



Savings Learning Lab



Human-centered design in international development

A review of what works and what doesn't

Date: 12 March 2021

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Acknowledgements

This paper was written by Rathi Mani-Kandt, Senior Human Centered Design Specialist and James Robinson of Itad, with inputs from team members of the Savings Learning Lab, Diana Dezso, Leonie Beckmann, Melanie Punton and Helen Bailey. The authors are grateful to all those who gave generously of their time for consultations and interviews which helped inform the direction and content of this paper. We are especially thankful to our Savings Learning Lab partners - Weselina Angelow, Program Director for Scale2Save at the World Savings and Retail Banking Institute (WSBI) and Hanna Laufer – who leads the MREL workstream of the Savings at the Frontier program at Oxford Policy Management (OPM). Our thanks also go to Nandini Harihareswara of UNCDF, Antonique Koning of CGAP, Jayshree Venkatesan Independent Financial Inclusion Specialist, Pum Sophy of AMK Microfinance, and Micheal McKay, Human-Centered Design Specialist for their insights and contributions to the shaping of the topic.

The Mastercard Foundation's Savings Learning Lab

The Mastercard Foundation Savings Learning Lab is a six-year initiative implemented by Itad, in partnership with the SEEP Network, that supports learning among the Foundation's current savings sector portfolio programmes: Scale2Save, implemented by WSBI and Savings at the Frontier, implemented by OPM.

The Savings Learning Lab support learning among the partners and the wider sector through the generation, synthesis, curation and dissemination of knowledge on savings focused financial inclusion.

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List of acronyms

3SI	Supporting Sustainable Sanitation Improvements (3SI)
A360	Adolescents 360
BMGF	Bill and Melinda Gates Foundation
CGAP	Consultative Group to Assist the Poor
CHW	Community Health Worker
HCD	Human-Centered Design
IUD	Intra-Uterine Device
LQ	Learning Question
MSI	Marie Stopes International
PSK	Population Services Kampuchea
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WSUP	Water & Sanitation for the Urban Poor

Executive summary

Introduction/purpose

Human-centered design (HCD) is a creative problem-solving approach that puts the customer or beneficiary at the center, with the objective of getting beyond the assumptions that prevent effective solutions. It is one of a variety of innovative techniques, methods and mindsets that have emerged in design practices in the private sector, where designing products and services has long been crucial in developing successful and profitable businesses. Collaboration, empathy and co-creation are all key components of this creative process.

Citing the success¹ of these creative problem-solving approaches in the private sector, 'social design' has emerged as a way to fight poverty in international development. The purpose of this paper is to take a critical look at the application of the HCD process in international development, across multiple sectors, to understand what is working and what is not working, and to see under what conditions the application of HCD could lead to better outcomes. Details of our learning questions and approach are outlined in the full document but in this summary we cover four areas: what has worked well in applying HCD to international development; what hasn't worked well in applying HCD to international development; critical success factors and some ideas on what organizations should consider when taking forward HCD.

What has worked well in applying HCD to international development

A literature review and stakeholder interviews identified several important aspects of HCD that have worked well when applied in international development. HCD has been successful in shifting the mindset of practitioners to be more user-focused, creating more empathetic and responsive design teams that are willing to try more and different types of ideas. Methods have worked well in international development programs when the problem or the design challenge is narrow or discrete, like improving marketing tools, removing barriers to usage in the customer journey, optimizing existing products or understanding if there is value in a product or idea. An overview of key findings of what has worked well is below.

When there's a narrow problem or focus

A lot of good examples of HCD being effective have come when it has been used with a relatively narrow focus, to overcome specific problems.

Building understanding of how clients use and talk about products

HCD's focus on empathy-building as a key method in the early design phase has led to deep understanding of how a customer would use and understand specific products and make them more user-centered.

Ideating and co-creating potential solutions for a specific problem

HCD has encouraged ideation/co-creation of products and services with customers to generate innovative ideas. It has also identified existing products and services, combining these in a way that works for users.

Prototyping and early testing

HCD methods such as mapping, prototyping and testing have led to product and design efficiencies.

¹ In 2015, the Design Management Institute created a design value index, an attempt at measuring the value that a good design and innovation process or culture can bring to a business. It found that, 'Over the last 10 years design-led companies have maintained significant stock market advantage, outperforming the S&P by an extraordinary 211%.'

Box 1. AMK's use of HCD

AMK, a large microfinance institute based in Cambodia, mapped in detail its customers' cash flow through HCD methods, which challenged its assumptions around customers' ability to pay. As a result, instead of offering a standard one-year agricultural loan with monthly payments, it offered a flexible credit line that customers were able to draw down from over two years. This meant better management of payments along the seasonality of their income, incurring fees only when the credit was needed – but this had never been done before. Despite concerns about the risk this flexibility would create, the credit line product has proven over more than a decade to perform as well as, if not better than, the other credit products.



