A Community Resource Matcher

Solving Inefficient **Post-Disaster Resource Distribution** in Puerto Rico

Right Problem
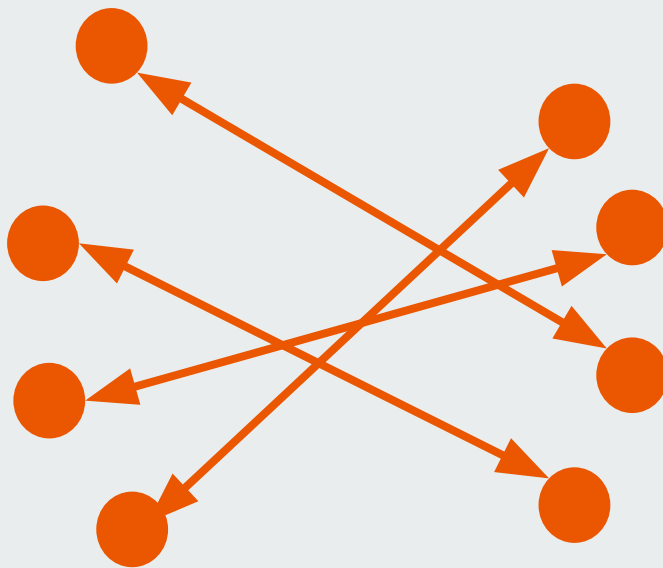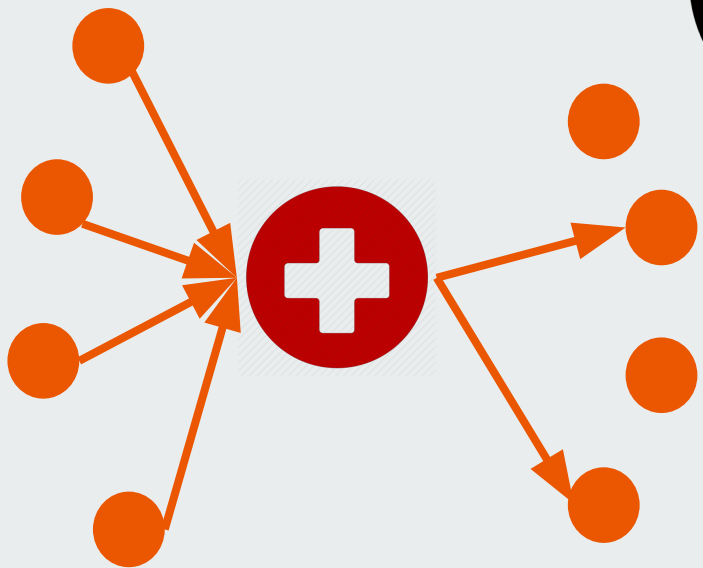

