Supply Chain Planning in the Humanitarian Sector: Landscape Analysis and Directions for the Future

A qualitative research study on the state of supply chain planning in the humanitarian sector and recommendations to improve the status quo

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Our study in short

Humanitarian supply chains provide critical support for millions of people affected by crises. To deliver upon their programmes, while ensuring optimal resource allocation and maintaining accountability to those they serve, humanitarian organisations must anticipate the needs they aim to fulfil and plan their supply chains accordingly. This white paper explores how they achieve this by presenting the state of supply chain planning in the sector, with a focus on supply chain planning for programmatic response over a tactical (i.e., mid-term) horizon. It primarily draws upon qualitative data: namely, interviews with 39 practitioners from 15 international humanitarian organisations. The paper also provides recommendations, informed by best practices from both the humanitarian and private sectors, aimed at enhancing the supply chain planning capabilities of humanitarian organisations.

Executive summary

Landscape analysis: What is the state of supply chain planning in the sector?

Most humanitarian organisations mainly respond to non-emergency situations, including slow-onset disasters, protracted crises, post-emergency phases, and development aid more generally. Therefore, our research primarily focuses on these contexts; the findings presented next are situated within this framework, with some supplementary feedback reserved for emergency planning. We mainly consider the perspective of national entities, providing separate commentary about supply chain planning at the regional and global levels.

Main findings related to demand planning

Demand refers to the quantity of a good or service that is necessary to cover the needs of the people affected by crises. The objective of demand planning is to estimate the demand that a humanitarian organisation faces over a given horizon.

1. All organisations interviewed integrate some form of demand planning into their processes. However, the resulting demand plans are frequently considered to be of suboptimal quality and may not necessarily trigger supply planning activities.

2. Demand plans are mostly constrained. They...
often reflect the fundraising capacities of organisations more than the actual needs of people affected by crises. While this approach is pragmatic, it limits the strategic thinking necessary for strengthening supply chains in the long-term.

3. Demand plans are usually created based on needs assessments and predefined humanitarian standards, with some additional inputs utilised for complex programmatic areas like healthcare. Historical data rarely informs the demand plans and no organisations interviewed reported relying on statistical forecasting.

Main findings related to supply planning

Supply refers to an organisation's capacity to meet a given demand. The objective of supply planning is to organise the supply chain to effectively, efficiently and sustainably meet the planned demand.

4. Supply planning efforts in the sector are mostly dedicated to anticipating and organising sourcing activities. However, many organisations overlook strategic sourcing considerations and neglect planning for long-term-oriented goals, such as localising sourcing and increasing cash-based assistance.

5. Procurement planning is a challenge for many organisations, largely because the demand plans (which precede procurement planning) are not reviewed frequently enough, the quality of essential data (e.g., lead times) is poor, and the planning tools (mostly templates in Excel) are not designed adequately. Consolidating or staggering orders appears to be an inconsistent practice. Joint procurement planning with suppliers is rare.

6. In the sector, the needs for logistics planning (i.e., planning for transport and storage) vary significantly: from minimal planning for the organisations that outsource their logistics activities to extensive planning for those that manage a multi-tiered network of warehouses. Aside from a few notable exceptions, logistics activities tend to be planned for over a short-term horizon and decisions are mostly reactive.

Main findings related to the end-to-end supply chain planning process

7. There are two main approaches to supply chain planning in the sector: annual and project planning. With annual planning (mostly followed by UN agencies), demand and supply plans are created yearly and consider the programmatic activities that the organisation aims to implement over the year. With project planning (mostly adopted by INGOs), demand and supply plans are created separately for each project following its specific scope and timeline.

8. Organisations tend to consider supply chain planning from an activity or project perspective (with the plans resembling task lists). However, some organisations do take a more comprehensive supply chain view, reviewing and optimising the demand and supply plans across all their activities or projects.

9. Organisations in the sector usually consider demand and supply planning at once. In fact, demand and supply plans are generally created as a single plan, with little distinction between the demand and supply aspects. This blurs the division of work, mainly across Programmes and Supply Chain staff.

10. Overall, supply chain planning is not a well-established function in the sector. Although all organisations develop supply chain plans, these efforts are often limited by a lack of processes and tools, poor governance, and a narrow understanding of supply chain planning. Additionally, organisational siloes, namely across Supply Chain and Programmes staff, often prevent the necessary collaboration required for effective planning.

11. Supply chain planning is gaining traction, with initiatives at both the individual and organisational levels flourishing across the sector. Some organisations stand out for having built strong supply chain planning capabilities. They could inspire others and help drive change in the sector.

