Business models for digital ‘commons’ in the humanitarian sector:

Tasking Manager & HOT core tooling

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We develop a range of tools & tech around maps.
Imagery services & hosting - OpenAerialMap

https://openaerialmap.org/
Remote mapping - Tasking Manager

http://tasks.hotosm.org/

Map a Task
Join coordinated humanitarian mapping projects on a free and editable map of the world. Communities use maps to address local development challenges and support mapping projects such as OpenStreetMap.

Missing Maps
Putting the World's Vulnerable People on the Map
Each year, disasters around the world kill nearly 100,000 and affect or displace 200 million people. Many of the places where these disasters occur are literally 'missing' from any map and first responders lack the information to make valuable decisions regarding relief efforts. Missing Maps is an open, collaborative project in which you can help to map areas where humanitarian organisations are trying to meet the needs of vulnerable people.

176
Mappers Online

1,679,947
Tasks Mapped

142,788
Total Mappers
Remote mapping - Tasking Manager

http://tasks.hotosm.org/

#5253 - Sri Lanka Flood Response 2018 Project 6b

Download: AoIs as .geojson, Tasks as .geojson, .osm, .gpx

Monsoon rains have caused severe flooding in the Kurunagala and Puttalam districts of Sri Lanka. Your help is needed to map these areas so aid agencies can better assist in the recovery.

HOT has received a request from the Disaster Management Centre of Sri Lanka to trace buildings in the inundated areas.

Instructions

Entities to map

Buildings only

Changeset Comment

#hotosm-project-5253 #SriLankaFloods2018 #SriLanka request for buildings

Imagery
Data use and analysis – Export Tool & HDX bridge

Case Study: mapathon at Accenture

24 hour Global Mapathon with employees from 42 cities adding 230,000+ people to the map

Watch: https://youtu.be/tHr6Pf4W_gg
General strategies

- Open data and open source by default
- Built on top of, and supplementing, the work of the OpenStreetMap Foundation, contributors & volunteers (core, API, Overpass, iD, JOSM, etc)
- As transparent and open as we can be (we have a very invested and vocal community – which is amazing)
Community

International staff: 23
National staff: 60
Voting Members: 131
Remote and Local Community volunteers: 140,000+

Centralised NGO structure

Open Source Community
- 200,000 ‘actions’ across core HOT tools in September 2018
- Tasking Manager projects in 50+ countries
- Majority for a variety of partners, partly in support of our field teams
Partnerships are critical to our success

No aspect of our work happens in isolation - we are reliant on partners in every step.

1. **Identify the need**  
   Where are the top priorities for mapping?  
   **Partners**  
   NGOs, UN agencies, governments, communities

2. **Acquire imagery**  
   Identifying highest quality most recent satellite imagery available  
   **Partners**  
   DigitalGlobe, Bing, ESRI, Mapbox, US government, drone community

3. **Task setup**  
   Setting up mapping tasks in Tasking Manager  
   **Partners**  
   Amazon Web Services (hosting support) and community volunteers

4. **Mapping**  
   Volunteers map Tasking Manager tasks  
   **Partners**  
   Corporates, universities, OpenStreetMap Foundation, community volunteer groups

5. **Validation**  
   Experienced volunteers or staff validate the data produced to ensure quality is ready for field projects  
   **Partners**  
   Universities, community volunteer groups - trying to add corporates

6. **Community mapping**  
   Through HOT field programs or local volunteers add extra data e.g. street names, hospitals, schools, sanitation  
   **Partners**  
   Range of Grant-makers who fund field programs, funders for Microgrants & Device Grants

7. **Data use**  
   Support field staff to use the data operationally to inform programming and take better decisions  
   **Partners**  
   NGOs, UN Agencies, governments

**HOT Mapping process: OpenStreetMap involved throughout**
Missing Maps

http://www.missingmaps.org/

Founders:

- American Red Cross
- British Red Cross
- Humanitarian OpenStreetMap Team
- Médecins Sans Frontières Doctors Without Borders

Members:

- CADASTA
- cartOng
- Clinton Health Access Initiative
- Concern Worldwide
- Canadian Red Cross
- The George Washington University
- Pan American Development Foundation
- youthmappers
- The Netherlands Red Cross
- GI Science
- International Federation
- Map Action
Challenges

**Technology:** choosing and developing the ‘right’ direction of change, while hosting a stable product

**Communications:** constant requests on many channels and a need to streamline - Slack, Github

**Funding - ongoing:** stability, maintenance and ops costs. Very difficult to ‘price’ things in an open community, but need funding to maintain and run

**Funding - innovation:** need to adapt and respond to new developments in Machine Learning

**Stakeholders:** huge volume of requirements from different organisations, but also community - how to prioritize these
Funding streams: how do we support this?

1. **Grants** - majority from ‘traditional’ funders e.g. USAID, and government partnerships

2. **Missing Maps** - NGO networks leveraging the tooling make small contributions from their corporate fundraising

3. **Corporate partnerships** - shared value partnerships, designed around
   - Pro bono support and collaboration on tech/development
   - Large volume of mapping volunteering
   - Financial support

4. **Individual donations** - not a huge proportion of our fundraising, however provide critical funding to sustain our community microgrants program (now in it’s third year - hotosm.org/donate)
Case Study: Salesforce

In 2018, Salesforce & HOT have collaborated to:

■ Engage 3,000 employees in mapping as a volunteering opportunity (8% of organisation)
■ Map 430,000 buildings and 10,500 km of roads
■ Supported refugee response for government and UNHCR in Uganda, medical programs for MSF in Congo, and Red Cross programming in Myanmar and Nigeria.

Organised through:

■ Annual ‘Global Volunteering Month’ with 30+ mapathons
■ Regular support for global volunteering teams
■ Organised around specific campaigns e.g. refugee crisis, disaster mapping, support for specific organisations

Maps being created by Salesforce volunteers

And used by field teams surveying in Uganda
Areas of development

Training
Corporate partnerships work through a Train the Trainer model, but need to keep making improvements to ensure data quality - if an event lead is unprepared, they train others to create a lot of bad data.

Validation
Increasingly trying to train corporate mappers as validators so they can begin to validate their own mapping, but not yet achieved at scale.

Awareness
As the barrier to set up a mapathon is very low, often events happen which we don’t know about, and retrospectively need to provide information on (e.g. tracking amount mapped).

Innovation
We need to adapt to a new set of tools which will increase effectiveness and speed of mapping - but what will the role of the volunteer be?
Join the conversation

Ongoing work on the Tasking Manager

- Github - [https://github.com/hotosm/tasking-manager](https://github.com/hotosm/tasking-manager)
- General TM dev - #tasking_manager_3 channel
- ML - #ml4tm channel
Thanks!

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