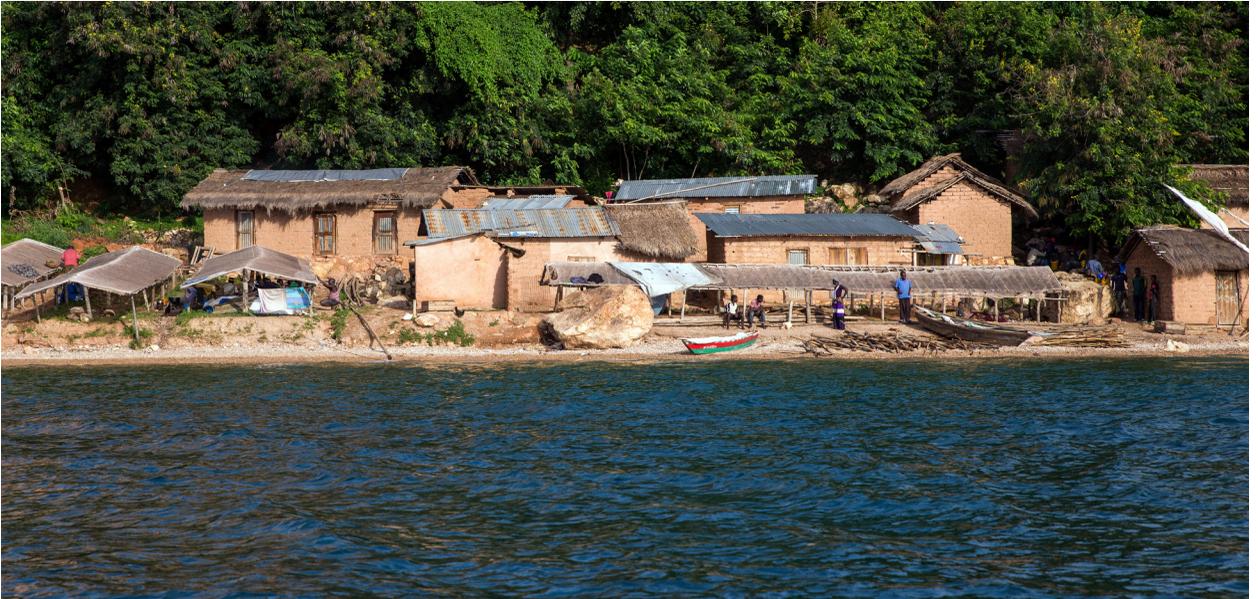


The Tech for Global Good Vaccine Distribution Challenge



KIGOMA,
UNITED REPUBLIC
OF TANZANIA



The Tech
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Introduction

The Tech for Global Good

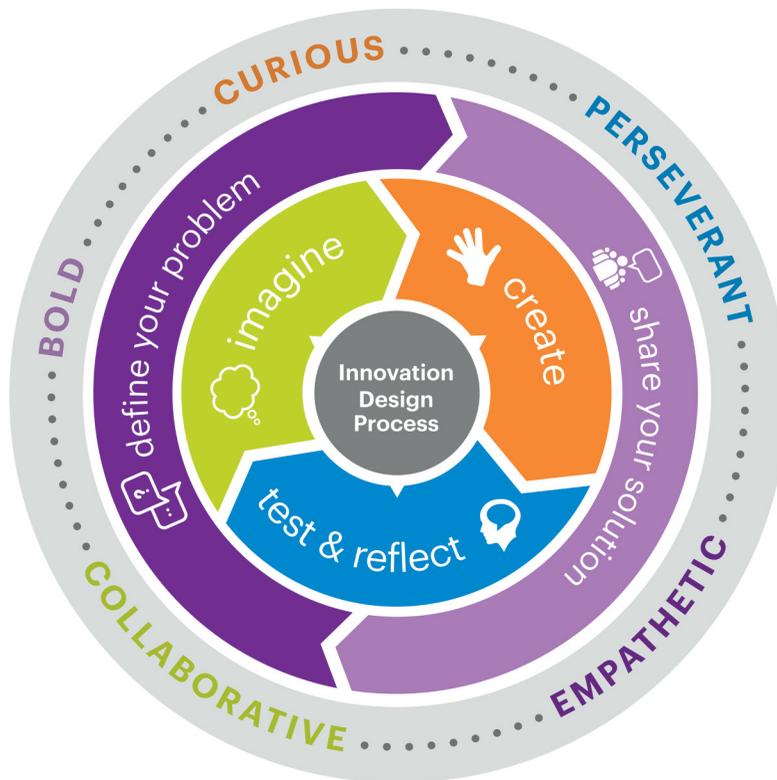
The Tech for Global Good is an initiative that will create the next generation of innovators ready to tackle the toughest challenges facing our planet.

PATH

What is PATH?

PATH is the leader in global health innovation. An international nonprofit organization, they save lives and improve health, especially among women and children.