What hasn't worked well in applying HCD to international development

While HCD has been good in solving more narrow design challenges, it has not necessarily proven to solve large-scale systemic problems such as poverty, income inequality and restrictive social norms. In addition, current funding/management mechanisms do not promote ongoing investment in iteration; thus, there is limited evidence that design teams can tackle feasibility, viability or scale issues from the beginning. Below, we outline key areas that have not worked well.

In developing feasible, viable and scalable ideas

HCD's application in development has had success in improving product desirability but there is less evidence of success at taking complexity into account from the beginning and ensuring feasibility, viability or scalability of solutions.

When design phases are not followed up appropriately – often because of cost

There are examples of initial concepts being brought to market without continuing their use of an HCD approach in the follow-on stages, such as piloting, and they have not gained traction. Meanwhile, HCD processes are often costly and follow-up iterations may not be included in budgets.

When organizations aren't equipped to use HCD

The literature indicates that, for HCD to be effective, organizations adopting an HCD approach need certain things in place to be able to adopt its findings. These include an adaptive mindset and flexibility in design and management teams to fully embrace recommendations. These characteristics have not always been considered when choosing partners.

The insights HCD processes generate are often not local enough

The implementation of HCD requires highly specialized expertise that is not yet readily available in all countries. Many designers in the projects reviewed are not local or are considered 'outsiders,' and therefore the insights are not local enough.

Box 2. The A360 program

Design teams often have a short time in the country and then they return to their headquarters and support the process remotely. In the A360 program, insight synthesis was conducted separately by country teams and the design partner, who led the process from San Francisco. This led to concerns that important public health and contextual issues were not sufficiently considered when developing the insights. The balance of ownership shifted during the prototyping stage, with decision making primarily driven by country teams in collaboration with the design partner.

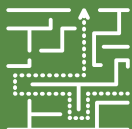








Image: iStock.com/ FrankRamspott

What should organizations consider when taking forward HCD

Our review looked across the different sectors and found the common successes and challenges laid out in the previous sections. These findings enabled us to identify some of the 'critical factors' in establishing successful HCD projects. We present these below, as well as some key considerations for those thinking of implementing or funding HCD programs in the future.

Use HCD for the right kind of problems		As outlined in the previous sections, HCD can play an important role in developing new ideas or concepts, or adapting products and communications to better engage potential users. However, it will not be appropriate in all situations, and the more complex the problem the more consideration of whether and how HCD can play a role will be necessary.
HCD needs to incorporate more criteria for feasibility, viability and scalability earlier in the process		Desirability tends to be the focus of all innovation processes in the earliest stages. However, including feasibility, viability and scalability criteria from the very beginning in the design process can increase the potential for success.

<p>Working with organizations that have a sustained commitment – of both human resources and funding – to iteration & testing is important</p>		<p>Our review has shown the critical importance of working with the right organizations to deliver these projects. Consistent feedback was that the providers who had gained the most from these projects were the ones who had invested a lot of their own staff time and resources in the HCD process, as well as committing at the most senior levels to becoming more customer-centric. The strongest examples of HCD have shown sustained engagement throughout the HCD phases of inspiration, ideation and implementation. Building in multiple engagements with designers over the product lifecycle will improve the chances for success.</p>
<p>To truly design for local needs, HCD must get more local</p>		<p>In the 2014 Stanford Social Innovation Review, 'When will design get serious about impact,' the author says that, 'Design cannot deliver impact without a sustainable base of practice and robust pool of local practitioners in markets with the greatest need.'² While local practitioners are integral to the design process, reliance on 'outsiders' to lead, shape, and apply process is still quite heavy.</p>
<p>Ensuring HCD performance metrics are clearly linked to wider program goals and having data collection processes to test links</p>		<p>Programs using HCD approaches to solve problems need to ensure that it is clear that they are collecting data that links the intervention with wider program goals. The focus on short-term performance metrics can lead programs to look to the short-term goals without understanding if these are contributing, or not, to wider program goals.</p>

² https://ssir.org/articles/entry/when_will_design_get_serious_about_impact#

About this paper

Purpose

Human-centered design (HCD) is a creative problem-solving approach that puts the customer or beneficiary at the center, with the objective of getting beyond the assumptions that prevent effective solutions. It is one of a variety of innovative techniques, methods and mindsets that have emerged in design practices in the private sector, where designing products and services has long been crucial in developing successful and profitable businesses. Collaboration, empathy and co-creation are all key components of this creative process.

Citing the success³ of these creative problem-solving approaches in the private sector, 'social design' has emerged as a way to fight poverty in international development. These approaches seek to design tailored solutions and to develop new ways to reframe problems. Influential stakeholders and funders like the Consultative Group to Assist the Poor (CGAP), the MasterCard Foundation, the Bill and Melinda Gates Foundation (BMGF) and the United States Agency for International Development (USAID) have made significant investments in various sectors, such as health, water, sanitation and hygiene (WASH) and financial inclusion, encouraging implementing partners and providers to incorporate more HCD into their products, services and programming. After a decade of incorporating HCD into development programming, however, there remain questions over what has been achieved by programs that have adopted these approaches. In addition, little is known about the commonalities of successes and challenges across the sectors where HCD has been used.

