

Co-Creation SYMPOSIUM

RESPONSIBLE WELL-BEING AND
RESILIENCE IN COMMUNITIES
OF PUERTO RICO



CO-CREATION SYMPOSIUM

The 2020 Co-Creation Symposium is part of *Cultivating Responsible Wellbeing in STEM* (CRWS), a project sponsored by the National Science Foundation (NSF #1449489). This project encourages us to explore questions around responsible consumption, resilience, appropriate technology and community-centered design. In response to the COVID 19 pandemic, a completely virtual (and bilingual!) event was conceived, starring residents of Puerto Rican communities and focused on the communities' context, ambitions and ideas.

Symposium Objectives:

- To explore community needs, interests, and priorities within three focus areas.
- To engage in the design process in order to ideate and prototype innovative solutions to community challenges.
- To create action plans and form partnerships in order to facilitate project implementation.

"Design Thinking is very appropriate for our community. I was surprised to see all the tools that are available to us that we are not aware of."

-El Seco community member

During the 2020 Co-Creation Symposium, residents of Puerto Rican communities - *both young and adult* - joined as a team to come up with solutions together. The symposium experience consisted of 4 days of synchronous and asynchronous, team-based sessions and activities. Two different groups of community teams participated in the event on the following dates:

- July 27 - 30, 2020
- August 4 - 7, 2020

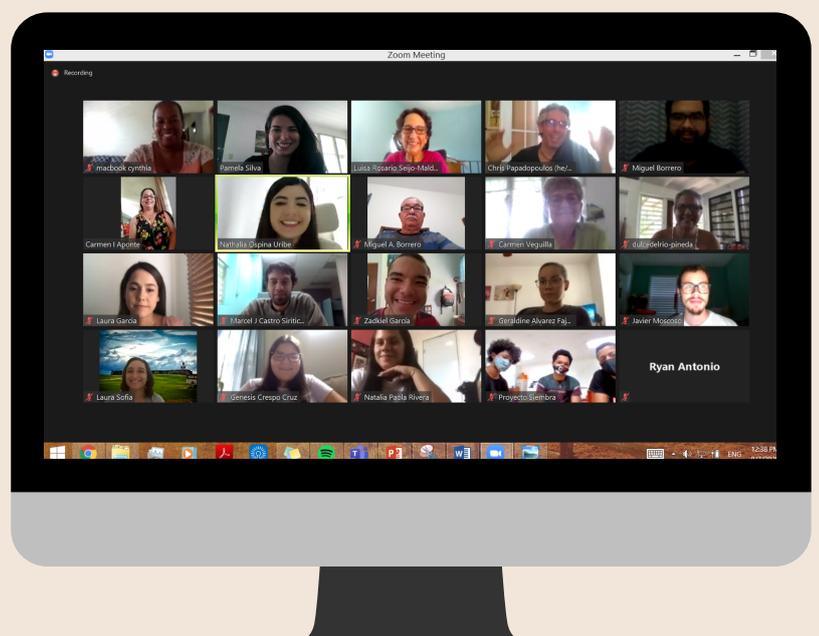
This document summarizes community projects and serves as an invitation to join in, collaborate, and support the new community ventures.

THE ORGANIZING TEAM

THANK YOU - to the team that made this event possible!

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Geraldine Álvarez
Laura García

Alexis Burgos Rivera
Lyam Rivera Moctezuma
Alexander Ramos Ruiz
Javier Moscoso
Kevin Crespo
Reiner Simshauser



COMMUNITIES

Communities are Puerto Rico's engine...

Thank you to all community teams!

La Salud, Mayagüez

Villa Esperanza, Mayagüez

Arenas, Guánica

San Antonio, Naranjito

Corcovada, Añasco

San Salvador, Caguas

El Seco, Mayagüez

Portillo Miramar, Juana Díaz

Añasco Playa, Añasco

La Esperanza, Manatí

Proyecto Siembra, Culebra

Describe tu comunidad con una palabra

empoderada única agricultura familia
resiliente unidos música
fortaleza bondad
unión propósito
respeto

Co-Creation

2

WEEKS

44

**COMMUNITY
PARTICIPANTS**

11

COMMUNITIES

10

**RESILIENT
DESIGNS**

FOCUS AREAS

COVID-19 FAMILY JOURNAL



Contact tracing is a vital tool for identifying potential COVID-19 cases in the community and preventing future infections. The Family Journal is a tool for documenting the activities that family members partake in and the people they come into contact with, thus facilitating future contact tracing if necessary. During the symposium, innovative ideas were generated to facilitate the documentation of outings and contacts within the community context.

