



## GiraDora Frequently Asked Questions

**What is GiraDora?** GiraDora is a human-powered washer and spin dryer that increases efficiency and improves the experience of hand-washing clothes. The user sits on the drum-like appliance and pumps the pedal with her foot, which agitates, cleans, rinses, then spins-dries clothes.

**HEALTH BENEFITS:** GiraDora's upright ergonomic operation reduces chronic back pain. Its ability to wash, rinse and spin-dry clothes removes hands from painfully cold water, and eliminates risk of tenosynovitis from wringing clothes.

**PRODUCTIVITY & TIME SAVINGS:** GiraDora reduces the time to wash a load of laundry from 1 hour by hand to 3-5 minutes.

**WATER SAVINGS & ECOLOGICAL BENEFIT:** GiraDora saves money, by using 1/3 less water than hand-washing, and facilitating re-use of water.

**BUSINESS PLAN/IMPLEMENTATION:** GiraDora's innovative business plan seeks to provide micro-entrepreneurs with 3 revenue streams to supplement income: laundry services, renting, sales.

**Who made this project?** Currently, Team GiraDora is comprised of 3 full time students: Alex Cabunoc (Product Design Major at Art Center College of Design), Ji A You (Environmental Design Major at Art Center College of Design), Jonathan Beckhardt (MBA Candidate at the Marshall School of Business at the University of Southern California). In addition, we have the academic support of the following:

Penny Herscovitch and Daniel Gottlieb (Environmental Design Department, Safe Agua Initiative Lead Faculty, Art Center College of Design) Mariana Amatullo (Vice President and Co-Founder Designmatters Department) and Adlai Wertman (Professor of Clinical Management and Organization, Founding Director of the Society and Business Lab). GiraDora is closely supported as well by the Innovation Center team of Un Techo para Mi País under the direction of Julián Ugarte.

**Are you a company?** Not yet! Everyone on Team GiraDora is a full time student.

**Where can I buy a GiraDora?** We are currently prototyping and field-testing the most recent design. We will keep you posted when the product is ready for purchase!

**When can I buy a GiraDora?** We are planning a pilot program in select communities for the summer of 2013.

**Can you let me know when it will be available?** Yes, we are happy to add you to our mailing list to announce milestones, big news or events over the upcoming year. If you have a Facebook account, you can also "Like" GiraDora to learn about updates as they happen or post questions and comments. <https://www.facebook.com/GiraDora>

**Are you looking for money or investors to develop this further?** Yes. While we have received several grants to support the research and development of GiraDora, we continue to seek additional sources of capital that will allow us to bring the product to market. Please contact us if you are interested in supporting the development of GiraDora.

**Can I buy rights to produce GiraDora or distribute GiraDoras?** At this time, we are not selling the rights for third-parties to produce or distribute GiraDoras.

**Are you looking for partners?** We will announce opportunities as they arise. However, feel free to reach out to us if you believe you have an expertise that is the right fit for GiraDora.

**What does GiraDora mean?** Loosely it translates in Spanish to "Spinning apparatus/machine," from the Spanish words "gírar" (to spin) and "lavadora" (washing machine).

**Do you need testers for GiraDora? Can I be one?** We will conduct testing in Spring 2013 with Base of the Pyramid families in Peru and Chile, via our NGO partner. Stay tuned for updates on future opportunities for you to test GiraDora when we complete the next rounds of prototyping!

**Who are the manufacturers?** Current prototypes have been hand-built. We will be conducting research over the next year to identify manufacturing partners.

**Are the pictures the final product?** The pictures that you may have seen online are pictures of the working prototypes. The prototypes were created to approximate the proportions, test the features and provide a proof-of-concept. The final design will evolve from these prototypes.

**How many prototypes have you made?** The pictures shown on the internet represent the 6th working prototype iteration, as of August 2012. Over the next 12 months, we plan to make at least 2 more iterations, and to field test 10-20 of the most advanced iteration.

**Where will you sell GiraDora?** Initially, the product will be available in Peru and Chile. Ultimately, GiraDora will be available wherever it can have an impact.

**These would be great for Western markets as well, like hunters, campers, apartment dwellers, people living off grid, people wanting to save money, college kids, RVs, etc... Do you have plans to make it available to them?** We agree. While we are currently focused on bringing this product to market in BoP communities, we intend to develop a model for this market as well.

**Are they going to be available in the United States?** We hope so!

**Are there D.I.Y. (Do-it-yourself) plans available?** While the working prototypes were hand-assembled of pre-existing components, the final product will be fully manufactured, rather than available as a D.I.Y. plan. We will keep you posted if D.I.Y. kits or plans become available at a future time.

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**Why is GiraDora's capacity so small?** We kept the size of GiraDora's capacity similar to the capacity that was considered a load of laundry in Peru, about the amount of clothes that fit into a washbasin. This is also a manageable volume that the user can comfortably operate when the weight of the water is also included, and a manageable amount of clothing to carry.

**How well does it clean clothes?** Our most recent prototype cleans clothes to a level that our field testers in Cerro Verde, Lima, Peru and the campamentos of Santiago, Chile considered satisfactory. We are striving to improve GiraDora's cleaning power, and our next iterations of prototypes will improve this function through a new gearing system.

