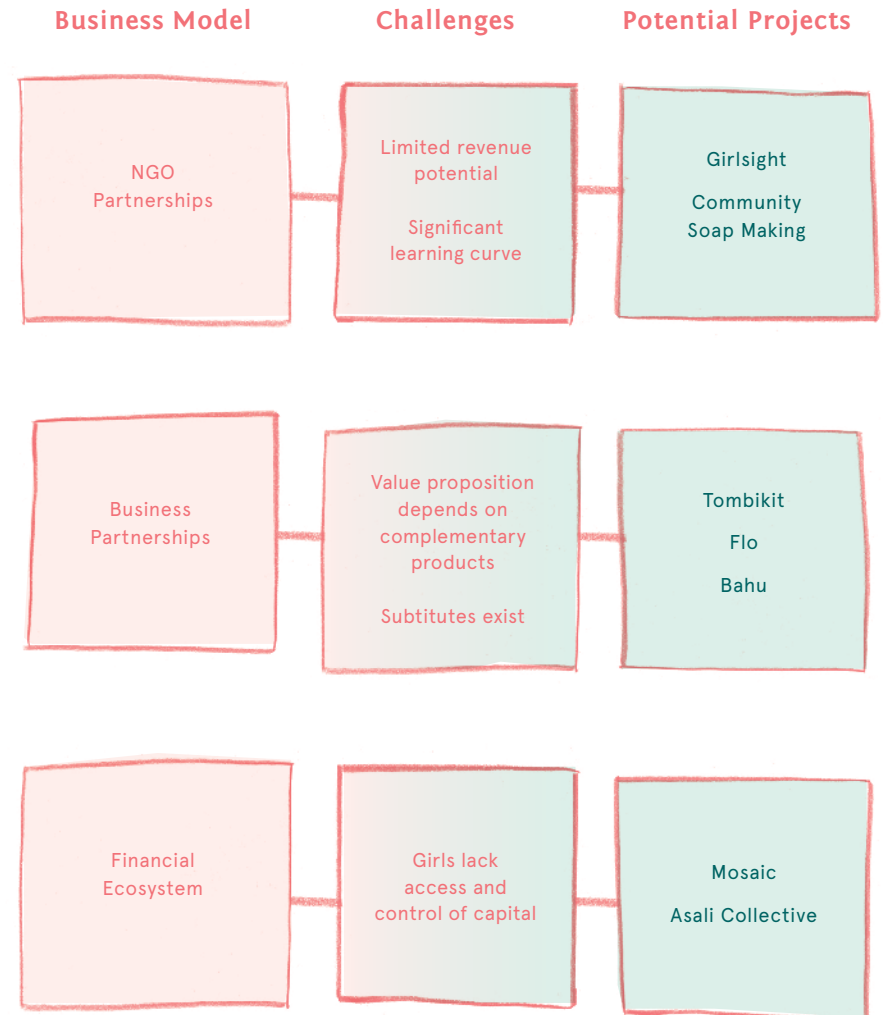
—
Yale student Alison Joseph during a problem-solving session.

BUSINESS MODEL CLUSTERS

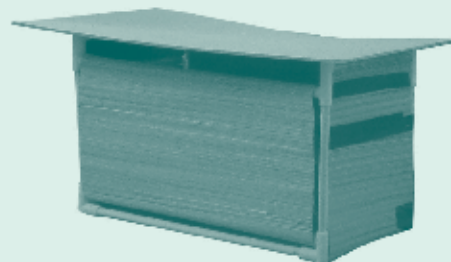
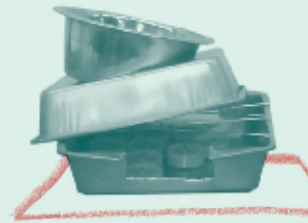
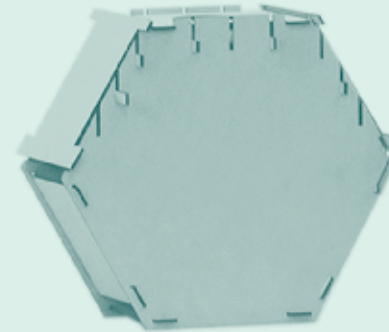
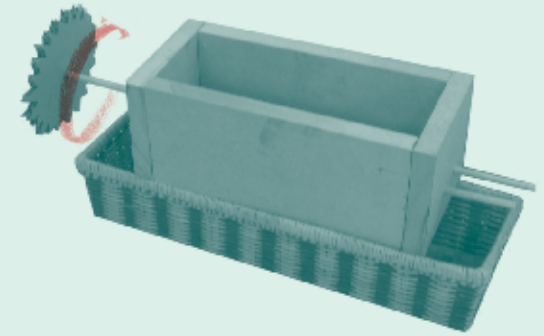
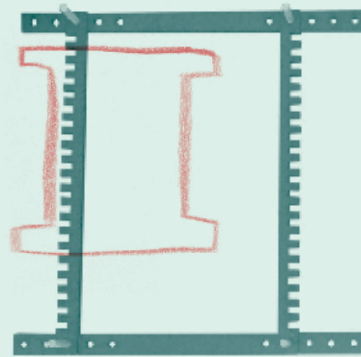
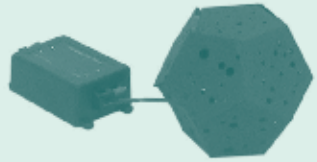
Analyzing case study examples within the current 'social business' landscape and testing ideas against their approaches gave teams the opportunity to identify viable and sustainable business models for implementation.

Students focused opportunities based on specific considerations within the business-model canvas framework, which includes analyzing partnership strategy, material sourcing, sales strategy, value proposition creation, manufacturing options, marketing strategy, financial modeling, distribution channels, and implementation roll-out strategy.

Potential marketing strategies for Girl Effect projects fell into three main business-model clusters: partnerships with NGOs, partnerships with existing businesses, and the creation of a new financial ecosystem.



EARLY PROTOTYPES AND MATERIAL EXPLORATION



This studio is one of those breakthrough projects that will hopefully set the bar of design and business students working together. These students have produced a beautiful portfolio of meaningful ideas on how to change the world. They removed their titles of ‘designer’ or ‘MBA’ to be innovators, trusted in the process, and had no fear of the unknown. ”

Karen Hoffman, Art Center Faculty

OPPOSITE PAGE

Art Center Student Shiva Farrokhi during showing the results of her final project Mosaic.



