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Assessing the Potential Value Contribution of a High-Volume Humanitarian Distributor of WASH Items to Customers

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Assessing the Potential Value Contribution of a High-Volume Humanitarian Distributor of WASH Items to Customers

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Summary: This thesis provides an understanding of WASH humanitarian agencies' product and services needs during emergency and ongoing programs; identifies areas where a humanitarian distributor of WASH items can add value, and how such a distributor can transition from being low-volume to high-volume status.



Bachelor of Administration, Nkumba University, Uganda

6 years emergency and development humanitarian response experience



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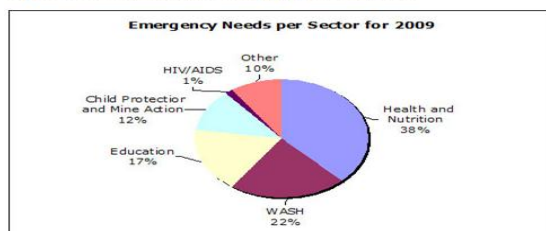
KEY INSIGHTS

1. Humanitarian Procurement Centers are not well known and utilized by WASH agencies (customers)
2. Most WASH agencies source products and related services from commercial suppliers and distributors
3. Customer field based technical support needs are largely unmet
4. WASH ORG has the ability to differentiate itself

Introduction

The water, sanitation, and hygiene, or WASH, sector is one of seven key sectors in humanitarian disaster response (Sphere, 2004). In humanitarian emergencies, this sector is ranked only next to health and nutrition in funding (UNICEF).

Figure 1: Humanitarian Funding by Sector, 2009



Source: Humanitarian reforms

To meet the needs of the WASH sector, humanitarian organizations traditionally mobilized money, people, and equipment in the name of protecting life, health, as well as physical security; all done whilst upholding the core values of humanitarianism. Times have changed. Against this traditional view of humanitarian organizations, many humanitarian agencies now act as middlemen, providing goods and services that used to be the domain of the for-profit sector. An example of this in practice involves the United Nations Children's Fund, or UNICEF. UNICEF, among many responsibilities, distributes educational material through both their own programs, as well as through programs of other organizations. Governmental organizations like the European Commission Humanitarian Aid Office, or ECHO, supported the idea that humanitarian organizations could act as middlemen through the creation of humanitarian procurement centers, or HPCs.

Although certain humanitarian agencies have become distributors, the WASH sector is yet to have a high-volume not for profit middleman. Furthermore, because humanitarian middlemen are relatively new, there is little understanding of how well these organizations are fulfilling customer needs. Documentation, in regards to customer satisfaction, does not exist in the public realm. This lack of information makes it difficult to ascertain how

not for-profit distributors could improve their service; WASH ORG, a leading WASH humanitarian agency operating in over 70 countries around the world, is no exception.

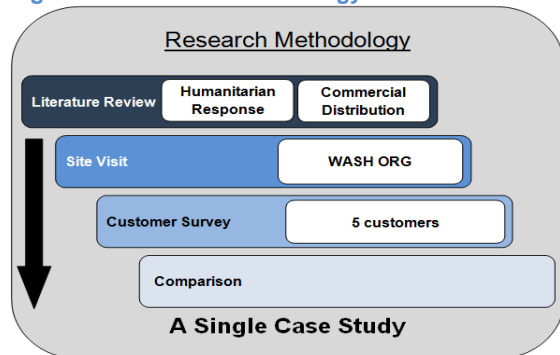
Methodology

WASH ORG is currently a low-volume distributor of WASH products who began serving external customers three years ago: in 2010 only 7% of central warehouse shipments were destined for external customers. In order to understand how an organization like WASH ORG could transform into a high-volume distributor three key research questions were posed:

- 1) What are WASH item customers' needs, and how are they being met?
- 2) What are their unmet needs, and how could they be met?
- 3) How should an agency who intends to become a high-volume humanitarian distributor of WASH items choose and prioritize product offerings to meet customer needs?

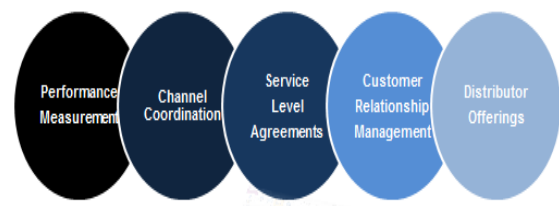
To answer these questions the study relied upon a multi-step methodology.

