

Grassroots Disaster Relief Network Response to Superstorm Sandy: Successes and Opportunities



General Focus

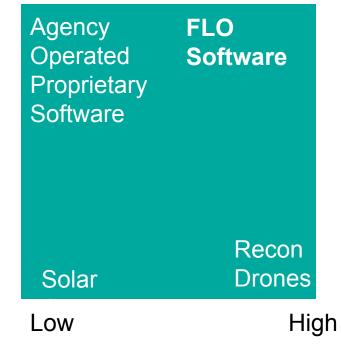
"Grassroots disaster relief networks" are neither unaffiliated volunteers, nor are they affiliated volunteers. They're different.

- Organizing members have prior relationships
- Horizontal, consensus based decision making
- Incorporate themselves into conventional relief structures over time
- Heavy Use of Social
 Media and FLO Software

Technical Complexity of Society

High

I ow



Local Accessibility

nycprepared.org/presentations



Superstorm Sandy

Superstorm Sandy hit New York City on October 30th, 2012. 2nd most impactful in US history.

147 people died. 300k/750k homes affected in NYC/USA. \$19B/\$65B cost of damage in NYC/USA.



Occupy Sandy's Impact

Within 48 hours

- Social network profiles
- Website and volunteer database
- First base of operations

Within two weeks

- 3 main hubs producing 10k-20k meal/day
- Supplying approximately 20 relief sites

OCCUPY SANDY

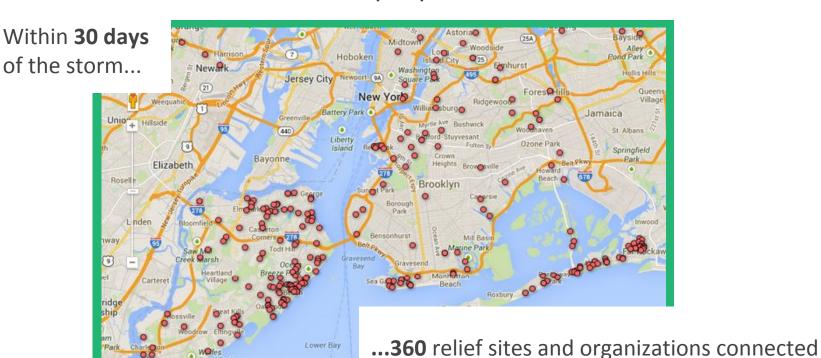
In Total

- \$2.5 million raised
- 12k signed in volunteers
- 60k volunteers mobilized (4x more than the Red Cross)*



Response

Hundreds of groups and "relief sites" sprang up in the NYC area for Sandy response. Many of these groups had never before been involved in disaster preparedness or relief efforts.





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Why is this Important?

- Grassroots disaster relief networks are increasingly effective.
- We have yet to achieve integration between grassroots and institutional relief – we can, we must. The outcomes will be great.
- We can leverage insights and advances in grassroots relief work to accelerate innovate in institutional relief efforts.



Theory of Change: The Clamp

Pressure from within institutions to do better. **Innovation** Citizens modeling effective, innovative alternatives.



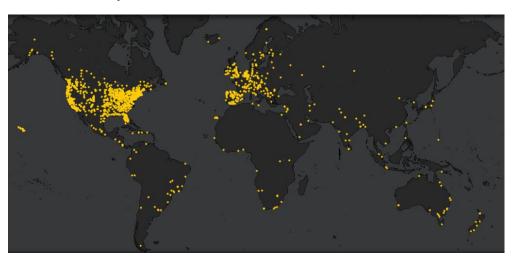
How Did Occupy Sandy Happened?



Occupy Wall Street

Occupy Wall Street (OWS) began on September 17, 2011, in Zuccotti Park, in NYC's financial district as a movement against social & economic inequality.

Over 1,500 "occupations" emerged worldwide. Many ended with "evictions" and arrests: 1500 arrests in NYC and nearly 8,000 worldwide.





The term is still used by social movements such as the recent social movement in Hong Kong called #OccupyCentral.