PORTABLE SINKS AND PERSONAL HYGIENE



Hand-washing with soap and water is our strongest weapon against COVID-19. Nevertheless, natural events such as hurricanes, earthquakes and droughts, can result in water outages - and prevent proper hygiene maintenance. This focus area challenged participants to design portable hand washing stations and other hygiene alternatives for their community challenges.

COMMUNITY ENERGY



The failure of the electric grid is one of the most common outcomes of events such as storms, hurricanes and earthquakes. Extensive and prolonged interruptions can have fatal consequences for the population. Participants in this focus area explored their energy needs and appropriate solar energy alternatives for their community.

PROJECTS

The symposium curriculum focused on delving into the community challenges and co-creating innovative solutions through Design Thinking. The following pages outline the conceptual designs developed by each community team. These projects will continue to be developed in the coming months together with partners and collaborators.

CULEBRA - TOUCHLESS HAND-WASHING STATION

LA SALUD - SOLAR-POWERED REFRIGERATOR LOCKERS

AÑASCO PLAYA - FAMILY JOURNAL: MOBILE APP AND NOTEBOOK

ARENAS - COMMUNITY EMERGENCY CENTER

EL SECO - PORTABLE SINK FOR COMMUNITY GAZEBO

LA ESPERANZA & PORTILLO MIRAMAR - COVID-19 PREVENTION KIT

VILLA ESPERANZA - COMMUNITY NANO-GRID

SAN ANTONIO - FAMILY JOURNAL: CALENDAR AND STAMP SYSTEM

SAN SALVADOR - COVID-19 PORTABLE KIT

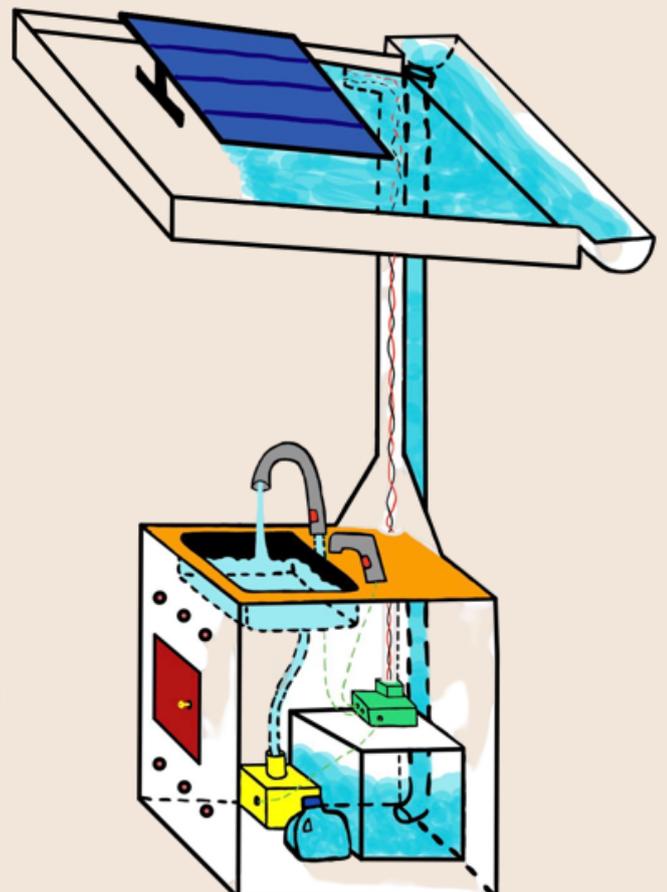
CORCOVADA - HAND-WASHING STATION FOR COMMUNITY CONVENTION CENTER

Culebra

TOUCHLESS HAND-WASHING STATION

The island-municipality of Culebra is a popular tourist destination year-round. Unfortunately, this puts its residents at a higher risk of being exposed to COVID-19. To protect the population, the community team set out to design a portable and accessible sink that would avoid contact with shared surfaces. To avoid crowding of people inside public toilets, it is proposed that the sink be located just outside of an existing public restroom. The hand-washing station includes:

