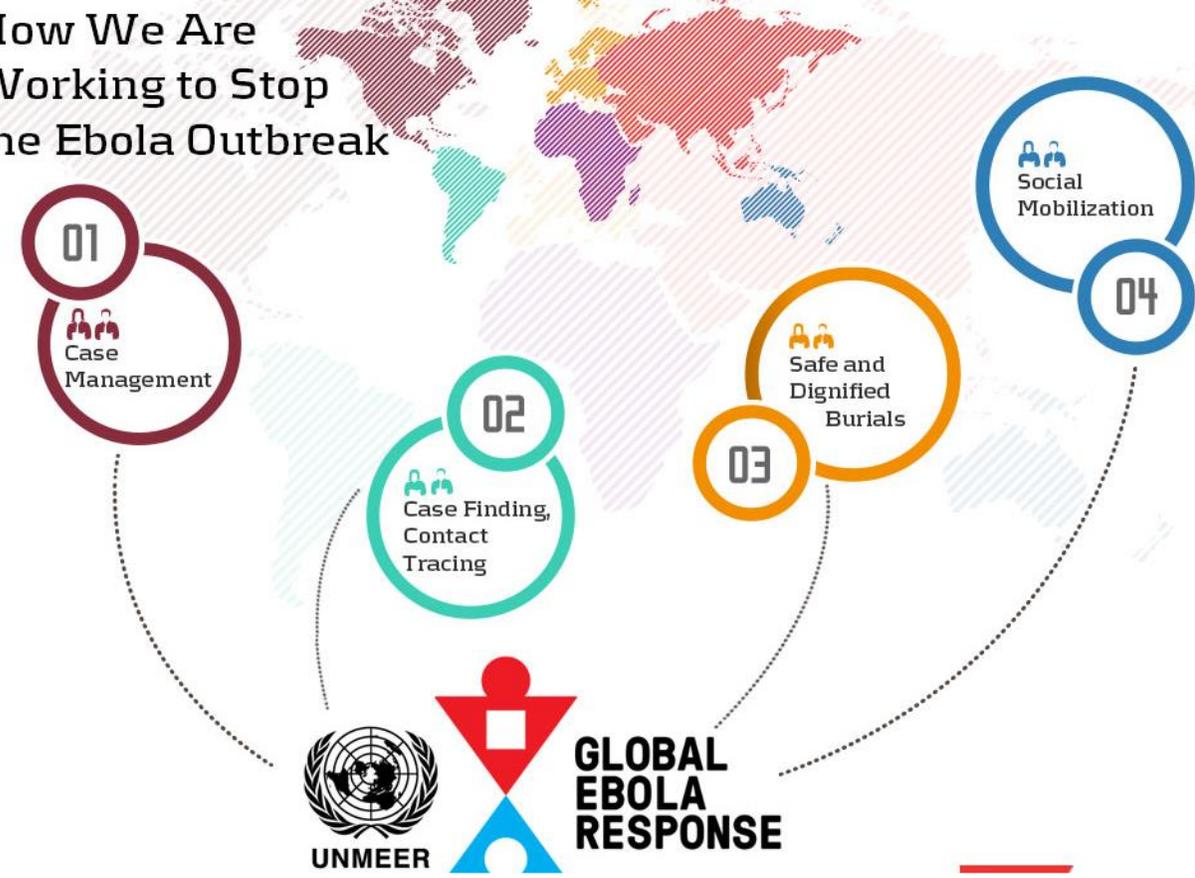
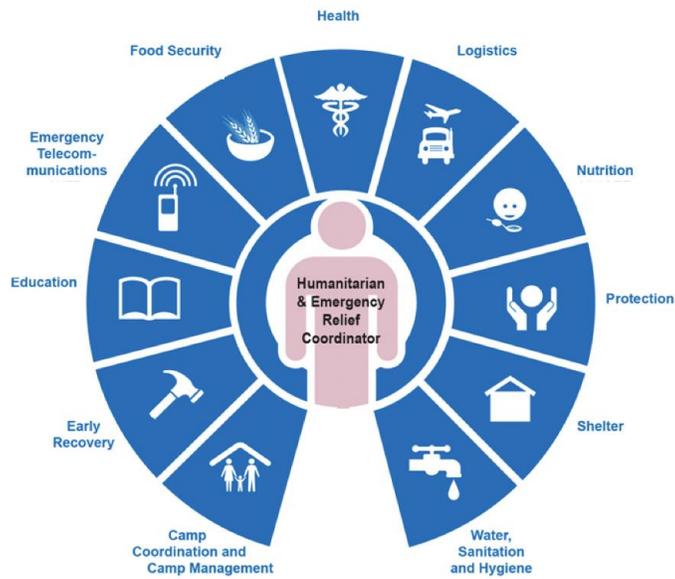