Two Sides of OWS

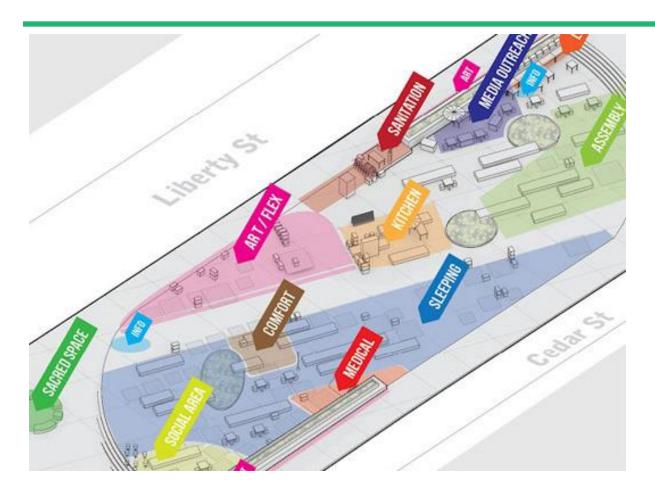




Protest

Mutual Aid

Zuccotti Park was a Relief Site



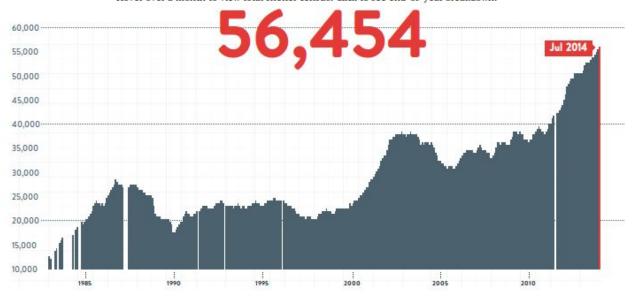
- Kitchen
- Comfort
- Shipping, Inventory and Storage
- Medical Center
- Sacred Space
- Info
- Media
- Sleeping/Shelter
- Assembly Space
- Resource Center



New York City Needs More of Them

Number of Homeless People in NYC Shelters Each Night

Hover over a month to view total shelter census. Click to see end-of-year breakdown.



Source: NYC Department of Homeless Services and Human Resources Administration and NYCStat shelter census reports

*For data through September 2011, figures for homeless families, children, and adult family members reflect end-of-month census data.

All numbers for families after September 2011 and for homeless single adults (men and women) for all months reflect average daily census data.

The primary cause of homelessness, particularly among families, is lack of affordable housing leading to eviction; doubled-up or severely overcrowded housing; domestic violence; job loss; and hazardous housing conditions.

Homeless single adults have significantly higher rates of serious mental illness, addiction disorders, and other severe health problems.



Opportunity for Social Services Providers

Meeting place of difficult to reach "at risk" populations attracted by service provision outside the conventional "institutionalized" environment.

- Chronically houseless
- Mental health issues
- Gay youth without support at home
- "Drop outs"

It was an unprecedented opportunity to reach these populations.



Bloomberg (and Wall St.) Didn't Care





11.5 Months Later...



- Kitchen
- Comfort
- Shipping, **Inventory and** Storage (off site)
- **Medical Center**
- **Sacred Space**
- Info
- Media
- Sleeping/Shelter
- **Assembly Space**
- Library



Where FEMA Fell Short, Occupy Sandy Was There ...

www.nytimes.com/.../where-fema-fell-short-occup... ▼ The New York Times ▼ Nov 9, 2012 - In Hurricane Sandy's aftermath, Occupy Wall Street has tapped into an unfulfilled desire among city residents to assist in the recovery.

