Safe and Desirable Female Toilets in Refugee Camps

Overview

In refugee camps and temporary accommodation across the world, toilets are often unlighted and without proper safety measures. For women and girls who rely upon them, broken locks and a lack of light bring danger and discomfort – especially at night. In emergency settings toilets are also often described as latrines: communal sanitation facilities.

To increase toilet usage, comfort and safety among female refugees, the **International Rescue Committee (IRC)** is looking for ideas that can provide users with toilet facilities that feature automatic, dimmable lighting and lockable, tamper-proof security.

The IRC is looking for ideas around three key categories of a long-term solution, each with prizes from $2,500 to $10,000 for the best proposals that meet enough of the criteria:

- **Lighting**: automatic and dimmable lighting, irremovable, and powered by renewable energy,
- **Locking**: methods to lock and provide secure, tamper-proof cubicles that offer privacy and comfort,
- **Alerting**: systems for alerting when toilet is in use and when in need of maintenance.

Your solution should cost significantly less than $20 USD if focusing on one category only, and a maximum of $20 USD if it achieves all three categories.

If your solution or idea doesn't quite fit these criteria but will help improve use, comfort, and security of toilet facilities in refugee camps, please

submit your solution and it will be evaluated. Any improvement to the overall problem will be considered in this IRC Challenge.

Submissions to this Challenge must be received by 11:59 PM (US Eastern Time) on 1 August 2023. **Late submissions will <u>not</u> be considered.**

[Follow this link for more information about Participation in Wazoku Crowd Challenges](.).

About the Seeker & Eligibility

The **International Rescue Committee (IRC)** is a global humanitarian aid, relief, and development nongovernmental organization. Working in more than 40 countries and over 20 U.S. cities, the IRC helps those affected by humanitarian crises to survive, recover, and rebuild their lives.

IRC's **Airbel Impact Lab** aims to find and advance breakthrough solutions, delivering them at scale – with an emphasis on solutions that can shape policy and practice around the world and not only in local contexts.

The **employees of the International Rescue Committee (IRC)**, as well as their spouses or partners and their relatives up to the fourth degree, **are not eligible for awards in this Challenge.**

The IRC is supported in this project by SeaFreight Labs (www.seafreightlabs.com), an open-innovation consultancy using global challenges to cost-effectively deliver breakthrough innovation. Participation

in this project is a direct result of SeaFreight Labs membership in the [Pledge 1%](#) movement.

The Challenge

Background

In refugee camps the world over, many toilet and sanitary blocks are unlighted, unsafe, and not secure – especially for women and girls. Blocks of toilets are often affected by broken doors and locks, and placed in proximity to or within view of male facilities. With more than 1% of the world's population now living in displacement, improvements to sanitation and safety in refugee camp settings will keep people safer and more secure.

In order to increase toilet usage, feelings of safety and security, and reduce incidents, the **International Rescue Committee (IRC)** are searching for new solutions with which to retrofit existing toilets around lighting, locking, and alerting. The IRC are looking to provide a tamper-proof lock, renewable-powered lighting, and data monitoring to toilet facilities in displacement camps.

Toilets in displacement camps vary across the world, but they are usually simply constructed, sometimes even from temporary materials or from corrugated metal sheets.

Figure 1 and 2: examples of latrines/toilet blocks in a displacement camp, not necessarily those built and maintained by the IRC.

Regarding the Challenge image and Figure 1 and 2: the card image shows latrines in good condition in a displacement camp in Nigeria. Even upgraded latrine blocks have problems with lighting, locking, and maintenance. The latrines and toilet blocks in Figure 1 and Figure 2 are

also representative, and not meant to be the exclusive examples to consider when considering your solutions.

To get a sense of the structure and design of toilets in a typical context, you can refer to the Sanitation section (starting on page 33) of this Nigeria guidance document. The toilets we have in mind are pit latrines – or outhouses – so free-standing away from dwellings, and they may be individual toilets or in blocks of up to six. There may be separate washroom cubicles as well. With a minimum standard of one toilet per 20 people, a refugee camp will often require thousands of toilets. If you are interested in learning more about international standards around sanitation in camps, the Sphere Handbook is a standard reference.