THE VALUE OF COLLABORATION

The Girl Effect project gave us the opportunity to participate in the process of iterating a design+business model that would hold the promise of enhancing social and economic opportunities for girls around the world. ”

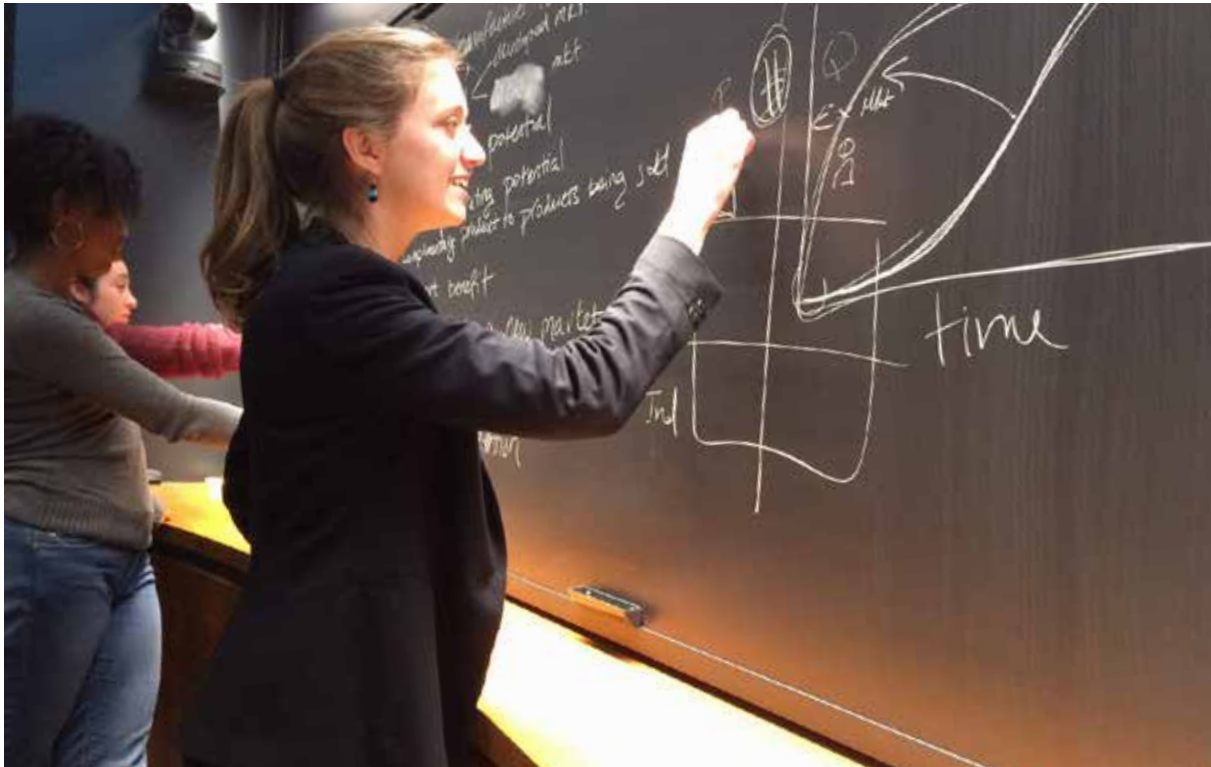
Anthony Sheldon

Faculty, Yale School of Management

From the perspective of business school students, I think the most remarkable thing about the Girl Effect project was incorporating tangible objects, real things, into the problem-solving process. To engage with the Art Center teams, as they were designing artifacts that could address real-world challenges faced by adolescent girls in developing countries, offered our students a rare opportunity to contribute to a rich process of design thinking.

We generally tackle problems from a much more abstract vantage point. How to conduct a market analysis and develop a marketing plan; how to identify the main drivers of revenues and expenses, and develop a set of financial projections; how to analyze a set of data and see the patterns underlying them—these are skills well-honed in business school education. To be able to link these skill sets with the creation of specific, tangible products was a new experience for most of our students. To see the Art Center students create working prototypes, to witness the progressive iterations on these—often abandoning one idea/object for a completely different one that better addressed the underlying challenges—was a rich and novel experience. And to be able to bring our skills to bear in order to assess the viability of the products; to embed them in a specific regional context; to try to devise business models that could lead to significant scaling up—these challenges allowed our students to test their abstract skills in very practical ways.

The Girl Effect project gave us the opportunity to participate in the process of iterating a design+business model that would hold the promise of enhancing social and economic opportunities for girls around the world. We saw both the value and the limitations that business skills can bring to social change, and the importance of engaging with partners with very different perspectives and skill sets, so that our joint outcome could be far more valuable than that of either side working independently.

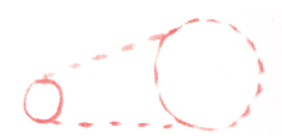


After receiving feedback on midterm presentations from faculty and studio partners, teams delved into diagramming systems and details of manufacture, financing, price points, potential distribution centers, sales, marketing and roll-out plans. These discoveries further fueled design updates and refinement, providing a richer sense of the overall process of what it takes to bring a conceptual model to fruition.

Throughout the entire process, student teams needed to fold in and consider the overall Girl Effect in their thinking in terms of messaging, design strategies, consumer/advocate/supporter roles and how their products/systems would complement and reinforce project ideals.



Yale student Rebecca Blum crafting a business plan to support her team's design concepts.



The students' solutions had to grapple with a huge web of NGOs, services, business factors and a host of other issues that are often beside the point for traditional product design. ”

As an industrial designer, my core motivation is pushing the limit of what an object can achieve. Partnering with Girl Effect and Art Center to look at physical assets for girls speaks directly to this challenge in a way that students will seldom experience in a traditional consulting job.

The students' solutions had to grapple with a huge web of NGOs, services, business factors and a host of other issues that are often beside the point for traditional product design. They worked hard to absorb these new inputs and still deliver on the key thing that designers can bring to the table—solutions that are tailored not just to an individual, but uniquely suited for the modern scale of mass production.

This practice of designing for scale, for massive scale, is what gave rise to ubiquitous classics like the Bic pen; a simple object that now defines writing. If designers hope to have an impact on poverty through their creations, they will need to strive for this level of scale and impact. The studio gave the students a taste for this challenge and showed their inspiring new proposals for what an object can achieve.

Noah Murphy-Reinhertz

Design Director, fuseproject

It was remarkable to see design students address the business realities that often hold great ideas back, like distribution and scale challenges. ”

Fuseproject is all too familiar with the monumental challenge the Nike Foundation and Design Matters handed the students: design a product for a group of people who are rarely designed for, with limited research and complicated business factors, in order to achieve a daunting goal—break the cycle of poverty. Even experienced designers could feel overwhelmed.

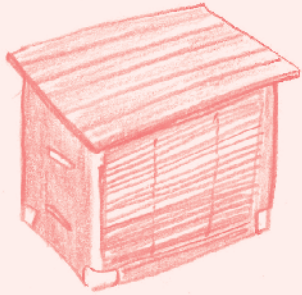
The Designmatters students attacked the challenge with courage and maturity. Early, obvious assumptions were quickly evolved. Prototypes were built and rebuilt. The girls' experience and benefit was always the focus. The Yale collaboration set them up for success for many projects to come. It was remarkable to see design students address the business realities that often hold great ideas back, like distribution and scale challenges.

The result: at least half of the projects are immediately ready for further prototyping and development, a rare result for student work.