OWS Had "Preparedness" Tools

- Community organized into informal affinity groups
- OWS social media profiles (500k followers) ready to promote new OS ones
- Network of Occupy websites ready to deploy technology
- Relationships with religious institutions and spaces
- Shared philosophy
 - direct action
 - horizontalism
 - mutual aid



Phase 1: Scouting - within 48 hours

Online Offline Listservs for internal People go to affected communities communications Twitter and Facebook for Survey damage Connect with residents external communications WePay for donations Start hubs WordPress Website with Report back to emerging OS community relief maps Celly loops for organizers

Governance: None



Phase 2: Networking - within 2 weeks

Online Offline

- Social media profiles grow
- Press takes notice
- CiviCRM for volunteer management is launched
- Newsletters and email alerts start

- More hubs are established at churches
- Main distribution location are set up
- Resource begin to flow in

Governance: managed through facilitated meetings **Finances**: controlled by a small group distributing

emergency funds to hubs



Phase 3: Relationships - within 2 months

- Developed strategic relationships with local partners.
- Deeper integration with local operations
- Volunteer and financial climaxed
- Meeting sizes continued to grow and include institutional folks
- Struggled to navigate institutional partnerships
- Migrated from Google Docs to Sahana EDEN

Governance: official network meetings

Finances: team and decision making process is transparent, all accounting information is published online



Phase 4: Projects - Ongoing

People have organized autonomous projects, often with local partners in affected communities

Attempted participatory budgeting but decide to fund Long Term Recovery Groups instead.

Projects that are still active.

- Coop Incubation
- Community Organizing and Political Education
- Survivor Storytelling
- LTRG Facilitation
- Community Space
- Technology Development

Governance: projects made decisions via "spokescouncil"

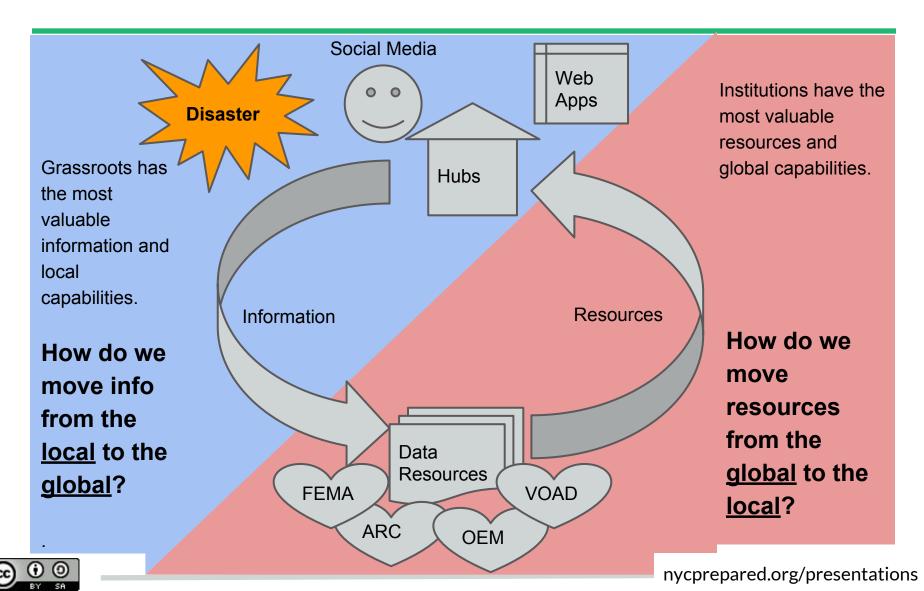
Finances: allocated by spokescouncil, administered by a project,



Introducing NYC:Prepared



Grassroots & Institutional Collaboration



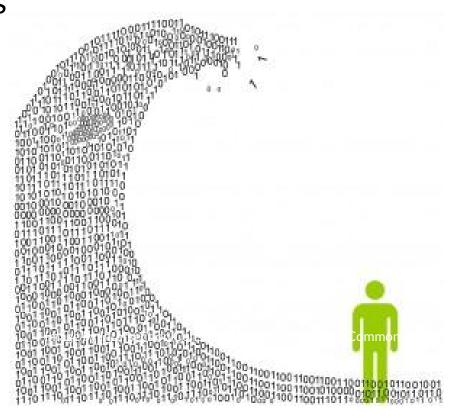
A Massive Information Challenge

Neither grassroots nor institutional relief have central software systems for coordination.

- Hundreds of organizations

 each with their own
 systems.
- Politics ensures there will never be a single "miracle" solution everyone uses.
- Information is money and power.