Main findings related to supply chain planning for emergencies

12. Supply chain planning for emergencies is better established in the sector than for non-emergencies. Many organisations develop what-if scenarios and run preparedness activities, such as staff training, in-country stock prepositioning, and assessments of local logistics and market capacities.

13. During emergency responses, planning efforts...
tend to be more collaborative both within organisations and across external stakeholders, contrasting with the less integrated approach typically seen outside of emergencies.

**Main findings related to supply chain planning at the regional/global level**

14. Many of the largest humanitarian organisations operate with central procurement (or supply chain) units. Some of these units, at the regional or global level, adopt a proactive approach by centralising the plans from the country programmes and planning accordingly (sometimes by prefinancing stock). In contrast, other units take a more reactive stance, focusing primarily on execution with little space for proactive planning.

15. The strategy of prepositioning stock for emergency response at the regional or global level is waning among INGOs, largely due to the infrequent use of such stock. Conversely, maintaining stock at these levels to respond to ongoing operations has proven to be more effective for some of the largest humanitarian organisations, who follow (or attempt to follow) such an approach to reduce lead times and costs.
Directions for the future

Humanitarian organisations differ in type, structure, size, sector focus, funding sources, and operational complexity. There is no one-size-fits-all approach to supply chain planning that will accommodate such diversity. Yet, based on our research and practices from the private sector, we can offer recommendations that should speak to most humanitarian organisations. We classify these across the three main enablers of supply chain planning: processes, data and tools, and people.

Recommendations related to processes

1. Elevate Supply Chain as a strategic partner. Organisations should undergo a cultural shift to create an environment where the value of supply chain management is understood. While this shift will not happen without leadership’s drive, Supply Chain staff should support such shift and be their own best advocate.

2. Institutionalise and formalise the function of supply chain planning. Organisations should recognise supply chain planning as a foundational function to supply chain management and build a clear and comprehensive process framework for it.

3. Carefully design supply chain plans. Organisations should design their supply chain plans to enable effective planning. There is no universal design, but some best practices should be considered (e.g., distinguishing demand and supply, working with time buckets).

Recommendations related to data and tools

4. Invest in data and IT tools. Effective supply chain planning requires reliable data and integrated IT systems. Organisations should assess their IT capabilities in relation to supply chain planning and address gaps comprehensively.

Recommendations related to people

5. Promote collaborative supply chain planning. As organisations develop or refine their supply chain planning process framework, they should ensure a focus on collaboration. Effective supply chain planning requires the participation of all relevant internal and external stakeholders.

6. Strengthen cross-organisational supply chain planning capacity. Organisations should strengthen day-to-day collaboration across their different departments by initiating knowledge-sharing activities and promoting organisational training.

7. Retain talent. Organisations should develop a human resource strategy that empowers staff with strong technical and/or interpersonal planning skills. This will help these individuals thrive and inspire their colleagues, thereby enhancing the organisation’s overall planning capabilities.

8. Be proactive. Change at scale must occur at the organisational level, but individual contributions are equally important. As a humanitarian practitioner, consider the small changes you can initiate. These incremental efforts may cascade and lead to significant transformation.

Recommendations for donors

Donors also have a role to play in strengthening the sector’s supply chain planning capabilities. Some initiatives they can pursue include:

9. Advocate for and invest in supply chain planning. Donors should establish clear requirements for supply chain planning, emphasising its dynamic nature rather than focusing solely on the creation of static plans, and invest in capacity building initiatives.

10. Increase flexibility in funding to support optimised operations. Donors should revise their guidelines to enable organisations to plan their supply chains optimally. Funding non-earmarked stock or at least shifting towards programme (rather than project) earmarking would enable more effective planning and help achieve optimal results.

Over the past decade, humanitarian organisations— with the support of donors—have professionalised their approach to supply chain management. However, supply chain planning has often been neglected. With many organisations beginning to address this gap, we hope this white paper will further accelerate change.
Introduction
Introduction

In recent years, the humanitarian sector has taken greater interest in supply chain management. Indeed, humanitarian organisations have invested in strengthening their capacities for procurement, storage, transport, and fleet management—and institutional donors have raised their expectations in turn. However, one essential supply chain management function has largely been overlooked: supply chain planning. Supply chain trainings frequently neglect the planning dimension, which not only undermines its strategic importance in humanitarian operations, but also reflects the function’s broader lack of institutionalisation (as this report will detail). Admittedly, humanitarian supply chains are not easy to plan, but in today’s complex world, few supply chains are—and yet, many sectors are championing supply chain planning. So why does it not receive the attention it deserves in the humanitarian world?