The purpose of this paper is to take a critical look at application of the HCD process in international development, across multiple sectors, to understand what is working and what is not, and under what conditions the application of HCD could lead to better outcomes. The primary audience for this paper is implementing organizations that use and promote HCD methods in their programs. The secondary audience is funders and other stakeholders who invest in the application of HCD in development.

Box 3. What is human-centered design?

In its simplest form, HCD is a creative problem-solving approach that puts the customer or beneficiary at the center, and leads to innovative solutions that meet their needs or solves a problem – all with the aim of getting beyond the assumptions that prevent effective solutions.

Stanford's d.school, credited with popularizing design thinking in the 1980s, defines 'design thinking' as a five-step innovations process, leading to solutions that sit at the intersection of desirability (do people want it?), feasibility (is it possible to build and deploy?) and viability (can we sustain it?).⁴

IDEO.org, one of the leading design firms specializing in running HCD projects in international development, has expanded on the design thinking process and defines HCD as a way of 'cultivating deep empathy with the people you're designing for; generating ideas; building a bunch of prototypes; sharing what you've made with the people you're designing for; and eventually, putting your innovative new solution out in the world.'⁵ The Annex includes common stages of a HCD process.

³ In 2015, the Design Management Institute created a design value index, an attempt at measuring the value that a good design and innovation process or culture can bring to a business. It found that, 'Over the last 10 years design-led companies have maintained significant stock market advantage, outperforming the S&P by an extraordinary 211%.'

⁴ <https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process#:~:text=Design%20Thinking%20is%20a%20design,based%20approach%20to%20solving%20problems.&text=school%20is%20the%20leading%20university,Ideate%2C%20Prototype%2C%20and%20Test>. For more information on each element of design thinking, see Stanford's d.school resources.

⁵ <https://designthinking.ideo.com/faq/whats-the-difference-between-human-centered-design-and-design-thinking>

This paper discusses HCD applications in three main sectors in international development: WASH, financial inclusion and health. In each of these sectors, service providers, entrepreneurs and private and public actors have applied HCD approaches with the aim of improving the design of initiatives, products, services and customer experiences

Learning questions and approach

To deliver on the purpose outlined above we set out to answer the following learning questions:

- **What evidence exists that HCD is working or adding value to international development, looking across multiple sectors, if any?** Is there any evidence that it's working or leading to better results? What have been the results or outcomes of these different interventions?
- **What are the biggest challenges in implementing HCD in international development?** What has HCD *not* been able to achieve in development? What is challenging about applying the HCD *process* to international development?
- **What are critical success factors for applying HCD in international development?** What are the factors that have contributed to successful implementation?
- **Going forward, what must we keep in mind so we can use HCD in appropriate settings and with the right support to be successful?**

To answer these questions, we undertook the following:

Key informant interviews: To understand and shape the learning questions for this review, the team conducted key informant interviews with practitioners from implementing partners, think tanks, financial service providers and human-centered designers.

Literature review: A variety of literature and documentation was collected to shape the contents of this paper, including program reports, scoping reviews, qualitative and quantitative evaluations, white papers, video and written case studies, presentations, news articles and blogs. For a full list of the documentation reviewed consulted, see the Bibliography section.

Limitations

This paper is not a comprehensive review of all literature related to HCD. While we undertook a detailed search, we are aware that we may have missed examples from the different sectors and beyond. We are also aware that a number of the examples are supported with evidence from only a small cluster of organizations, and that there may be examples from beyond this that we have missed.

What has worked well in applying HCD to international development (LQ1 and LQ2)

Our literature review and interviews identified several important aspects of HCD that had worked well in international development. HCD has been successful in shifting the mindset of practitioners, creating more empathetic and responsive design teams that are willing to try more and different types of ideas. HCD methods have worked well in international development programs when the problem or the design challenge is narrow or discrete, like improving marketing tools, removing barriers to usage in the customer journey, optimizing existing products or understanding if there is value in a product.

This section provides examples of how HCD approaches have helped improve program outcomes in the three sectors reviewed.

When there's a narrow problem or focus

A lot of the good examples of HCD come when they have been used with a relatively narrow focus, to overcome specific problems

As highlighted below, a lot of the good examples come from using HCD approaches in approaching a specific problem. There are particularly strong examples around improving communication of a product and combining existing elements of a product in a way that works for users.

Building understanding of how clients use and talk about products

HCD's focus on empathy-building has led to understanding of how a customer would use and understand specific products

Because HCD promotes speaking to the target audience earlier in the design process using empathetic research and testing methods, it is well suited to understanding customer needs, wants or barriers and to informing the design of products and communication materials. It has been particularly successful in developing appropriate communication material and making slight adjustments to product design.