## How We Are Working to Stop the Ebola Outbreak



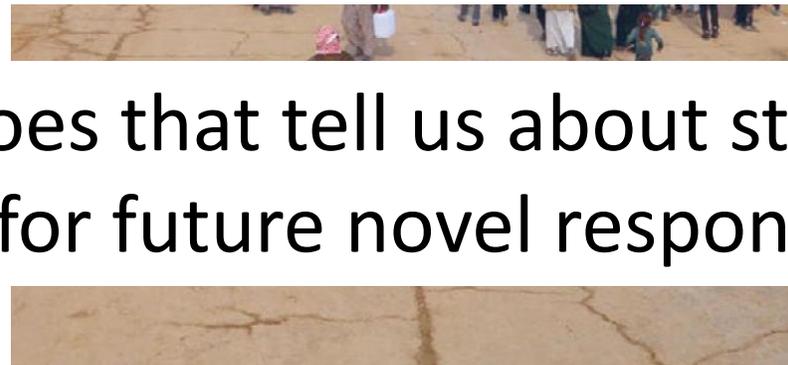
# When structure breaks in humanitarian response: a systems architecture analysis



### How We Are Working to Stop the Ebola Outbreak



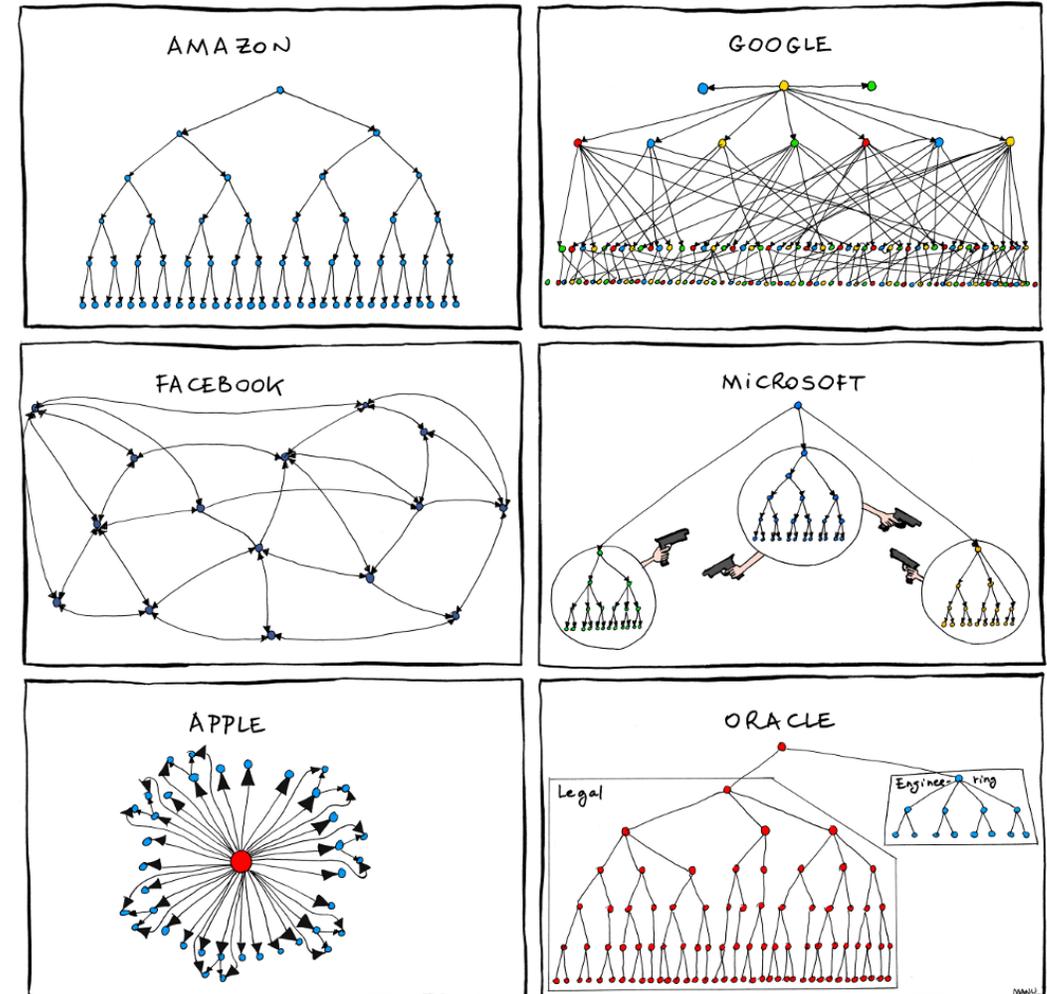
What changes were needed to the flexible, modular structure of the Cluster System in the face of the Ebola outbreak?



... and what does that tell us about structuring response organizations for future novel responses?