Motivated by this question, we launched a research project with the objective of understanding the current state of supply chain planning in the humanitarian sector, including common practices, recurrent challenges, and improvement opportunities. Our goal is to bring visibility to this critical topic, lay the groundwork for dialogue and exchange amongst humanitarian actors, and ultimately, support the sector in strengthening its supply chain planning capabilities. We believe this research is essential, as supply chain planning enables organisations to operate more effectively, efficiently, and sustainably—which also serves to reinforce their accountability to the affected people they serve.

In this report, we present the main findings and conclusions derived from our research. To gather these insights, we conducted interviews with nearly 40 individuals representing 15 distinct international humanitarian organisations, including International Non-Governmental Organisations (INGOs), United Nations (UN) agencies, the Red Cross and Red Crescent (RCRC) Movement, as well as one governmental organisation. The full list of the interviewees’ organisations and profiles can be found in Appendix 1 and Appendix 2, respectively.

Our research centres on the humanitarian sector, which encompasses the group of organisations that respond to protracted crises and emergencies and/or engage in development aid. We narrowed our focus to international organisations, with a primary emphasis on the perspective of their national branches, such as country offices or national societies. Functionally, we focus exclusively on supply chain planning for programmatic response, thus excluding indirect procurement. We also mainly consider tactical planning, which covers a horizon of 12 and up to 18 months.

The structure of this report is outlined as follows:

- **Chapter 1** offers important background information by introducing the main concepts related to supply chain planning.

- **Chapters 2 and 3** provide a summary of our main research findings. Chapter 2 contextualises the supply chain planning principles to the humanitarian sector and explains how supply chain planning occurs today in humanitarian organisations. Chapter 3 highlights the common challenges and positive trends that we observed.

- **In Chapter 4**, we suggest ways for the sector to develop its supply chain planning capabilities.

Summarising our research findings in this report proved to be challenging, given the uniqueness of each organisation involved in our research and their distinct ways of working. We employed a qualitative research method in order to highlight any notable aspects of humanitarian supply chain planning; we intentionally refrained from direct quantitative references to prevent potential misinterpretations of the relative importance of the different topics. We believe that our analysis offers a comprehensive outlook on the current state of supply chain planning in the sector and provides valuable directions for the future. Our hope is that this report will eventually stimulate constructive discussions amongst humanitarian actors.

We wish you a good read.

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1 DG ECHO’s Humanitarian Logistics Policy, published in early 2022, is a significant example.
2 Indirect procurement refers to the procurement of goods and services that do not directly contribute to programmatic response, such as office supplies.
Chapter 1
Introduction to supply chain planning

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Chapter 1: Introduction to supply chain planning

Supply chain planning is the process of keeping supply and demand in balance by effectively, efficiently, and sustainably organising and coordinating the supply chain. It involves developing plans to ensure that the right choices are made to fulfill the programmatic needs, while optimizing the processes to limit a waste of resources. Planning is distinct from execution, which involves implementing the supply chain plans and managing the supply chain day to day.

Supply chain planning usually consists of two main steps: demand planning (answering the question “What supplies are needed?”) and supply planning (“How can we effectively, efficiently and sustainably meet these needs?”). By its nature, supply chain planning is an integrated function that hinges on collaborative processes, accurate data, and robust tools.

1.1 | Three supply chain planning levels

Supply chain planning involves running activities and making decisions across different time horizons. Practitioners generally consider three planning levels:

- Operational planning is short-term oriented, with plans usually spanning three to four weeks. It informs decision-making to ensure that day-to-day operations run smoothly.
- Tactical planning aims at balancing supply and demand over a mid-term period, covering a time horizon of 12 to 18 months. It involves decisions that bridge the gap between short-term operational needs and long-term strategic objectives.
- Strategic planning focuses on the long-term horizon, typically spanning two to three years. Decisions are made to evaluate major investments, set up long-term goals and align with the organisation’s programmatic strategy and vision.

Our research, and thus this report, largely focuses on the tactical planning horizon. This decision followed informal exchanges with practitioners, who highlighted this area as a notable weakness within the sector. Furthermore, since tactical planning serves as a bridge between operational and strategic planning, the insights gained at this level have beneficial implications for the other levels. For these reasons, we believe that addressing tactical planning offers considerable opportunities for improvement and success in the sector’s overall supply chain management and across the broader spectrum of supply chain planning.