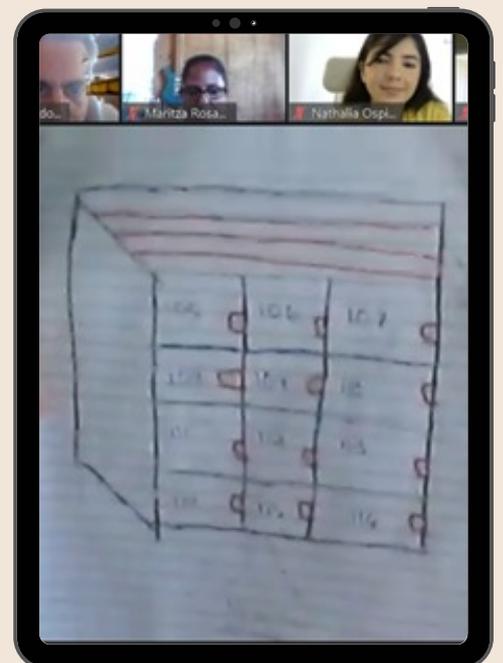
- Sensor-operated soap dispenser and faucet.
- Rainwater collection system.
- Water tank and pump.
- Water filtration.
- Lighting.
- Solar energy system with battery.



La Salud

SOLAR-POWERED REFRIGERATOR LOCKERS

After conducting a series of community interviews, the team from La Salud community in Mayagüez identified their most urgent energy challenge: maintaining refrigeration during power outages - in particular, the ability to keep medicine and infants' milk refrigerated. They thus designed an innovative refrigeration product for the community: solar-powered refrigerator "lockers" located in the community center - a space that is already equipped with a solar energy system. Each neighbor will have a locker and key assigned to them. Each locker will have limited space, ideal for storing medications, insulin and breast milk, among other important products.



Añasco Playa

FAMILY JOURNAL MOBILE APP AND INCLUSIVE NOTEBOOK

The Añasco Playa team devised two innovative strategies to document outings and contacts:

1. A mobile application that allows:

- Creating family member profiles.
- Identifying and recording location in real time.
- Recording the outings of each family member on a calendar.
- Recording outing durations with a stopwatch.
- Recording contact information in order to send notifications in the case of a positive test result.

2. Record-keeping notebook and calendar:

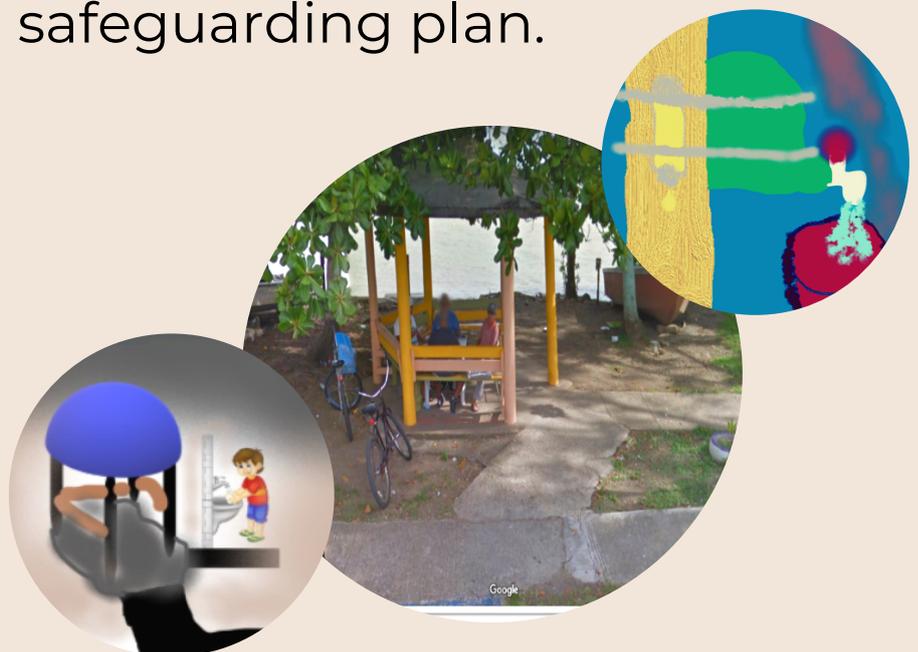
- The analog version of the app, can be placed in an accessible and visible location for the family.
- Includes a color-coded legend to facilitate use by illiterate people.