For example, in designing the communications for a low-income savings product with a large commercial bank in Mexico, CGAP relied heavily on in-depth interviews and ethnographic-type research, commonly used in HCD, to surface critical insights. Saying, 'We sat in their homes, we visited their businesses, we shopped with them in markets,' CGAP found that poorer Mexicans perceived 'saving' to be an activity to be undertaken in the presence of disposable income, which they said they never had. They did save, but used terms like 'put money away,' 'store it,' 'keep it,' 'set it aside,' 'put it to work.' The design team used this insight to recommend to the bank to use alternative language than had traditionally been used in order to market the savings product, so that a 'savings account' would not feel irrelevant.⁶

Spending time with adolescent girls in Kenya helped designers working with Marie Stopes International (MSI) understand how to better frame reproductive health products to target markets, based on the target groups' behaviors. Behavioral research revealed the insight that, in Kenya, 'Many girls use the "e-pill" as a consistent contraceptive choice, and that the copper IUD was also used for emergency contraception. Subsequently, they reframed the communication of the IUD [intra-uterine device] as an "e-pill" and focused messaging around short-term, not just long-term, benefits of the IUD.'⁷

There are also examples of products being adjusted to improve usability based on HCD programming. As an example, iDE in Ghana used a tool called 'Who's responsible' to understand key roles and responsibilities of household members in each aspect of buying, maintaining and fixing their pour flush latrine Sama Sama. Insights from using this tool brought clarity to decision-making dynamics in the

⁶ <https://www.cgap.org/blog/why-dont-low-income-mexicans-use-formal-savings-products>

⁷ https://www.itad.com/wp-content/uploads/2020/02/Itad-HCD-Evaluation_Final-Report_Nov-10-2017-1.pdf

household. For example, purchasing was a joint decision; cleaning was the woman's job; sourcing repair labor was the woman's job but it was the man's job to complete it. Understanding these dynamics allowed the designers to build a customer journey that was relevant to the realities of 'Who will do what' from each of the households.⁸

AMK, a large microfinance institute based in Cambodia, mapped in detail its customers' cash flow through HCD methods, which challenged its assumptions around customers' ability to pay. As a result, instead of offering a standard one-year agricultural loan with monthly payments, it offered a flexible credit line that customers were able to draw down from over two years. This meant better management of payments along the seasonality of their income, and incurring fees only when the credit was needed – but this had never been done before. Despite concerns about the risk this flexibility would create, the product has proven over more than a decade to perform as well as, if not better than, other credit line products.⁹

Ideating and co-creating potential solutions for a specific problem

HCD has encouraged ideation/co-creation of products and services with customers to generate innovative ideas, and identifying combinations of activities in a way that works for users

HCD uses brainstorming, ideation and prototyping methods to help practitioners generate more and different ideas.¹⁰ As an example, CGAP, with seven HCD projects implemented in eight countries with financial service providers, cites that it has been able to develop 175 financial product concepts and 30 different early prototypes using the HCD process.¹¹

As an example of co-creation, in a scoping review of projects where HCD has been applied to health programs, the authors state that HCD is 'a systematic process that helps people embrace ambiguity and generate new insights and ideas,' and that it brings value in 'systemizing innovation and co-creating with community members and cross-sector partners.'¹² Co-creation,¹³ a central tenet of HCD, has been an effective way to generate relevant ideas and ensure smooth customer experiences. Medic Mobile, a company improving service delivery in antenatal care and immunizations using digital tools, used design cards with pictures illustrating concepts to co-create with the community. The design cards broke down language barriers and, by ideating and rearranging with key stakeholders, designers were able to simplify health workflow systems that had previously been challenging and inefficient.¹⁴

MSI, which worked with IDEO.org to redesign reproductive health services for adolescent girls, notes that the HCD process itself has been innovative and impactful in shifting mindsets, by 'bringing in skills and perspective from outside the sector to think outside the box.' Local MSI teams in Kenya and Zambia noted 'that they were embracing new ways of thinking and doing, and a shift to a stronger client focus.'¹⁵

Prototyping and early testing

HCD methods such as mapping, prototyping and testing have led to product and design efficiencies

In terms of product efficiencies, HCD methods of mapping products, systems and overall customer journeys can lead to cost savings and better design of products and services. Visual customer journey mapping, a typical HCD method for understanding the customer experience, helped identify key customer barriers and opportunities for process improvement. PSI's Supporting Sustainable Sanitation Improvements (3SI) project in Bihar, India, used journey and systems mapping techniques to understand

⁸ https://www.fsnnetwork.org/sites/default/files/PROWASH_IDE%20HCD%20%26%20WASH_6_August_2020.pdf

⁹ <https://customersguide.cgap.org/sites/customersguide.cgap.org/files/resource/2018/06/CGAP-AMK-Leadership-Case-Study.pdf>

¹⁰ <https://www.designkit.org/methods/how-might-we>

¹¹ <https://www.cgap.org/research/publication/what-human-centered-design-means-financial-inclusion>

