Malawi Action Report

Using enhanced data intelligence to transform the way we do business

WHAT

A HUMAN CENTERED DESIGN WORKSHOP

WHERE

LILONGWE MALAWI **WHEN**

16-18 Oct - Vision Setting
19-20 Oct - Concept Design

November 16, 2018



POPULIST

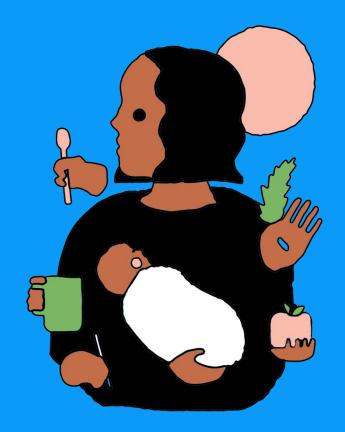
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BACKGROUND

To achieve equity in a low resource environment like Malawi, it is necessary for UNICEF to increasingly become an innovative and evidence-based organization. While our programming is increasingly results-oriented, our business practices have not yet followed suit and are still largely reactive, responsive and input-oriented (e.g. cash, supplies, technical expertise). This transaction oriented strategy creates barriers to quickly achieving results at scale for children. The opportunity, therefore, lies in creating a system that enables frontline service providers in education, health, WASH and other sectors to refocus their attention, moving from transactional to nimble and holistic service delivery for children, families and their communities.





OUR BRIEF

OBJECTIVE

Together, we built on the success and effectiveness of data-driven initiatives led by the UNICEF Malawi team, wherein new forms of data were used to address specific health and environmental situations. We engaged in human-centered design for targeted implementation that enables real-time monitoring and yields leaner operations, innovative financing, and 360-degree communication for more efficient and effective development and humanitarian responses for children.

CHALLENGE

UNICEF Malawi has, at its fingertips, a wealth of technology, expertise and successful data-driven initiatives, but has vet to institutionalize these assets in ways that optimize the benefits both for the organization and the people we serve. Today, data is most often used for reporting and reactive response purposes rather than as a tool for proactive, predictive and preventive purposes. By breaking down silos across systems, processes, departments and data, we attempted to reduce bottlenecks, eliminate repetition, increase efficiency and remove impediments to decision making to enhance efficacy and achieve impact at scale.

VISION

UNICEF Malawi seeks to define specific ways in which enhanced data intelligence may be applied to positively transform its business, programming, operational practices and outcomes. By aligning ambition both with the community we serve and across departments, roles, and responsibilities we put enhanced data to work, delivering actionable intelligence to the community so that together we may create sustainable change for children.



SECTION 2:

executive summary

5 DAYS 2 TRACKS 8 COUNTRIES

LAINNOVATORS

Setting the Vision. Designing the Concept.

Using a human centered approach to problem solving, we convened a diverse group of innovators, program specialists from various sectors, design thinkers and technology experts across UNICEF (regional office, HQ, other country offices, and NatComs), non-profits, government, and private sector organizations to unpack the grand vision defined in Malawi's three country program pillars in order to identify clear and definiable issues that would immediately benefit from enhanced data intelligence.

The workshop was designed in 2 tracks, the first for vision setting and the second for concept design of how Malawi might benefit from the application of enhanced data intelligence to problem solving and across the way we do business. In the first track (days 1-3) teams envisioned opportunity, identified the agents of change (persona development and user journey mapping) and developed five areas of action with associated theories of change for each.

In the second track (days 4-5) we engaged in concept design to reconsider the ways in which UNICEF Malawi uses data across its operations. We then developed an innovative blueprint for applying enhanced data intelligence to map an organizational transformation that would accelerate community impact.

Across both of these tracks we facilitated the work of multiple teams of remote participants across 5 countries. Ultimately, we defined five MVPs (minimum viable products) for which enhanced data intelligence will create change for children and produce impact at scale.



Incorporating Data Intelligence: A Timeline

Creating impact depends upon UNICEF Malawi being more efficient and effective in achieving positive outcomes for children. Through the development and use of a data intelligence node that combines structured and unstructured data, along with contextually rich analysis we will be able to make the intelligence necessary for better decision making more immediate, available and accessible to actors, change agents, influencers and allies so that together we may achieve sustainable impact at scale for children.







This Data Intelligence Node is the blueprint for both community and organizational transformation.

We've named this initiative 4P2C which signals a transformation from the way UNICEF has done business – using data to react, respond and report on problems plaguing our communities – to a new way of doing business by working with and not for the community and by sharing enhanced data intelligence with them for more collaborative, holistic proactive prediction, prompting and promoting of innovative solutions that produce more resilient communities and sustainable change for children.



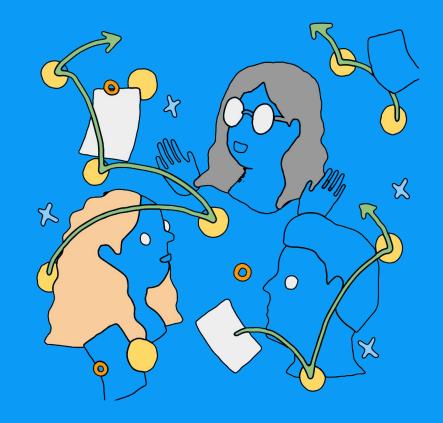
section 3: methodology

Our approach is rooted in human-centered design.

Human-centered design (HCD) is a problem solving process that begins with understanding the "human factors" and context surrounding a challenge — then works with users to develop solutions that are viable and appropriate in a given context.

This approach serves to translate UNICEF Malawi's pillars into actions that can be taken by and with people you serve.

To learn more about HCD principles and practice, visit http://hcd4health.org/ for detailed resources.



Principles at the heart of using human centered design to create change



Small Is Big

Understand the leap and define, in detail the small steps required to get there.



Context Comes First

People rarely change behavior so how do we change the context so that their current behavior works to their and our advantage?



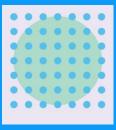
Knowing Is Not Enough

Persuasion, required for change, is not an act of delivering information, its an act of aligned beliefs.



Truths Are Buried

What people believe, say and do can be three different things.



Attention Is Elsewhere

Our focus is on problem solving, not data. Data is useful when it serves the problem solver without asking them to do more.



Intentions Are Not Actions

Intentions can be a poor predictors of actions. Behaviour depends on removing the barriers to taking action.

Process

Because UNICEF Malawi's desired outcomes are directly tied to the improved welfare of children, their parents and their communities, our process began with beneficiaries and their issues rather than with an examination of our own assets and capabilities.

By identifying existing problems we were able to understand problem-solving challenges in a more integrated and holistic way, resulting in the development of data intelligence enabled interventions that aligned with the areas of greatest need and most potent opportunities for efficacy.

We engaged key internal and external stakeholders in an ideation and co-creation process to identify what may allow UNICEF to enhance the efficiency and effectiveness of its work and achieve results at scale for children.

Identify existing problems and challenges

that are keeping UNICEF Malawi from achieving its 5 year goals

Recognize potential users, internally and externally

and determine their goals, ambitions, and limitations

Understand available and accessible data sources

define processes for analyzing, combining and designing useable reporting, and map the distribution process

Define the goals

break-down the vision into 2-3 defined principles, develop design principles that will inform the technical team.

Simplify the process

for frontline service providers to integrate data intelligence into their programme delivery

Design product schema

and develop an implementation roadmap around which the group is aligned and committed

Commit to the application of enhanced data intelligence

to a clearly defined project that demonstrates the ability to achieve scalability across diverse regions and country contexts

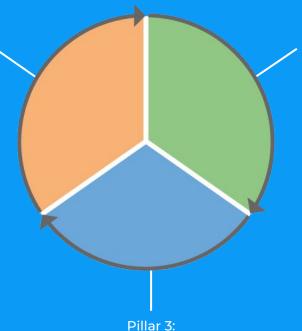


SECTION 4:

human centered

Malawi's CPD Pillars

Pillar 1: Improving early childhood (first 1,000 days) development care and learning



Pillar 2:

Ensuring school-age children achieve essential learning outcomes and skills for life and are safe

Ensuring girls and boys grow up in resilient, inclusive and child-friendly communities



From Pillars to Opportunities

Using Malawi's program pillars as our starting point, we examined the relevant opportunities, identified the specific problems to address, and contextualized the people invested in and affected by these problems.

To narrow in on the Minimum Viable Problems (MVPs) under each programmatic pillar, we began with creative possibilities (leap), refined to concrete ideas (stretch), and finally the simplest and most effective actions (step or MVPs). The following process was used to arrive at each MVP:

- Step 1: Mapping the opportunities
- Step 2: Building the personas (Summary and Exercise)
- Step 3: MVP/Step and User journey mapping

Determining the MVPs

To tell the story of the MVPs, we begin with a summary page that captures the stretch and leap elements and shares the opportunity maps that were produced by the workshop participant teams. Then we move into an illustrated journey and story of the MVP that introduces individuals from the community, provides opportunity context, and demonstrates the practical impact of the data intelligence node.