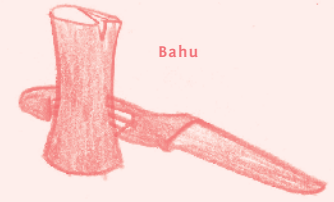
Andrea Small

Strategy Lead, fuseproject

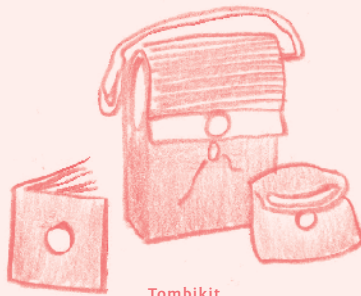
Asali Collective



Flo



Bahu



Tombikit

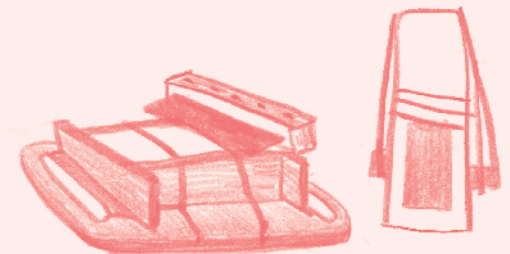
SCALABLE
DESIGN
SOLUTIONS



Girlsight



Mosaic



Community Soap-Making

STUDENT PERSPECTIVES

The designers were so resilient week after week, which was especially impressive when critiques led to their having to start over from scratch. Using more technologically dynamic (and in many ways, more casual) means to communicate took a little getting used to. No matter what the means, this experience confirmed that communication and collaboration ultimately comes down to people. Our meetings worked best when everyone involved was (physically and mentally) present and enthusiastic, when the whole team had a clear sense of what hurdles we had to tackle next, and when both coasts kept team decisions in mind when facing design or business-centric crossroads. ”

Joan Kim, Yale SOM

Growing up in rural Africa as a young Zulu male, anything to do with women I did not need to know because of cultural constraints and taboos. Doing the Girl Effect Studio opened my eyes to what is possible and deepened my respect and understanding for women. Honestly, us guys have it easy. ”

Thokozani Mabena, Art Center

So much of product design is about seeking problems. “Identify the problem” we hear it all the time, but this class was really about identifying *opportunities*. By accepting the lives that many girls lead worldwide, accepting that “better” does not mean “Westernize,” we can then start to see opportunities: spaces and situations where if you give girls certain tools they can help themselves and others around them. It’s hard not to form biases about certain aspects cultures other than our own, but so much of social impact design is exactly that: feeling empathy, not sympathy. ”

Carolina Rodríguez, Art Center



GIRLSIGHT

CAMERA AND PHOTOGRAPHIC RESEARCH

Lori Nishikawa – ART CENTER
Carolina Rodriguez – ART CENTER
Therese Swanepoel – ART CENTER

Charlotte Wong – YALE SOM
Ben Freedman – YALE SOM

How Does it Work?

Since girls in poverty are the best voices to tell others what girls in poverty need, this affordable camera offers girls an outlet to express themselves and document their lives in a creative manner; the uploaded images are also valuable resources for social service and humanitarian organizations that need unadulterated research and direct insight to best plan and design effective programs.

Business Model Canvas

ROLLOUT PLAN

- Start with 2 non-US districts and donor grants
- Exchange photos and communication via GirlSight website, expand via targeted marketing and WOM
- Scale with US school donations and participation

KEY PARTNERS

- Contractors for manufacturing, packaging and distribution
- Ministries of Ed. are purchasers, US schools are donors
- Schools administer workshops
- GirlSight Inc. for marketing, curriculum, training, and website

VALUE PROPOSITION

- Girls: Empower girls by inspiring creativity, expressive engagement and connection
- Schools: new, exciting means to educate

SOURCING MATERIAL

- Outsourced to contractors
- Plastic, wiring/circuitry, glass, computer chip

MANUFACTURING

- Outsourced to contractor to manufacture parts and package into individual units

Schools monitor curriculums to teach girls how to assemble and critically use their cameras. Photos would be shared on a website that is accessed by donors, researchers and girls around the world, including those in Western schools.

Camera financing would come from private donors and US government subsidies; rollout would start with a target area and grow wider to universally connect girls in poverty with the outside world.

MARKETING

- GirlSight Inc. establishes relationships with MoEs, schools, donors
- GirlSight Inc. devises product & workshop positioning, curricula, pricing strategy, curates website

SALES

- GirlSight Inc. sells to MoEs and US schools
- MoEs distribute to schools
- Schools administer workshops with GirlSight Inc.

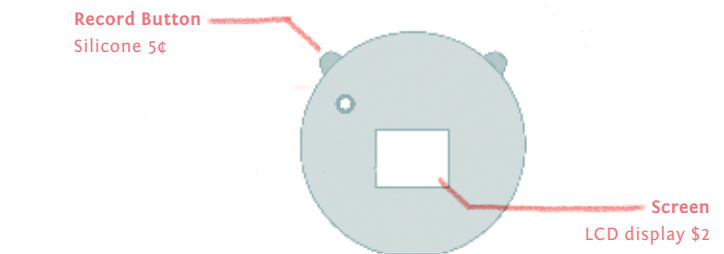
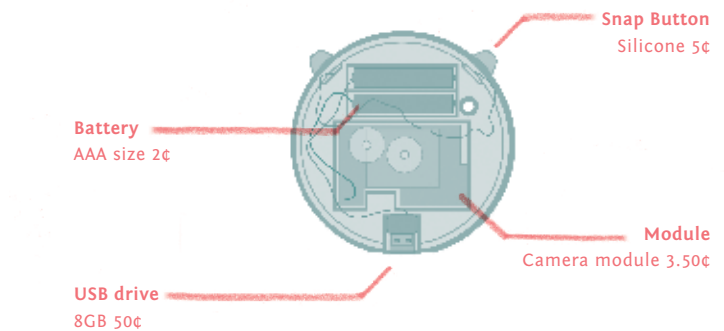
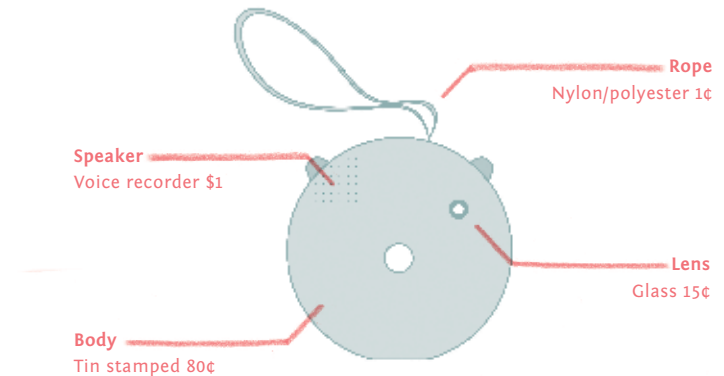
FINANCING

- Donors and US schools subsidize manufacturing/distribution & fund GirlSight Inc.
- MoEs purchase GirlSight and curriculum/training

DISTRIBUTION

- Manufacturer ships individual units by sea to country of sale
- Freight forwarder collects shipment and transports to schools/training

Design Features



Total Cost \$6.10



BAHU

MULTIPURPOSE FOOD PREP TOOL

Daniela Cardona – ART CENTER
Marie Nguyen – ART CENTER

Joan Kim – YALE SOM
Joyce Lin – YALE SOM

How Does it Work?

Preparing meals often monopolizes a young girl's waking day and limits her school attendance, social interactions and potential value in the community. Often a girl has only one large knife in her possession, likely passed down from older generations.