Women in Bakasi Camp for Internally Displaced Persons (IDPs) in Nigeria have said that "We don't feel comfortable at all using the toilet if the lock is broken" and "There is no way I feel comfortable to go that far a distance to change menstrual pads at night". Beyond this context, the Shining a Light Project reported **40% of women and girls do not use communal or shared latrines** that agencies provide, impacting their wellbeing.

The proposed system or systems will be added to existing blocks, providing lighting, security, and ideally real-time data on usage and maintenance needs. Systems may also be fitted to toilets at schools and health clinics. A final thing to bear in mind is that people are sensitive to technology in toilets. A proximity sensor or motion detector may be mistaken for a camera, for example, and may be covered over or disabled.

If your solution or idea doesn't quite fit these criteria but will help improve use and security of toilet facilities in refugee camps, please submit your solution and it will be evaluated. Any improvement to the overall problem that meets **the overarching criteria of improving toilet usage, comfort, or safety** will be considered in this IRC Challenge.

Solution Requirements & Acceptance Criteria

The IRC is looking for ideas around three key categories of a long-term solution (lighting, locking, and alerting) each with their own prizes if they meet the acceptance criteria. Your solution may address all three of these categories, or you may propose a solution that meets only one of the categories and its requirements. **The IRC welcomes proposals to one or more of the three categories**, and proposals that embrace innovative integrations across each category are also encouraged.

IRC are open to ideas, concepts, your already existing solutions or your knowledge about already existing solutions. Solutions with Technology Readiness Levels 1-9 are invited: from ideas about what to do, solutions

with how to achieve this, and more mature proposals for who can provide these outcomes.

Cost constraints - **$20 USD maximum cost per cubicle**
While interested in innovative solutions, the IRC is conscious of cost constraints around the setting, scale, and context of the Challenge. To ensure that your ideas can be used in displacement camps around the world, cost is paramount. Integrated solutions that meet all three of the categories (lighting, locking, and alerting) should be delivered at a maximum price point of $20 USD per cubicle.

For submissions that focus on only one of the categories, the IRC will prioritize solutions that can be delivered at a cost of < $20 USD per cubicle. Innovative and cost-effective submissions from Solvers in individual categories could then be combined by the IRC so that an integrated solution would total a maximum of $20 USD per cubicle.

Your solution should cost significantly less than $20 USD if focusing on one category only, and a maximum of $20 USD if it achieves all three categories.

Capital costs are of primary importance in your reporting of the solution cost, but it would be of benefit to the IRC if you can give indication to the labor costs, maintenance costs, or time for installation in your submission.

Acceptance criteria

1. **Lighting - automatic and dimmable lighting**, irremovable, and powered by renewable energy:

It's hard to use a toilet in the dark, and lighting is particularly needed when accompanying young children, when managing menstruation, and even to see if there are snakes or vermin in the cubicle.

Lighting needs to be deployed sensitively, as bright light can make people feel blinded or spot-lit. If this is the only light in an otherwise dark camp, there have been cases where men have gathered to socialize at the lighting in the evening, making the toilet inaccessible for women. For more discussion on lighting in refugee camps, and its potential impact on gender-based violence, you may wish to refer to the Shining a Light study.

It may be helpful if the system is flexible, to allow the IRC and stakeholders to experiment and adjust to arrive at a solution that is comfortable for the users.

MUST HAVES
- Provide lighting for at least 12 hours
- Plug-and-play and/or low maintenance, even for untrained persons
- Renewable and independent energy source
- Theft-resistant, as far as possible
- Robust, weatherproof, and waterproof
- Flexible in terms of type of latrine/cubicle design
- Meets cost constraints

NICE TO HAVE
- Adjustable lighting levels
- Power-saving features

2. **Locking** - methods to **lock and provide secure, tamper-proof cubicles** that offer privacy and comfort:

Feeling secure when accessing toilet facilities is essential. Women and girls especially fear being spied upon or walked in on, and so secure locks on doors are a necessity. However, with simply built structures and limited local resources, latches and locks on doors are often poorly installed, and are also often stolen by residents, for sale or for use on their own dwellings.

Improved solutions for making women feel secure when using sanitation facilities will go a long way towards building a greater sense of safety and improved use of facilities by currently underserved populations.