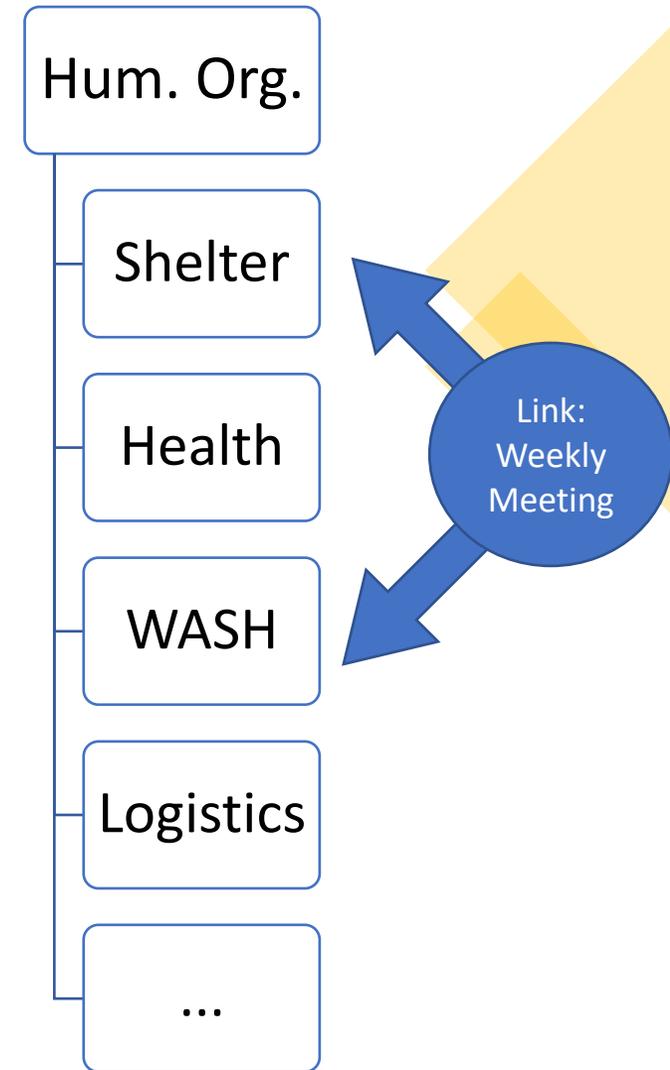
# Motivation: need for adaptability

- Organizational structure can support or inhibit **adaptability**
  - e.g. to changes in the software market *or* to novel emergencies
  - *Which of these companies do you think is most adaptable?*
- Humanitarian organizations have always been adaptable, but may need to be even more so
  - Novel emergencies – epidemics/pandemics, mass migration, etc.
  - Novel response approaches – cash-based programming, localization, digitalization of aid and information-as-aid
- Do humanitarian organizational structures need to change?



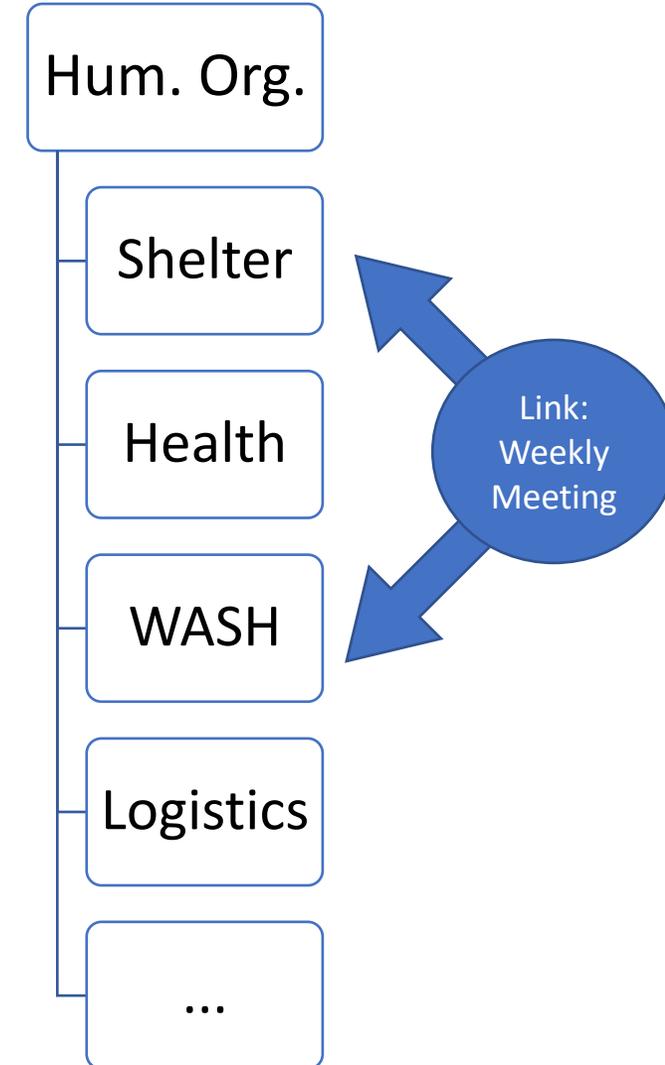
# A primer on organizational structure

- Organizations separate people into groups or **modules** that work internally on closely related tasks
  - e.g., WASH or shelter teams
- Then they **link** groups when there is a need to coordinate because the groups' tasks are interdependent
  - Links might be regular meetings, a liaison officer, or even a common database
  - e.g., regular meetings between WASH and shelter to site and maintain latrines
- Finally, they **align** incentives and resources with the goals of the org.