Pillar 1: Improving early childhood development care and learning

MVP 1: TECH-ED

MVP 2: P'Loop (Progress Loop)

Pillar 2: Ensuring school-age children achieve essential learning outcomes and skills for life and are safe

MVP 3: YAP (Youth Attendance Program) MVP 4: Living Schools

Pillar 3: Ensuring girls and boys grow up in resilient, inclusive and child-friendly communities

MVP 5: LEAD (Loans for Entrepreneurs in Agricultural Development)

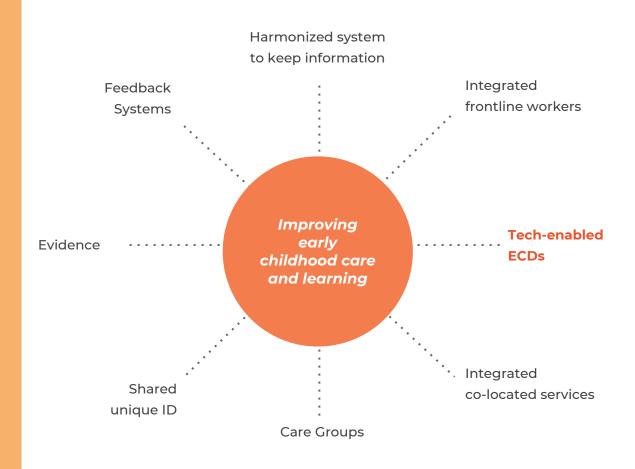


Leap

Improving early childhood development care and learning

Stretch

A 360° view of a child's life through tech-enabled ECD centers



TECH-ED - Building Personas



Hope, ECD Facilitator

At 38 years old, Hope is a doting mother to 8 children. While married, she raises the children as a single mother with her husband mostly away in South Africa. When she's not busy with her own children, she's teaching toddlers at the the Early Childhood Development (ECD) center. The salary doesn't cover her financial needs, and she receives little support in the classroom.



PERSONAL

Hope is a 38 year old mother to 8 children, 2 of which have special needs. She raises them alone, since her husband is in South Africa.

She has a junior certificate and teaches at an overcrowded tech-enabled ECD center.

Her day begins at 4 AM with household chores—fetching water, cooking meals, gathering hardwood.

ACTIONS

Hope is trying to improve her reading abilities.

One of her biggest frustrations is that her salary barely covers her financial needs.

In the classroom, she receives little support in terms of skills training. Though the ECD is tech enabled, network connectivity is unreliable and the tech itself is rarely updated.

Being so busy at home, it's hard to make time to develop lesson plans.

MOTIVATIONS

Hope is truly motivated by children and remains dedicated to improving their lives, both at home and in the ECD center. With the right resources, she can give herself and her family a better life.

Her community influences her behaviors to a great degree, whether its her parents or in-laws involvement in her home life, or her church groups influence on her beliefs.

Her busy schedule means that she carries guilt when she cannot be more present for her children.

She wishes her husband were more present.

INFLUENCES

In her village, stigma surrounds her—as a single mother who cannot divorce, as a mother to special needs children, etc. Her church group provides a lot emotional support for each other and has a heavy influence on her life.

At school, Hope answers to her supervisors, children's parents, front line workers, volunteers, and high level officials at the Ministry of Education and of Gender.

Her environment is burdened by a inconsistent heat, water, and electricity. During rainy season, there's a higher risk of flooding and related illnesses.

TECHNOLOGY

Amid an incredibly hectic day-to-day schedule, Hope can't be bothered with thinking about tech. There are no resources, and no one to teach. And yet, she knows that updated tech can make her job simpler and more efficient

If she knew her student's challenges, she could create better lesson plans. Technology could help her keep track of student profiles, attendance, and so much more.

Until then, the tools at her disposal are a simple radio, basic pen and paper, and a single device with slow internet.



Ken, Ministry of Education

Ken is a senior civil servant at the Ministry of Education. Though he likes his routines, his work life is bogged down by slow processes. He lacks the data he needs to really understand the context of education of Malawi, connectivity is an issue across the country, and bureaucracy creates stagnation where there should be change. Reputation and status are as big an influence and motivator as his wife, social circles, and political alliances

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PERSONAL

Ken is a by the books, routined individual. He's is well known in his community, a chief of his village, a husband, a father to 4 children, and an NGO board member.

He is well educated, holding a PHD in education management Ken plays golf and watches football with friends.

His wife takes care of the kids for the most part, but he takes them to school after his morning run and breakfast.

ACTIONS

His main professional goals involve education reform, but he often feels like he's stuck in too many meetings to get any real work done on the ground.

Budgets are never released on time, admin process and bureaucracy slow him down, and his corruption involvement is catching up with him.

Ken lacks the right data to assist his decision making.

MOTIVATIONS

Ken is motivated by his political ambitions. He is proud of his achievements thus far and cares a great deal about his reputation.

He is heavily influenced by his faith, by politics, and by wealth/status.

Despite being well connected, Ken still deals with a high rate of vacancies for educators, struggles with balancing partner needs and demands, and lives in constant fear of punishment for his corrupt practices.

INFLUENCES

As a senior official, Ken is careful about how he is perceived, especially at his church and at his place of work.

In his personal life, he is particularly keen on maintaining the respect of his social crew, and at home, his wife influences his decisions as well.

Frequently, Ken is concerned with how local politics sways his work and his decisions.

TECHNOLOGY

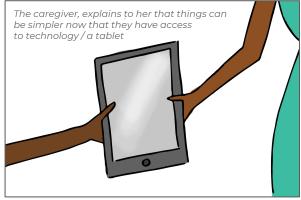
Though Ken technically has more access to information and resources, there's a lot of missing information. How many teachers in a given area? What's the pupil to teacher ratio? What's the training levels of the teachers?

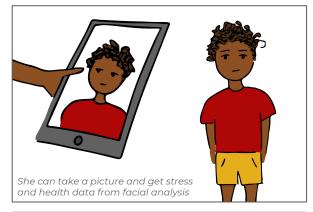
Some of the issues would be solved with more bundles and a better budget provision for connectivity. At the same time, connectivity is an issue across Malawi.

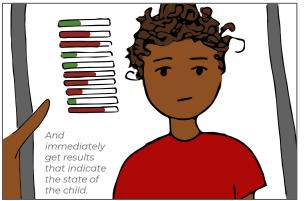
TECH-ED - MVP 1

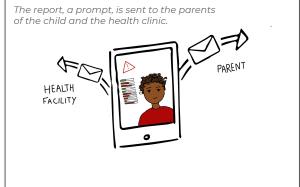
Caregiver and ECD facilitator exchange that empowers those most intimate with health and education knowledge of the students through the creation and monitoring of student profiles to prompt timely interventions.











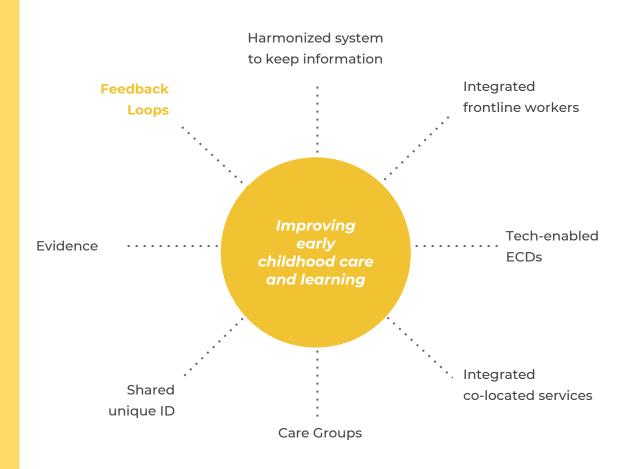


Leap

Improving early childhood development care and learning

Stretch

Create a better integrated and sustainable health system to Improve the quality of health services and health facilities and better serve communities.





Julia, Village Health Worker

At 37 years old, Julia is a single mother of 4. Her husband left her a few years back. Julia has always had to feed and raise her children alone, and her whole family depends on her income. She's thankful that she has a steady job as a community health worker, but the daily challenges make her job difficult. Long distances in the heat, a lack of access to important patient and clinic data, and a lack of motivation—the issues pile up daily. Julia knows that better technology could help her do her job better, and ultimately, improve health in the community on a major scale.



PERSONAL

Julia is a 37 year old mother to 4 children. He husband divorced her many years back, so she is raising the children alone.

She is a professional, she studied community health work. And she has been working within her community for years.

Julia has had to put a lot of her personal goals on the side in order to take care of her children, her whole family depends on her income.

ACTIONS

Julia struggles with the resources in her community; the supervision, the staff, the routes, the trainings. Most of the time she feels that her work is not well supervised, and that she doesn't have access to trainings that will help her build better skills. She wishes there was better coordination.

One of her biggest frustrations is that her income doesn't cover her expenses and her family is always coming to her with new requests.

MOTIVATIONS

Julia is truly motivated by the impact the work she does has on children. She finds it really rewarding to see her patients healthy.

But most of the time, she's frustrated because she has no clear career path, she doesn't know if she is doing well or not and she feels like she doesn't get the recognition she deserves.

INFLUENCES

Her community is uncomfortable with the fact that she is divorced and a single mother. For Julia, this is an additional challenge whenever she tries to connect with members of her community.

She knows family planning is sensitive, she needs to respect the village rules and traditions so that people will allow her into their homes and that she can do her job. Though men tend to make the decisions, it is easier to talk to women.

When conducting family visits, the distance and the heat are difficult. She cannot always predict when families will be home.

TECHNOLOGY

Without proper technology or connectivity, it is difficult for Julia to have up-to-date information on the status of clinics nearby. If she had access to health trends, she could do a better job of assessing risk, planning for families, and setting benchmarks for success month on month or year on year.

Sometimes she needs medications quickly, but when she arrives at the clinic, she has no idea if the stock will be there.

The mothers she speaks to would benefit from her knowledge about ambulances, ECD facilities, etc. if only she possessed that information easily.



Maria, Data Analyst (external)

Maria is a data analyst who specializes in remote sensing and GIS; she's an international expert on these technologies and a geographer as well.