1.2 | Demand and supply planning

Demand planning

Demand refers to the quantity of a good or service that is necessary to cover the needs of the people affected by crises. The objective of demand planning is to estimate the demand that a humanitarian organisation faces over a given horizon. In theory, two types of demand can be established through different steps and consensus-building:

- The unconstrained demand reflects all the needs of the people affected by crises, without considering any constraints on meeting these needs. Taking an unconstrained view is interesting when considering a long-term horizon: it may help

*Note: The planning horizons specified in the figure are indicative.

Visual 1: The three supply chain planning levels and their associated time horizons
organisations prioritise efforts, set up long-term objectives, and advocate for funding. Additionally, such a comprehensive perspective may guide necessary supply chain investments, fostering the sustainable improvement of the organisation’s capacity to meet growing demands.

- The constrained demand reflects the demand that can be covered by the organisation, constrained mostly by resource availability and the earmarking of funds. It is advisable to consider constrained demand in the short- to mid-term horizon to ensure realistic planning.

Given the inherent uncertainty of demand, particularly as the plans extend further into the horizon, organisations need to define and address different demand scenarios beyond their baseline plan.

**Supply planning**

Supply is the organisation’s capability and capacity to meet a given demand. The objective of supply planning is to convert the demand plans into optimal supply plans. Supply planning can be decomposed into three main steps:

- **Sourcing:** What should be sourced and where from?
  Sourcing involves selecting the type of supplier (internal or external supplier, with separate consideration for in-kind donations) and the source’s geographical location (local, regional, international) for each product (or service) category defined in the demand plans. It goes hand in hand with market assessment and supplier base development. While the scope of supply chain planning does not encompass specific sourcing tasks such as tendering and evaluation, it does cover the anticipation of said activities, the definition of sourcing strategies to drive their execution, and the allocation of sources of supply.

  **Procurement planning:** What, when, and how much should be procured?
  Building on the established and more strategic sourcing decisions, procurement planning involves creating a month-by-month plan to schedule orders for specific products (or services), ensuring they align with the demand while considering lead times. Different strategies can be adopted, such as consolidating orders to minimise transport costs or staggering orders to minimise inventory holding costs.

- **Logistics planning:** What, when, where and how much should be transported and stored?
  Logistics planning covers an extensive scope: It includes overseeing the transport of products from its sources of supply all the way down to implementing partners or directly to people affected by crises, as well as the storage of supplies (if any) along that chain. Beyond such operational orchestration, logistics planning also involves strategic decisions related to transport (e.g., should transport be handled internally or outsourced to suppliers, which corridors should be used to reach given areas, etc.) and storage (e.g., should products be kept on stock and in what quantities, where and what size should the

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1 While production planning plays a critical role in supply planning within manufacturing industries, it is uncommon for organisations in the humanitarian sector to directly manage production activities. The sole exception lies in the assembly of kits: Certain organisations opt for in-house production, which requires meticulous planning. Given the infrequency of such occurrences, we chose not to include production planning in this report.
While these different supply plans address different stages of the supply chain, they must remain interconnected and coherent with each other. It is also worth noting that the quality of the supply plans highly depends on the quality of the demand plans.

**Integrated nature of supply chain planning**

Building upon this initial understanding of the technical aspects of demand and supply planning, we want to acknowledge the broader spectrum of contributors to the process. By its nature, supply chain planning operates as an integrated process and a collaborative function, both horizontally and vertically.

Horizontally, supply chain planning relies on not only the expertise of Supply Chain staff, but also on various other organisational functions such as Programmes, Finance, and Human Resources (HR). Effective supply chain planning depends on the synchronisation of planning-related activities, information-sharing, and alignment of organisational objectives between functions. Externally, humanitarian organisations should also collaborate and integrate to ensure a coherent and efficient response, avoiding duplication of efforts and leveraging economies of scale.

Vertical integration is equally important. Internally, it means ensuring alignment between all the sub-departments involved in the supply chain to ensure that all work contributes to the same plan. Externally, it encompasses the supply chain’s upstream and downstream activities, which include aligning with suppliers and implementing partners.

### 1.3 | Supply chain planning enablers

Three aspects are crucial to supply chain planning: processes, data and tools, and people. A streamlined set of processes and supply chain routines ensure efficiency. This efficiency is further amplified by employing the right tools, increasing visibility, and facilitating data-driven decision-making. Ultimately, the success of planning always lies in the capabilities of a proficient and collaborative team.