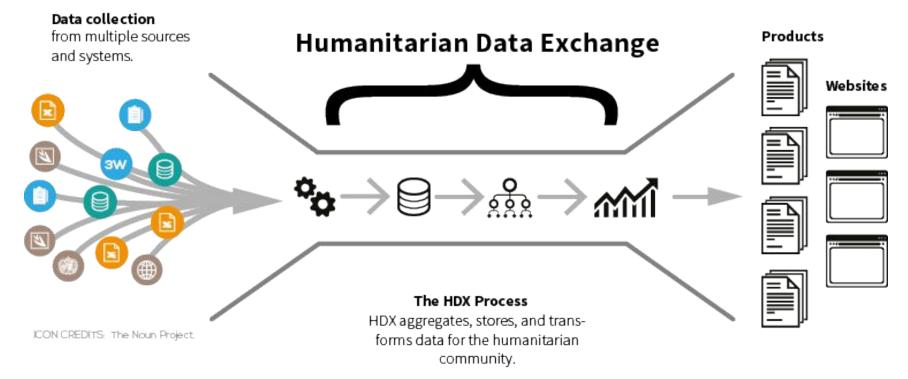
We need a strategy that enables many independent solutions to work together.



UN's OCHA is Tackling this Problem

Humanitarian Data Exchange (HDX) project allows participants to upload data in the most accessible file formats (ex. CSV) and then produces information products with it.







Our Target: Coordination Networks

Organizations engaged in disaster relief and community resilience work after Sandy are the most in need of these types of coordination systems.

Many of these organizations participate in coordination networks that lack software coordination solutions.

- Borough-based response networks (ex. Brooklyn Long-Term Recovery Groups)
- City-wide relief networks (ex. New York City Voluntary Organizations Active in Disaster Relief - NYCVOAD)
- Networks engaged in human service provision (ex. Human Services Council)
- Networks building community resilience (ex. Community Garden Coalition)



Target Valuable Proposition

- Nonprofit organization logs into it's own website's and uploads a post requesting volunteers for an event.
- Event is published on their website, syndicated through social media and posted on an inter-organizational coordination system (IOCS).
- Network partners/users can commit to, prepared, fulfill and report on requests through IOCS.
- If the nonprofits website goes down, they can use IOCS, if IOCS goes down, the nonprofit can use their website.



Our Strategy

- Establish data standards and build templates we can use to make HDX style info products.
- Provide software solutions to organizations that makes producing compatible data easy.
- Provide central a platform "coordination networks" can use to turn data into action.



Common Software Needs

These groups need a common set of tools not just for themselves, but also for their coordination networks.

For Individual Groups	For Coordination Networks
 Online Publishing Syndicatable News & Events Form Builder/Manager Newsletters Donation Processing 	 Information Management Contact & Facilities Directories Services Directories Request & Work Order Queues Mapping & Data Visualization
 Productivity Suite Collaborative Documents Data-Driven Mapping Inbox Management Email Address & Groups 	Data Repository HDX Knowledge Base Network-Wide IT Support



Common Data Needs

These groups need to access, update, visualize and collaboratively manage a few different types of data.

Types of Data	Examples	Sources
1: News, Events and General Knowledge	Relevant news & events, localized preparedness plans and procedures, training materials and templates for community-led relief and response.	Local nonprofit & aid community
2: Core Demographic and Geographic Data	Boundaries such as census tracts, points of interest such as hospitals, vulnerability information such as elevations and flood predictions.	Local, state and federal agencies
3: Human Services	Disaster food stamps, rental assistance, remediation and repair services, grants for replacing damaged items, assistance with paperwork.	Nonprofits & gov' t agencies.
4: Coordination Network Information	Individuals, organizations, groups, and facilities within coordination networks; action items, work orders, inventories and assets, internal discussions.	Participating groups & orgs.



Technology Criteria

Accessibility

We use FLO tools & techniques so that as many organization as possible can participate.

FLO means:

- Free: donation-based business model
- **Liberty**: the community owns its data and leads the software development process
- Open-source: people can contribute and innovation can be shared globally

Autonomy

We use open data standards so groups can use their own tools or use ours.