Figure 3: Research methodology



Unfortunately, unlike the commercial sector, little literature exists regarding humanitarian distributors. Therefore, we built a framework to compare WASH ORG against using two sets of literature. Understanding the environment WASH ORG operates within was paramount; a comprehensive review of literature on humanitarian response was done. In order to appreciate the offerings of WASH ORG literature concerning commercial distributors was evaluated, as shown in figure 4.

Figure 4: Commercial Distributor Literature Review



A site visit to WASH ORG, using interviews, direct observation, and data submitted from the organization, provided a basis for comparing WASH ORG against our commercial distributor template.

With WASH ORG information in hand, a customer interview guide and questionnaire were designed. A mock interview with WASH ORG was conducted, and based upon company feedback relevant changes were made.

Agencies were chosen based upon WASH ORG contacts. These agencies included both current and potential customers. In order to better group responses, customers were segmented as shown in table 1.

Table 1: Customers Interviewed

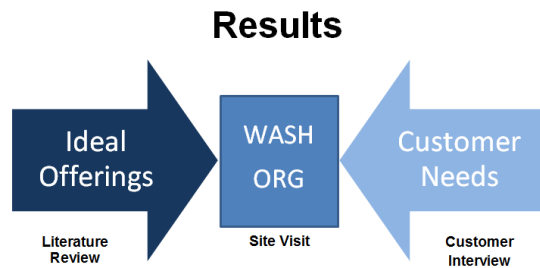
TYPE	AGENCY	INTERVIEWED
High Volume Distributor Potential	UNICEF	✓
	CARE	✓
High Volume Customers	Mercy Corps	✓
	Norwegian Church Aid	✓
	World Vision International	✓
Lower Volume Customers	<u>None Were Interviewed</u>	

Results

Using WASH ORG's current product and service offerings, the results of the paper were broken into two distinct sections.

- 1) WASH ORG versus an ideal commercial distributor
- 2) Customer needs

Figure 5: Results



Based upon our analysis, some key findings were developed.

First, because humanitarian distributors are an emerging business, customer needs are framed in terms of what commercial distributors currently provide. Customers do not have experience with humanitarian distributors, but do have expectations about them.

Because WASH ORG only sells small volumes to external customers, it does not currently pursue some of the customer-oriented practices that commercial distributors pursue based upon literature review. For example WASH ORG limits its performance measurement to order fill rates, has few customer feedback loops, and does not have distributor agreements with suppliers.

WASH ORG does have the potential to differentiate itself against competitors. Through decades of experience, WASH ORG has an unrivaled level of knowledge concerning WASH products and services. Customer needs that WASH ORG is well-positioned to serve include provision of field technical support through its field engineering teams, negotiation for lower prices with suppliers based on aggregating customers demand, and ease of doing business by being present and very accessible at program sites and thus responding to agencies' needs better.

Furthermore HPCs have been around for a long time. Few customers purchase either product or services from such distributors. Hence WASH ORG, if high-volume sales are the target, must provide something different as compared to what HPCs have already done.

Finally the number of potential customers with significant procurement spend is small. Based on limited data, annual WASH procurement spend for higher volume potential customers is in the range of \$1M to \$5M (per customer), as compared to WASH ORG annual spend of \$5M to \$10M. One agency interviewed had an annual spend of \$50M. Understanding each

potential higher volume customer in terms of procurement spend, catalog-preference and motivation for sourcing from WASH ORG will be critical for WASH ORG to build the relationships and create the product/service offering that will build sales.

Limitations

A limited number of customers were interviewed. Only five agencies were able to participate. Three other agencies wanted to contribute but ongoing events in the Ivory Coast, among many places, hindered such participation.

In addition, some customers that partook could not provide complete information. For instance the majority of agencies lacked quantitative data regarding procurement; such information could have better aided modeling customers' needs, based upon size.

Commercial supplier information and interaction was lacking. Such knowledge could have helped compare WASH ORG against fellow market players.

