



## Humanitarian supply chain information systems: insights for successful implementation

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## About this white paper

In September 2014, the Médecins Sans Frontières' Operational Centre in Amsterdam (OCA) commissioned PSA Consulting Ltd to carry out a benchmarking survey of similar international humanitarian organisations who had implemented, or were planning to implement, a supply chain management system in the field.

This took the form of structured interviews during October 2014, with staff from four international aid organisations that are in the process, or have already implemented, similar supply chain management systems for their field operations.

In this white paper we aim to show our findings and give new insights into organisations which are successfully implementing new business practices in the funding, selection and implementation phases in the humanitarian sector.

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## **Abstract**

Each year, the aid sector transports hundreds of millions of dollars' worth of goods to developing countries and victims of humanitarian disasters around the world; most often as a matter of life or death for thousands of people. In recent years, some humanitarian organisations have adopted promising business practices developed in the western world to improve their operations, and ultimately their response time, and quality of humanitarian aid delivery efforts. However, the success rates of such implementations have been mixed.

While the reasons for failure are often easy to identify, the key factors for success are yet to be clearly laid out. As a result, these successes are difficult to replicate when it comes to the selection, design and implementation of supply chain systems.

This white paper aims to show how four key organisations, World Vision International, Oxfam GB, CARE USA, and Save the Children International, are successfully implementing new business practices in the funding, selection and implementation phases of supply chains. These aid organisations have experienced significant savings in terms of inventories, procurement and warehousing costs, and improved programme effectiveness.

The benchmarking among the four leading worldwide aid organisations, reported in this white paper, poses new questions about their stories of failure and success. These questions can be used by other organisations to try and replicate what has been learned about the adoption of information technology in supply chains for development and humanitarian settings.

## **The standardisation of business practices in development and humanitarian supply chains**

Despite access to promising business practices that are successfully adopted worldwide in the private sector, public sector and military organisations, the humanitarian sector has not experienced the same level of success. All too often we see aid organisations lacking standard ways of working at the national level, with such methods being paper or spreadsheet based. Many do not have any technological or structured business processes, but rather conduct key business activities, such as procurement and transport management, in an ad-hoc manner over the phone or in person. In many cases this ad-hoc strategy results in higher costs of acquired goods, theft and corruption, as well as wastage of warehouse storage space and other resources. The reason for such behaviour, as M. Blansjaar rightfully notes, stems from the fact that supply chains “are still not considered critical to the success of aid programmes”<sup>1</sup>. While there is an assumption that the humanitarian sector needs its own reference model and that innovations in the private sector are not always directly applicable to the humanitarian sector, this does not explain why the deficiencies in operational processes have not been addressed in many humanitarian NGOs; except for those who understand the value of it and have access to larger pools of funding and highly skilled resources.

The adoption of computerised systems to increase visibility and improve the efficiency of the supply chain is an attractive idea. However, managing a successful IT project which is on-time, on-budget and on-scope is no small feat. The ‘Chaos Manifesto 2013’<sup>2</sup> reports that in 2012, only 39% of software development projects surveyed in the United States, Europe and elsewhere, met their objectives. Meanwhile, 43% fell short and 18% were cancelled. For aid organisations, spending donors’ millions of dollars in a supply system is a high-risk investment, but a necessary one in order to build donor confidence and maximise aid received by the beneficiaries.

The organisations have similar objectives; to implement a supply system to:

- improve visibility of their processes, planning, decision making and control;
- increase efficiency through standard ways of working and reducing costs by consolidating transactions and minimising administrative workload.

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<sup>1</sup> Blansjaar, M., van der Merwe, C. (2014). The Importance of Information Technology in Humanitarian Supply Chains: Opportunities and Challenges in the Helios Project, in Christopher, M., Tatham, P. (eds) *Humanitarian Logistics: Meeting the Challenge of Preparing for and Responding to Disasters*, London; Philadelphia, p. 53.

<sup>2</sup> <http://www.versionone.com/assets/img/files/chaosmanifesto2013.pdf>

The intent of this white paper is to identify the root causes for the unsuccessful or non-sustainable adoption of promising practices in this sector and to provide suggestions on how to overcome these shortfalls.

## **Market trends – a benchmarking of existing practices**

As previously stated, in September 2014, Médecins Sans Frontières' Operational Centre in Amsterdam (OCA) commissioned PSA Consulting Ltd to carry out a benchmarking survey of similar international humanitarian organisations who had implemented, or were planning to implement, a supply chain management system in the field.