She often works as a partner to UNICEF offices in order to supply specific forms of data. Her job both has its fulfilling and challenges moments. Though Maria is working toward publishing her work, she is often bogged down by the bureaucracy and internal inefficiencies of working with data.



PERSONAL

Maria is a geographer and an international expert. Day to day, she analyzes remote sensing and GIS data, as well as satellite imagery.

ACTIONS

At work, Maria collaborates with a diverse team of experts and nationals, but they're able to use data as their common language.

She wishes there was more interaction between sectors, however.

Despite her access to modern technology, the computers themselves often lack the space or updates to function at their best. And of course, connectivity is an issue in Malawi. That's a massive problem when trying to upload data or ensure that it is properly backed up.

MOTIVATIONS

Maria is motivated to publish her works' results in academic journals or at events, but completing the work can be challenging.

She is faced with bureaucracy, poor planning, subpar equipment, and unclear goals.

INFLUENCES

Maria is influenced by her work colleagues. She deals with little to no social pressures given the nature of her work.

That said, her work is heavily influenced by the environment. Tracking weather patterns helps provide predictive data for emergencies, illnesses, etc.

TECHNOLOGY

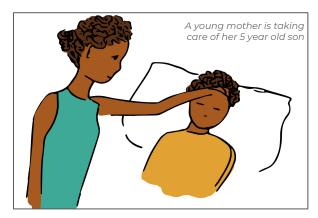
Maria has plenty of technology at her fingertips, but would like to better understand the applicability of data. For example, if you need information on vegetation, you might need short wavelength sensory data to detect the data sets you need.

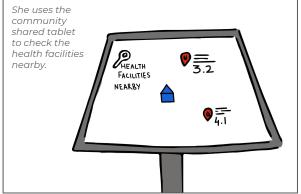
One of her concerns is the misuse of data, ie. if someone gains access but uses it for inappropriate purposes.

Maria is hungry for real time data, data prices, and auxiliary data (e.g. accurate enough digital elevation model, files of buildings such as schools) to help do better analysis of the data

P'Loop - MVP 2

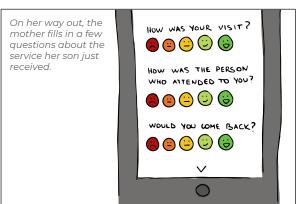
Create a "Yelp"-like platform that provides location-based ratings of health facilities and workers. This feedback loop tracks progress improves accountability, and incentives workers. It can lead to a more efficient and effective service planning and delivery.











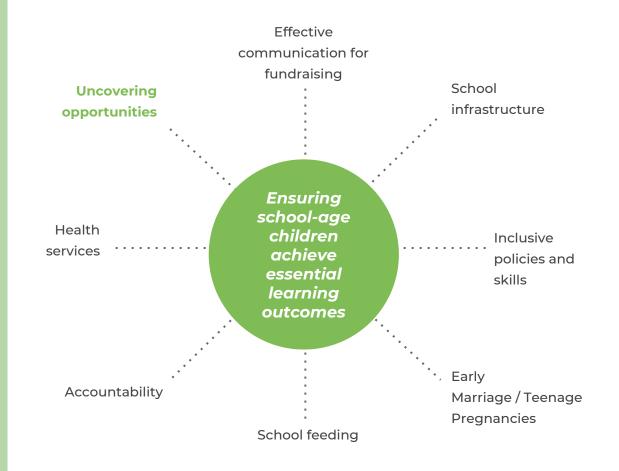


Leap

Ensuring school-age children achieve essential learning outcomes and skills for life and are safe

Stretch

Incentivizing attendance for secondary school students





Mtsunge, Adolescent Student

Growing up as a young adolescent girl in the village of Dedza, Malawi, Mtsunge faces numerous challenges in pursuing her education. While she's dedicated to her studies, her school has little resources, her home life is burdened by chores or caring for ill siblings, and older men are already pursuing her for marriage. In this environment, it's hard to make time for learning—not just about math or reading, but about sexual health, education and career opportunities, or the world outside of her village. In spite of these challenges, Mtsunge dreams of being a teacher one day.

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PERSONAL

Mstunge is a 15 year old student interested in community leadership and politics.

She lives at home with her mother and 6 siblings, of which she's the second oldest. She helps with early morning chores and child care.

With little time to study, she stays up late to get her work done for the next day.

ACTIONS

Despite her young age, she is already exposed to older men seeking marriage.

With so many pressures outside of school, Mtsunge finds it difficult to cope with her workload, and teachers aren't always available to provide support.

MOTIVATIONS

Mtsunge dreams of being a teacher one day. She's already a confident public speaker.

Unfortunately, a lack of basic needs (food, menstrual pads) and a lack of education support at school make her daily studies a challenge. Class cancellations make lessons inconsistent.

She's invested in local nutrition, and as such, loves to cook.

Though she takes pride in being a caring older sister and good daughter, she wants a better life for herself as well.

INFLUENCES

School aside, simply living in her village proves difficult. Unpredictable weather makes it hard to respond to storms and flooding. Electricity is often out; heat is non existent; and water requires long distance travel.

Social pressures make being a young woman difficult—from lack of menstrual products to early marriage and everything in between.

Her church has just as much influence on her behaviors as her friends at school.

TECHNOLOGY

In order to tackle her various challenges.
Mtsunge needs access to information. Community leaders help, but can be bias. If internet connectivity were improved or accessible she could learn about sexual health, have additional learning resources, and much more.

Technology would also provide support in the classroom when teachers are overburdened or unavailable.



Building the Persona

Ajay, UNICEF Health Specialist

32 years old, Ajay, a self-made man, is married and just had his first child. His family lives in India, but 2 years ago he moved to Lilongwe for a 3 year duty station.

Before this assignment he was working with UNICEF in Mumbai, and this is his first time living outside of India. He is slowly adapting to living and working in Malawi, but he still wishes some things were easier.



PERSONAL

Ajay is a UNICEF Malawi employee, he works as a health specialist within the organization.

He is from India, and this is his first duty station outside of his hometown, a 3 year mission in Malawi.

His wife and son live in India, so he gets lonely sometimes. He really enjoys working with a lot of people and being surrounded.

ACTIONS

Despite his efforts, he has trouble connecting with the local communities, mostly because of the language barrier.

Because of his heavy workload and the multitude of stakeholders, Ajay finds it gets hard to keep a clear mind about projects. There are too many channels, partners, and different priorities, he often gets a little overwhelmed.

MOTIVATIONS

Ajay is passionate about his job. He grew up in a very poor family and knows how hard it can be. His goal is to do everything he can to help others grow up in better conditions.

He feels as though he spends most of his days figuring out logistics, going from one meeting to another and filling out paperwork.

He would like his work to have a more important impact.

INFLUENCES

His move to Malawi has not been easy on him. He is not able to work independently, he has to rely on a translator whenever he is in the field.

He has to overcome challenges everyday, from transportation to connectivity with everything in between.

He also has to juggle multiple reporting lines (HQ, CO, RO...), and the different priorities of various implementing partners.

TECHNOLOGY

In order to do his job better, Ajay needs access to better information.

He wants geo-tagged real-time data, well integrated data, and stakeholder information.

Currently he suffers from untimely, messy and most importantly siloed data.

YAP - MVP 3

Gamifying school attendance and incentivizing community building. A platform, that rewards adolescents for their participation by giving them access to connectivity so that they can be exposed to learning and opportunities.

There is a bank of smartphones in the classroom

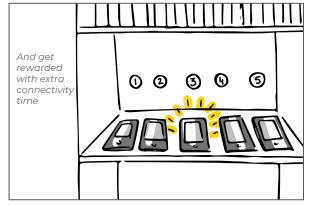
CLASS PHONES

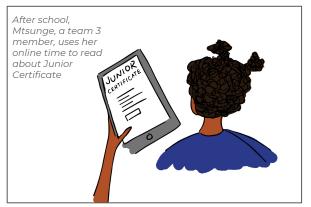
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Living Schools - Mapping Opportunities

Leap

Ensuring school-age children achieve essential learning outcomes and skills for life and are safe

Stretch

Enabling effective horizontal communication to raise funds for schools





Living Schools - Building Personas



Chimwewe, Adolescent Student

Chimwewe grew up in Lilongwe, the capital of Malawi, and goes to secondary school there. Unfortunately the school she goes to has not been well built or maintained; whether it is transportation, sanitation, or resources, the infrastructure is a mess.

But Chimwewe is very involved and is a leader in all things community. Even if she doesn't have a lot of time or resources, she is committed to learning. She always strives to be better, and especially to write better. In spite of all the daily obstacles that keep her from going to school, she is committed to writing and sharing her story.

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Samuel, Donor

Samuel lives in Frankfurt, and is the CEO of a major corporation. He has a son and two daughters who are between the ages of 10 and 18.

Every year he makes a generous donation to UNICEF because he believes that he has been lucky and wants to give back to those less fortunate.

He makes the donation, gets a thank you letter, but then never has the time to go through UNICEF's annual report to see where and how his donation was used. He sometimes wishes there was a better way for him to track his donation, know more about where his money is going, and who it is really helping.

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Living Schools - MVP 4

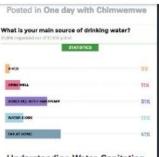
A real-time horizontal communication platform that bridges the existing gap between donor and beneficiary.

Through the platform, adolescents build their skills and gain exposure, while donors are able to track the progress and impact of their donation.

24 days ago Chimwemwe shows us Understanding Youth in Malawi the school garden where pupils and 24 days ago Four questions polled teacher plant pumpkins together. that try to provide a better She looks closely after the crop understanding of youth in Malawi. because goats always try to eat even the little parts. Posted in Good to know Posted in One day with Chimwemwe a month ago That look when you survived the first week of school! Wishing all school going children and their guardians who pulled off #backtoschool well a happy weekend! https://t.co/FBrGdVpJJR Posted in Dally Life via twitter CHIMZ ON THE BOREHOLE!