**Have you thought about two pedals or attaching it to a bicycle?** Yes, we have considered these options. One pedal was chosen to give the user the greatest sense of stability. By keeping one foot on the ground, the user can stabilize themselves while pumping the pedal with their other foot, and keeping their hands free. With both feet off the ground, there can be a tendency to feel unsteady or precarious atop the unit, especially while pedaling. We also considered attaching it to a bicycle, however this solution would detract from the design in four major ways: First it would add to the cost. Second, it would add to the complexity of the design, and therefore increase the potential to break down. Third, it would add much more to the product footprint, for a product that is designed for homes smaller than 300 square feet with 4 or more inhabitants. Finally, it would impact the flexibility of the unit when not being used to clean clothes. GiraDora has been designed with idea that it could be used as secondary seating when needed. It needs to be light, easily maneuverable and comfortable to sit upon.

**Why are you introducing it to Peru?** We believe in designing for community needs. We are introducing GiraDora in Peru because we have been working closely with Peruvian communities to identify their needs. GiraDora, is not exclusive to Peru, and can make an impact in other communities around the world. We hope to spread distribution to any and all locations where such a device is desired.

**Do people in the slums of Peru actually wash clothes for 6 hours a day?** It is quite easy to take for granted how much easier a modern washer and dryer have made the chore of washing clothes. We observed and participated with several families while they washed their clothes by hand. It was an extremely labor intensive job requiring several steps. A single "load of laundry" -- about the equivalent to the amount of clothes that can fit in a 10 liter plastic washbasin -- takes about 1 hour to wash, rinse three times, and hang dry. A large family would often have several of these basins to do on any given day.

**Why do they do so much laundry or so often?** Often times it is not that families have so much laundry; it is that the environment requires the frequent washing of clothes. Most children in Cerro Verde had one or two school uniforms, which they are required to wear in order to attend school. The first uniform is provided by the government and a second uniform is purchased by the family at a heavy financial burden. This meant that the uniforms are often in a rotating pattern of use and wash several times a week. This often holds true for men's work uniforms. Additionally, living in a community that lacked paved roads means that conditions are very muddy in the winter and dusty in the summer, contributing to the frequency of clothes-washing. And the amount of laundry that can

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be done on any given day is also governed by the amount of clothesline available to dry the clothes. Often times, dirty clothes have to wait to be washed until more clothesline would be available later in the week.

**Do you think that they would do this in front of a TV? Do they even have TVs?**

Poverty is not a simple state of being, and just because one is poor it does not mean that they don't have taste or desire. From our observations in slums in Lima, Santiago and most recently in Bangalore the television is a highly desired and prized appliance. Regardless of the condition of families' housing, the vast majority of homes had at least one television and many had additional equipment such as DVD players and satellite dishes. So yes, in that way we believe that even people living very humbly in these types of communities would have the same desire to perform chores while watching their favorite television shows, just as anyone else might too. GiraDora allows for this, through its all-in-one containment of the washing cycles. Currently the women wash clothes outside because of the large amounts of spilled water and general mess it can make. But they did express a strong desire to do their laundry inside during inclement weather if that option was available.

**Can people living in slums really afford \$40? It might as well be \$1,000.** Coupled with the financing opportunities we intend to package with sales of the product, we believe a significant majority of the people in the communities we are targeting will be able to afford GiraDora. We performed our research in Cerro Verde, a community we believe is demographically representative of the communities we will be targeting. While people in these communities typically live on \$4-10 dollars/day, nearly all households in this community own appliances in price ranges similar to and greater than GiraDora, such as gas stoves, televisions, and DVD players. People in these communities are generally familiar with micro- financing opportunities and other ways of purchasing higher priced items that add value to their household, such as refrigerators. Furthermore, we believe that many people will see GiraDora as a capital expense that will more than pay for itself. There are already women who offer laundry services, which they currently do by hand. The GiraDora will allow these women to handle a greater volume of laundry in a shorter amount of time, significantly enhancing their earning power.

**How poor is Peru really?** Like any country, there are some areas that are relatively well-off and other parts that are poorer. Cerro Verde was a very poor part of the city. The inhabitants lacked running water and basic sanitation facilities. Most of the people we interacted with in that community lived on \$4-\$10 per day.

**Do you believe that GiraDora will break the cycle of poverty?** Poverty is an enormous and multi-faceted problem. We do not believe that a washing machine alone can be the solution, however GiraDora may be the necessary advantage to help a family begin to break the cycle on their own. Imagine a situation in which GiraDora allows a mother to not only keep her child's school uniform clean, a requisite for attendance, but also provides supplemental income that could be put towards the fee for a better school or tutoring or medicine to keep that child healthy and in school. Perhaps that child is able to academically succeed and be the first in her family to finish high school. Perhaps she is even able to go to college. And in two generations you have transitioned from a mother who was largely illiterate to a highly educated daughter. Now this is an ideal situation, one of many possible outcomes, but it is this type of small advantage that we hope to afford families.