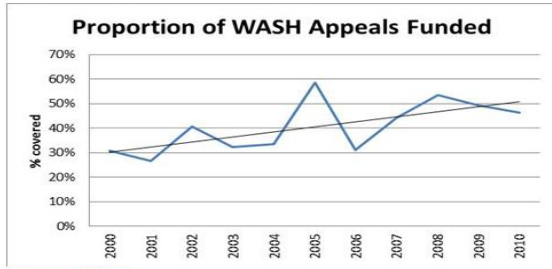
As this paper examines many facets of an organization, time was always a constraint. We could not cover everything.

Considerations to Establish the Business

In order to transform the key findings of this paper into concrete recommendations, some considerations must be discussed.

Humanitarian finance is born out of the need to respond. However funding is generally made available only after the occurrence of disasters. To further complicate the issue, funds, when compared against requests, can vary greatly both in terms of time realization and gross value. Thus financing of prepositioned stock is difficult. The manner in which humanitarian agencies choose to finance inventory is of great importance; remember they are competing against commercial firms that can finance such inventory.

Figure 6: Proportion of WASH Appeals Funded

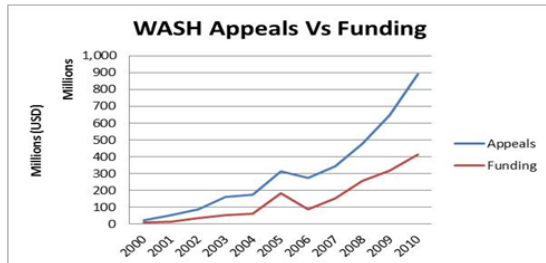


Source: UNOCHA

Additionally humanitarian procurement tends to be disaggregated. For instance WASH ORG employs a centralized warehouse for emergency response; shipments out of WASH ORG's centralized warehouse amounts to less than 1% of revenues. The same situation clouds the ability to aggregate purchasing in other agencies. Lack of demand aggregation restricts downward pressures on purchase costs through volume discounts.

The WASH market is growing. Based upon the consolidated appeals process, a funding mechanism launched by the UN, appeals, and consequently funding, has grown over the past decade. As an indirect consequence, the WASH market is rife with competition. The value an organization offers as a WASH distributor must be clearly defined.

Figure 7: WASH Sector Appeals and Funding



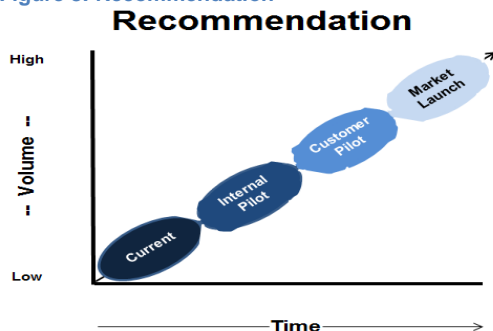
Source: UNOCHA

Recommendations

Our recommendations follow a 3 step process.

- I. Internal Pilot
- II. Customer Pilot
- III. Market Launch

Figure 8: Recommendation



In order for WASH ORG to move from its current state, that of an internally centric organization, to an internal pilot program certain things must be in place. For instance leadership buy in is vital. WASH ORG has a deep engineering department to pull from for service offerings. If WASH ORG chose to offer such services, better alignment between departments would be needed. Without proper verification of results, any implementation will be fruitless, additional KPIs will needed.

If an internal pilot program were successful, the next step would be a customer pilot. Based upon our findings WASH ORG implementing partners focused on developmental water projects would be the best choice.

Table 2: Product and Customer Focus Recommendation

		Product Type		
		Water	Sanitation	Hygiene
Customer Focus	Emergency			
	Development	X		

In order to offer WASH ORG product and services to a wider market, stronger relationships with suppliers must be initiated. Our findings suggest the following:

Table 3: Supplier and Inventory Preference

Preference Ranking in Regards to Becoming a High-Volume Distributor				
		Inventory Financing		
		Internal	Customer	Commercial Distributor
Supplier	Humanitarian Alliance			3rd
	Commercial	5th		2nd
	Commercial (Sole license)	4th		1st

Sources Cited

- Sphere. (2004). *Sphere Project: Minimum Humanitarian Standard*.
- UNICEF, IOM, & UNJLC. (2011). *NFI Common Pipeline, Common Appeal 2011: Northern Sudan*.
- UNOCHA. (2006). *Humanitarian Response Reform*.