¹² <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0186744>

¹³ <https://www.designkit.org/methods/co-creation-session>

¹⁴ <https://www.tandfonline.com/doi/full/10.1080/02681102.2019.1667289>

¹⁵ https://hewlett.org/wp-content/uploads/2018/07/Itad-HCD-Evaluation_Final-Report_Nov-10-2017.pdf

the latrine construction process and was able to find efficiencies in reducing labor costs, leading to a drastic overall reduction in the price of the latrine down to \$225.¹⁶

Another example shows that regular cycles of product iteration and testing with users with a physical product like a hand-washing station helped designers from the Kenya USAID Global Development Lab's Development Innovation Ventures program find a cost-effective solution to a new hand-washing station that did not need piped water. Based on immediate feedback and understanding the barriers to accessing soap, the end solution focused heavily on finding solutions for using less soap and less water per hand-washing, ultimately reducing the everyday cost of hand-washing by more than half compared with conventional systems.¹⁷

Testing products and services directly with users has led to tangible feedback that has made product design more relevant to the target market. Unitel, the mobile network operator in Laos working with the United Nations Capital Development Fund to improve mobile wallet usage, early tested its marketing materials with women. This surfaced the insight that, 'Women had a larger role in the finances of the family,' leading to marketing materials that spoke to women directly – using different visuals and language. Unitel said that it would use this approach of testing ideas throughout 'all customer facing materials and agent training.'

HCD is also useful in testing early-stage ideas through live prototypes, especially in the case of digital experiences, or short trials or simulations to see if they will work or if they have value to the customer, before investing a lot of money in building something no one wants or will be able to implement. Water & Sanitation for the Urban Poor (WSUP), an organization partnering with private and public sector actors to deliver sanitation services, was challenged in fecal sludge management by 'unknown customer locations, ineffective marketing, and inability to manage fleets of vehicles.' WSUP stepped in to develop a mobile app called PULA to help improve emptying services. To develop the app, it began by using low-cost paper mock-ups and rapid ideation methods and then used a prototyping platform called Marvel to build a rapid digital prototype to test with users, making getting feedback and improving the user experience really easy.¹⁸

Population Services Kampuchea (PSK) in Cambodia was able to identify early and with confidence an innovative way to increase malaria testing on rubber plantations. The design team prototyped two early concepts to increase malaria testing using simply A4 paper to understand how the concepts could work, which stakeholders would deliver the services and if the customers would actually do it. Both concepts were validated through pitches and the team proceeded to conduct a low-cost four-week trial. The trial showed that that one concept led to 300% better malaria testing results, failing the other concept early.¹⁹

In Tanzania, Off-Grid Electric was able to early test if customers would be willing and able to pay for electricity on a weekly basis, before spending significant funds on building the technology or diving into technological integrations. It ran a pilot where Maasai tribesmen served as cash collectors and walked from village to village to collect money each week, which validated the theory that customers would in fact pay smaller amounts regularly.²⁰

¹⁶ <https://beamexchange.org/resources/1001/>

¹⁷ <https://globalhandwashing.org/learn/latest-research/>

¹⁸ <https://www.ucdinsanitation.com/digital-prototypes-better-user-feedback-better-products/>

¹⁹ <http://www.17triggers.com/projects/population-services-khmer/>

²⁰ https://ssir.org/articles/entry/an_operating_model_to_make_social_innovation_stick

What hasn't worked well in applying HCD to international development (LQ3)

The examples described earlier in the paper demonstrate that HCD approaches have been valuable in international development. However, while HCD is good at solving more narrow design challenges, it has not worked well in solving large-scale systemic problems such as poverty, income inequality and restrictive social norms. In addition, the current funding/management mechanisms do not promote ongoing investment in iteration, and thus there is limited evidence that design teams can tackle feasibility, viability or scale issues at the beginning. In this section, we explore these key challenges that development practitioners have cited with regard to applying HCD.

In developing feasible, viable and scalable ideas

HCD's application in development has had success in improving product desirability; there has been less success in taking complexity into account and ensuring feasibility, viability or scalability of solutions

Most HCD engagements focus on desirability, rather than building feasible, viable or scalable solutions. This may be for a number of reasons, including inability to take the wider context and complexity into account and incapacity of design processes to access the business case for significant changes in design.

As an example, in A360, a contraceptive delivery project, the implementing partner said it had challenges with its service providers in feasibly delivering health products and services, primarily because the realities of the service providers had not been sufficiently considered in the initial design phases. Implementing partners wished that they 'had designed for health service providers, the same way we had designed for girls.'²¹ For products and services that require multiple partners for delivery, all stakeholders must be incorporated into the design – those who implement the product or service and those who receive it.