24 days ago Chimwemwe gets water at a borehole at Nankhali Primary School that was repaired by UNICEF.

Posted in One day with Chimwemwe



Understanding Water, Sanitation and Hygiene in Malawi

24 days ago Checkout the Poll Results from latest u-Report Survey aboit Water, Sanitation and Hygiene

Posted in Good to know



a month ago Flashback to May 2017 when @matshummels visited Nankhali Primary School in Malawi! Thanks to support from the German public, UNICEF began constructing new classrooms for Nankhali Primary School this year. https://t.co/8HVK/YXhUJQ

A screenshot from the live web platform: http://dfv.clapp.de/unicef/ls_v003/

3.860 GIRLS RECEIVING

SCHOLARSHIP SUPPORT

FOR VULNERABLE GIRLS

Creating Dynamic Immediate Content to Reduce the Distance Between Donors and Children (Intention & Action) Stefan. Chimwewe. Donor Student Replacing UNICEF as intermediary with **UNICEF** as facilitator via story-telling web platform **ONE DAY WITH CHIMWEMWE** YOUTH-**CREATED STORIES** SAY HELLO TO SCHOOL UNDER A CHIMWEMWE TREE Lulu from UNICEF Malawi meets the 13 year old girl at the Nankhali School. have to learn under the shadov himwemwe will show her of a tree. When the rainy seaso around and tell her how thins starts or there is a stormy day are improving thanks to #YouthOutLoud Self-managed groups that **UNICEF** as data

intelligence

provider

share across borders

Transparency, Connection, and Real-Time Progress Real-time monitoring of school facilities and reporting of project progress



Satellite

Data & Drone

Imagery



Leap

Ensuring girls and boys grow up in resilient, inclusive and child-friendly communities

Stretch

Empower a new generation of farmers to work together in vertically integrated cooperatives that enhance resilience through sustainable financial opportunities







Mphatso, Young Farmer

Mphatso is a 21 years old farmer living in Malawi. A few years back, he quit school to make money for his family.

He worries about his crops and hopes they will do better than the year before. He struggles with getting the equipment he needs, getting fertilizer, and finding helpful information. He usually asks his family, neighbors and peers for advice. He has to rely on the local bank for loans, but it is always a battle for him to get the funds that he needs to maintain his crops.

Most days, he wishes he could go back to school and not have to worry about all these challenges.

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PERSONAL

Mphatso is a young farmer. He is 21 years old, and is part of a large family.

He was forced to quit school a few years back, because his family needed money. Like his father, and his whole family, he went into farming.

His days begin at 3am, he wakes up worried, looks at the sky and goes tend to his crops.

ACTIONS

Mphatso's goal is to provide for his family. Every year he wants his crop to do better than the year before.

Despite his efforts, he can never plan ahead. He doesn't know if he will be able to afford fertilizer, seeds or pesticides. And he doesn't know if he will be able to get a loan from the bank.

He worries all the time: Is it going to rain? Will there be a drought? A flooding? Will we get enough corn?

MOTIVATIONS

Because he doesn't have access to many resources, Mphatso relies a lot on the advices of his family, his neighbors and his peers. He also listens to a few radio shows that give him a better understanding of the situation.

He can get very frustrated because of the market conditions, the prices of the produce on the market.

He also suffers from the limited access to resources and credit.

INFLUENCES

Mphatso is heavily influenced by his peers. They share their experiences and their knowledge.

His and his whole family's livelihood depend a lot on the market conditions and the market prices.

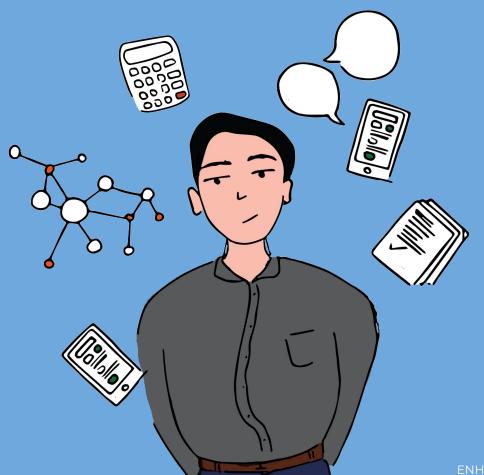
Mphatso respect the political chiefs. His church also has a lot of influence on his behaviors.

TECHNOLOGY

Mphatso has many technological limitations. He wishes he had access to a cellphone, and to solar chargers; this way, he could get more accurate weather information, better information about market conditions, prices and volumes.

He also wishes he had better access to information on funding, alternative crops, new information on irrigation, gout policies.

LEAD - Building Personas



Mark, Finance

Mark is a father, husband, and former farmer from Mzuzu. He now dedicates his life to lifting up agriculture entrepreneurs and helping communities improve their livelihoods. Access to all the right data is challenging, and getting farmers to trust him and be okay with risk can be even more difficult. Mark is on a mission to get buy-in from the government, from banks, and of course from community leaders. With a bigger portfolio and more data, he can help create a generation of independent lenders/borrowers and conduct predictive analytics.

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PERSONAL

Mark is a 34 year old husband and father of 2 children from Mzuzu.

His job takes him to South Africa once in a while.

He's the kind of guy who leans into his fears -- for example, he has a fear of flying but does it often.

Mark is constantly working for the community—assisting with trainings and applications, attending group meetings, and carefully planning his days.

ACTIONS

It is hard for Mark to be away from home so often, but he finds his job fulfilling.

He doesn't always know the local language, which causes difficulties as he works with local farmers.

Mark enjoys playing football, but he sometimes breaks his glasses, and suffers from eyesight problems.

He travels long distances to meet the farmers groups; unfortunately he can only see a limited number per day.

MOTIVATIONS

Mark used to be a farmer himself, and is motivated to lift up other agriculture entrepreneurs. He understands that improved livelihoods can have a tremendous impact on the communities.

He is well connected by his social and work circles—he is participatory at church, has many friends who work in banks, and connections from his days in agricultural training.

His biggest frustrations are the intense competition of business, the risk averse nature of farmers, and unregulated money lenders.

INFLUENCES

It is hard for Mark to get to farmer's meetings when the distances are long and the access to roads and bridges is insufficient. The villages are often losing electricity.

In meeting farmers and their families, Mark pays special attention to who spends and who borrows money.

It is important that he get support from politicians. Mark also needs to receive buy-in from the group leaders and approval from the loan companies.

TECHNOLOGY

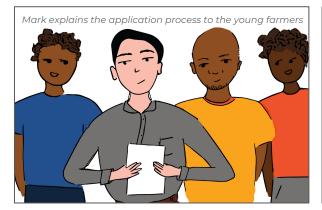
In terms of technology, Mark has access to a cell phone, tablet, a motorbike, a vehicle, television, and radio.

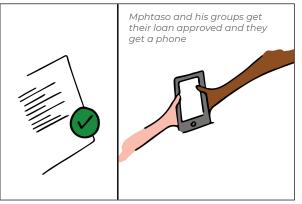
There is a ton of data he needs in order to do his job better. Whether it's income data, understanding competition, learning about credit histories, monitoring crops, or simply mapping where the farmers are. Mark understands that historical data and real time data will help make better planning decisions.

When it comes to data, connectivity is an issue. Often farmer records are non-existent.

LEAD - MVP 5

Identify a young agricultural entrepreneur influencer who will create a trust group to which a micro-loan in the form of a feature phone is made along with a program of information exchange that enhances production and profitability













SECTION 6:

organizational change

External impact begins with internal change.

Over the course of the workshop, participants elevated a key principle of successful development - feedback loops are essential to creating sustainable data intelligence practices and positive outcomes. Each MVP contains feedback loops that include data capturers, data beneficiaries and data providers. Moreover, in effective human-centered design, the community remains a central focus and is a critical participant in problem-solving.

By eliminating silos and barriers to sharing information internally, UNICEF Malawi can will gain a more holistic understanding of issues, challenges and problems and will open up access to the information necessary to create sustainable, system change. Through the active sharing and utilization of data intelligence in the problem-solving process, we change the way we do business, catalyzing a transition from using data primarily for reporting and responding to using it for the 4Ps: prediction, planning, prompting, and promoting.

What follows in this section are the principles of 4P2C, which form not only the foundation of the enhanced data intelligence node, but provide guidance for UNICEF Malawi's organizational transformation.





Align with Action

From Nouns to Verbs

When we list resources, inputs, basic data, etc. what we're really charting are UNICEF Malawi's nouns. What creates impact and signifies a transformation, however, is the combination of these assets to create action. Whether it's tracking, charting or predicting, we conclude with verbs.