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1. Essentially, organisations hand over the goods to these implementing partners, including both local and international NGOs, with a notable growing aspiration in the sector to collaborate more with local partners. Implementing partners are then responsible for distributing the goods to the people affected by crises.
Processes

Well-defined processes are essential for seamless supply chain planning. These processes should outline the steps involved in both demand and supply planning, including roles and responsibilities, as well as how these steps integrate into projects and programmes’ lifecycles. Clear guidelines and established routines help reduce inefficiencies and mitigate bottlenecks, thus contributing to consistency and accountability throughout the organisation and the supply chain function.

Data and tools

Supply chain planning can only truly be successful when there is standardised, integrated, and accurate data supported by robust tools. In the ideal case, these tools capture uniformised and cross-functional master data\(^1\), along with accurate transactional data\(^2\), all hosted in a coherent and sustainable Information Technology (IT) system aligned with the organisation’s strategy. While some humanitarian organisations may not have the funds to develop advanced tools with built-in planning functionalities, it is essential that they rely on tools that are integrated, standardised across the organisation, and easily accessible by all parties involved in planning activities. Tools not only enhance organisational visibility, but also facilitate data analysis by supporting (near) real-time and data-driven decision-making processes.

People

Last, but not least, people constitute a paramount component in the success of supply chain planning processes. Supply chain planning relies on a team of skilled individuals, trained in supply chain planning, knowledgeable about the processes and the tools, and open to sharing their expertise within the organisation. Thus, collaboration, communication, and transparency are key factors.

1.4 | Supply chain planning benefits

A strong supply chain planning capability brings significant benefits to an organisation. Planning helps to build effective, efficient, and more sustainable supply chains, and thereby supports the achievement of broader organisational and programmatic objectives.

Effective and efficient supply chain

Supply chain planning is about organising a supply chain so that the right choices are made to provide suitable products and services, manage them well, and ensure timely delivery to meet the needs of people affected by crises, all while ensuring that those efforts have a positive long-term impact. In short, supply chain planning supports the building of effective supply chains. At the same time, supply chain planning involves streamlining and optimising processes and capacities to avoid unnecessary costs and minimise waste. In other words, supply chain planning also aims to build an efficient supply chain. On the contrary, inadequate planning may lead to excess inventory situations or stockouts, coupled with higher supply chain costs. As a result, the organisation’s reputation may erode over time.

Sustainable supply chain

Sustainability can be viewed through three key dimensions: environmental, social, and economic. From an economic perspective, sustainability largely relates to the idea of (cost-)efficiency, as discussed above. From an environmental perspective, supply chain planning can help minimise stock movements and the carbon emissions associated with them; adopt slower yet low-carbon transport modes, and prevent waste volumes generated by expired inventory. Additionally, supply chain planning allows for additional time to engage in sourcing activities, enabling procurement officers to explore markets and identify greener products or sources. From a socio-economic perspective, supply chain planning can drive the development and implementation of localised sourcing strategies and stimulate weakened economies. It also serves as a solid foundation (if not a platform) for inclusive conversations, both internally across the different departments of an organisation and externally with local partners. Thus, beyond fostering effective and efficient supply chains, supply chain planning also helps make supply chains more sustainable.

Accountability and flexibility

Through its established routines and collaborative nature, supply chain planning improves accountability in the organisation by promoting a culture of responsibility and adaptability. Robust supply chain planning capabilities also improve organisational flexibility by enabling informed, data-driven, and cross-functional decision-making.

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1. Critical, static, and long-lasting information that forms the foundation upon which all planning activities rely.
2. Dynamic, (almost) real-time records of supply chain activities.
Chapter 2

Landscape analysis of supply chain planning in the humanitarian sector
Chapter 2: Landscape analysis

In this chapter, we leverage our research to describe how humanitarian organisations appear to plan their supply chains. We mainly focus on tactical supply chain planning for non-emergency operations\(^1\), but also briefly comment on emergency operations at the end of this chapter.

### 2.1 Demand planning

Demand planning is central in orchestrating supply chain operations, including in the humanitarian sector. Our research led to a positive finding: All organisations we interviewed have integrated some form of demand planning into their processes, despite rarely labelling it as such. This indicates an underlying effort towards demand planning within the sector, reflecting a tacit acknowledgment of its importance.

As highlighted in the introduction, demand planning can be either unconstrained or constrained. In the next paragraphs, we outline our research findings related to both types of demand planning, with a focus on the latter given its prevalence in the sector.