The Amplify Project, which paired design specialists with grantees, reported that grantees found greater value for money from HCD processes where the designers were involved to support product iterations beyond the initial design period. One grantee stated, 'We got an amazing design from our Design Project, but implementing it caused a major crash of our system because our quality assurance process wasn't prepared for a launch like this.' Grantees also found it easier to understand and define the features for 'desirability' than their organizational capacity and capability (feasibility) or market fit (viability), and this restricted the HCD process in effectively designing innovative, longer-term, scalable solutions.²²

For MSI's project with adolescent girls, the team felt the research was too focused on urban areas and on criteria for desirability, limiting the replicability and scale of the products developed. Designers were not able to reach rural areas, and the biggest tension between design firms and implementing partners was that the partner 'didn't feel that scale, sustainability, and replicability to areas outside of urban areas were considered enough.' In addition, there was an overemphasis on desirability of the product for adolescent girls as against feasibility and scalability. This meant the design solutions in Kenya and Zambia were too narrowly focused and could not be replicated to other areas of MSI's intervention.²³

When design phases are not followed up appropriately – often because of cost

There are examples of initial concepts being brought to market without using HCD approaches in piloting new products that have not gained traction; in addition, HCD processes are often costly and follow-up iterations may not be included in budgets

²¹ https://www.itad.com/wp-content/uploads/2020/02/Spotlight-2_weblinks-1.pdf

²² http://iati.dfid.gov.uk/iati_documents/45213885.pdf

²³ https://itad.com/wp-content/uploads/2019/06/A360-MTR-Report_FINAL_27th-June-2019.pdf

UGAFODE, a microfinance institution in Uganda, embarked on a journey of HCD to develop new product concepts but had limited outcomes. Insights from early inspiration research revealed that customers needed a way to access their savings in rural areas, given that UGAFODE did not have rural branches. Through the design process, a 'savings scratch card' that could be widely distributed like airtime scratch cards, found in any small retail shop or kiosk, was presented, launched and piloted. However, the design company was not involved in the pilot, and UGAFODE had limited capacity to collect feedback and translate customer insights into improved features, prohibiting the product from gaining traction and reinforcing the idea that one-off HCD engagements were limited in their value.

Medic Mobile, an organization that has invested in HCD, stated that engaging health workers in the design process was 'not a "once and done" task to be associated only with formative research, but an ongoing opportunity with each new design iteration.' It conducted assessments on what was working and not working several months after the initial implementation, and found that stakeholders were actually doing things differently or applying 'work-arounds' from the original model to manage inefficiencies.²⁴ Medic Mobile eventually incorporated the work-arounds into the final design. However, this is not always possible, owing to program design and budget constraints.

With limited local capacity for human-centered designers, and high upfront investment costs, most implementing partners and local service providers are not able to sustainably pay for international human-centered designers to accompany the lifecycle of the iterative product design process over a multi-year period.

In terms of intervention costs, these can be expensive. For example, CGAP spent US\$150,000–350,000 per project (for a total of seven projects) only for the conceptual and design phase, with no scope for pilots or implementation. For The Amplify Project, the average grant awarded to perform any HCD interventions was US\$107,068. A mid-term evaluation of A360, the Gates-funded contraception program, found that costs for the HCD portion were quite significant, specifically the heavy reliance on international designers.

When organizations aren't equipped to use HCD and implement findings

The literature indicates that, to be effective, organizations adopting HCD approaches need to have certain things in place – and this has not always been the case

In the Itad paper 'Evaluating a HCD approach to adolescent sexual and reproductive health,' the authors note that the fast-paced nature of HCD is challenging in international development, particularly in programs and projects where it is critical to engage multiple actors. In applying HCD to their project, it was difficult to communicate findings or design decisions across a multitude of stakeholders and implementing partners, and ensure buy-in for the design decisions being made.²⁵

In financial inclusion, where private sector providers often drive financial services, CGAP discussed how its experiences differed depending on the type of financial service provider it worked with. While large commercial banks had 'product development and process changes take a very long time,' fintechs, which are increasingly providing digital products and services to the poor as a revenue strategy, tend to be more agile and iterative as the HCD process is more 'built into their DNA.'

In The Amplify Project, the design teams did not fully tailor the process to adapt to the needs of smaller, more inexperienced, grassroots organizations that may not have had previous design experience and might have needed more capacity-building or support to effectively apply HCD.

²⁴ <https://www.tandfonline.com/doi/full/10.1080/02681102.2019.1667289>. The organization discovered that, 'Public health oriented CHW [community health worker] supervisors (rather than nurses) had taken responsibility for the fact that not all CHWs were submitting data as expected,' which meant the supervisors were the users of the data dashboards, but it had been designed for a nurse, which had not been anticipated in the design sessions and was a break-through in design for them. 'While documenting key personas can help build empathy and concrete evidence of stakeholder experiences into the design process, making sense of which personas to focus on cannot be taken for granted.'