# Why different structures?

- **Modules** are useful because they are efficient – they avoid over-coordination.
  - The WASH team doesn't need to know *all* the details of logistics planning, and vice versa.
- ***However***, sometimes a novel emergency requires *more* coordination between different groups
  - *Any examples?*
- So, make stronger **links** or **change the modules** so that coordination happens where it's needed.
  - But changing the organizational structure can be very difficult...



# The challenge

- Modular organizations make humanitarian organizations efficient and flexible [Brusoni & Prencipe 2011; Colfer & Baldwin 2016; Jahre & Fabbe-Costes 2015]

*...however...*

- In fast-moving and novel contexts, normal structures and routines might be counter-productive [Lifshitz-Assaf, Lebovitz & Zalmanson 2021]

*...so, do humanitarian structures need to change in some emergencies? How? Which?*



# Research Questions

**What are the limits of the “traditional” humanitarian organizational structure for novel and highly dynamic contexts?**

**Specifically: What about the traditional humanitarian structure “broke” in West Africa Ebola?**

# The International Federation of the Red Cross & Red Crescent: Emergency Plans of Action

- IFRC stands up a new organization for each emergency response
- IFRC has a “template” organization of on-call modules, each of which can be deployed or not.
- An Emergency Plan of Action is developed upon deployment.
- EPOAs are revised after a period of assessment and planning



## Combined Monthly Ebola Operations Update N° 28<sup>1</sup> 15 December 2015

### Current epidemiological situation + country-specific information

The spread of Ebola in West Africa has slowed intensely, but enormous challenges remain in conquering this scourge while re-establishing basic social services and building resilience in Guinea, Liberia and Sierra Leone. This unparalleled outbreak has hit some of the most vulnerable communities in some of the world's poorest countries.



School children practicing proper handwashing before classes begin in Monrovia, Liberia in October 2015. IFRIC supported by IFRC has been distributing handwashing kits, soap, chlorine and no-touch thermometers to over 500 schools across the country. Photo: IFRC

On 20 November 2015, the Government of Liberia confirmed three new cases of Ebola from a family of six living in an area of Monrovia. All the cases were transferred to an Ebola Treatment Unit (ETU). One of the three confirmed cases, a boy, died on 23 November. His brother and father continued with the treatment.

There have not been any additional/new confirmed cases so far. A total of 166 contacts related to the current cluster were listed and continued with daily follow-up. The contacts are being seen by contacts tracers and remained asymptomatic.

According to the WHO Ebola Situation Report of 2 December 2015, these recent cases in Liberia highlight the importance of robust surveillance measures to ensure the rapid detection of any reintroduction or re-emergence of EVD in currently unaffected areas.

IFRC's Ebola virus disease (EVD) strategic framework is organised around five outcomes:

1. The epidemic is stopped.
2. National Societies (NS) have better EVD preparedness and stronger long-term capacities.
3. IFRC operations are well coordinated.
4. Safe and Dignified Burials (SDB) are effectively carried out by all actors.
5. Recovery of community life and livelihoods.

Helping stop the epidemic, the EVD operations employ a five-pillar approach comprising: (i) Beneficiary Communication and Social Mobilisation; (ii) Contact Tracing and Surveillance; (iii) Psychosocial Support; (iv) Case Management; and (v) Safe and Dignified Burials (SDB) and Disinfection; and the revision has included additional sector on recovery basically covering food security, livelihoods and disaster risk reduction.

Six emergency appeals were launched to respond to and combat EVD outbreaks in Guinea, Liberia, Sierra Leone, Nigeria and Senegal. Those in Guinea, Liberia and Guinea are still active whilst coordination and technical support continues at the regional level. The Ebola emergency appeals have been revised to articulate a longer-term vision as operations head toward recovery. The revised appeals can be found at <http://www.ifrc.org/publications-and-reports/appeals/>, and are currently planned to end in December 2017.

Smaller preparedness and response operations were financed by the IFRC Disaster Response Emergency Fund (DREF) in Mal, Côte d'Ivoire, Cameroon, Togo, Benin, Central African Republic, Chad, Gambia, Kenya, Guinea Bissau and Ethiopia. In total, 16 countries in Africa launched emergency operations relating to the outbreak.