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**Why are you as an American/Western “parachuting” into Peru to design more stuff?** We understand that there is a lot of concern about westerners designing products for other countries that are supposed to be impactful but often end up being abandoned. That is why from the very beginning we worked closely with a South American NGO, TECHO (<http://www.techo.org/en/>) that is well respected in the area and has over 14 years experience. In addition, we made it a point to include the community and the end users in a process called co-creation -- using our research and observations from field research and taking into consideration their input and opinions into the design as well. We have maintained communication with our NGO partner and have performed 2 rounds of field testing in South America, with at least 2 more trips planned, ensuring a great deal of interaction between the design team and the end users.

**Who did you work with?** We worked with and continue to work with our NGO partner, TECHO (<http://www.techo.org/en/>) and members of the community in Lima and Santiago.

**Who is Un Techo Para Mi Pais?** Un Techo para mi Pais (now known as “TECHO”) are a well established and respected NGO originally founded in Santiago, Chile. Best known for their work relating to housing, they also work on ways to create impact through innovation, design, and job creation. For more information please visit <http://www.techo.org/en/> and <http://www.centrodeinnovacion.org/Hola1.html>

**What is Safe Agua: Peru?** Safe Agua: Peru is the second class from DesignMatters at Art Center College of Design funded in part by a grant from NCIIA that sent design students to South America to work with a prominent NGO to design products to help alleviate the burden of water poverty. The goal was to create products that could be scalable up to 1 million people and where possible, generate additional income. The initial class spent 2 weeks doing field research in a slum in Santiago, Chile followed by 14 weeks of design and development. The second class had a similar structure but instead spent two weeks in a slum in Lima, Peru.

For more information about the Safe Agua: Peru class, we encourage you to watch the 9-minute documentary “Hands in the Mist” by Erik Anderson, shortlisted for the Young Directors Award at the 2012 Cannes Film Festival: <http://vimeo.com/42475212>

And check out the Designmatters website: <http://www.designmattersatartcenter.org/proj/safeaguaperu/>

**Why not subsidize GiraDora and make them free for people?** We believe that subsidizing is problematic for many reasons. Should any part of a business model rely on subsidizing, then it is not sustainable as it is dependent on hand-outs. We also believe that if a product is free to the user then it has no sense of value to that user. However, if we can create a beneficial and affordable product that people desire, then we can create a business that can be sustaining and impact more people over a much longer time frame.

**What do you think about the “buy one-give one” model like Tom’s Shoes?** We believe that like subsidizing, the “buy-one, give-one” model is also problematic. As stated above, anything that is free has no value. In addition this model does not provide as many benefits for job creation, and can even take business away from local entrepreneurs.

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**So you won’t consider subsidizing at all?** Not necessarily. There is the possibility of selling GiraDoras at a higher price in the Western markets to cross-subsidize the cost of the product and/or education and marketing in the poorer markets in other countries.

**Have you considered crowd-sourced funding like Kickstarter for GiraDora?** Yes, we have. But those types of campaigns require a hard number to aim for as a goal, such as initial manufacturing costs. Perhaps in the future as we get closer to bringing GiraDora to market, a crowd-sourcing campaign like Kickstarter would be a very real possibility.

**Can I buy one or more to donate?** Yes, once they are available. However, you ultimately would have to be responsible for shipping the unit and any related costs to whomever you choose.

**Do you have a website just for GiraDora?** Not yet, but this is a great idea! For now, check out: <https://www.facebook.com/GiraDora>

**Why not just sell manual washers that have been on the market for years instead of designing and making GiraDoras?** While other manual washers are already on the market, we designed GiraDora specifically for this demographic. Quite often the existing models are too expensive and don’t address many of the unique challenges faced by the women in these communities. We hope to bring them a robust and versatile device that they can feel confident in. GiraDora goes a step further -- since its inception we have incorporated income generating opportunities and ways to support these endeavors.

**Why don’t you “open source” GiraDora?** Open sourcing is a great way to get many eyes on a project and generate a lot of creativity and innovation because the project belongs to everyone. However, we believe open sourcing is not a good fit for GiraDora because if something belongs to everyone, it also belongs to no one. When we first set out on this project we made a commitment to do our best to design a product that would help alleviate the burden of water poverty that was scalable up to 1 million people. With GiraDora, we believe that we might actually have a chance at doing just that. But if we were to open source the design of GiraDora so much of what is needed to make this product successful would be put at risk. Open sourcing is great because it gives anyone the opportunity to work on a design itself, but who would be responsible for the other components that make a successful product? We cannot open source manufacturing, distribution, inventory, or quality control. We have a responsibility to the people at the base of the pyramid to bring them a quality product that will provide real and valuable impact on their lives. The only way to accomplish this is to ensure quality along all steps of production from the manufacturer all the way to the customer. Instead we are relying more on the processes of co-creation and field research to ensure that the desires and expectations of the end users are incorporated into the final design.

**Where can I contact you if I have more questions?** Please feel free to email me at [CabunocDesign@gmail.com](mailto:CabunocDesign@gmail.com) Additionally, GiraDora now has a facebook page at <https://www.facebook.com/GiraDora>