²⁵ https://www.itad.com/wp-content/uploads/2020/02/Itad-HCD-Evaluation_Final-Report_Nov-10-2017-1.pdf

The insights generated by HCD processes are often not local enough

The implementation of HCD requires highly specialized expertise that is not yet readily available in most developing countries, with many designers in the projects reviewed not being local or considered 'outsiders,' and therefore the insight not being local enough²⁶

Most programs hire international design firms to run HCD projects as consultants; inevitably, these 'outsiders' are the ones that capture the insights and design the products. Generally speaking, they have not been immersed enough in the local context they are trying to understand. On its engagement with seven financial service providers, CGAP said that, 'Some of the teams [we worked with] had steep learning curves as they went into slums in Africa and navigated terrorism threats in Pakistan for the first time in their lives,' noting that they were out of their element and, as complete 'outsiders,' perhaps not best suited to develop rapport and communicate with local communities.

Design teams often have a short time in the country and then they return to their headquarters and support the process remotely. In the A360 program, during the synthesis phases of insights, country teams had to participate remotely with their design teams based in San Francisco; ultimately, 'This resulted in the country teams not being truly involved in co-generating insights.'

Program teams felt that IDEO.org should have completed the synthesis in country, and ensured that PSI staff were at the front of the insights and the ideation. At the end of the day, it is hard to know whether the insights gathered have been interpreted correctly. The irony here is that HCD is based on a deep understanding and empathy of the target group in the inspiration phase and throughout the process; arguably, outsiders, who may or may not understand the local context, language, culture and practices, are not the best equipped to collect this information.²⁷

Moreover, while international teams often attempt to build local capacity in HCD during the design exercise, there is limited evidence these efforts have been successful or that local teams are being set up to replicate the HCD process. The evaluation report of The Amplify Project critiqued capacity-building efforts saying that HCD bootcamps for the grantees were 'only moderately effective as it did not set-up orgs to practice HCD independently, and remote design support did not guide participants' to fully execute it. One insight that emerged from interviews with implementers and providers implementing HCD was that, while numerous toolkits and online resources have been invested in over the years, these have too much HCD jargon, and are not necessarily accessible to the average non-native English-speaking product or program manager within an organization that may be looking for way to apply HCD methods.

Using HCD metrics to understand development impact

HCD looks at short-term performance metrics, with little documented evidence of it being able to address wider systems issues; short-term metrics aren't always linked to long-term impact

HCD, having emerged from the private sector, focuses heavily on outcomes like uptake, usage, retention and conversion rates as early signals of demand, and therefore success, but often does not go far enough to show that applying HCD methods to international development interventions leads to more social impact. HCD is more suited to measuring short-term performance metrics that give us signals of positive results. However, there is little evidence linking longer-term social impact to the HCD process. In contrast with HCD, international development programs often intend to measure change at the impact level, using indicators such as 'reduction in diarrhea' or 'increase in household income' or 'reduction in financial vulnerability' as measures of success, linked to a theory of change; this could ensure that the results of HCD projects remain focused on the right outcomes. In 'Evaluating the influence of HCD in health,' Anne LaFond and Nikki Davis of John Snow, Inc., a large health-focused international non-governmental organization incorporating HCD into its programs, states that, 'In product development, we measure

²⁶ <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0186744>

²⁷ https://itad.com/wp-content/uploads/2019/06/A360-MTR-Report_FINAL_27th-June-2019.pdf

effectiveness with sales, but in the social sector space, sales does not equal impact. Social design requires different methods and metrics. In many cases when HCD has been used, the impact is assumed, possibly because of its novelty. Also, no single metric that measures the impact of design (e.g., Net Promoter Score) is going to tell us the whole story.'²⁸

²⁸ <https://www.isi.com/evaluating-the-influence-of-human-centered-design-on-health-programs/>

Going forward: What should organizations consider when taking forward HCD

Our review looked across the different sectors and found the common successes and challenges laid out in the previous sections. These findings enabled us to consider some of the 'critical factors' in establishing successful HCD projects. We present these below as well as some key considerations for those thinking of implementing or funding HCD programs in the future.

Use HCD for the right kind of problems

As outlined in the previous sections, HCD can play an important role in developing or adapting products and communications to engage potential users. However, it will not be appropriate in all situations, and the more complex the problem the more consideration of whether and how HCD can play a role is necessary. Specifically, using HCD insight research and testing for value propositions can have a large impact on the shape of the product or service in the earliest stages of design or implementation.

HCD needs to incorporate more criteria for feasibility, viability and scalability early in the process

Including feasibility, viability and scalability criteria from the very beginning in design processes is key. While some designers may say this limits innovation or the ability to truly solve a pain point, it is a waste of valuable resources to design a beautiful idea that solves a pain point if no one can deliver it sustainably and at scale in complex and emerging markets. Critical to the early-stage design process would be including early analysis of the business model and institutional capabilities of the service provider or any partners critical to the product design or service delivery model. While desirability is critical to the success of the product, this must be balanced with the distribution channels available, the capabilities needed and the partnerships to execute. Equally important is to ensure the pathways to ensuring financial viability and scale have been brainstormed and identified early in the process. This requires a commitment to early systems, stakeholders and journey mapping when beginning to narrow ideas in the ideation process.