The multifaceted Bahu food prep tool streamlines the cutting, peeling, crushing and rolling process into one curved-shaped tool (with a built-in sharpener)

that is ergonomically designed for a young girl's hands.

Bahu would be crafted from stainless steel and G10 plastic; it would first be marketed in the United States to jumpstart sales. This initial revenue would later subsidize the overseas costs, making the tool affordable. Mothers are the target buyer for the tool, and would give it to their daughters as a special gift.

Business Model Canvas

ROLLOUT PLAN

- Start with a bundled product (large and smaller knives) in a large urban market with an established relationship with the CPG company
- Rollout in subsidizing market (US) to generate momentum and funding to fuel roll out to harder to reach markets

KEY PARTNERS

- CPG company with global presence (P&G, Black and Decker, Tiangong Int'l)

VALUE PROPOSITION

- Bundling (marketing opportunity for peripheral sales) both grown-up and girl iterations
- New market penetration (for moms and for daughters)
- Sales to subsidizing market (largest market is in the US) to lower pricing
- Added brand value from social benefit

SOURCING MATERIAL

- China (largest producer of steel products)
- Germany/Japan/China/Italy/US (largest exporters of plastic goods)

MANUFACTURING

- Germany/Japan/China/Italy/US (plastic exporters and manufacturers)

MARKETING

- Sold to moms, primarily
- Mentorship opportunity with mom's twin tool
- Multipurpose function
- Proven utility over time

SALES

- Main point of sale is in large markets (smaller vendors go there to purchase and resell)
- Small bulk packaging to appeal to kiosk vendors, who purchase from large markets

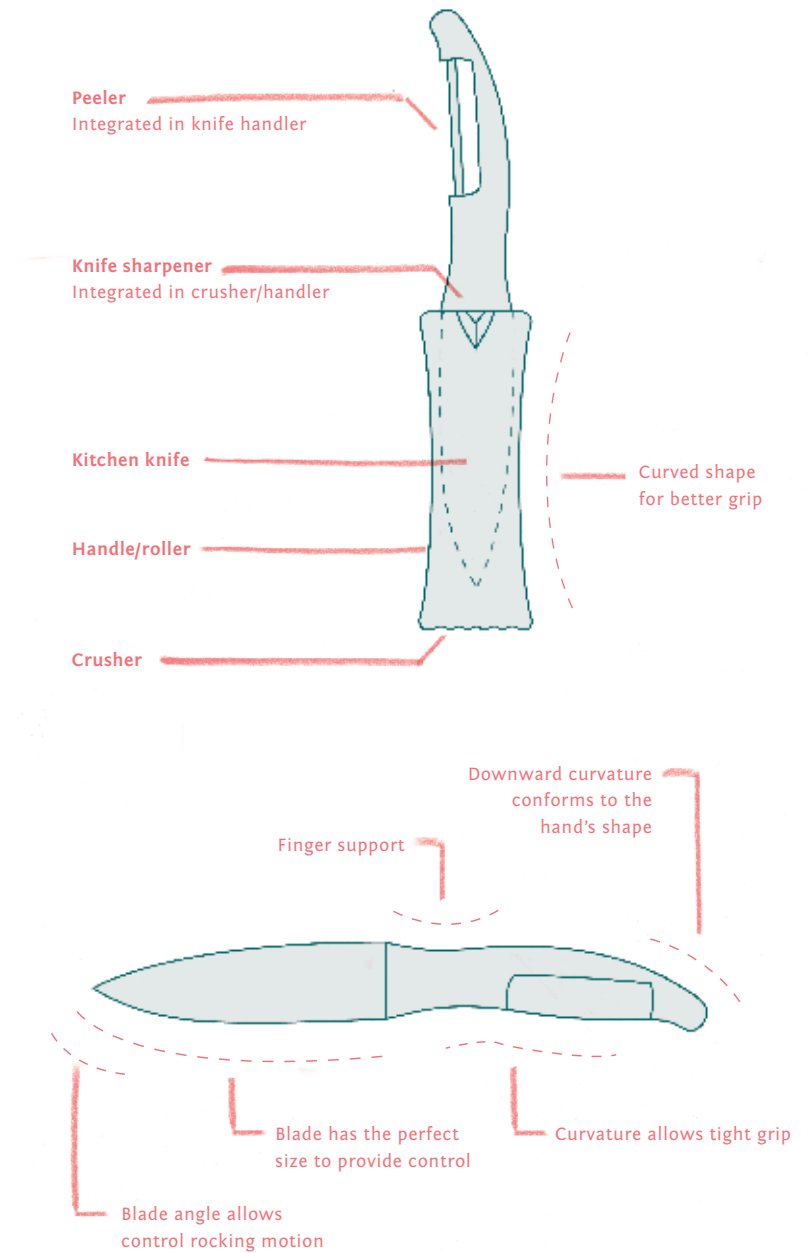
FINANCING

- Licensing partnership with a CPG company looking to generate value in the above ways
- Possible partners: P&G, Black and Decker, Tiangong International Company Limited

DISTRIBUTION

- Identify key partners in key urban areas (given the understanding that purchasing habits for grown-ups looking for knives are set)

Design Features





MOSAIC

EDUCATION THROUGH WOVEN CRAFTS

Kathy Tieu – ART CENTER
Shiva Farrokhi – ART CENTER
Diana Jones – ART CENTER

Joan Kim – YALE SOM
Joyce Lin – YALE SOM

How Does it Work?

The Mosaic program encourages girls to continue their secondary education through a crafts collective where their creativity and artistry is valued along with their schooling. Using a small hand-held loom, girls weave a square patch composed of local materials. Patches are delivered to schools for credit, enabling the girls to continue their education. Girls also receive a story card that reinforces the importance of education and also acts

as a reward for finished patches. Patches are combined to create various items that are ultimately sold at local markets and eventually through overseas fair-market trade associations.

NGOs would oversee the program to make sure that revenue collected from sales would finance the girls' education. Transparency is a must to overcome any child labor infringements.

Business Model Canvas

ROLLOUT PLAN

- Start in a country where both the partner NGO and CPG company have a presence (CARE has a presence in Bangladesh)
- Build funding/momentum within the subsidizing market
- Scale according to NGO presence while researching additional partners

KEY PARTNERS

- NGO/Church/School to chaperone the process (Room to Read, CARE Education (already a Girl Effect partner))
- Banks for girls to protect the money/ensure it's spent on uniforms/books (like a 529 plan)
- CPG company to make and buy the product (subsidy model through primary/secondary markets; subscription model for the materials)

VALUE PROPOSITION

- Social benefit within indirect market
- Income from sales (bags/direct market for looms)
- Income generation for the NGO from the banking and sales
- Brand loyalty from customers who like the social benefit proposition

SOURCING MATERIAL

- India, Pakistan, China (largest producers of textiles)

- Germany/Japan/China/Italy/US (largest exporters of plastic goods)

MANUFACTURING

- Germany/Japan/China/Italy/US (plastic exporters and manufacturers)

MARKETING

- Relies heavily on the partner NGO/church/school
- Incorporation of practices into the curriculum
- Continued use challenge: Can we sustain that market for bags/potholders/whatever they're making