#### Unconstrained demand planning

In theory, an unconstrained demand plan disregards any limitations on demand, such as financial constraints or the organisation’s operational capacity to respond. In practice, a fully unconstrained plan is seldom achievable, as constraints in certain areas may be inevitable (e.g., security concerns or restrictions on humanitarian movements\(^2\)). Nonetheless, a distinction can usually be made between plans that fully and singularly reflect humanitarian needs and those that are significantly constrained due to practical considerations.

Our research indicates that unconstrained demand planning is rare in the sector. Organisations do conduct needs assessments, collecting primary data and/or researching secondary data to understand the needs of people affected by crises. However, the outcomes of such assessments are not necessarily translated into actual demand plans that detail relevant supply chain information, like the types of supplies needed to respond and their corresponding quantities. In fact, needs assessments first serve advocacy and fundraising activities rather than supply chain ones.

One of the organisations we interviewed did offer an exception to the above: It works with unconstrained demand plans, detailing the needed supplies, the quantities (rather than just the number of people affected by crises) and a budget estimate. Granted, this organisation still predominantly uses these plans for advocacy purposes and fundraising rather than supply chain management.

While our research primarily involved discussions with Supply Chain staff, further insights from Programmes practitioners might have provided additional depth on this topic. Nevertheless, our findings still underscore a significant disconnect between unconstrained demand and supply chain management, potentially leading to missed opportunities for strategic thinking.

#### Constrained demand planning

In the humanitarian sector, demand plans are predominantly constrained. Through our research, we observed two main approaches to constrained demand planning, which subsequently influence supply planning: annual planning and

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1. By “non-emergency operations”, we mean response to slow-onset disasters or protracted crises, as well as response in the post-emergency context and development aid more generally. By “emergency operations”, we mean response to rapid-onset disasters.

2. Even the Humanitarian Needs Overviews (HNOs), which are largely needs-based and thus unconstrained, do consider such access constraints.
project planning.

**Annual planning**

Humanitarian organisations typically follow annual budget cycles: They develop budget plans for the upcoming year, usually at the start or end of the year. Such plans serve as a foundation for organisations to effectively assess and manage their internal capacity. They provide staff with clear guidance on essential projects or programmes, as well as define potential investments for additional staff and capital that these projects or programmes may require.

A few of the organisations we interviewed also mentioned that demand planning is integrated into this annual exercise: They translate budget plans into a quantified and timed demand for specific goods and services, across programmes, projects, and activities. The resulting annual demand plans usually remain partially unconstrained and include uncertainties about the funds that the organisation may or may not manage to raise. By year-end, the plans may not be entirely realised if the organisation underestimated financial or other constraints. On rare occasions, the plans may be exceeded: for instance, if the organisation raised additional funding during the year for activities it had not originally planned to implement.

Overall, only a few interviewees mentioned annual budget planning when discussing supply chain planning, highlighting a notable gap between these two exercises despite their apparent potential for alignment. The annual demand planning approach seems to be mainly followed by UN organisations and the RCRC Movement. INGOs tend to take a project-oriented approach to planning.

**Project planning**

For most humanitarian organisations, particularly INGOs, demand planning starts at the project level. When a project is being designed, often during the project proposal phase\(^1\), Programmes staff usually create a demand plan for the project that considers its full scope and duration. While this plan generally contains all the key information for demand planning (e.g., products, quantities, and dates), it is rarely labelled as a “demand plan”; instead, it is commonly referred to as a “procurement plan”. This illustrates the lack of distinction that the sector generally makes between demand and supply planning, a point which we will revisit again in this chapter. To keep our explanations clear, we will adhere to the phrase “procurement plan”, while explaining in Chapter 3 why we believe such a name is problematic.

These project “procurement plans” are mostly constrained, as they are based on the budget that was negotiated with donors for the project. They can span a short horizon or have a duration of 12 months like the annual demand plans. The difference between the project and annual plans lies not necessarily in the timeframe they cover, but rather in their scope and the level of constraints involved: The projects plans are more specific and constrained than the annual plans. While project plans appear to be more specifically scoped, they can still undergo significant changes during the project lifecycle. While operating on a loose and uncertain scope is not inherently problematic and can still offer strategic value, it poses challenges over shorter time horizons. As supply chains require time to organise, achieving a certain service level without upfront demand information may prove difficult.

**Mixed approach**

A couple of the interviewed organisations considered supply chain planning in both their annual budget planning and project planning cycles. These plans can indeed be complementary: one serving as a guiding objective for staff, and the other, closer to reality, enabling actual implementation.

