

SMART CONTRACEPTIVE DISPENSER

ID: 130663

1. Participation Type - Please select how you are participating in this Challenge:
Solver (Individual)

2. Solution Level – Please select the Technology Readiness Level (TRL) of your solution:
Proof of concept (TRL 4-6)

3. Partnering - Are you interested in partnering?
Yes

4. Problem & Opportunity – Please highlight the innovation in your approach to the problem, its point of difference, and the specific advantages/benefits this brings (up to 500 words)

The innovation lies in the adaptation of current technologies, such as portable blood pressure readers, inventory management systems, QR Code readers, AI, offline operation, GPS point indication; all unified in a contraceptive dispenser already sold on the market, although its size needs to be adapted to fit in a women's bathroom for people with special needs. Placing the contraceptive dispenser inside large women's chemical toilets, used for people with special needs, solves the issue of privacy, as each person accesses the space alone, reduces the chance of robberies and can be installed next to bus stops, parks, squares and wider sidewalks in the city, with the dual function of a contraceptive dispensing point and a women's public restroom. With the dispenser adapted to a smaller size, it can also be installed in women's restrooms in bus stations, airports, train and subway stations and other public buildings, although it is not possible to install solar panels or wind turbines in these cases. In any case, this solution is perfect for serving both migrant users and the city's own population. However, migrant users have cards, QR codes or passwords (which must be typed on the keyboard at the time of purchase to indicate that the buyer is a migrant) that differentiate them from the rest of the population. In this way, the system allows a limited number of products to be purchased by non-migrant users, allowing greater access to the products for migrant users.

The payment methods, in addition to the transfer of money from the user's account, must be managed by the organizations responsible for the contraceptive dispensers. Payment cards and QR codes, whether physical or digital, are ways of managing user access to the dispenser's products. Through these instruments, organizations can grant credits to the most needy users, without any money. The purchase of a larger quantity of products for users who will be traveling for several days is also managed by these organizations. The benefits are clear: total privacy (dispenser installed in a large women's bathroom), free and clean energy (wind turbines and solar panels, plus support from the nearby public power grid), online and offline operations (mini Wi-Fi router and offline app for areas

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without Wi-Fi), automatic inventory management (free program), simple self-screening (questionnaire based on the experience of the US government), digital payment (digital card, digital QR code, transfer of funds) or physical payment (card or QR code), application for interaction with the dispenser for areas with Wi-Fi available (allows you to mirror dispenser functions such as maps of nearby pharmacies and distribution points, show which types of contraceptives are available and their prices, fill out the self-screening questionnaire via smartphone).

5. Solution Overview – Please describe the features of your solution and how they address the SOLUTION REQUIREMENTS (add supporting data, diagrams, etc. as attachments below) (500 words).

The solution's features are illustrated in the attached visual material:

- Mini Wi-Fi router to boost signal in the area close to the contraceptive dispenser
- Portable blood pressure monitor adapted to the dispenser structure
- Identification of migrant and non-migrant users, with product restriction quota for non-migrant users
- Digital screen with touch function and information in several languages make the dispenser intuitive
- Payment methods by bank transfer, physical or digital card, physical or digital QR code
- Self-screening questionnaire to determine eligibility available on the dispenser screen or on the user's own smartphone, for areas with Wi-Fi.
- BRIAR technology for offline access to the dispenser
- Alternative energy sources with solar panels combined with mini wind turbines installed near the women's bathroom where the dispenser is installed, in addition to the use of energy from the public grid in emergency cases.
- Smartphone application that mirrors the dispenser's functions, showing available products and prices, displaying maps of dispenser points or nearest pharmacies, availability of QR codes and digital cards for purchasing products using credits granted by the organizations responsible for the program.
- Automatic remote inventory manager, online and offline, for managing the replenishment of dispenser stock.
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6. Solution Feasibility - Please provide supporting information and rationale, such as references and precedents, that will help the IRC evaluate and validate the feasibility of the solution (up to 500 words)

When faced with a major problem, the solution needs to be up to the task, and so, despite being completely viable, it depends on several partnerships and adaptations for the project to be successfully implemented. I believe that the resource adaptation phase is the most complex part, but after this phase, the self-managed contraceptive dispenser project can be implemented anywhere.

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The SIMPLE CHECK contraceptive dispenser is the inspiration for this project. The idea is to partner with the company and adapt the dispenser to a more compact size, allowing it to fit into large women's portable toilets.

Then there are the adaptations of the blood pressure reader developed by UC SAN DIEGO, the installation of a mini Wi-Fi router and the BRIAR operating system, which allows offline access to the system. It is also necessary to connect solar panels and wind turbines to the dispenser.

Obviously, so many adaptations are a challenge for the executing party, in addition to the time and money involved. But even so, I decided to share my idea as a way to collaborate with such a noble and urgent cause in a world with so many wars causing the exodus of a large number of people. If the idea cannot be implemented in its entirety, I hope that I have contributed in some way to SEEKER.

7. More Information. Do you have further relevant information you could disclose, consisting of IP rights you would only grant the Seeker subject to an acceptable award offer? If yes, you will be asked to capture the IRC's interest (up to 500 words).