From Siloed to Collaborative

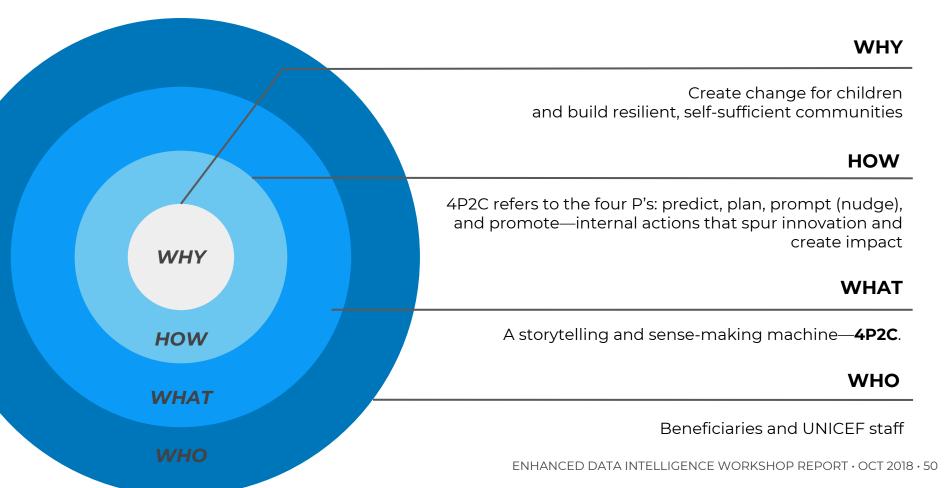
In order to create a culture dedicated to innovation, decision-making at UNICEF can't happen in silos. Vertical communication prevents internal alignment, whereas horizontal communication ensures team buy-in, clear responsibilities and aligned ambitions.

From Data-Centric to Human-Centered

Amplify existing behaviors, knowledge situations, or networks. Understand and leverage what currently motivates behavior.

Start with leap. Before you can determine your stretches and step, use magical thinking to imagine possibilities; then, refine to what's practical, simple and most effective.

UNICEF Malawi - 4P2C Driven Organizational Transformation



Principles of 4P2C

Human centered.

We focus on understanding the perspective of the person who experiences a problem, their needs and design solutions that effectively meet these needs.

With, not for.

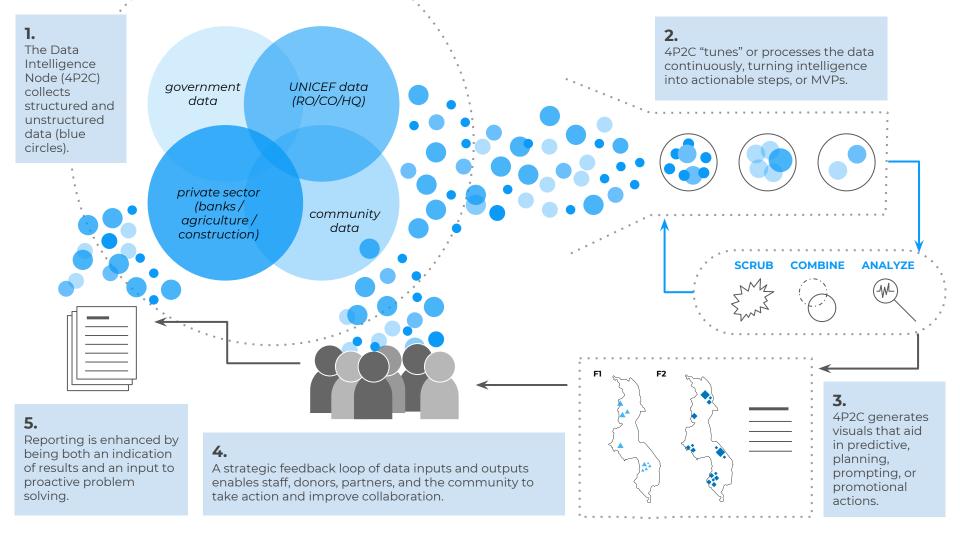
This is a collaborative process in which we work with and not for others. We become allies to problem owners supporting and facilitating their ability to engage in sustainable change.

Change the Context, Not the People

Changing a person's behavior can prove difficult, but by changing the context in which they behave, we can alter their actions.

From Historical Reporting to Actionable Intelligence

When data is translated into actionable intelligence, it empowers action where historical reporting does not. Rather than hoarding data in silos, feedback loops are created, knowledge is co-owned, and impact is co-created.



Next Steps

This report will help inform:

- 1. The development of the Functional Requirements Document
- 2. The internal and management strategy
- 3. The investors' deck and video



section 4:
appendix

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- 84 Photos from the Workshop

Select photos from the workshop activities are included here to give a sense of how the activities take shape. For a full set of photos, click <u>here</u>. Within each day of the workshop, folders labeled inputs contains photographs of completed exercises.

97 Additional Information and Tools



ENHANCED DATA INTELLIGENCE: HUMAN CENTERED DESIGN WORKSHOP AGENDA

The objective of this Human Centered Design workshop is to identify problems and issues that may benefit from the application of enhanced data intelligence to achieve positive and sustainable results at scale for vulnerable children in Malawi. By bringing diverse perspectives together we will facilitate ways to predict, prevent or resolve issues by leveraging a combination of existing and new, traditional and non-traditional data.

BRIEF WORKSHOP CALENDAR

TRACK 1 - VISION SETTING

Tuesday, 16 October to Thursday, 18 October 2018

Day 1: Envision the Opportunity

Day 2: Identifying the Change Agents

Day 3: Developing Our Theory of Change

→ REMOTE PARTICIPANTS

Remote participants are engaged in the workshop on Days 1 through 3. We will follow the below schedule on those days.

- Activity Teamwork (1 hour)
 Remote teams should come together for an hour each day to
 work through the assignments shared the previous evening.
- Sharing and Discussion (1 hour)
 Using Skype remote teams will share out their work, facilitators will share progress from the morning and assignments for the following day will be provided.

TRACK 2 - CONCEPT DESIGN

Friday, 19 October to Saturday, 20 October 2018

Day 4: Focus on Possibilities
Day 5: Implementing Change



Day 1: Envision the Opportunity

Wednesday, 17 October 2018

OBJECTIVE

The purpose of Day 1 is to envision the opportunity, starting with workshop guidelines to guide us over the next five days and ending with determining the three to five concrete high-impact issues and data interventions for which UNICEF Malawi can have the greatest impact used as a basis for designing data intelligence solutions.

unicef @

MORNING SESSION: 7:30AM-1:00PM

Populist will kick off the workshop with an overview of what to expect over the next five days together. Throughout our time together we'll highlight HCD strategies, process and tools to build capacity in the use this effective problem-solving approach with future challenges.

Breakfast

Gather at Kumbali Lodge for a light breakfast.

Welcome

Convene and share our desired goals and outcomes

· Introduction and Golden Rules

Introductions and a brief overview of guidelines for using human centered design principles for problem solving. A focus on highly participative brainstorming will be key to achieving outcomes.

· Hopes and Outcomes - activity

List hopes and outcomes for the use of enhanced data intelligence to achieve Malawi's 5-year goals. We'll engage in a "from > to" evolution, listing "best possible" outcomes from data interventions

Starting Point - presentation

A synthesis of the findings from our stakeholder interviews and the answers you provided to the homework examining the challenges and opportunities and entering into a group discussion about the ways in which data intelligence may be used in conjunction with the Malawi UNICEF programme priorities.

• Innovation Snapshot

workshop...

Andrew Brown - Horizontal Communication

• Issues, Challenges and Bottlenecks - activity
UNICEF Malawi will share with the group the three
programme priorities guiding their efforts for the next 5
years. Together, we will break down pillars to the to
establish context for issues. Then we'll break into teams, and
with input from program officers and partners working
directly on problem-solving initiatives in the field we'll
identify the specific issues and problems that fall under
each priority. The goal of this exercise is to produce a
comprehensive list of problems and opportunities so we
may use these as our focus for the remainder of the

AFTERNOON SESSION: 12:45PM-3:00PM

After a break for lunch at noon, we'll review and discuss the goals of the project together.

· Opportunity for Change - activity

We will move from challenges and bottlenecks to opportunities by using the "if > Then" framework that connects the actions we take to the outcomes they create. After sharing out, as a group, we will ask "how might we" to bridge the Ifs and the Thens.

Opportunity Maps - activity

Considering this opportunity, what are all the issues and opportunities around it to address? Participants will draw two circles with synthesized issues, fill out and select a way forward. Workshop participants will share-out their opportunity maps and review all work done throughout the day.

Closing Discussion

We will review the progress we've made in Day 1 and relate that to how we'll use this in Day 2.

REMOTE PARTICIPATION: 2:30-4:30PM

Activity - Teamwork

Remote teams will receive a synthesis of the findings from stakeholder interviews and the answers from homework. As a team they should review the UNICEF Malawi programme priorities and identify the specific issues and problems that fall under each priority.

Sharing and Discussion

Remote participants will share their comprehensive list of problems and opportunities that we can use as we consider how and where enhanced data intelligence can have the greatest effect.

Day 2: Identifying the Change Agents

Wednesday, 17 October 2018

OBJECTIVE

The purpose of Day 2 is to consider the problems and opportunities that exist in the context of those people who aim to prevent or solve them. Using the HCD process we'll establish a deep understanding and empathy for the people or groups that will build, manage, engage with and benefit from enhanced data intelligence.

MORNING SESSION: 7:30AM-1:00PM

The morning will be devoted to establishing a deep and well-rounded understanding all of the people in the problem-solving process, and the ways in which their actions, activities and needs may inform their need for and interest in enhanced data intelligence.

Welcome

We gather at Kumbali Lodge for a light breakfast together.

Morning Review

Review a synthesis of the work done on Day 1 and discuss the Problem-Solver persona(s).

• Innovation Snapshot

Clara Palau Montava - Magic Box

· Persona Identification - activity

Consider the specific issues identified in day 1 and provide suggestions of the people involved in realizing the opportunity or solving the problem, identify the personas of the partner problem-solver and UNICEF specialist/officer supporting them.

· Persona Building - activity

Using the persona development model, we'll now break into teams and each team will build out 2 personas. Working on one persona at a time, outline a day in his/her life as they work through your chosen issue/opportunity. Think about their personal lives, their motivations, their environment. All teams will share out their 2 personas with the rest of the participants.