MUST HAVES
- Easy to install and maintain, even for untrained persons
- Flexible in terms of door type, material, and construction
- Theft-resistant, as far as possible
- Meets cost constraints

NICE TO HAVE
- Locks that can show when the toilet is in use, seen from the outside

3. **Alerting -** Systems for alerting **when toilet is in use and when in need of maintenance:**

There may be thousands of toilets in a camp. Success is often measured around the number of toilets constructed relative to the camp population. However, pits fill up, doors break, storms damage structures – in other words, there are a multitude of factors that impact maintenance. Maintenance is an ongoing responsibility as long as a camp is inhabited, but attention and funding tends to wane after the initial humanitarian rush to build sufficient toilets to maintain public health and ward off cholera outbreaks.

In order to improve the situation around monitoring of sanitation facilities, we seek innovative ways to monitor sanitation and usage in real time. This will help us to measure performance of sanitation infrastructure base on usage, not just numbers of units. In turn, it will increase our accountability to our clients, the camp population, and to the donors who paid for the toilets in the first place.

Monitoring data will provide the IRC and other stakeholders with the ability to respond rapidly to sanitation issues in camps across the globe. Using occupancy and safety data heatmaps will provide more objective measurements to keep the IRC and other stakeholders more accountable to clients and refugees. This information can result in more chances that may positively affect women's wellbeing in refugee camp settings: including maintenance, security upgrades, or more units.

MUST HAVES
- Plug-and-play and easy to manage
- Robust, waterproof, and weatherproof
- Real time information capture
- Flexible in terms of scale
- Theft-resistant, as far as possible
- Meets cost constraints
- Independent power source

NICE TO HAVE
- Real time information sharing – particularly those that can use existing local cellphone networks
- Flexible: not necessarily reliant on local communication infrastructure, where it doesn't exist.
- Renewable power source desired, but not necessary.

Summary
The best solutions in each of the three categories have the opportunity to win prizes from $2,500 to $10,000 USD for meeting the award threshold or enough of the listed criteria, as solely determined by the IRC and evaluators.

Submissions should address the following **Solution Requirements**. Any proposed solution in each category **must**:

- **Be easy to retrofit, deploy** and maintain;
- **Production at low cost:** 20 USD maximum per cubicle, with more detail in Cost constraints;
- Be **easily replicated** in other, global contexts.

Nice-to-have requirements:

- **Simple to maintain at low cost** by people without specialist knowledge, to encourage sustainability – rather than replacing unit solutions.

Your Submission

The submitted proposal must be written in English and should include:

- An **Abstract** and optional Conclusion of the proposed solution.
- A **detailed description** of the solution including capital cost, logic, design and/or examples to substantiate the idea.
- **References** that acknowledge the use benefits of the idea, if available.
- Please indicate if you are interested in entering into a **future collaboration** with the International Rescue Committee on this project.

This is a Prize Challenge, which has the following features:

- **The best solutions in each category can win prizes from $2,500 to $10,000 USD, as solely determined by the International Rescue Committee (IRC) and evaluators**. The IRC welcomes solutions that meet all of the categories as well as those that solve part of the wider problem around increasing toilet usage, comfort, and safety among female refugees.

- The best solutions in a Prize Challenge have the opportunity to win some or all of the award pool of **$30,000 USD, as solely determined by the Seeker and evaluators**.

- The IRC may also issue "Honorable Mention" recognitions for notable submissions that are not selected for monetary awards.

- To receive an award, the Solvers will <u>not</u> have to transfer their exclusive Intellectual Property (IP) rights to the Seeker. Instead, Solvers will grant to the International Rescue Committee (IRC) a royalty-free, perpetual, and *non-exclusive license* <u>to use any information included in this proposal</u>. <u>The IRC will make awarded solutions freely available to other non-profit and for-profit organizations to help improve the state of displacement and refugee camps worldwide.</u>

Submissions to this Challenge must be received by 11:59 PM (US Eastern Time) on 1 August 2023. **Late submissions will <u>not</u> be considered**.

After the Challenge submission due date, IRC will complete the review process and make a decision with regards to the winning solution(s). All Solvers who submit a proposal will be notified about the status of their submissions.