SALES

- No point of sale/using mail for products and materials/direct deposit into safe accounts for girls
- Incentivizing the school: some money for supplies

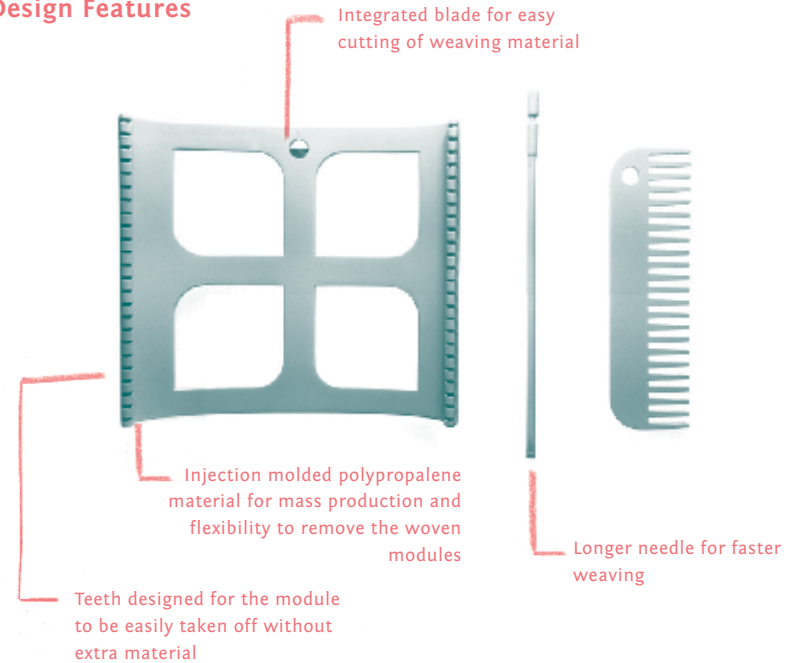
FINANCING

- Licensing partnership with a CPG company looking to generate value
- Possible partners: P&G, Tiangong International Company Limited

DISTRIBUTION

- Through large networked NGO, church, or school
- Mail systems within the local country

Design Features



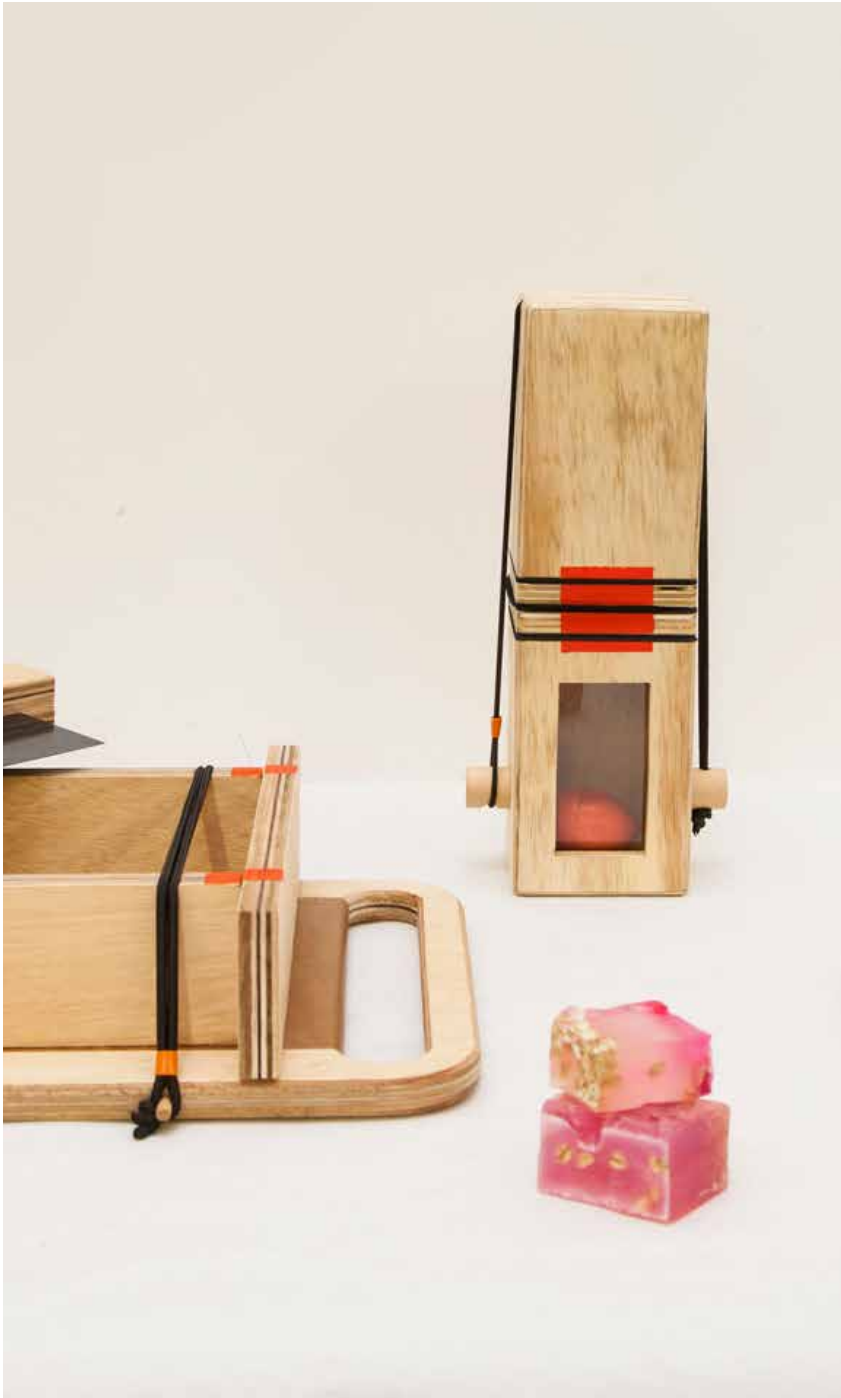
Story Cards

Along with an educational voucher, girls receive story cards for their woven modules. The goal of the story cards is to make girls more confident by illustrating empowering life stories that they can identify with.



Branding

Through branding aesthetics, the end products will tell the story about where the modules were created.



COMMUNITY SOAP-MAKING

SOAP-MAKING COLLECTIVE WORKSHOPS

Brittany Au – ART CENTER
Daniel Bromberg – ART CENTER
Connie Chuy – ART CENTER

Emily Harris – YALE SOM
Tiffany Morris – YALE SOM

How Does it Work?

Young girls team up with older mentors to create soap bars using affordable tools that encourage cooperation, creativity and income generation centered on basic hygiene needs.

To bypass the inherent dangers of soap making, this collective engages the youngest girls to gather ash and water (lye) from their home fires via a safely constructed lye collector. Lye is brought to the workshops where older girls continue the

process using a molding board to form and create the finished bars of soap.

Distribution of the final soap product would start locally and spread. The collective would collaborate initially with one of the many agencies that currently offer adolescent-focused workshops, but the goal is to make the co-ops self-sustaining by passing down knowledge from older to younger girls.