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\(^1\) This may also happen at a later stage: right before or after the project starts.
Demand planning methods

As mentioned previously, annual demand plans are typically the translation of the organisation’s budget, which should reflect the organisation’s programmatic strategy, its capacity and fundraising capability, and of course, the humanitarian needs. Details on products, quantities, and timelines are derived based on the activities that the organisations plan to implement to meet those needs. The project “procurement plans” follow a similar logic, but on a smaller scope: Targeted needs assessments influence the project activities, which then inform the project “procurement plans”. In specific programmatic areas, additional information might need to be collected, such as the bill of quantities for construction work and disease prevalence rates for medical projects. Historical data seems to only be used as an input to the demand plans for certain longer-term projects, especially health-related ones: Medical staff would estimate the demand by taking averages of historical consumption data (coupled with roughly estimated trends and, on rarer occasions, seasonality factors). Interestingly, almost no interviewees reported using time-series statistical forecasting. Only one organisation reported using this method at the global level to estimate future demand—with promising results—but had not managed to implement the process (at the time of the interview) due to a lack of internal buy-in. Interestingly, the ownership of the demand plans predominantly falls under Programmes, although Supply Chain staff may participate in their creation. One notable aspect where Supply Chain staff’s input is particularly essential is the modality decision, which determines whether the assistance should be provided through cash and vouchers or in-kind goods. While this decision theoretically falls under the Programmes teams, Supply Chain expertise is indispensable for making a modality decision, which depends on having a comprehensive understanding of local markets, their dynamics and dependencies. Unfortunately, only one organisation spontaneously mentioned having Supply Chain staff running such analyses. Opportunities for Programmes and Supply Chain staff to collaborate more closely in shaping the demand plans, crucial for effective aid delivery, have been missed.

2.2 | Supply planning

In this sector, the development of demand plans—whether in the form of annual or project plans—does not automatically translate into the initiation of supply planning procedures. These demand plans might be considered of inadequate quality and thus go unused. In such instances, the initiation of supply chain activities hinges on Programmes creating a purchase requisition, which leaves little space for actual planning. While this practice continues to be observed in the sector, it does not seem to be prevalent. The subsequent paragraphs outline the course of action when demand plans are used and supply planning is (at least partially) carried out. It is important to note that organisations might work with a single plan, mixing both demand and supply aspects—we will revisit this in the next chapter. However, for clarity purposes, we distinguish between demand plans and supply plans separately in this chapter.

Sourcing

Sourcing steps

One first element of supply planning is for organisations to define where they want to source the products listed in the demand plans from. Over the tactical horizon, organisations generally define different sourcing elements like the sourcing approach (e.g., will the organisation perform sourcing activities at a local level or will it rely on a global procurement unit) and the sourcing method (e.g., direct purchase, open or closed tendering). These elements are translated into supply plans. It is particularly interesting to note that supply plans often exclude in-kind donations.
showcasing a lack of consolidation of all sourcing options. This results in a gap when assessing how the demand should be covered and potentially leads to siloed supply chain operations.

Based on the sourcing decisions, Supply Chain staff then run the necessary sourcing steps based on the chosen sourcing approach and procedure. Most organisations strive to set up long-term agreements with suppliers; demand plans can inform this decision. Note that if a suitable supplier has already been pre-approved, or if a long-term agreement exists, this supplier might be assigned directly to the supply plans, which negates the need to run the typical sourcing activities.

**Comprehensive strategies for tactical sourcing**

Sourcing generally receives significant attention in the humanitarian sector, driven by the importance of adhering to the rules set up by donors. In that regard, Supply Chain staff are well acquainted with the sourcing processes. However, our observations revealed a lack of comprehensive tactical and strategic thinking when it comes to sourcing. Many organisations still run sourcing activities at a project level and fail to define explicit sourcing strategies at the organisational level. Such strategies could include:

- **Project/programme modality**: Organisations should assess their preferred modality to deliver the project or programme. The initial decision is whether the overall supply process should be handled directly by the implementing partners (if any), with direct cash transfer. If the supply process is kept internal, Programmes staff, supported by Supply Chain staff, need to decide on the modality for aid delivery (i.e., cash versus in-kind).

  Our interviews revealed that Supply Chain staff are rarely involved in such modality decisions.

- **Outsourcing**: Organisations must determine whether sourcing capabilities should be retained internally or outsourced. Outsourcing requires decisions such as whether to engage with either a global procurement unit, another country office or national society, or even a cooperative of humanitarian organisations.

- **Localisation**: The sourcing decision should align with the organisation’s localisation strategy. Indeed, some sourcing options may support local markets by influencing them in a sustainable manner, while some others may miss that opportunity.