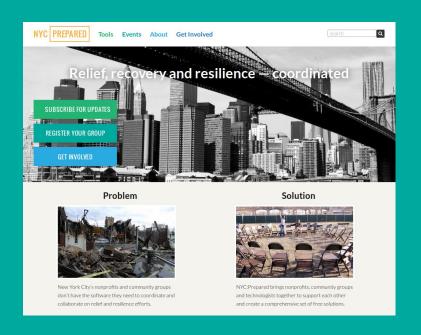
Open standards include:

- **RSS** for news
- iCAL for events.
- Open Referral for services data
- HXL for reporting (eventually)

All the solutions we produce are released with "copyleft" licenses like GPL and Creative Commons, meaning others can use our intellectual property with minimal restrictions.

FLO Makes Interoperable Systems Possible

 We can provide these products to hundreds (even thousands) of nonprofit in the NYC area using popular, reputable, free/libre/open source software and open data standards.











A Common(s) Solution Set

Products	Software	Data	Provider
Online Publishing	WordPress	News, Events and General Knowledge	Glocal Coop
Knowledge Base	Wagn	General Knowledge	Grass Commons
Data Repository	CKAN	Core Demographic and Geographic Information	Ontodia Inc
Services Directory	Ohana API	Human Services Data	Sarapis
Information Management	Sahana EDEN	Network Information Management	AidIQ
Productivity Suite	Google Apps*	All Purpose	NA

Website Builder

We offer free websites to organizations powered by the **WordPress** content management system. Our particular deployment integrates with the NYC: Prepared ecosystem of tools. We're working on a plugin that would enable any WordPress-powered site to integrate with our ecosystem.

Our free sites have all the features most organizations needs:

- News posts and feeds
- Event calendar and feeds
- Email Newsletters
- Social media integration
- Form building and management
- Donation processing
- Customizable looks and feel



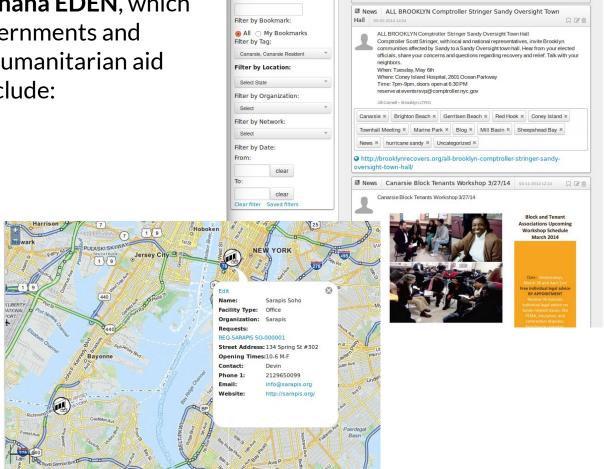


LATEST INFORMATION

Aid Management System

We offer a central information management platform powered by **Sahana EDEN**, which is used by dozens of governments and NGOs to manage their humanitarian aid operations. Features include:

- News Feed Management
- Request Queues
- GIS and Data
 Visualization
- Network Directory
- Inventory and Logistics Management



Human Services Directory



Survivors and their case managers need access to information about services being provided by nonprofits in their area. OpenReferral offers open data standards and FLO software for managing that information.

CalFresh/Food Stamps Health Insurance Medi-Cal Medicare SFMNP/Food Vouchers For Seniors WIC/Women, Infants, & Children

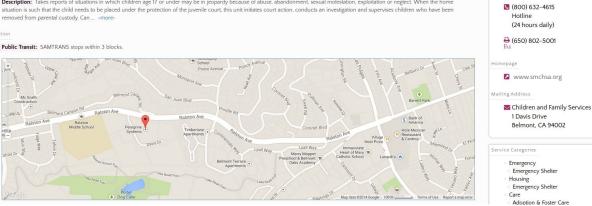
Accepts referrals about situations in which children age 17 or under are in jeopardy because of abuse, abandonment or

Description: Takes reports of situations in which children age 17 or under may be in jeopardy because of abuse, abandonment, sexual molestation, exploitation or neglect. When the home situation is such that the child needs to be placed under the protection of the juvenile court, this unit initiates court action, conducts an investigation and supervises children who have been removed from parental custody. Can ... <more

Children and Family Services

San Mateo County Human Services Agency

We're deploying an **Ohana API** data platform to manage this information.