<b>Emergency Appeal n° MDRNP008</b>	<b>Guide n° EC-2015-000048-NPL</b>
<b>Date of issue:</b> 16 May 2015	<b>Date of initial appeal launch:</b> 27 April 2015
<b>Operation start date:</b> 25 April 2015	<b>Expected completion date:</b> 30 April 2017 (24 months)
<b>Overall revised budget:</b> CHF 84.9 million	<b>Amount advanced from DREF:</b> CHF 500,000
<b>Number of people affected:</b> Around 8.5 million (1.7 million families)	<b>Number of people to be assisted:</b> 700,000 (140,000 families)

This Revised Emergency Appeal seeks CHF 84.9 million to enable the International Federation of Red Cross and Red Crescent Societies (IFRC) to support the Nepal Red Cross Society (NRCS) in delivering humanitarian assistance to 700,000 people (140,000 families) affected by the 25 April and 12 May 2015 earthquakes. This revision takes into account additional needs in the event of further major aftershocks as well as preparedness activities for the upcoming monsoon season. The **overall budget** includes CHF 6.5 million for the deployment of emergency response units (ERUs) and CHF 1.6 million for the deployment of a Shelter Cluster coordination team. Click here for [IFRC Revised Emergency Plan of Action](#).

### The disaster timeline

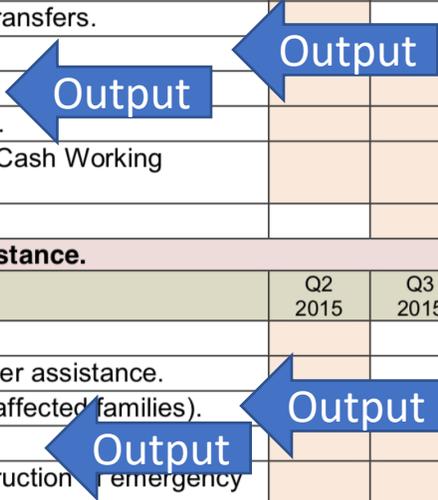
- 25 April 2015: An earthquake measuring 7.9 magnitude on the Richter scale strikes area between Kathmandu and Pokhara.
- NRCS activates its emergency response committee (ERC) and emergency operation centre (EOC). NRCS staff and volunteers immediately engage in coordination, search and rescue activities, provision of first aid and distribution of non-food relief items in affected areas.
- Initial reports indicate mass casualties and extensive destruction to houses, lifelines, infrastructure and livelihoods. The Government of Nepal declares a state of emergency and calls for international humanitarian assistance.
- NRCS requests for IFRC support. CHF 500,000 is allocated from the Disaster Relief Emergency Fund (DREF). IFRC alerts its global disaster response team (DREF, FACT, ERUs and DORTs) as well as surge capacity for immediate deployment to support NRCS.
- 27 April 2015: Emergency Appeal is launched seeking CHF 33.4 million is launched to support 70,000 people. IFRC starts deploying global tools and surge to support the NRCS.
- 28 April 2015: Members of surge teams and the global disaster response tools start arriving in Nepal. NRCS response intensifies.
- 12 May 2015: A strong aftershock, measuring 7.3 magnitude on the Richter scale, strikes with its epicentre 70 km northeast of Kathmandu. It affects 32 districts, causes more deaths and injuries, and damages or destroys buildings and infrastructure.
- 14 May 2015: NRCS response has reached 42,600 families (213,000 people) with non-food relief, emergency shelter and medical assistance, with more than 7,000 NRCS staff and volunteers mobilized.
- The NRCS response in country is supported by IFRC, ICRC and National Societies of 23 countries from Americas, Asia Pacific, Europe and Middle East.



Photo credits: Upper by Palani Mohan/IFRC lower by NRCS (See captions in page 5)