• Innovation Snapshot - Onicio Neto

AFTERNOON SESSION: 12:45PM-3:00PM

After a break for lunch, based on the personas that were just built by each team, we will develop user journeys to provide deeper insights about each persona.

· User Journey Maps - sketch and share

Carrying on from the Persona development we will use storyboarding frameworks to create user journey maps that provide deeper insight into how each might incorporate enhanced data intelligence into their thinking and actions to achieve better outcomes. Workshop participants will share out their user journeys with everyone else. They will be provided with post-its to support and build upon personas and user journey maps

· Closing Discussion

We will review the progress we've made in Day 1 and relate that to how we'll use this in Day 2.

REMOTE PARTICIPATION: 2:30-4:30PM

Activity - Teamwork

Remote participants will be assigned 1-2 personas to develop.

Sharing and Discussion

Remote participants will share their developed personas. Populist will provide an overview of the Theory of Change methodology and share examples of how it has been used in prior efforts.



Day 3: Developing our Theory of Change

Thursday, 18 October 2018

OBJECTIVE

The purpose of Day 3 is to map the theory of change and identify the inputs, tools and processes necessary to achieve transformative change.

MORNING SESSION: 7:30AM-1:00PM

Day 3 includes a series of sprints to define the critical elements of the product/platform we will design in Track 2, focusing on the transformative change that this will deliver.

Welcome

We gather at Kumbali Lodge for a light breakfast together.

Morning Review

Review a synthesis of the work done on Day 2 and alignment on the issues/problems that will form the foundation of our focus for mapping the theory of change.

· Innovation Snapshot

Magda Biesiada - Geospatial analysis and Al

· Selecting your MVP - activity

Reviewing your Opportunity Map and the work you've done on persona and journey mapping, define the smallest action you can take that may have the biggest or most critical impact on efficiency and efficacy.

Walk-About and Voting

Workshop participants will be provided with stickers to vote on what excites them, what should carried forward.

Theory of Change Methodology - activity

Populist will introduce the theory of change methodology and share examples from prior work to prepare teams. Then, working as a group, teams will select clusters or a category of issues to take forward. Then each team will develop their theory of change focused on the selected category of issues and referencing the persona work and user journeys from prior days.

AFTERNOON SESSION: 1:00PM-3:00PM

The afternoon session includes time to receive theory of change feedback from half-day participants for their input and perspective.

Innovation Snapshot

Marc Vivier - MyBucks

Theory of Change Refinement

Each team goes back to their theory of change and refines their work.

Sounding Board - Theory of Change

The teams will share their Theory of Change and the process by which that change will occur. They will ask the entire group for input, challenges, builds, support.

• Closing Discussion and Next Steps

We will review the progress we've made throughout Track 1, discuss the intentions for Track 2 and will open the floor for discussion including workshop participants and the leadership team.

REMOTE PARTICIPATION: 2:30-4:30PM

Activity - Teamwork

Remote teams will select a category or cluster of issues against which to develop their Theory of Change..

Sharing and Discussion

Remote teams will present their Theory of Change work.



Day 4: Focus on Possibilities

Friday, 19 October 2018

OBJECTIVE

The purpose of Day 4 is to reflect on the problems we intend to solve, reconsider the new data forms we can apply, articulate and finally, to determine the design principles by which the MVPs will be chosen and the DIP will be created and measured.

MORNING SESSION: 7:30AM-12:00PM

Populist will kick off the day with a review of Track 1. We will re-familiarize ourselves with the key problems we believe we can realistically solve in the immediate future, and pave the way for a data intelligence platform to help us accomplish our goals. This synthesis of Track 1 informs our way forward for Track 2 as we define and refine our design principle and process.

Welcome

We gather at Kumbali Lodge for a light breakfast together.

· Morning Review - Fresh Start

Review a synthesis of the problems, personas, and user journeys from Track 1, and introducing the new teams.

Features and Priorities / Technology Choices and Considerations - presentation

Omnitech will share learnings from their stakeholder interviews, and gaps and opportunities. They will explore and share the available technologies that could be considered to realise the various business opportunities. Such as: GIS visualization, Analytics tools, Big data analytics algorithms, Structured data analysis processes.

Inspiration

Each participant will share their homework on a data intelligence or tech innovation that is solving a problem or making something possible today.

Sustainable Business Process - activity

Based on their persona developments and theory of change, each team will develop a simple business plan that includes: Who we are building for and with, what they give, what they get, what value does it add and how it can sustain itself.

AFTERNOON SESSION: 1:00PM-5:00PM

After a break for lunch, Populist will launch into activities that help participants visualize how we turn aspiration into action.

· Process Plan for Change - activity

Using an expanded version of the Theory of Change tool, each team will dive into the specifics of every stage: the inputs, the processes, the outputs, the tools, the actions and the effects. The teams can develop visual aids to help bring their idea to life.

· Closing Discussion

At the end of Day 4, there should be the main opportunities and processes taken into Day 5 in order to focus on implementation and realization.



Day 5: Creating a Roadmap for Change

Saturday, 20 October 2018

OBJECTIVE

The purpose of Day 5 is to understand the business opportunities we have uncovered and start thinking about implementation. Through prototyping using a business process change model we will decide what the specificities of this product are, how it should be implemented, and how it will help us achieve the project goals and objectives.

MORNING SESSION: 7:30AM-1:00PM

Populist will start by reviewing what was achieved on Day 4, the Processes for Change, and start defining what the DIN should look like and what it should do. We'll end Track 2 with a farewell lunch together.

Welcome

We gather at Kumbali Lodge for a light breakfast together.

such as Data hub. Data warehouse or Data lake.

Innovation Snapshot - Potential DIN Architectures Omnitech will introduce high-level architectural structures that could address and challenge the opportunities and constraints from the Malawi environment. Some of the data models to be considered

· Inputs and Outputs - activity

Both teams will develop two close to exhaustive lists: the inputs that go into the DIN, and the outputs that will come out of it.

Start with Why - activity

In their teams, participants take a step back and list out what they want and why they want it, which will lead to the "how", the DIN. Participants can either use the bull's eve tool or hack it.

• Envision the Change - walk about

Review and discuss a systemic view of how we might change the way we do business. We move now from the possible to the practical, determine as a group where we want to focus. What do we endorse, what do we want to build on, and what do we want to challenge?

Reflections, Next Steps and Concluding Remarks We will look back at the work we have done, discuss what we are most proud of, and discuss most immediate next steps versus the longer term goals.

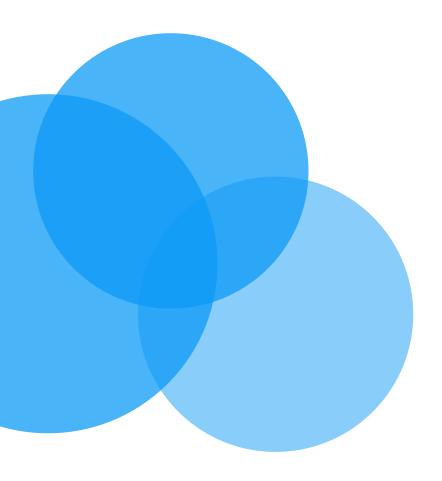




Populist Frameworks and Tools for Creating Change

The following sections contains the tools used in the Enhanced Data Intelligence Workshop. The process, which relies on human-centered design principles, takes a team through the critical thinking required to understand context, align ambitions, and develop strategies for change alongside the community invested in and affected by the issues.

These tools are mutable-tweak, edit, add, or remove prompts as you see fit.



From/To Exercise

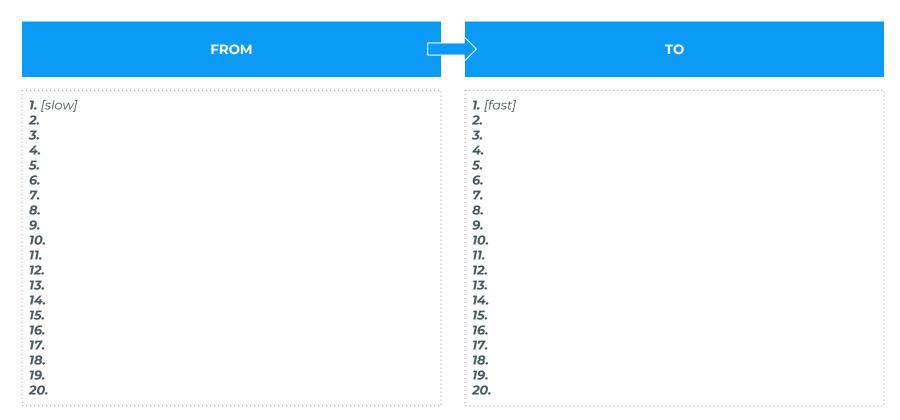
Instructions

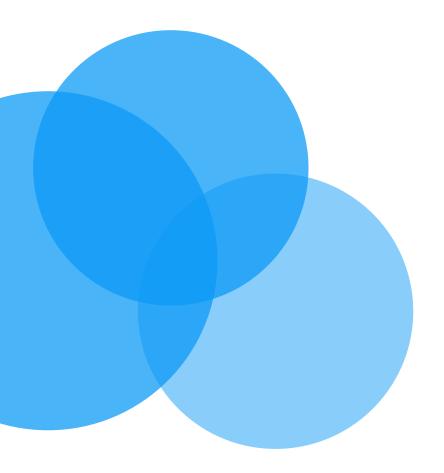
Rapidly list 20 ideas. *From*: what we want to change, evolve, leave-behind. *To*: where we want to go assuming we have all the power in the world to remove constraints and bottlenecks

Recommended Timing

15 minute sprint; 15 minute share-out.