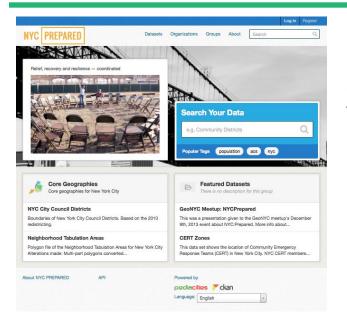


Marsha Beaman (Court Investigations)

Matt Radisch (Licensing)

Pravin Patel (Shelter Care) Marie Morris (Adoptions)

Data Repository



Our **CKAN** powered data repository contains over 100 datasets useful to communities and organizations working on disaster related issues. The files contain elevation maps, flood projections, community district boundaries, census tracts and more.

This same software and functionality is used by the UNOCHA's Humanitarian Data Exchange (HDX) Project to aggregate, organize and publish data sent to them via their partners.



Productivity Suite

Google offers free Apps for Nonprofits accounts to 501.c.3 organizations.

A single Google Apps account can provide functionality to dozens of

organizations.

We help organizations register and configure accounts to meet their unique needs.



Reduce your IT costs and help staff and volunteers work together more effectively.

Get the job done with Google Apps for Nonprofits:

- Get free access to the Google Apps suite including Gmail, Google Calendar and Google Drive
- · Work better with colleagues through online collaboration
- . Store documents in the cloud: 30GB of storage across Gmail and Google Drive
- · Stay connected from anywhere; securely access data anywhere
- · 24/7 support; no hardware, no updates
- Google Apps for Nonprofits is free for all members of Google for Nonprofits



A System of Syndication

Organizations following our online communications standards (RSS)/iCAL) can syndicate into NYC:Prepared's information management system.



Publish

Member organizations publish to social media and on our free websites or their own.

Aggregate

Our system aggregates these information feeds and parses them into queues of requests, reports and events.

Organize

Our data team adds descriptive metadata and formats it for actioning.

Synthesize

- SitRep Feeds
- Ticket Queues
- Directories
- Asset Tracking
- Mapping & Viz
- Printable Reports
- API



Community Information via API

Agencies and large organizations can integrate with the Sahana API to access real time data from these deployments.

What API's do the large organizations and agencies have that they can offer to our community?

- Shelter Status Map
- 311 Requests
- National Guard Assessment Dat



Broader Question

How do civic institutions and social service organizations share data?



Services

We provide a few services to keep this system functioning.

Training	Data Work	System Support
Regularly scheduled trainings in critical technology skills: • WordPress • Google Drive • Data Sharing • Social Media • EDEN IMS • Open Referral	Our network of data specialists can perform work on-demand: • Data entry and cleaning • Data scraping • Extract, Transform, Load (ETL) • Database administration	24/7 tech support for all NYC:Prepared community tools and "office hours" supporting members WordPress, Google Apps and social media efforts.



Access Model

Access is provided to organizations that are members of approved coordination networks.

Approval requires:

- NYC-Based
- Nonprofit and Community Groups
- Dealing with Relief and Resilience
- Elect delegate to Information Management Working Group
- Provides resources to sustain the network



Success Required Data Standards

We're working towards a set of data standards for emergency management information in NYC that is widely accessible to institutions and grassroots groups alike.

- News & Events
- Requests
 - Supplies
 - Assets
 - People
- Facilities
- Organizations
- People

- Resources
 - Assets
 - Inventories
 - Services
- Assessments
 - Canvass
 - Individual needs
 - Damage
 - Unmet needs



It Begins With...