El Seco

PORTABLE SINK FOR COMMUNITY GAZEBO

The team from El Seco community in Mayagüez explored and prioritized the following challenge: many public spaces in their community lack adequate facilities for hand washing. The team identified a space that is frequently visited by residents and outsiders, and would hence benefit from the installation of a hand washing station: a community gazebo. Their design includes a hand-washing station fixed to the gazebo column, with a sensor-based soap dispenser to avoid contact with surfaces. The team plans to engage the community in an educational process in order to integrate neighbors into the station's operation, maintenance and safeguarding plan.



La Esperanza & Portillo Miramar

COVID-19 PREVENTION KIT

The team from the Portillo Miramar (Juana Díaz) and La Esperanza (Manatí) communities devised a kit with important supplies for COVID-19 prevention. Each kit contains the following items:

- Family Journal notebook.
- N-95 masks.
- Hand Sanitizer.
- Alcohol.
- Sanitizer wipes.
- Informational brochure for COVID-19 prevention.



Villa Esperanza

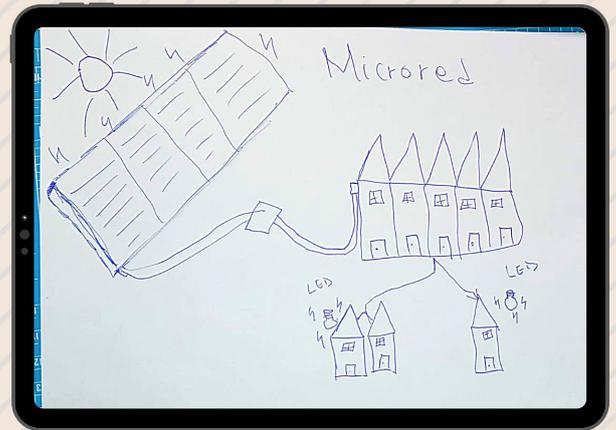
COMMUNITY NANO-GRID FOR EMERGENCIES

The Villa Esperanza community ideated a small-scale solar energy microgrid system: a *nano-grid*.

A group of neighboring houses (4 to 5 houses) can share a solar power system to address basic needs during a blackout.

This "nano-grid" approach is an appropriate one for

emergency response in Villa Esperanza, since many sectors in the community are located far from each other and from the community center.



This solution includes:

- An educational program to adopt energy efficient technology.
- Agreed schedule for the use of electrical appliances by all neighbors of the nano-grid.
- Refrigerator and freezer to store perishable food, medicine and ice (placed in one house).
- Responsibility agreement signed by all the neighbors of the nano-grid.

San Antonio

FAMILY JOURNAL: VISIBLE CALENDAR AND STAMPS

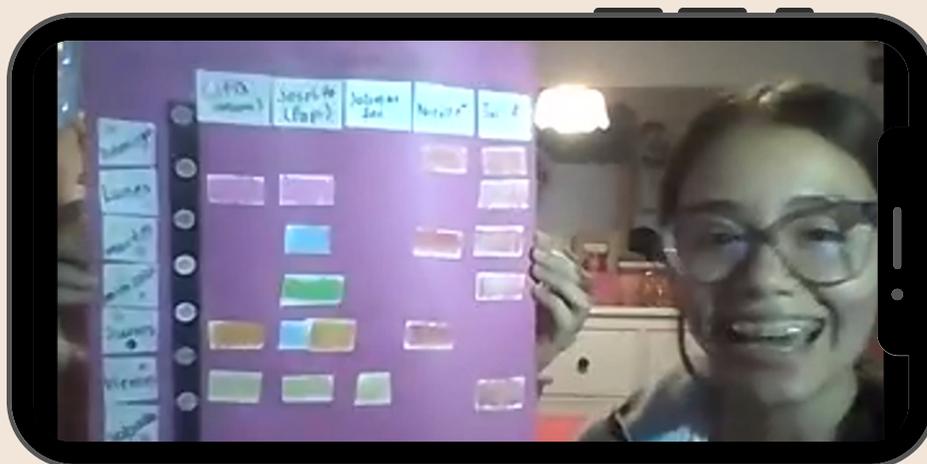
Team members from the San Antonio community in Naranjito conceptualized creative ideas to put the family journal to practice.