1. Supply-demand **mismatch**

2. Geographical **inaccessibility**
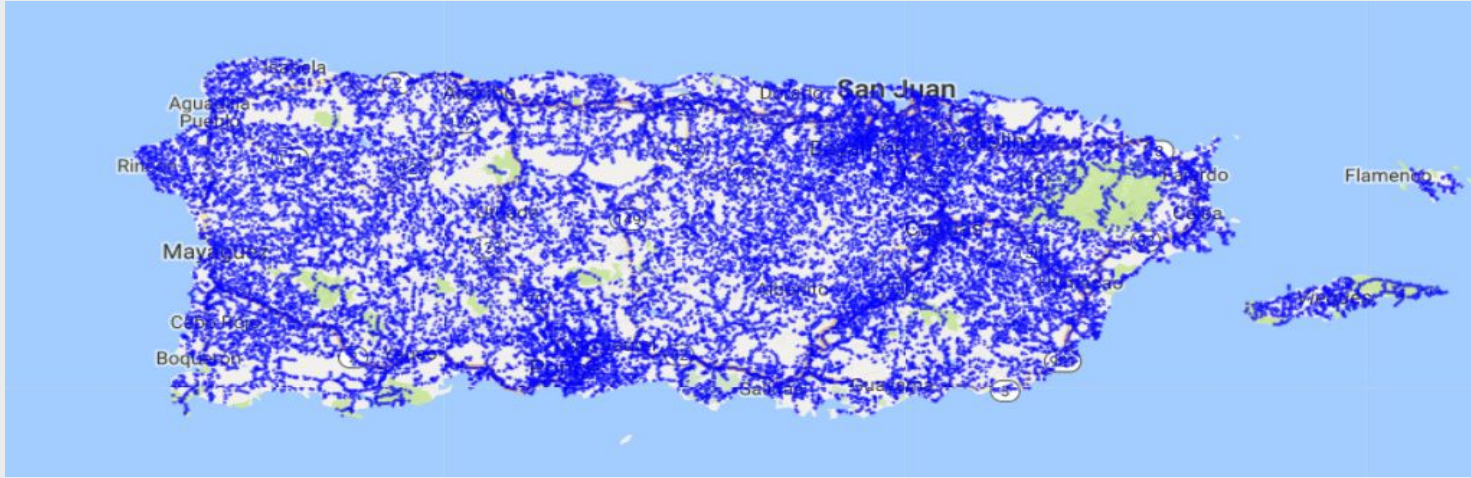
1. Inefficient Matching

2. Inaccessibility

Source: Puerto Rico Open Data Interconnection Portal, 2014

Our Mission:

Instant Matching and **Optimized Delivery** of Local Community Resources

Solution

- Optimized recipient–provider matching:
  1. Assigning **Urgency Score** based on demands.
  2. Evaluate a combination score for each person

Solution

- **Clustering** algorithms to find community hubs

- Assign **delivery routes** to volunteers

Impact Assessment

1. Highest mobile penetration: 160%
    **→ Sophisticated mobile users;
    Uber has been in Puerto Rico since July 11,
    2016 and has taken the tourist and locals alike
    by storm.**

2. High urbanization rate: 93.57%
    → Convenient last-mile delivery

3. Enhanced post-disaster mobile reception services
    **→Solar-powered, high-altitude balloons to
    provide internet access in remote regions**
    (e.g. Google's Project Loon)

Table III.2 - Availability by Broadband Platform - Puerto Rico & U.S. Comparisons			
At least 768 Kbps Download/200 Kbps Upload			
	Puerto Rico Estimates		U.S. Estimates
Platform Type	Served Households ('000s)	Percent of Households Served	Percent of Households Served
Cable	995	79%	85%
DSL	806	64%	88%
Fixed Wireless	506	40%	31%
Mobile	1,256	99.6%	97%
All Platforms Except Mobile	1,084	86%	N/A
All Platforms	1,267	99.7%	99%

Source: For Puerto Rico estimates, Connect Puerto Rico, June 2011. For U.S. estimates, National Broadband Map, NTIA, December 2010 (which is the latest data available at the national level).
Note: NTIA's National Broadband Map data does not provide estimates for terrestrial service offering excluding mobile broadband.

Our Vision

Short-run: Post-disaster Aid

Mid-run: Neighbourhood engagement

Long-run: Community empowerment

PROTOTYPE CANVAS

DESIGN A BETTER BUSINESS

CUSTOMER PROMISE	STEP 1	STEP 2	STEP 3	STEP 4	CUSTOMER'S JOB-TO-BE-DONE
• Needs-based matching • Fast response • Real time updates • Sustainable community	Match individual recipients with suitable service providers	Connect individual recipients in local neighborhoods	Create mutual provider response systems	Scale app across different countries	• Register • Identify specific needs and services • Establish contact
	ALTERNATIVE Choose from multiple service providers	**ALTERNATIVE** Create messaging functionality	**ALTERNATIVE** Connect providers in local neighborhoods	**ALTERNATIVE** Scale app into Caribbean countries	
KEY FEATURES • Optimized pairing • Maximum impact hubs • Ease of usage	**THE EXPERIENCE** Why can't we skip this step? Disaster Relief and User Feedback	**THE EXPERIENCE** Why can't we skip this step? Build local relationships	**THE EXPERIENCE** Why can't we skip this step? Inclusive community experience	**THE EXPERIENCE** Why can't we skip this step? Expand into global market	**CUSTOMER'S BENEFIT(S)** • Financial assistance • Efficient disaster management