I am a partner of the company SART, which works with data science technologies and recently launched an AI system that automatically searches the target audience's social networks, revealing their characteristics, habits, thoughts, ideals, location, lifestyle, age range and other personal data, all collected in a short space of time, presenting reports based on various criteria for analysis of the target audience. I believe it would be a great tool for the organizations responsible for the program to understand how migrants live in each region of the planet, each with their own challenges, problems, desires and demands. If SEEKER thinks it is a good idea, I can send the contact details of SART members for more information.

8. Experience – Please describe expertise, use cases, and skills you or your organization may have in relation to your proposed solution, and state your interest in potential partnership (up to 500 words)

I am an individual solver and do not have an organization. Since my idea is a fusion of several technologies adapted to the SIMPLE CHECK dispenser, there is no way to describe experiences or use cases and skills in relation to the proposed solution. Therefore, it is impossible for me to be available for a possible partnership. However, I would gladly accept being a partner to help think about the final solution based on my proposal. I work in the field of ideas only, and I do not have the skills to carry out the proposal. However, my intention is for there to be an interaction between SEEKER and SIMPLE CHECK to analyze a possible partnership with the aim of solving a serious social problem worldwide.

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9. Solution Risks – Please describe any risks you see with your solution and how you would plan for this (up to 500 words)

Since this is a proposal that involves adapting technologies to a device that is already on the market, I imagine that the biggest risk is the project execution stage itself. First, it is necessary to find a partner that produces contraceptive dispensers, such as SIMPLE CHECK, or other quality brands on the market. It is necessary to reduce the size of the dispenser so that it is more compact and can fit in a female chemical toilet suitable for people with special needs (since the bathroom will be adapted to receive the dispenser, it can no longer be used as a toilet for people with special needs). Then, it will be necessary to adapt the other devices, such as the portable blood pressure reader, the BRIAR offline system, the QR code reader, the mini Wi-Fi router and the interaction system between the dispenser and the smartphone app.

Although the project is very laborious to execute, with an average level of feasibility, I am sure that the solution meets all the demands of the briefing satisfactorily.

10. Timeline, capability, and costs – Please describe what you think is required to deliver the solution, including estimated time and cost to total up your summary, capital, and operating costs and add as an attachment (up to 500 words).

Since the proposal involves adapting several technologies to an automatic contraceptive dispenser, it is impossible to estimate the project's time, capacity or costs. However, I imagine that between adapting the size of the dispenser to fit in women's chemical toilets or other public restrooms, adapting the various technologies mentioned in the previous item, testing and actual implementation, the time will be at least 6 months to produce the first prototype.

As for costs, establishing a partnership with a company that produces automatic contraceptive dispensers is essential for the success of the project. At the same time that a new demand would be met, a new byproduct would be created by the company, which could profit from the new model in other markets, with other products, for example. In other words, it would be a two-way project, with gains for both sides.

11. Online References – Please provide links to any publications, articles or press releases of relevance (up to 500 words)

CONTRACEPTIVE DISTRIBUTION MACHINE

<https://www.gov.za/news/media-advisories/government-activities/health-hands-over-contraceptives-vending-machine->

<https://health-e.org.za/2024/04/10/health-department-launches-contraceptives-vending-machine-in-ec/>

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<https://vanderbilthustler.com/2024/05/05/vsg-and-generation-action-for-planned-parenthood-bring-contraceptive-vending-machine-to-campus/>

BLOOD PRESSURE GAUGE

<https://www.youtube.com/watch?v=GCANUSQkQKc>

OFFLINE INVENTORY TRACKING

<https://www.waspbarcode.com/buzz/how-to-track-assets-and-inventory-while-offline>

MESSAGE WITHOUT INTERNET

<https://engage.sinch.com/blog/offline-messaging-apps/>

SOURCE CLEAN ENERGY

<https://www.euronews.com/green/2021/04/06/could-this-be-the-safest-most-powerful-wind-turbine-in-the-world>

EOLIC ENERGY TURBINE

<https://innotechtoday.com/powerpod-a-new-wind-turbine-for-urban-spaces/>

SELF - SCREENING

https://www.uslegalforms.com/jsfiller-desk10/?flat_pdf_quality=high&mode=cors&requestHash=4433b99e88cdf8cbf350dceebb e61d110463cb428010358702678664ff2ee258&lang=pt&ref=https://www.uslegalforms.com&projectId=1643232988&PAGE_REARRANGE_V2_MVP=true&richTextFormatting=true&isPageRearrangeV2MVP=true&jsf-page-rearrange-v2=true&jsf-redesign-full=true&act-notary-pro-integration=true&jsf-fake-edit-embedded=true&isSkipEditorLoadFrequency=true&jsf-desktop-ux-for-tablets=false&jsf-probability-70=true&jsf-socket-io=false&routeld=0be9cc010eff0d8cb3765de708ed9062#353b6071de444ae38b831a1b441a71c8

12. How did you find this Challenge? – please indicate what drew you to this Challenge, including any relevant advertising or marketing that you followed to this Challenge.

I've been a Wazoku member for 2 years, so I'm always on the lookout for new challenges. I was a member of the Eyeka platform for 7 years, but at the moment the site is practically offline, with no new contests, which is a shame. For this reason, I migrated to Wazoku and I'm very happy and eager to start winning challenges.