1. Community stamp system:

Each community establishment or business can give out stamps with their logo each time a resident visits the business. These residents can stick the stamps to a calendar in order to document their outings.

2. Visible weekly calendar (on the wall):

A weekly calendar that shows each family member's outings. The calendar may be color-coded to represent high-risk exits (for example: hospital visits are marked in red).



San Salvador

COVID-19 PORTABLE KIT

The community of San Salvador in Caguas identified the lack of access to hand washing facilities while carrying out errands outside the home as their main challenge. The team decided to create a personal kit for the prevention of COVID-19. This kit is small and portable, so it can be stored in bags and backpacks while running errands.

The kit contains:

- Liquid soap.
- Hand Sanitizer.
- Sanitizer wipes.
- Masks.
- Alcohol.
- Informational flyer.

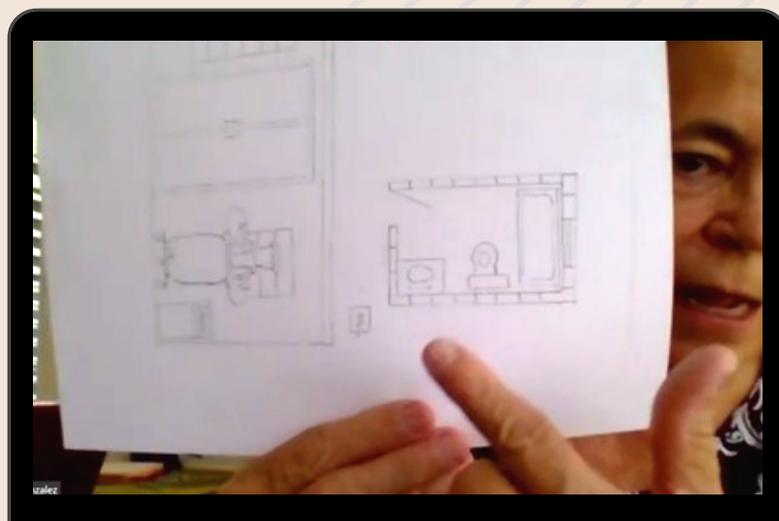


The team has begun prototyping this kit and will be distributing it to families in the community.

Corcovada

HAND-WASHING STATION FOR COMMUNITY CONVENTION CENTER

The community convention center in the Corcovada community of Añasco hosts group activities throughout the year. The Corcovada team identified an opportunity to strengthen public health in the community: installing a hygienic sink in their convention center - a sink that does not require touching surfaces with your hands, located near the convention center door. This sink, along with a paper towel bin, would be available for rent as part of the use of the convention center. Maintenance and supplies (such as soap and paper towels) would be the responsibility of the group leading the activity and leasing the facilities.



RECOMMENDATIONS FOR VIRTUAL WORKSHOPS

ARE YOU RUNNING A VIRTUAL WORKSHOP? THE FOLLOWING STRATEGIES CAN CONTRIBUTE TO THE QUALITY, EFFICIENCY AND SAFETY OF YOUR WORKSHOP:

- Establish a communication channel with participants (ex. Whatsapp).
- For safety, actively discourage groups from meeting in-person in order to share devices or internet service (unless they are family).
- Once the digital platform is selected, be prepared with more than one account in case there are difficulties with the main account.
- Assign technical facilitators who are in charge of time keeping, break-out rooms and giving technical support. Assign at least two facilitators, in case one of them loses internet service.
- Practice the event with the organizing team to identify possible difficulties and adjust the curriculum appropriately.
- Start early and allocate additional time for potential delays.
- Send instructions - preferably step-by-step videos - to use the platform and its capabilities (such as chat, translation, or break-out rooms).
- Provide the contact information of technical facilitators and address technical issues offline so as not to interrupt the agenda.
- If there are changes to the composition of the break-out rooms, include activities in between that allow enough time to set up new rooms.
- Use the "chat" feature to speed up group discussions.
- Incorporate activities with body movement and bathroom breaks.

JOIN US!

WE ARE LOOKING FOR COLLABORATORS!

IF YOU WOULD LIKE TO SUPPORT PROJECT IMPLEMENTATION WITH ANY OF THE TEAMS...

CONTACT US!

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"The best way to create awareness is through a sense of ownership: educating, implementing and incentivizing."

- Corcovada community member



PamLab
Design and Engineering



Puerto Rico
Public Health Trust