Working with organizations that have a sustained commitment – both human resources and funding – to iteration and testing is important

Our review has shown the critical importance of working with the right organizations to deliver these projects. In response to its experience working with multiple providers, CGAP says, 'You can't bring in a design team, wave a magic wand, and simply get a great response. The providers who gained the most from these projects were the ones who invested a lot of their own staff time and resources, as well as committed to becoming more customer-centric, to make the projects a success.' Support from senior-level champions is critical to the successful implementation of HCD.

The strongest examples of HCD have shown sustained engagement throughout the design and testing of products. Building in multiple engagements with designers over the product lifecycle will improve the chances for success. More organizations are also considering how to bring an 'adaptive management' lens to implementation, which follows a similar approach of flexible iteration and can fully incorporate the HCD process and uses shorter design sprints as a way to iterate and make product improvements. As mentioned in CGAP's Change Management Toolkit, 'The move to a customer-centric business model is not simple, and the process is not swift. It requires emphasizing a portfolio of customers rather than a portfolio of products, with growth based on meeting customer needs and creating long-term customer value. The shift begins with leaders who emphasize the strategy and lead by example to build a customer-centric culture, one that rewards employees for solving customer problems and deepening long-term relationships.'²⁹

²⁹ <https://customersguide.cgap.org/why-go-customer-centric/customer-centricity>

To truly design for local needs, HCD must get more local

There have been several examples of local capacity and ideas adding considerable value to projects, as something that could help improve the quality and potentially reduce future costs of HCD projects. An example from CGAP of a successful endeavor was when it independently funded a local pop-up lab that focused on building and scaling mobile money products, at no cost to the provider. Pop-up labs and innovation labs are becoming increasingly popular and design firms are beginning to expand their footprint and create regional offices, as with IDEO.org's presence in Nairobi, Kenya. Funders could invest more heavily in local design schools to build the mindset, skillset and toolset of HCD. In addition to being placed locally, design teams must have *local liaisons* explicitly funded by the project or the intervention. Local liaisons are crucial to recruiting participants and coordinating research, can help interpret findings and communicate locally, and are essential in running any local experiments or trials. While translation and interpretation are often built into resources for HCD design projects, local liaisons are more of an after-thought rather than a 'key hire.' However, these liaisons are critical functions for every HCD design team operating in a local context.³⁰

Ensuring HCD performance metrics are clearly linked to wider program goals and having data collection processes to test these links is important

Short-term performance metrics are excellent measures for early-stage design and product performance, especially as a way of speeding up innovation and improving ideas faster. But these metrics are not sufficient for measuring social impact or change over time in people's lives. Programs using HCD approaches to solve problems need to ensure it is clear they are collecting data that links the intervention with wider program goals. The focus on short-term performance metrics can lead programs to focus on the short-term goals without understanding if these are contributing, or not, to wider program goals.

³⁰ <https://escholarship.org/content/qt6sc788r6/qt6sc788r6.pdf?t=odi7qg&v=lg>

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Annexes

Common HCD methods used in international development

The literature review revealed that the most common approach followed was the IDEO.org approach, which has three main phases of HCD: inspiration, ideation and implementation.³¹ To describe the methods most commonly used in the resources we reviewed and by the stakeholders we interviewed, this paper broadly categorizes them in the same way.

Phase 1 Inspiration: research and field immersion

The first phase is focused on understanding the humans, or the target group, to whom the products and services are targeted. This could be as broad as mothers, youth, farmers or health workers, or as specific as 'small business owners with two to five employees operating for more than two years.' This phase includes both primary and secondary research, and uses *primarily* qualitative methods such as in-depth interviews, focus group discussions, ethnographic research, observation, case studies and expert interviews. Research typically involves engaging with small groups of individuals but spending a significant amount of time with them. In this phase, design teams define the problem for the target group and attempt to understand and synthesize their needs, motivations and behaviors.

Phase 2 Ideation: brainstorming, prototyping and testing

Brainstorming, prototyping and testing is a critical part of the HCD process. It begins by generating a lot of ideas, and then narrowing these based on design criteria. Next, a design team prototypes the ideas – or creates samples of the ideas to test with the target group. Prototypes can come in any format (pictures, flyers, videos, websites) and can be either low fidelity (e.g. sketches done with paper and pen) or high fidelity (e.g. a digital prototype that simulates a user experience). Prototypes make ideas 'real enough to feel,' in order to test them in a tangible way. Testing tangible ideas gives design teams more specific feedback and ideas for improvement and crucial early feedback from potential users to inform the final design.

Phase 3 Implementation: launching and piloting

Typically, the third phase of the process focuses on developing and operationalizing concept(s) and getting closer to finding the intersection between viability, feasibility and desirability. Concepts are iterated and improved, and their impact assessed, using regular feedback from users. This part requires ongoing investment on the part of the providers to continue to learn and iterate and is critical for understanding the key iterations needed to scale.

³¹ For more on specific methods and tools, see IDEO.org's Design Kit at <https://www.designkit.org/methods>



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