Business Model Canvas

ROLLOUT PLAN

- Phase 1: Start in head NGO's existing country network (e.g. CARE's "Power to Lead" countries: Egypt, Honduras, India, Malawi, Tanzania and Yemen)
- Phase 2: Expand through other NGOs in the Girl Effect network using lessons from head NGO pilot

KEY PARTNERS

- Girl Effect network members (i.e. CARE) one of which will manage bringing the product to girls
- Low-cost woodworking manufacturers

VALUE PROPOSITION

- The experience of using the product to create soap will empower girls with making skills, confidence, and self-esteem to give them agency within their environment.

SOURCING MATERIAL

- Wood, silicon, rubber, gaskets, elastic cords, non-aluminum metal bolts

MANUFACTURING

- Local manufacture of lye sifter and soap mold by established woodworkers using proprietary "Soap Stories" design specs

MARKETING

- Girl Effect network members will use existing marketing channels to distribute educational materials on how to use lye sifter

SALES

- Sifter given to girls by Girl Effect network members who also facilitate workshops; partner orgs offer complementary initiatives (i.e. hand washing, hygiene, & entrepreneurship)

FINANCING

- NGO uses donor funds to support the purchase of sifters as part of education through making, gender-empowerment or hygiene
- Contracts local vendor for production

DISTRIBUTION

- Products will be purchased from local manufacturers and transported to lead NGO office, where they will be stored until delivery to girls at workshops

User Scenario



1 Go to workshop and receive tool.



2 Learn about soap-making and safety.



3 Learn about the different parts and functions of the tool.



4 Bring tool home with them.



5 Collect ash and find mesh-like filter.



6 Once they have collected enough lye they can return to the workshops.



7 Make soap using molds.



8 Sell soap and benefit and fund tool.



FLO

WASH, DRY AND CARRY KIT FOR SANITARY PADS

Lori Nishikawa – ART CENTER
Carolina Rodriguez – ART CENTER
Therese Swanepoel – ART CENTER

Charlotte Wong – YALE SOM
Ben Freedman – YALE SOM

How Does it Work?

Menstrual cycles often result in girls missing school, infection, illness and isolation. With disposable pads too costly, the Flo kit presents an inexpensive system for cleaning, drying and carrying reusable menstrual pads so girls can feel confident and in control.

When away from home, a girl wears light-weight carrying pouch under her garments where new and used pads can be comfortably hidden. Back at home girls privately clean used pads with the affordable and small-sized washer/dryer unit.

Business Model Canvas

ROLLOUT PLAN

- Test market w/existing subsidiary and established demand (e.g. Brazil)

KEY PARTNERS

- License to Rubbermaid for manufacturing/distribution
- DuPont for Tyvek licensing
- RNC Co for marketing/sales

VALUE PROPOSITION

- Consumer: easier, more sanitary + discrete cleaning and carrying method
- Partner: new market opportunity

SOURCING MATERIAL

- Leverage existing network out-of-country
- Plastic, metal wire, Tyvek

MANUFACTURING

- Leverage existing network out-of-country
- Patented mold design

MARKETING

- RNC Co: product positioning, target consumers/purchasers, user training, marketing analytics

This hand-operated device uses opposing forces and small amounts of water to clean and spin dry; it could be created out of found objects or purchased as a final product.

Key potential business partners would be Tyvek for carrying pouches and Rubbermaid for producing the washing design and deliver through their distribution channels.

SALES

- RNC Co: est. retail + partner networks (household + personal care goods), pricing strategy, inventory management, after-sales support

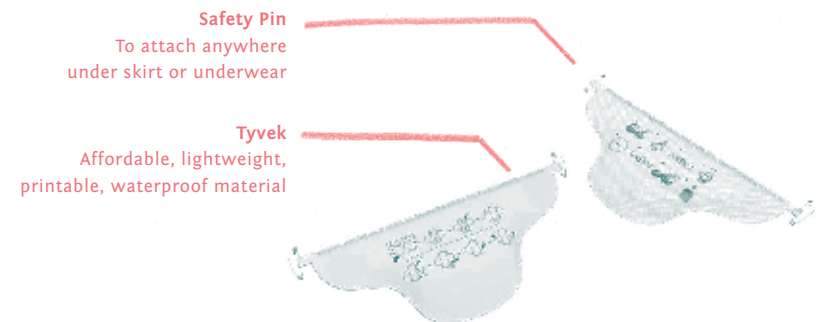
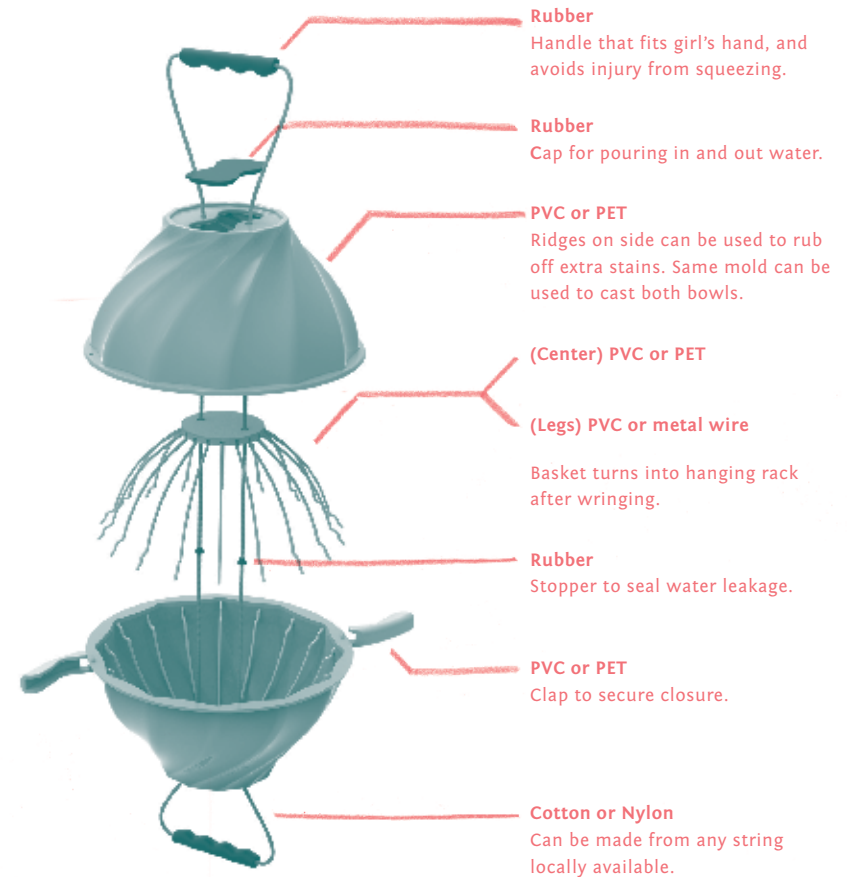
FINANCING

- Licensing of mold design

DISTRIBUTION

- Partner ships products to local subsidiary (by sea)
- RNC Co handles in-country transportation from port of entry to POS

Design Features





ASALI COLLECTIVE

BEEKEEPING COOPERATIVE

Annie Shin – ART CENTER
Mariana Somma – ART CENTER
Ong Wongnawa – ART CENTER

Rebecca Blum – YALE SOM
Laura Onelio – YALE SOM

How Does it Work?