The benchmarking was part of OCA's internal analysis on costs, benefits and impact, and part of planning the deployment of an MSF-wide system. At a time when donor funds need to be carefully scrutinized and evidence provided for their value for money, as well as the more critical need to reduce impact and any disruption on MSF's missions, the benchmarking exercise provided a useful comparison of the risks and issues that other NGOs had discovered and addressed, and how MSF may avoid their possible pitfalls and plan for a smooth implementation.

This document outlines the key issues faced by four international aid organisations which are implementing such systems, the choices they made and the lessons learned. They are Care USA, Oxfam GB, Save the Children International and World Vision International. The international aid organisations surveyed have implemented, or are in the process of implementing, supply systems integrating their headquarters in the United States and Europe, with district and country offices around the world. The interviews have uncovered the main issues related to supply chain systems adoption and implementation, the first one being the availability of funding to support the system.

## **Funding: how much does a supply chain system cost?**

The project costs include the costs of development, or purchase, and deployment. After the project has ended there are on-going costs of licensing, support and training. Although the initial project costs may seem most significant, it is likely that the on-going costs will be greater over the lifetime of the system. Aid agencies depend on donor funding to meet these costs, but a successful project result in net savings through greater efficiency. The decisions made during the project may be influenced by the preferences of a donor and so a project may fail if a donor withdraws support.

## System selection: off-the-shelf or tailored?



The choice of system can range from an off-the-shelf commercial product to a custom-built system. A commercial product of known functionality and cost carries less risk but is unlikely to have the full functionality required by the aid sector. As one of the respondents mentioned, there are also issues around the complexity of merging an off-the-shelf supply system with existing systems in the organisation. This survey showed the time needed to select and implement an off-the-shelf product is not significantly less than the development of a customised solution.

A custom-built solution may meet the full requirements of the organisation, but can be more expensive and carry the added risks of missed deadlines and running over budget. The success of a software project cannot be guaranteed, and we did not encounter a consistent approach to this issue across the organisations surveyed. In the following passages, we describe customised solutions accepted by the aid organisations, studied as separate cases.

### Interview findings

**Oxfam GB** was among the first agencies to realise the potential for greater operational efficiencies and long-term cost savings of supply chain automation. It chose Helios, a system developed for the sector, sponsored by the Fritz Institute. Subsequently the Helios Foundation for Supply Chain (<http://helios-foundation.org>) was created, which owns Helios IP and governs the development of the product, which includes Oxfam and World Vision International on the board. Collaborative approaches to developing a system, such as Helios, spread the costs and risks among several aid organisations to the benefit of all, but also requires a sustained inter-agency co-ordination. Medium- and small-sized agencies, which have trialed Helios, indicate that the product functionality is “painfully close” to their operational needs. However, funding constraints and lack of internal

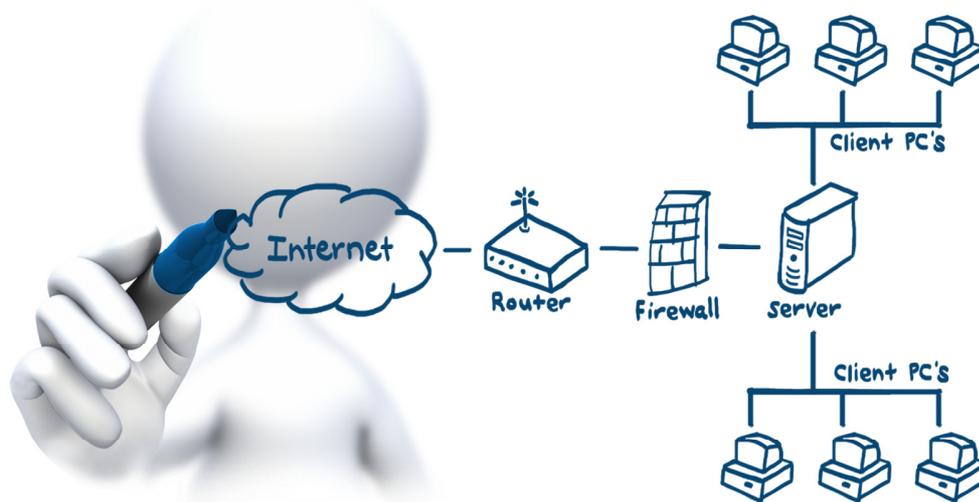
capacity to engage in a collaborative product development agenda remain the two barriers for adoption.

**Save the Children International** has considered using Helios, but decided to develop its own in-house system, by making a relatively simple addition to Agresso, a commercial ERP system used in the finance sector.