Innovation Design Process



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Design Challenge

You and your team run a pharmaceutical company in California that has developed, tested and produced a vaccine that can prevent measles. Your team will use your skills as communicators, researchers, collaborators and creative problem-solvers to assist the city governments in developing plans to help immunize their communities.



1. Research the problem:

- Understand the design challenge.
- Read the background material.



2. Brainstorming:

- Write each idea (text/image/both) on a sticky note and put it on the board.
- Be creative! Think of as many wild ideas as possible.



3. Create a solution:

- Each member shares their sticky notes and posts them on the board.
- Pick someone to group similar ideas.
- Label the categories.
- Work together to add more ideas.
- Each team member ranks their favorite ideas (1-5).
- As a team, choose a solution to focus on.



4. Refine your solution:

- Get feedback from peers on your solution.
- Edit your solution and improve how it addresses the problems.



5. Design a project and presentation:

- Get feedback on your solution.
- Please show:
 - The vaccination problem your team has addressed.
 - Your team's solution for this problem.
 - Story of how your solution will impact one person in the city (a child, a parent, a healthcare worker, etc.)

Designing a Solution with Kigoma, United Republic of Tanzania

The city of Kigoma has reached out to your pharmaceutical company in California for help with their current immunization crisis.

Problem

Your pharmaceutical company has helped develop and ship 200,000 vaccines for measles to Kigoma for use in Kigoma and the Nyarugusu Refugee Camp. Now your team needs to come up with a plan on who needs the vaccines most, where to distribute the vaccines and how to let people know when and where to get vaccinated.

Your pharmaceutical team will need to create a presentation to show your solution and how it will impact one person (a child, a parent, a healthcare worker, etc.) in Kigoma or Nyarugusu. The following provides some information that might be useful to your team while you work on your solution and story of how a person in one of these communities is affected by your solution.



About Kigoma and the Nyarugusu Refugee Camp



Kigoma is one of the busiest ports on Lake Tanganyika, partially because it has the only functional railroad that connects to a seaport; the seaport is located at Dar es Salaam. The Kigoma port is beginning to fill with silt making it harder for large boats to dock at the port. However, the city does have other transportation options that make it accessible: an airport, ferries, buses and roadways.

Kigoma is home to about 135,000 people. That is slightly larger than Santa Clara (116,500) or Berkeley (112,600) in the Bay Area region of California. In 2016, there were 33 cases of measles in Kigoma. The city has been working to prevent future outbreaks of immunization-preventable illnesses.

Approximately three hours northeast of Kigoma is the Nyarugusu Refugee Camp, which was opened in November 1996 to provide a safe place for people to live as they fled war. The population of this camp is currently between 130,000 and 150,000 people. The camp has access to deliveries and well maintained roads. There is also good access to food and healthcare through two hospitals, five health centers and 20 health posts. However, there are also challenges at the camp. There is a lack of quality shelters, clean water access points and bathroom facilities. It is important to improve these needs and to continue to provide quality healthcare as refugees find new homes and new refugees arrive at the camps.

Immunization challenges in Kigoma, Nyarugusu Refugee Camp and United Republic of Tanzania

Among Tanzanians, 99% have their immunizations, including that for measles. However, the United Republic of Tanzania is also the home of three refugee camps, the largest being Nyarugusu. The refugees who come to camps like Nyarugusu are



from different countries, cities and villages each with different experiences accessing healthcare. For the United Republic of Tanzania to continue fighting immunization-preventable illnesses there needs to be access to immunizations for everyone and continued efforts in distributing medications and healthcare information.

Some of the access issues involve long-term planning for transportation and distribution. Nyarugusu Refugee Camp has nearly doubled in size since 2015, which means there is a greater need for all human necessities from clean water to electricity to medical care. At the same time Kigoma's port is filling in with silt, decreasing the size of boats that can use the port. There is the railroad that comes to Kigoma from the seaport city of Dar es Salaam and the airport that provides access to materials from other countries and cities.

The last case of polio in the United Republic of Tanzania was in 1996, but there was an outbreak of measles in 2016. The government has made great accomplishments in keeping all the people inside the country as healthy as possible. One of the issues they will face is how to encourage people to get immunized even when no one they know has had one of the immunization-preventable illnesses.



From Your Reading

What information is important to share?

What additional questions do you have based on this reading?



Brainstorm Notes

Problem

- How will you share your vaccine with different communities within your city?
- How will you let people know about your vaccine?
- How will you distribute your vaccine to people who do not regularly see a doctor?



Solution

- What are some really wild, unusual ideas that you might try?
- If you had unlimited resources, what would you do to solve this problem?
- What are other ways to solve this problem? What are the pros and cons of these solutions?

Impact

- How does this solution impact the vaccine user (patient)?
- How does this solution impact healthcare workers?
- How does this solution impact the family of the patient?



Listen and Help

	Team Presenting	Audience
3 min	Present their design solution.	Silently listen. Take notes.
3 min	Respond to clarifying questions.	Ask clarifying questions.
2 min	Silently listen. Take notes.	Provides feedback.

Listen and Help Notes



Presentation Ideas and Sketches



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