This beekeeping cooperative employs an environmentally responsible method of income generation to teach young girls the value of cooperation, friendship and mentorship. The collective brings together girls of all ages; girls transition to new responsibilities in caring for the hives as they get older.

The collective features a unique hive design that is attractive to girls and created out of easy-to-assemble injected molded plastic

Business Model Canvas

ROLLOUT PLAN

- Phase 1: Prototype in Uganda + Rwanda
- Phase 2: Scale up across Africa
- Phase 3: Expand to Latin America

KEY PARTNERS

- Initial Donor: Girl Scouts
- Local partner: Bee World Project
- Curriculum: Bee Girl Project

VALUE PROPOSITION

- Local Partner: building female farming community
- Girls: income, community, confidence, business skills (fun, education, financial literacy)

SOURCING MATERIAL

- Out of country: ABS injection mold plastic joints
- In country: wood, clay, bees

MANUFACTURING

- Girls assemble the modular hives – learn skills and reduce cost
- Joint parts injection molded in China

MARKETING

- Local partner: works with community leader to create collectives and market products

and local materials. The smaller-than-typical swarm catcher is portable, lightweight and is ergonomically designed for young girls.

Financed by charitable organizations and donations, the collectives will earn credits for sales and eventually pay back the start-up costs for the tools/materials, making them self-sustaining. After short-term markets have been saturated, the collectives could form partnerships with global distributors.

SALES

- Local markets to start
- As program develops, global sales

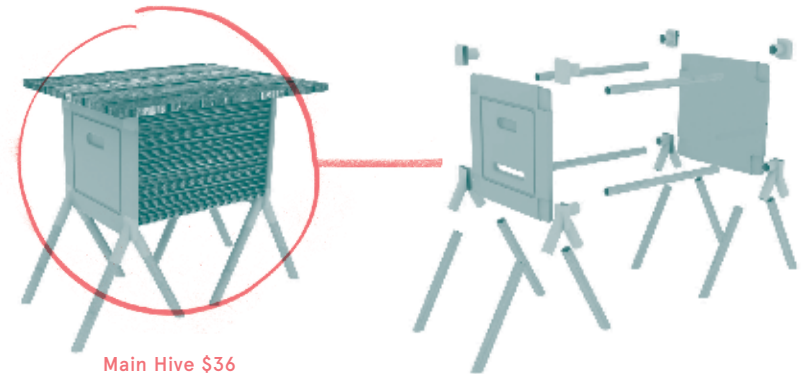
FINANCING

- Phase 1: Hives fully subsidized
- Phase 2: Hive Collective pays back within 3 years
- Phase 3: Self-sustaining within 3-5 years

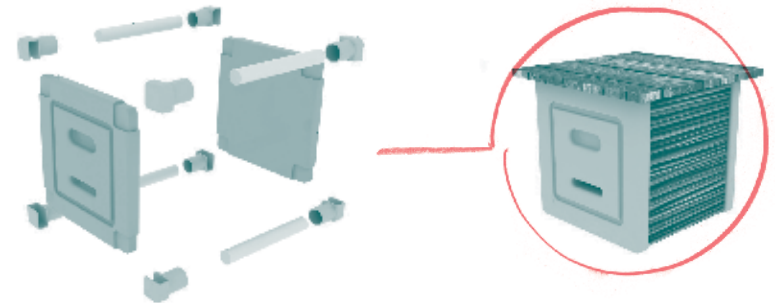
DISTRIBUTION

- Local partner distributes
- Most expensive part of process

Design Features



Main Hive \$36



Swarm Catcher \$15

- Lightweight structure
- Modular joints
- Fun to assemble
- Local materials
- Grows with you
- Easy to handle
- Portable learning
- Designed for playful education



TOMBIKIT

PRE-MENSTRUATION KIT

Andrea Cappelli – ART CENTER
Mona Gbaizadeh – ART CENTER
Thokozani Mabena – ART CENTER
Kei Yumino – ART CENTER

Alison Joseph – YALE SOM
Eric Rucker – YALE SOM
Kendrick Strauch – YALE SOM

How Does it Work?

With a lack of knowledge, privacy and resources, young girls often avoid school during their menstruation cycle, which could lead to educational setbacks. Engaging girls before they start puberty, the Tombi kit would answer questions, alleviate fears and provide tools for girls to discreetly take care of themselves.

The kit's carrying container includes: a journal (with picture prompts, a calendar and blank pages), sustainable menstrual

pads, and a smaller travel bag (with pouched area for used pads). The kit would be locally manufactured and assembled, featuring familiar cultural fabric.

Ambassadors would distribute the kit, provide educational sessions and be the source for refilling the kit. The business model calls for a small pilot project using crowdfunding sources in order to observe all facets from distribution to implementation.

Business Model Canvas

ROLLOUT PLAN

- Proof of Concept (1 year): Reach 400 girls across 4 sites
- Site #1: Bulawayo, Zimbabwe
- Start-up capital from Kickstarter
- Partner with SHE (Sustainable Health Enterprises)

KEY PARTNERS

- Publisher: Penguin subsidiary or Damaría
- Senne Media
- SHE (Sustainable Health Enterprises)
- Schools

VALUE PROPOSITION

- Publisher: Project TOMBI pays for services
- SHE: Increase distribution reach and brand recognition
- Schools: keep girls in school

SOURCING MATERIAL

- Box & Bag: locally sourced wood and fabric; glue
- Journal: managed by publisher
- Pads: materials sourced by SHE

MANUFACTURING

- Box & Bag: Made by Project TOMBI (simple design)
- Journal: Published in Johannesburg

- Pads: manufactured by SHE
- Assembly: Project TOMBI

MARKETING

- Project TOMBI Ambassadors
- Teachers help build trust with girls and parents
- Partner with SHE

SALES

- Kits given away for free at schools by Project
- TOMBI Ambassadors and Teachers
- Ambassadors sell replacement pads