**World Vision International** was part of the original Helios consortium, but were disappointed by its initial implementation. This was followed by a joint product development with a commercial company, Emergency Visions, that was cancelled after two years. The World Vision is now piloting Coupa, a commercial cloud-based procurement system.

**Care USA** first considered using the commercial PeopleSoft product, but found it too expensive. The organisation turned to software designed by Aidmatrix, a non-profit that is known for developing supply chain software for the aid industry, with support from UPS. A recent announcement that UPS would withdraw financial support for Aidmatrix and other more important issues have called its continued use by Care USA into question.

## The rollout



A successful software development is a reason to celebrate, but a significant phase of the project remains – the rollout to the district and country offices. This may be the longest phase of the project which can frustrate an organisation eager to enjoy the benefits of its investment. As one of the respondents clarified, the most significant part of the

investment sits in the rollout, in terms of both cost and change management: *'The large chunk of that was on site, post go-live support costs, which is very important to ensure the change is effective and sustainable.'*

**Oxfam GB** began to rollout Helios in the second year of the project. Four years on, the system has been deployed to 16 countries and 26 operational locations. This has involved significant alterations to their processes and change management efforts in each deployment. This included standardizing item descriptions and cleaning up historical data prior to the go-live phase.

**Save the Children International** planned a phased rollout. The first phase would include the procurement, and subsequently the warehouse system country by country. It estimated 25% of their efforts would be spent on implementing the system, and 75% on change management. The procurement phase was planned to be rolled out with e-learning training. The warehousing rollout was more complex and required 100% stock checks and cleaning historical data to be imported into the new system. The rollout was also dependent on two other activities; reviewing the country supply chains to consolidate procurement at hubs to serve field locations and upgrading internet connectivity at those hubs.

**World Vision International** is planning to roll out to 10 countries in 2015 and 50 countries in 2016. However, it depends on each country's ability to fund the implementation process. Smaller countries with insufficient funding may be grouped together. In the course of preparation, the country offices are adopting new standard procedures based on the Coupa system and are setting up their country supplier databases.

**Care USA** have deployed their system at two Care USA offices and at four Care Canada offices. Fewer USA offices were included because of another rollout of a financial system to the USA offices took priority. The offices are now using both the new and old systems (based on Excel spreadsheets), but intend to complete the move to the new system before rolling out to other offices. They were able to reduce the time spent on introducing the system at country offices by offering the e-learning training for the country staff. However, the continued rollout is being affected by the uncertainty over the future use of Aidmatrix software.

## **Benefits**

The interviews revealed some interesting insights into the benefits arising from the implementation of a supply system in a development and humanitarian environment. One respondents mentioned the key processes affected by the rollout of the system: *'Most*

*savings were in reduction in wastage, through better stock and asset utilization, reduction in end-of-project stocks, and reduction in sums of money returned to donors.'*

Another respondent recognised that: *'where there are 20 field locations, which in the past ordered their own supplies, they will try and consolidate and profit from economies of scale'*. Another respondent revealed how the implementation of the system represented an interface facilitating information exchange among different functions, like programme planning and finance, who could access figures in a read-only mode for inventory levels and gift-in-kind value.

In terms of education, the implementation of the system represented a great opportunity to train the regional and country staff on more general concepts related to supply chain management. This impacted on the diffuse *modus operandi*, based on contingency rather than planning ahead. It also resulted in a redesign of the processes to be standardised throughout the organisation.

## **Emerging challenges in supply chain system selection, design and implementation**

The issues preventing the successful and sustainable adoption of promising practices by both private and public sector are due to a number of factors, which include the following:

- Lack of awareness of promising practices due to limited exposure;
- Lack of understanding of long and short term added value of these methods to the organisation and to their operations;
- A deeply ingrained “rescue” culture that is focused primarily on resolving immediate problems rather than taking a wider perspective of how to create sustainable internal solutions and more streamlined response mechanisms in the long term;
- Lack of highly skilled resources in areas such as operations, change, IT and strategic SCM practices;
- Lack of funding to train or acquire resources skilled in these practices and methods;
- Lack of structure within the organisation to support these practices long-term;
- Disparity between the motivation, education and culture of employees and sub-contractors working within the supply chain;
- Lack of effective inventory and visibility of supply chain losses, which leaves the organisation at risk for corruption, theft and underutilisation of key resources.

There are a number of other factors unique to the humanitarian sector that greatly impacts the ability of many NGOs to adopt best practices:

- National and regional cultural differences – a resistance to what is seen as imposed methods rather than focusing on the benefits to the organisation, local economy and beneficiaries;
- Lack of understanding and integration of cultural context of both disaster environments and developing countries into the adoption and implementation of best practices;
- Lack of analysed and documented research and experience on the use of appropriate practices in the humanitarian sector, as well as the overall impact that these practices have on the effectiveness of the organisation and aid delivery.