# Shelter: multi-activity module organized around a technical expertise

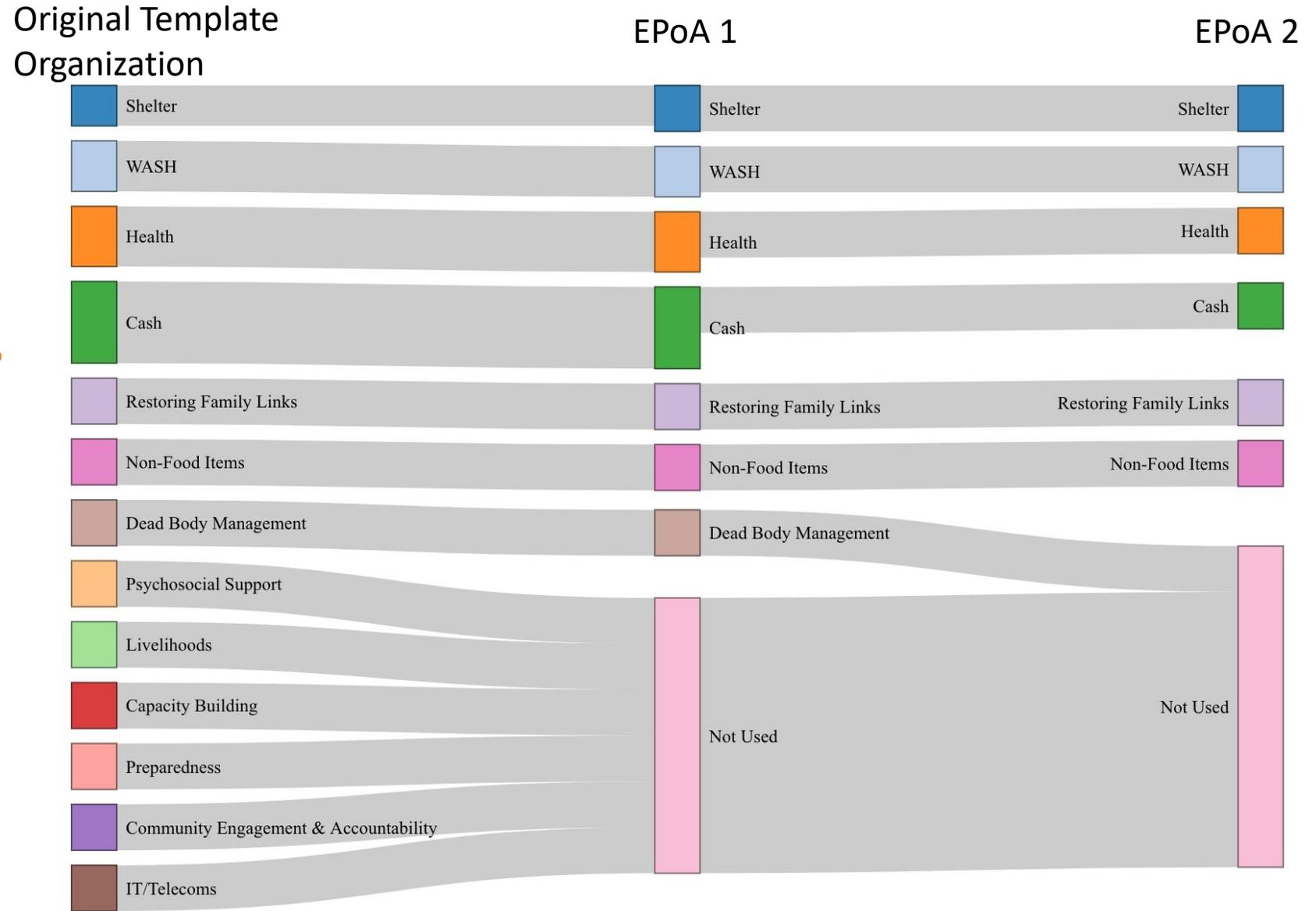
<b>Outcome 3: The immediate household, shelter and settlement needs of the target population are met.</b>		
<b>Output 3.1: Target population is provided with essential household items and unconditional cash grants</b>		
Activities	Q2 2015	Q3 2015
1.1 Mobilize volunteers and provide orientation on distribution protocols and cash transfer programming.		
1.2 Identify, register, verify and mobilize beneficiaries for relief and cash transfers.		
1.3 Distribute non-food items (two types of NFIs) to 60,000 families.		
1.4 Provide unconditional cash grants of CHF 115 to 40,000 families.		
1.5. Develop and disseminate IEC materials on unconditional cash grants.		
1.6 Carry out market assessment and monitoring (in conjunction with the Cash Working Group).		
1.7 Conduct post-distribution process and impact monitoring.		
<b>Output 3.2: Target population is provided with emergency shelter assistance.</b>		
Activities	Q2 2015	Q3 2015
2.1 Mobilize volunteers and provide orientation on distribution protocols.		
2.2 Identify, register, verify and mobilize beneficiaries for emergency shelter assistance.		
2.3 Distribute immediate emergency shelter relief (1 tarpaulin to 110,000 affected families).		
2.4. Distribute shelter kits (2 tarpaulins and 1 tool kit) to 40,000 families.		
2.5 Develop safe shelter messages and technical guidelines on the construction of emergency shelter.		
2.6 Provide technical orientations to volunteers for the construction of emergency shelter (with C materials, build back better).		