From/To Exercise





Breaking Down the Problems

Instructions

Each team is assigned a program pillar. Identify 10-15 issues, needs, bottlenecks, constraints, etc. keeping us from achieving the pillar. Remember the *Small is Big* principle of human-centered design.

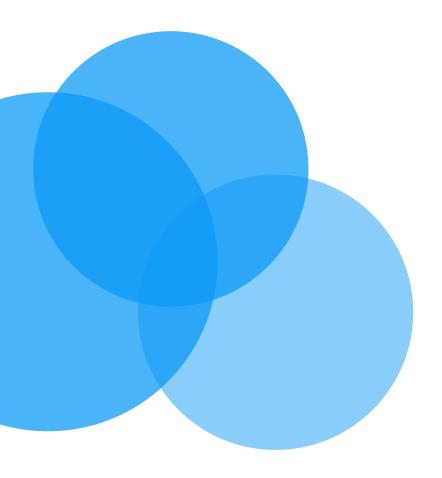
Recommended Timing

30 minutes

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Breaking Down the Problems

10. 12. 13. *14*. *15*.



If/Then Statements

Instructions

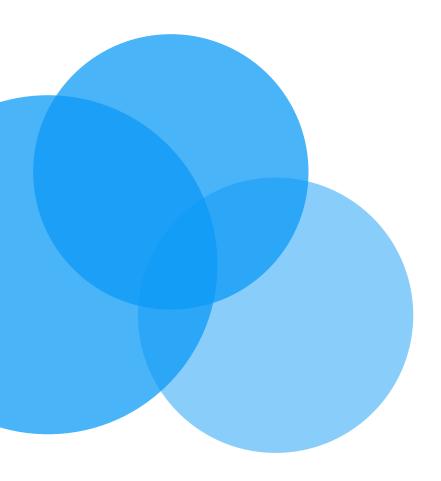
Write an If>>Then statement for at least half of the issues you identified in Breaking Down the Problem: "If we had X (magical thinking), then we could do Y and solve issue Z." Teams should edit,add, organize, cluster, prioritize the issues selecting their top 3 to focus on.

Recommended Timing

45 minutes

If/Then Statements

If we have [X]	Then we can [Y]	To Solve [Z]



Opportunity Mapping

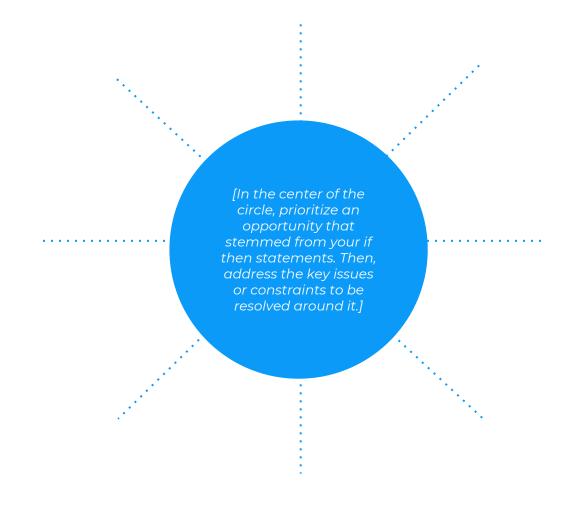
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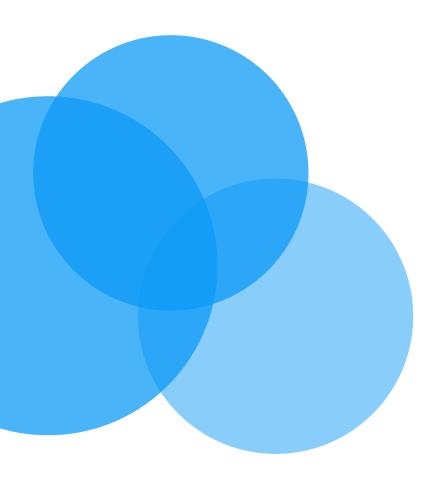
Take your prioritized clusters of issues from the previous exercise. Considering these issues, what are all the opportunities around it to address? Draw two circles with synthesized issues. Fill out and select a way forward.

Recommended Timing

45 minutes for each map

Opportunity Mapping





Persona Development

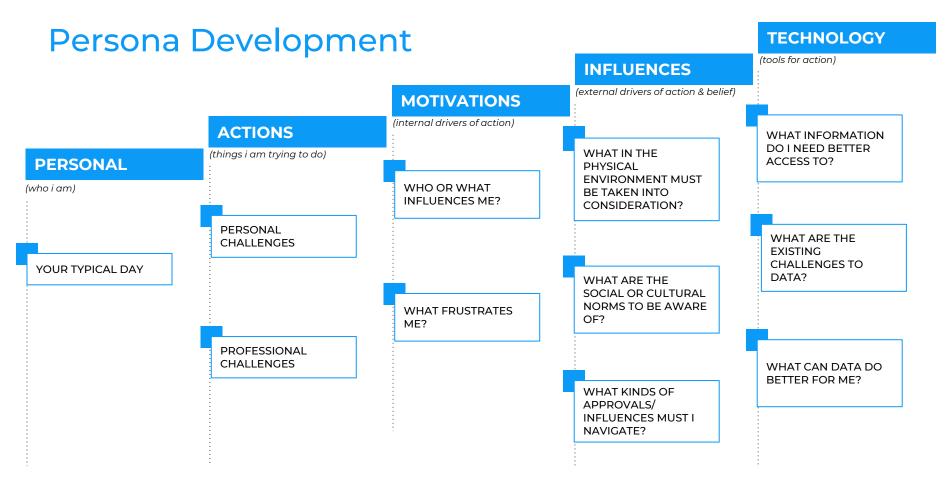
Instructions

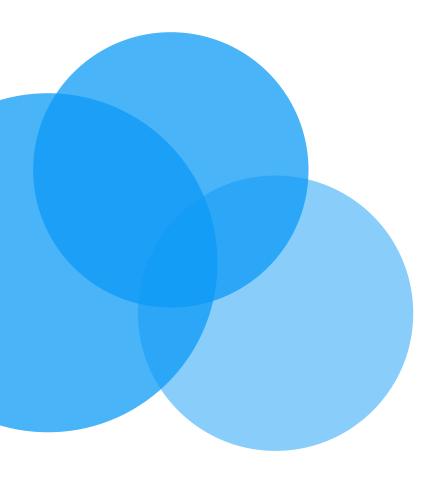
We build personas to familiarize ourselves with and prioritize the communities affected by any given issue. It places a strong focus on emotional richness as we problem-solve.

The entire group should identify and then fully describe the primary people involved in realizing the opportunity or solving the problem. Descriptions should reveal the true character, personality, habits, customs and culture of each person for whom a persona is developed.

Recommended Timing

30-45 minutes for each persona





User Journey Maps

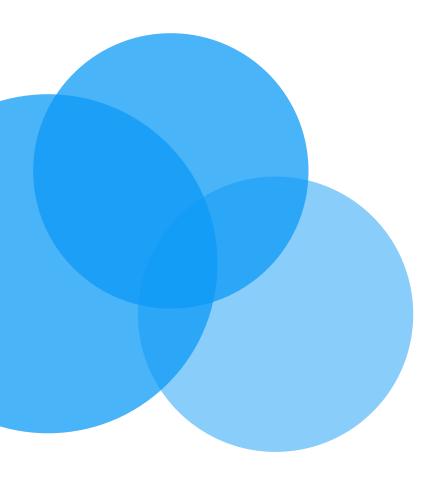
Instructions

For one of your personas, outline a day in his/her life as they work through your chosen issue/opportunity. Borrow other persona's as your person interacts with them Use visuals, sketches, stick-figures vs written narrative.

Recommended Timing

45-60 minutes for each user journey

User Journey Maps



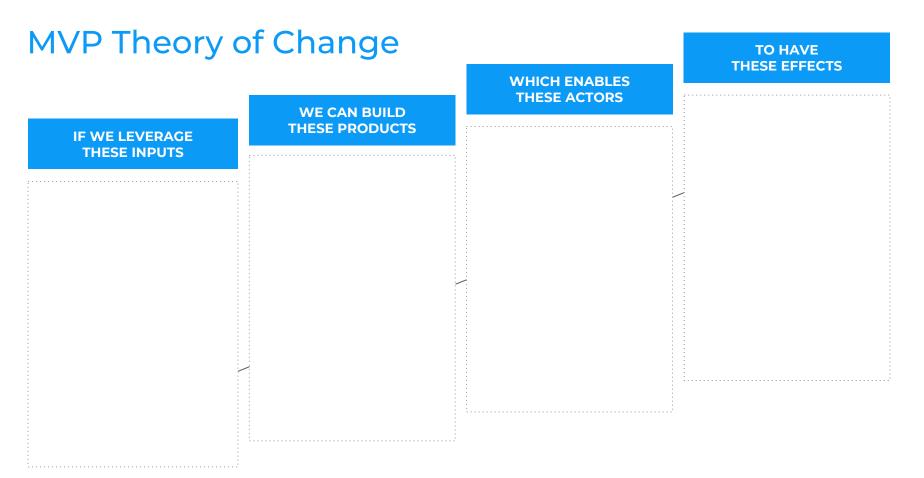
MVP Theory of Change

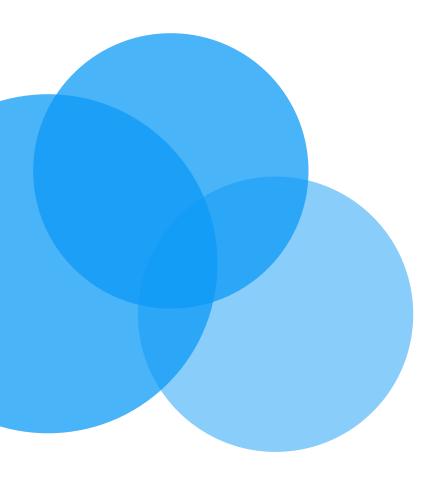
Instructions

Define your theory of change to create a plan for how you will change the way you do business. Using your team's chosen issue/opportunity, complete your theory of change. Remember to reference your personas and journey maps.