In the following passages we discuss specific challenges that are related to the three areas of investigation, namely funding, system design and system implementation.

## **Further observations**

### **Funding cuts and failure**

A large project may become too big to fail due to the risk posed to the organisation's reputation. It may be unacceptable to write off the money spent and the project continues long after it should have been cancelled, ultimately losing even more money. A series of smaller projects carry less financial risk than a larger project.

All our respondents and prior research support this idea, expressed by one of the interviewees: *'When it comes to the funding cuts, it is always the supply chain.'* It is clearly difficult to allocate a large budget for a project related to a function that is commonly undervalued. However, an information system selection and implementation can unfold the relevance of the function, especially when there is a champion at a senior level who holds responsibility for it. Often, a supply chain has no seat at board level, a condition that can hinder the effective system selection and rollout.

### **A lack of collaboration**

It is clear that an off-the-shelf solution might present a number of challenges for the humanitarian sector, as there are significant differences from the commercial sector which might prevent its adoption and implementation. However, the specificity of the sector cannot fully explain the low rate of success. From the data collected within the four organisations, it is evident that one of the key obstacles is the lack of collaboration among different organisations which could allow the design of a bespoke system tailored on the needs of the sector.

### **A phased rollout**

As well as lasting longer than implementation, the rollout is likely to involve the introduction of new standardised procedures as well as the IT system to support them. The introduction of a new system is unlikely to run smoothly at a country office where staff are under work pressure. Although the new system promises improved efficiency, it will inevitably drop during the transition period, while staff are trained and become familiar with a new working environment. Country offices will require additional capacity during this time.

Organisations do not normally have resources for vast deployment and taking a new system to the headquarters, regional and country offices simultaneously. Instead, a phased approach is more appropriate, but it should be adequately resourced to complete the rollout in a timely manner. A pilot rollout should be fulfilled at a representative country office to identify the problems that should be resolved before the general release. By this we mean minor problems and not the system issues which should have been identified and rectified during the development phase.

Training needs to take into account the diverse cultures and languages found at the regional and country offices. A well-designed product that prioritises ease of use can greatly help to shorten this phase.



## **Looking ahead**

This white paper focuses on benchmarking existing practices for the selection and implementation of supply chain systems in development and humanitarian environment, unfolds a number of questions for further investigation. They are formulated as follows:

1. What are the root-causes of unsuccessful or non-sustainable adoptions of appropriate business practices in the humanitarian sector?
2. What are the key factors of consideration in the decision process for determining which business practices to implement in humanitarian organisations, and what elements make up this decision process?
3. How do we measure success in the sustainable adoption and implementation of appropriate business practices in the humanitarian sector, especially in developing world environments?

## **Conclusions and further research**

Supply chain management is often considered in the development and humanitarian world as a cluster of disconnected support functions (e.g. procurement, logistics) with limited ability to impact on the performance of the programmes. According to the collected data, the selection and implementation of information systems has helped clarify supply chain processes and finding areas for efficiency improvement. The opportunity for savings and cost reductions demonstrate how the supply chain processes must be integrated with the other functions to deploy the organisation's final aim and strategy. This can only happen when the supply chain function has a centralised and global breath and responsibility in order to gain the highest value from its processes. In the sample used for this white paper, the most evident failure was connected to a fundamental lack of supply chain relevance within the organisation.

In conclusion, implementing supply chain business practices with information systems presents a number of challenges, which have been explained and supported by key information of the four organisations part of the study. However, success is possible and more visibility can support waste reduction, inventories management and a higher degree of adherence to donor requirements. Ultimately, more beneficiaries will be reached. Further research is needed to investigate the key factor for success and tools and techniques to measure the effectiveness of the developed systems.

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For more information on supply chain design tools and solutions for health and humanitarian visit our website contact us at: [info@pamsteele.co.uk](mailto:info@pamsteele.co.uk)

## **About PSA Ltd**

Pamela Steele Associates Ltd (PSA) is a UK based consultancy with a specific focus on the health and humanitarian supply chain. PSA is dedicated to raising the quality of logistics and supply chain management in the international development and humanitarian aid sectors to the benefit of recipients and donors.

PSA provides training, consultancy and research, services for donors; UN agencies; NGOs and INGOs; and government agencies. We use qualified supply chain management consultants who are experienced in the international humanitarian and development sector.

Company website: [www.pamsteele.co.uk](http://www.pamsteele.co.uk)

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