A closer look at a technically-organized module

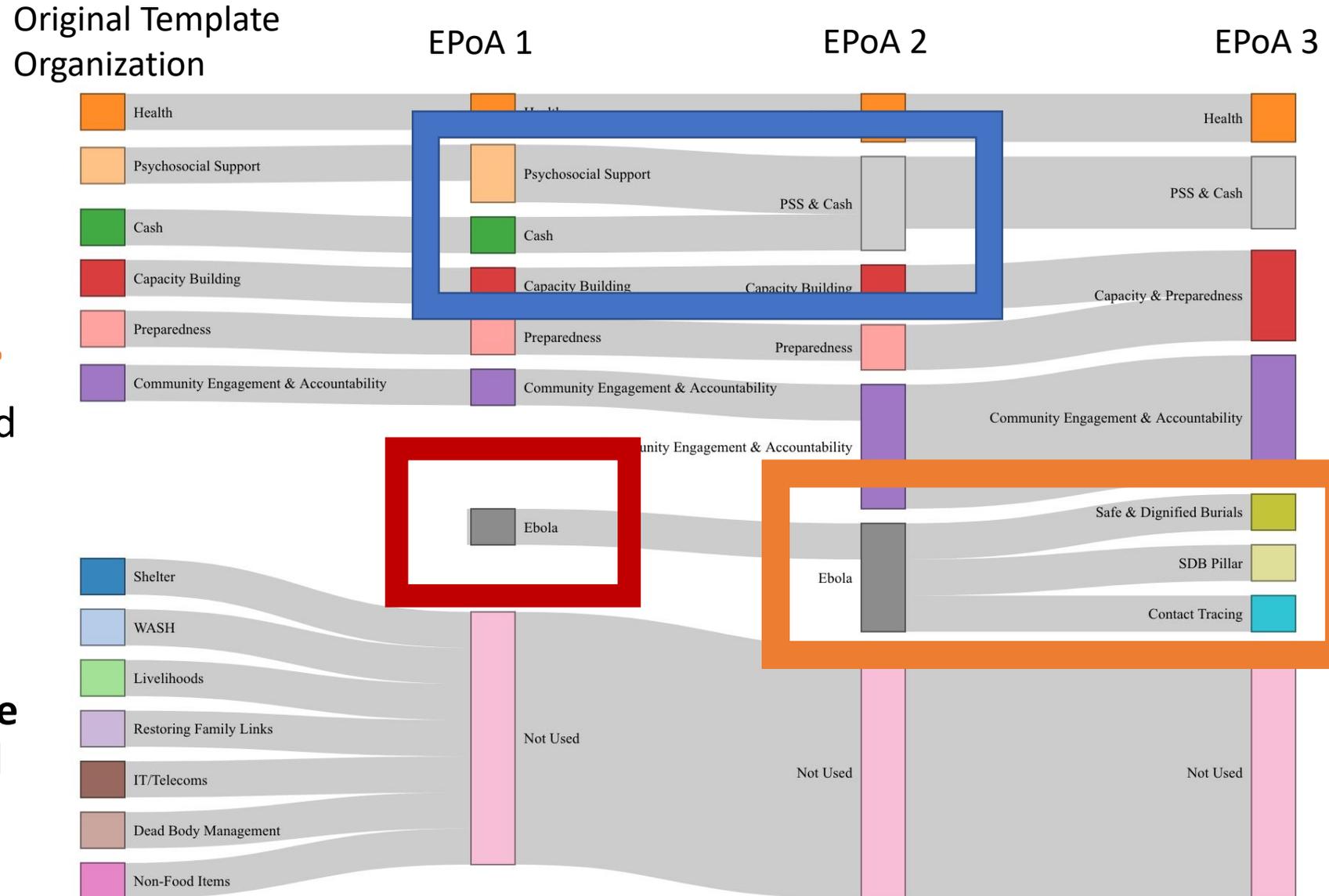
# Nepal Earthquake

- Modules are activated or not, as needed
- Modules have items added or removed within them over time
- Modules are removed/added as needed



# West Africa Ebola

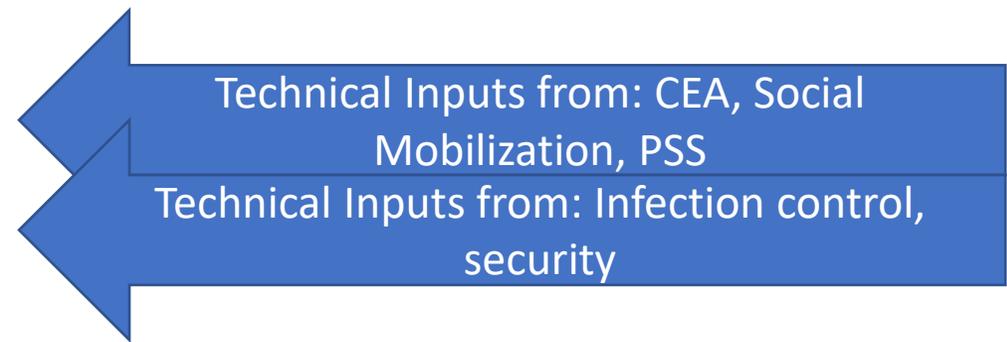
- Modules have items added or removed within them
- **Modules are merged as needed**
- **Entirely new modules are created that have multiple technical sectors involved**
- **Modules are split**