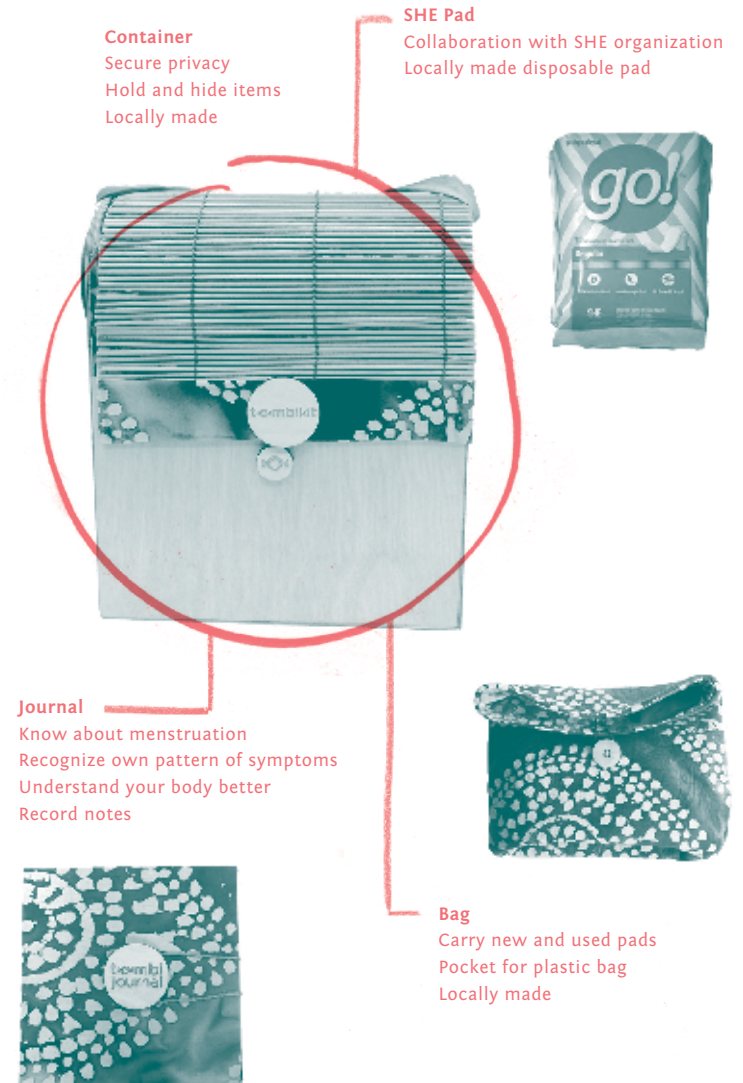
FINANCING

- \$10,000 seed funding for Proof of Concept
- Kickstarter campaign for start-up capital, grants or partnership for Phase 2

DISTRIBUTION

- Project TOMBI Ambassadors distribute kits to schools

Design Features



DESIGNERS AS TRANSLATORS

My message to the students was that this is another role that designers have to play: being the translators of large and diverse bodies of knowledge.. ”

Karen Hofmann

PHOTO COURTESY OF THE ART CENTER COLLEGE OF DESIGN

Product Design Chair, Art Center College of Design

“So, Tom...we are not going out into the field to do primary research?” That was the big, uncomfortable question that was asked by faculty during the planning stages of the Girl Effect project and one that was repeated by students during the kickoff. We were so used to challenges that included having direct input from end users and a legacy of Designmatters projects, such as Safe Agua, where field research drove idea creation and product innovation.

“We are supposed to build off of the proposed business model concepts that fuseproject developed from their research in Rwanda for the Girl Effect?” While inspiring to have firsthand access to fuseproject’s work, it was initially daunting to imagine how our students could come up with ideas that this award-winning studio had not already thought of.

“And we are to collaborate with MBA students at Yale’s School of Management?” Art Center students have successfully collaborated with MBA students in past projects face-to-face, but not distance based, so this was an exciting but anxious twist on an already complex project.

What an insane set of challenges—the time frame, the approach, the global context and teaming up with business students on the other side of the continent. This was a somewhat new process and an entirely new approach to a sponsored transdisciplinary studio coupled with the desire to produce meaningful ideas and inventive solutions for the Girl Effect partners.

My message to the students was that this is another role that designers have to play: being the translators of large and diverse bodies of knowledge, and making informed decisions based on someone else’s interpretation of the user experience. These restraints reflect real-world innovation inside of large corporations and start-up ventures alike. What a great opportunity for our students from several different disciplines, Yale students included, to remove the titles from their major of study and become teams of inventors and innovators.

While the first few weeks remained uncomfortable as the course was navigating new territory in methodology and collaborative logistics, what emerged in the end was a portfolio of meaningful ideas to empower girls and young women in multiple regions around the world. We are grateful that Tom De Blasis brought this Girl Effect challenge to Art Center as it has informed our students, faculty and educational leadership as to the critical translation role designers are playing in today’s global complex challenges.

PARTNERS
AND TEAMS

THANK YOU!



OUR FRIENDS
FROM YALE



ART CENTER COLLEGE OF DESIGN

DESIGNMATTERS DEPARTMENT

Dr. Mariana Amatullo, Ph.D., Vice President and Cofounder
Elisa Ruffino, Director
Jennifer May, Associate Director
Carolline Kim, Coordinator

HOST DEPARTMENT

Karen Hofmann, Product Design Chair

FACULTY

Sherry Hoffman, Humanities & Sciences
Krystina Castella, Product Design
Arden Stern, Humanities & Sciences

STUDENTS

Brittney Au (Graphic Design), Daniel Bromberg (Product Design),
Andrea Cappelli (Photography), Daniela Cardona (Product Design),
Connie Chuy (Environmental Design), Shiva Farrokhi (Grad ID),
Mona Gabaizadeh (Graphic Design), Mariko Iwai (Product Design),
Diana Jones (Advertising), Sohyun Kim (Environmental Design),
Thokozani Mabena (Transportation Design), Marie Nguyen (Photography),
Lori Nishikawa (Product Design), Carolina Rodriguez (Product Design),
Annie Shin (Environmental Design), Mariana Somma (Grad ID),
Therese Swanepoel (Grad Environmental Design), Kathy Tieu (Product Design),
Tatijana Vasily (Photography), Ong Wongnawa (Product Design),
Kei Yumino (Product Design), Ekin Zileli (Grad ID).

TEACHING ASSISTANTS

Kristina Ortega, Art Center College of Design, Media Design
Adriana Crespo, Art Center College of Design, Illustration

YALE UNIVERSITY SCHOOL OF MANAGEMENT

FACULTY

Dr. Rodrigo Canales, Associate Professor of Organizational Behavior
Anthony Sheldon, Lecturer in the Practice of Management
and Executive Director of the Program of Social Enterprise
Dr. Amy Wrzesniewski, Associate Professor of Organizational Behavior
Dr. Kyle Jensen, Director of Entrepreneurial Programs and Lecturer
in Entrepreneurship

STUDENTS

Rebecca Blum, Ben Freedman, Emily Harris, Alison Joseph Joan Kim,
Joyce Lin, Tiffany Morris, Laura Onelio, Disha Patel, Eric Rucker, Kendrick
Strauch, Charlotte Wong.

PARTNERS

Tom De Blasis, Design Innovation Director, Nike Foundation
Jade Dalton, Program Manager, fuseproject
Noah Murphy-Reinhertz, Director of Industrial Design, fuseproject
Andrea Small, Strategy Lead, fuseproject
Casey Lewis, Product Designer, fuseproject
Liam Adelman, Senior Industrial Designer, fuseproject

GUEST SPEAKERS

Marika Shiori Clark, Former IDEO.org Fellow
Elizabeth Gin, Associate User Experience Researcher, LinkedIn
Thema Monroe-White, Senior Consultant at Sage Fox Consulting
Cayla McCrae, MFA Graduate, Art Center College of Design
Tina L. Zeng, Media Design Practices, Art Center College of Design

PHOTOGRAPHY Lucia Loiso and Adriana Crespo
BOOK DESIGN Adriana Crespo
COPY EDITOR Alex Carswell
PRINTER Typecraft Wood and Jones, Pasadena, CA