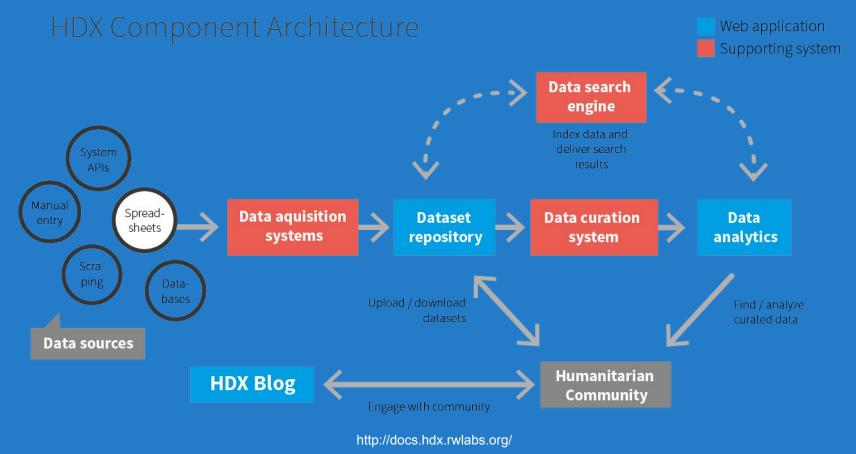
... a series of spreadsheets, form templates and simple training materials that defines how information should be collected and what should be done with it.

	TITLE
口☆	Data Standards Introduction Shared
日☆	Assessments Template Shared
	Resources Template Shared
日☆	Organizations Template Shared
口☆	Facilities Template Shared
□ ☆	Requests Template Shared

Site *					
The name of the location that supplies are to be sent.					
Address *					
The address of the site that the supplies are to be sent.					
Site Contact (Primary) *					
Name, Phone, Email (This is very important information to gather)					
Site Contact (Secondary)					
Name, Phone, Email					
Site Resources					
Cell Service?					
Does the site have reliable cell service?					
○ Yes					
○ No					
Unreliable / Unsure					
Has Electricity?					
Does the site have electricity?					
○ Yes					
○ No					
O Partial / Unreliable					

It Matures Into...

A comprehensive set of solutions for information sharing.





It Requires a Commitment

- For "non technical" people to come to the table and to come to some level of agreement on how to describe things.
- We need a process to keep these standards flexible and up to date.
- For institutions to build capabilities for sharing information with each other and with the grassroots.
- For those with resources to fulfill requests that originate from reputable groups and conform to established standards.



Progress

2013

Info management for Staten Island, Brooklyn, Queens LTROs.

Fall 2014

Deploying 2 last tools:

- Website Builder
- Services Directory

Winter 2014

Contracts with all of our software vendors.

Summer 2014

NYCVOAD website SI using IMS

Spring 2014

3 of 5 tools deployed:

- Data
- Eden (Resources)
- Knowledge.

Winter 2015

Organize a Crisis Response Working Group to manage data standards.



Goals for 2015 and Beyond

Organization

- Become financially sustainable through member funding and grants.
- Gain adoption in all 5 boroughs of NYC and NYCVOADs.
- Stable governance body with functioning steering committee

Technology

- Mobile Application with offline functionality
- Incorporate social and gamified features into WordPress
- Better integration between Sahana and WordPress system

Affiliates

- Bring cost for additional systems down to:
- \$10,000/deployment
- \$10,000/year of maintenance

If you're interested in deploying a similar system in your region, let us know.





Local Impact

In New York City, we're putting together a comprehensive set of technical solutions any group can use to enhance their relief and resilience work.

Global Contribution

By packaging and sharing our work under free/libre/open-source

licensing, we ensure that groups in future disaster contexts around the world can access and build on our work — building a global, integrated commons for disaster-related technical tools.

Connect with Us

Connect with Me

devin@sarapis.org
@devinbalkind

Learn More nycprepared.org

Contact Us info@nycprepared.org @nycprepared

Donate

nycprepared.org/donate

NYC:Prepared is operated by Sarapis, a 501.c.3 organization. Donations are tax deductible.

Extra Slides

Trainings:

- Data Basics
- WordPress
- Google Drive



Governance Model

Three stakeholder groups coordinate through a steering committee.

