Data for Good: Social Media Aiding in Disaster Response and Recovery

Providing Value and Protecting Personal Information
December 2018
Laura McGorman, Facebook Data Leadership
1876

"This 'telephone' has too many shortcomings to be seriously considered as a means of communication."

— William Orton, President of Western Union

1981

“Cellular phones will absolutely not replace local wire systems.”

— Marty Cooper, inventor

2007

“There’s no chance that the iPhone is going to get any significant market share.”

— Steve Ballmer, Microsoft CEO.
Nicholas Negroponte, director of the MIT Media Lab, predicts that we’ll soon buy books and newspapers straight over the Internet. Uh, sure.

“Most things that succeed don't require retraining 250 million people.”
Early questions

• Can Facebook help fill critical data gaps during the first hours of a crisis?
• How do we transmit this information to the right people at the right time while preserving privacy?
Filling data gaps

• **Location**: Where are people located during the crisis compared to where we expect them to be?
• **Connectivity**: Where do people have access to network coverage?
• **Power availability**: Where are people able to charge their phones and access power?
• **Safety Check**: Where are people checking in safe? Where are they not?
• **Long Term Displacement**: How long after a crisis are people still not able to return home?
Privacy preserving approach

• We share data in a privacy preserving way
  • Focus on **aggregation** and **smoothing**
    • Ex. Disaster maps relies on aggregated and smoothed data across very large (360K m^2) tiles, roughly equivalent to the size of neighborhoods
  • Co-development with partners we trust
  • We make data-driven products that provide insights, don’t passively hand over data
Hurricane Maria
September 2017
Hurricane Maria, Puerto Rico
Location Density Map

2 DAYS BEFORE MARIA
September 4, 2017
Baseline

3 WEEKS AFTER MARIA
September 28, 2017
Significantly low Facebook usage in most areas

8 WEEKS AFTER MARIA
October 24, 2017
Facebook usage recovering to normal in pockets
FB & the American Red Cross

Hurricane Maria, Puerto Rico
Red Cross Reunification Sites & Facebook Connectivity

Facebook
American Red Cross

Data: Facebook, October 7, 2017
Map Date: 10/9/2017
• **Information as Aid – Puerto Rico** Facebook page to provide affected communities in Puerto Rico. Within two weeks after launch, 30,000 citizens had accessed the page.

• According to ActionSprout this was the fastest growing Facebook page in history, reaching over 1.3 million users.
Hurricane Florence
September 2018
FB location maps helped verify evacuations

Humanity Road and Direct Relief used FB data to verify where people had evacuated and to send supplies where they were needed most.
FB location maps helped target supply distribution

American Red Cross used our data for its distribution plan, Direct Relief used our data to communicate about surges with its network of health centers.
FB location maps helped target mask distribution

American Red Cross used our data for its distribution plan, Direct Relief used our data to distribute over 10K respiratory masks, and CalOES used our maps to monitor evacuations.
Results in the past year

- **Partners**: Scaled from working with 6 humanitarian agencies to 30

- **Number of disasters activated for: 100+, including Hurricanes Maria and Irma, the Thomas fires, the Mendocino Fires, Hurricane Florence, Hurricane Michael, the Camp Fire and many others.**
Thank you!