# Safe & Dignified Burials: a single-activity module with multiple technical inputs

Output 2: Safe and Dignified Burials and Disinfection of Houses (A0102) Risk of transmission of disease in the communities at household level and in health facilities reduced through disinfection and Safe and dignified burials.	
Activities planned	Month
<ul style="list-style-type: none"> <li>• Development of protocol and safety regulations for implementation of SDB</li> <li>• Establishment of 76 SDB teams (9 people and 2 vehicles per team)</li> <li>• Procurement and pre-positioning of personal protective equipment, body bags and other SDB related supplies</li> <li>• Development of integrated community engagement, social mobilisation and psychosocial support tools and training packages.</li> <li>• Training in SDB protocol and procedures, personal protection, safety measures and SOPs</li> <li>• Refresher training of all personnel involved in SDB every three weeks</li> <li>• Establishment of data collection and management systems</li> <li>• Training of 76 volunteers on data collection tools</li> <li>• Fitting of HF and HVF radio system in all vehicles and establishment of radio network linked to the national alert system.</li> <li>• Procure and distribute infrared thermo flash thermometers to all branch teams</li> <li>• Deployment of 76 SDB teams on an average of 20 days per month</li> </ul>	

← Output

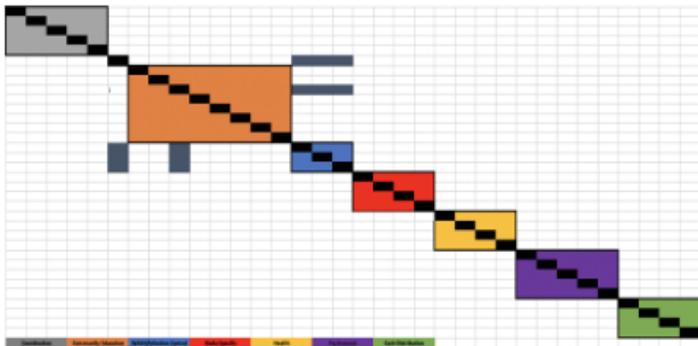


# Discussion

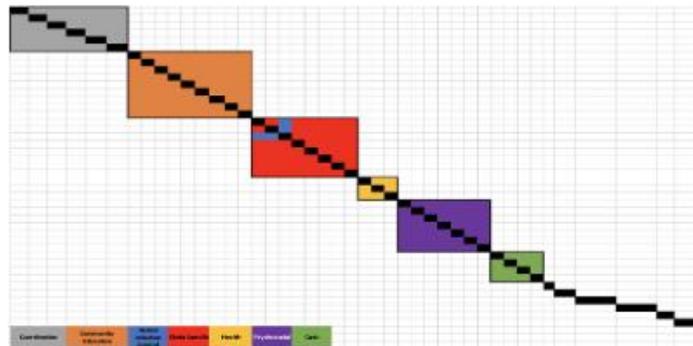
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- Ebola demonstrated that even the flexible-on-purpose modular structure has limits.
- The original structure works well when:
  - Existing modules need to be activated to deactivated
  - The scope of existing modules needs to be expanded or contracted
- The original structure did not easily allow for cross-module inter-dependencies and coordination to be handled.

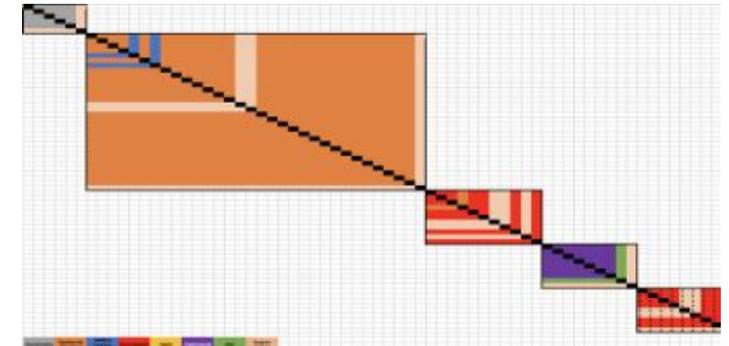
EPOA 1



EPOA 2



EPOA 3



# Insights and implications

- The sector-based structure is well able to adapt to most “typical” emergencies, but may require modification for *highly novel* emergencies
  - May need *new modules* (capabilities) or *new linkages or combinations among modules*
- Before an emergency, it is hard to predict what specific capabilities or linkages will be needed
- However, we could predict the novelty of the emergency and implement *strategies for flexibility*
  - Implement strong cross-module coordination so that novel coordination needs can be recognized quickly
  - Start with broad general modules for new capabilities – avoid separating work into specific but potentially ill-suited modules early in the response
  - Build procedures and guidance for how and when structural changes may be needed

# Future Research

- Now that we see what “broke”, we’re interested in what makes Ebola a special case
  - Interviews with responders about the change process
  - Expanding to edge cases to identify how change happened in other types of emergencies and for other response approaches:
    - Health emergencies
    - Conflict emergencies
    - Approaches such as cash-based programming, information as aid
- Similar questions are relevant to **logistics**, since the supply chain supports programmatic activities and works with modules of the organization
  - Consider the interactions among overall response structure and the structure of logistics services
  - How can logistics services be structured for greater flexibility to novel emergencies and response approaches

# Thank you.

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