Recommended Timing

60-90 minutes





MVP Business Process to Change

Instructions

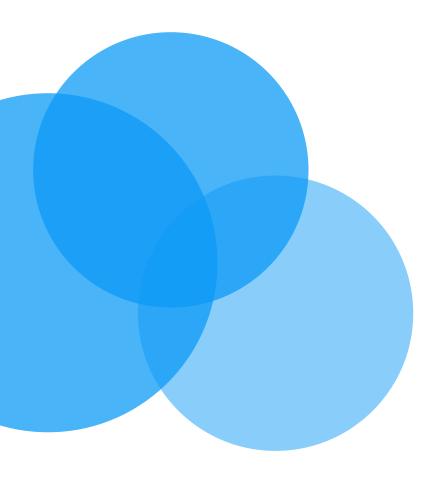
Focus on your team's challenge/opportunity. Then work through prompts on business process maps referencing existing users, journeys, and your theory of change.

Recommended Timing

60-90 minutes

MVP Business Process for Change

INPUTS (structured and unstructured data and available data sources)	PROCESSES (combining, analyzing, processing)	OUTPUTS (reports, data visualization, intelligence)	TOOLS (distribution channels, technology)	ACTIONS & USES	EFFECTS



MVP Sustainable Business Plan

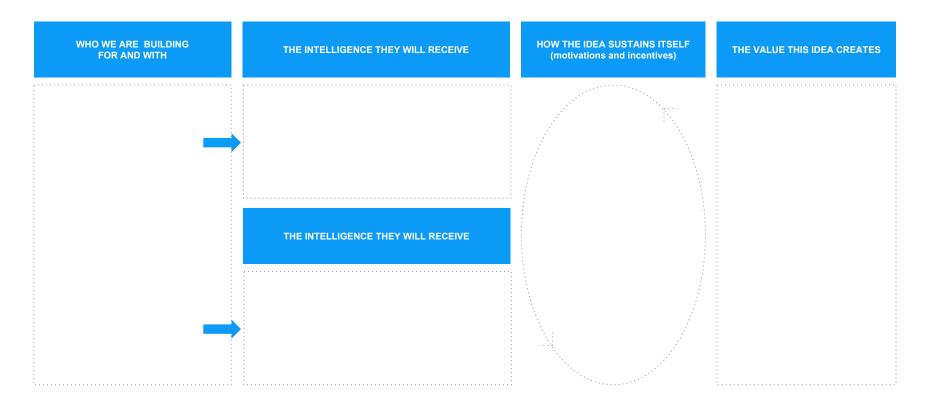
Instructions

Continue working on your team's challenge/opportunity. Then work through prompts on the sustainable business plan. Remember to consider incentives for action from your key actors.

Recommended Timing

60 minutes

MVP Sustainable Business Plan



TRACK 1 PARTICIPANTS

UNICEF

Afrooz Johnson Alfred Mukasa, UNICEF ESARO, Kenya **Andrew Brown Bob Muchabaiwa** Emma Creighton **Emmanuel Saka Ernest Oriero** Evan Wheeler, UNICEF NYHQ, USA Guillermo Burns Jean-Claude Kamelan Jieru Zheng, UNICEF NYHQ, USA Johannes Wedenia John Njunga Kimanzi Muthengi Kovalan Kumaran Magda Biesiada Marie-Claude Villacorta

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Andrew Brown

Charlie Hartono Lie

Clara Chindime

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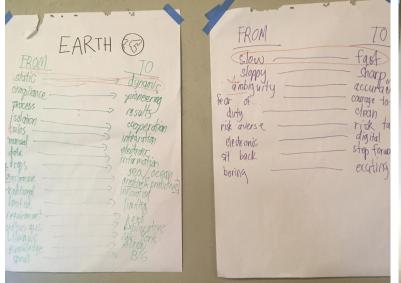


REMOTE PARTICIPANTS

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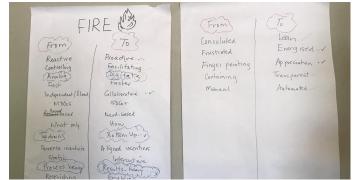






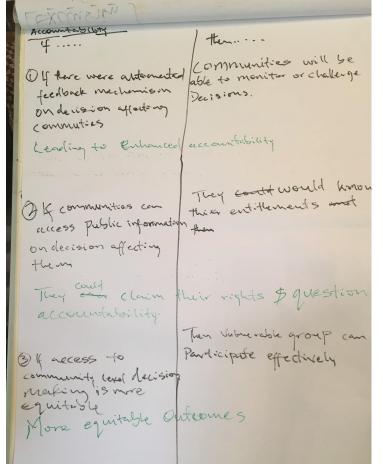
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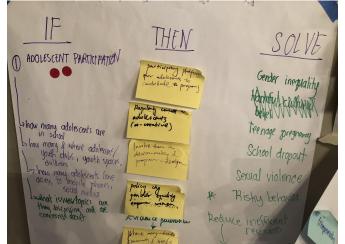
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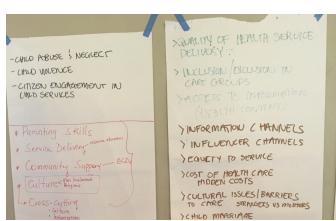




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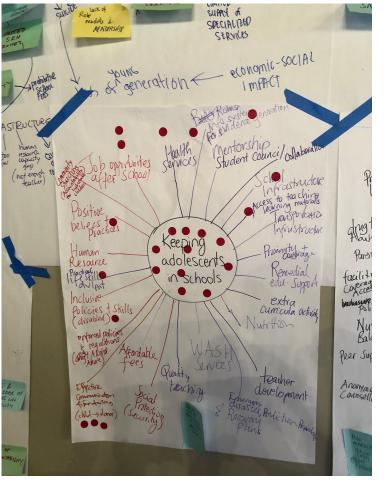






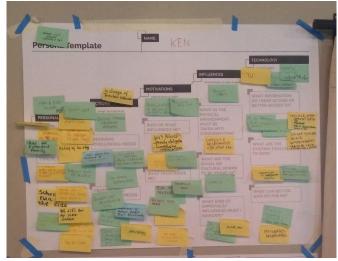




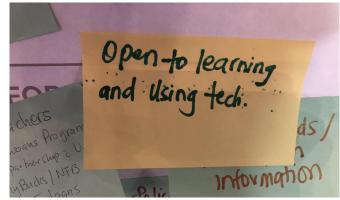


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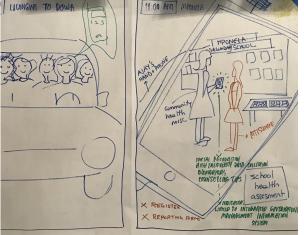












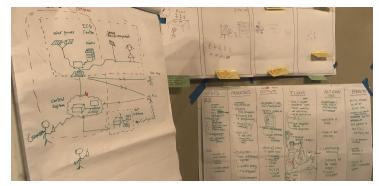


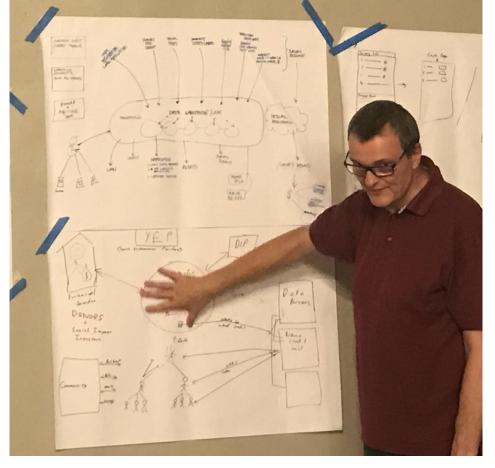












WHERE TO FIND MORE INFORMATION

We've created a set of tools that compliment different use cases, available at HCD4health.org.



"Demand for Health Services" Field Guide

A comprehensive 170-page manual introducing human-centred design as an approach to addressing challenges related to community demand for basic health services such as immunization.



Companion Workbook & Process Poster for "Demand for Health Services"

The workbook shares a summary of each step next to its associated tools. The poster shows an overview of the process.



"Designing Digital Interventions for Lasting Impact" Toolkit

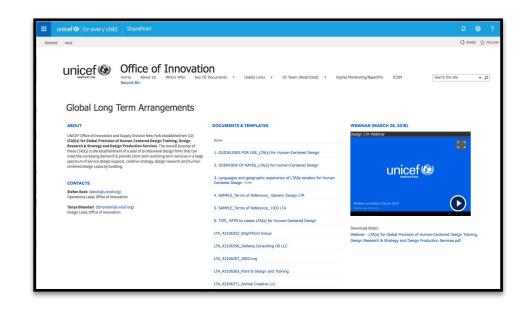
Created in collaboration with the Global Innovation Centre, this toolkit follows the same process, with additional concentration on incorporating technology-focused considerations.

WHERE TO FIND MORE INFORMATION

Global LTAs

The Office of Innovation has set up Global LTAs for Human-Centred Design Training, Design Research & Strategy and Design Production Services.

Click here to access.



Thank you.

QUESTIONS / COMMENTS?

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