User

Advocacy

Technology

Partners

Operations

Group

Steering Committee

Technical

Support

Trainings

Events

Members

Steering Committee:

- manages a technical development roadmap
- facilitates coordination amongst the three groups

Technology Partners manage NYC: Prepared software and hardware systems.

Operations Group manages fundraising and administration, produces communications, events and training materials, provides support to members and organizes sector-wide standards bodies.

Members are relief providers who use NYC:Prepared tools and services.

Software Development Milestones

General

- Apply Uniform Design to All Apps and Improve Mobile Experiences
- Sync WordPress/EDEN User Directory, Networks and Organizations
- Package complete systems so they can be rapidly deployed

WordPress

- Expand of MultiSite Customizability
- Incorporate of BuddyPress and Gamification Components
- Incorporate of Wiki (to replace Wagn)

EDEN

- Build Services Data Model and Sync with Ohana API
- Integrate Work Orders with CrisisCleanup API
- Expand Social Media Feed Processing Capabilities
- Redesign UI of Request Management (Kanban Style)
- Continuously Refine Data Models and Expand GIS Data Sets



Feature Access x User Type

	Individual Organizations	Coordination Networks	Network of Networks
Website Builder	Free WebsiteIntegration Option	Free WebsiteIntegration OptionFeed Aggregation	Free Website (Main)Feed AggregationContent Portal
Productivity Suite	Google Apps for Nonprofits	Google Apps for Nonprofits	Google Apps for Nonprofits
Data Portal	Organizational accounts	Organizational accounts	Administrative accounts
Information Management System	 Organization profile View network asset Make & fulfill requests 	 Manage membership Curate news feeds Network info/assets 	• All
Human Services Directory	Organization profileManage services list	Embed of services on their website	• All
Services	TrainingsNYCP WebsiteSupport	TrainingsGeneral IT SupportData Work	• All



Open Data: A Solvable Problem

What Data Should Be Public

- 1. Proactively release government information online
- 2. Reference and build on existing public accountability and access policies
- 3. Build on the values, goals and mission of the community and government
- 4. Create a public, comprehensive list of all information holdings
- 5. Specify methods of determining the prioritization of data release
- 6. Stipulate that provisions apply to contractors or quasigovernmental agencies
- 7. Appropriately safeguard sensitive information

How to Make Data Public

- 8. Mandate data formats for maximal technical access
- 9. Provide comprehensive and appropriate formats for varied uses
- 10. Remove restrictions for accessing information
- 11. Mandate data be explicitly license-free
- 12. Charge data-creating agencies with recommending an appropriate citation form
- 13. Require publishing metadata
- 14. Require publishing data creation processes
- 15. Mandate the use of unique identifiers
- 16. Require code sharing or publishing open source

- 17. Require digitization and distribution of archival materials
- 18. Create a central location devoted to data publication and policies
- 19. Publish bulk data
- 20. Create public APIs for accessing information
- 21. Optimize methods of data collection
- 22. Mandate ongoing data publication and updates
- 23. Create permanent, lasting access to data

How to Implement Policy

- 24. Create or appoint oversight authority
- 25. Create guidance or other binding regulations for implementation
- 26. Incorporate public perspectives into policy implementation
- 27. Set appropriately ambitious timelines for implementation
- 28. Create processes to ensure data quality
- 29. Ensure sufficient funding for implementation
- 30. Create or explore potential partnerships
- 31. Mandate future review for potential changes to this policy

Sunlight Foundation's "Open Data Guidelines"

http://sunlightfoundation.com/opendataguidelines/



Open Data Simplified: Four Ingredients

Schema (Column Headers) to define services.

Google.org's CivicServices Schema is sufficient.

Taxonomy (Terms) to classify service type and eligibility.

We've got a good start on services types and need to work on eligibility.

Format (Files) so we can easily exchange information.

PDFs are bad. Documents are okay. Spreadsheets are best.

Databases without APIs are bad. Databases with APIs are good.

Licenses (rights) that allow us to share.

Copyright is bad. No license is okay. Creative Commons is good.