- **Supplier rationalisation**: The supplier landscape in the humanitarian sector is generally highly fragmented. While maintaining a wide range of smaller localised suppliers may align with a strategic push for more localisation and sustainable aid, there should be a conscious reflection on rationalisation.

Unfortunately, the lack of consolidated demand plans—which prevents Supply Chain staff from having a comprehensive view of the total supplies to be sourced—often hampers these exercises. Insufficient recognition of supply chain management as a critical function may also further limit the development of sourcing strategies.

**Constraints for projects and programmes.**

1. This means strategically reducing the number of suppliers that the organisation works with to strengthen relationships with the selected ones, thereby improving the quality of the supply chain.
**Procurement planning**

**Procurement planning steps**

While the sourcing steps are generally well mastered, it appears that procurement planning poses more challenges. Once the source is defined, Supply Chain staff should, in theory, estimate the procurement lead times, allowing them to determine the latest deadlines for placing purchase requests and purchase orders to ensure the timely coverage of a specific demand. However, it is hard to know when to place purchase orders due to the sporadic review of the demand plans to incorporate the latest available information, combined with the general poor quality of lead times data. This introduces uncertainty into the supply plans and can lead to a more conservative procurement—potentially resulting in over-stocks. Alternatively, it can hinder decision-making, thereby leading to stock-outs and/or the delayed delivery of programmatic activities.

Two notable good practices in procurement planning are the grouping and the staggering of orders, both of which offer distinct advantages. Grouping orders can reduce transport and ordering costs, while staggering orders helps minimise inventory holding costs. Although both practices were mentioned during the interviews, their systematic use remains unclear. The opportunities for optimisation were restricted by not only quality concerns (whether related to the plans themselves or their underlying master data), but also the plans’ inadequate structure (particularly their tendency to remain at project level and rarely be expressed in time buckets).

Finally, while the interviewees widely acknowledge the importance of building strong supplier relationships, joint planning with suppliers seems extremely rare. However, sharing supply plans with suppliers could help to guarantee their reactiveness and/or cheaper prices (think about traders who may seek to replenish their stocks when market prices are low).

**Logistics planning**

Logistics primarily revolves around the transport and storage of supplies. The efforts that humanitarian organisations dedicate to logistics activities largely depend on the approach they adopt towards logistics—mainly, the degree of insourcing vs. outsourcing—as well as on factors like the organisation’s size and geographical outreach. The need for logistics planning follows the scope of the organisation’s logistical operations. For instance, organisations that rely entirely on their suppliers for the storage and delivery of purchased goods need to invest less time in logistics planning compared to those managing inventories across a network of warehouses. Nonetheless, all humanitarian organisations must consider logistics, which entails at least a minimum level of planning.

In the next paragraphs, we outline the key observations regarding logistics planning derived from our research. We first present the insights related to transport

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1 Minimum order quantities and other ordering constraints, particularly prevalent in complex manufacturing sectors such as the medical field, should also be considered.
2 Logistics activities related to cash-based distributions were not mentioned during the interviews. We therefore do not comment on these in this report.
3 Note that almost all organisations we interviewed engage with implementing partners and many are also implementing partners themselves. The exact role that an organisation decides to take or delegate defines its scope of work and thus drives logistics strategies as well, particularly at the last-mile level.

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**A word on centralised sourcing and procurement**

We observed no general trend regarding the centralisation of sourcing and procurement; instead, we noticed a balance between centralised and decentralised procurement. Even within the same organisation, the type of procurement might differ depending on the product category. For instance, the procurement of medical items is typically centralised and reliant on international suppliers, while other items may be procured from local or regional markets by country offices directly (which does not necessarily imply local production). In some cases, procurement can be organised by a small cluster of countries or at the regional level.

In cases where organisations fully or partially centralise their sourcing and procurement functions, regional and global procurement units should also gather the demand plans and aggregate them at the regional or global level. Some organisations excel in this area, with their centralised units taking a proactive approach and seeking to optimise the supply chain. However in other organisations, these centralised units may focus more on execution rather than planning.
and then those related to storage. We acknowledge that these topics are deeply interconnected: For instance, planning along corridors necessitates a coupled understanding of both transport and storage capacities, depending on the possible entry points—meaning logistics must be planned end-to-end. However, we address the topics separately for clarity purposes.

**Transport**

Humanitarian organisations often ask their suppliers to take care of transport: not only at the international level (for the delivery into the destination country), but also at the country level (with local suppliers sometimes extending delivery to the final distribution points). At the international level, only the very large organisations with a centralised sourcing and procurement unit seem to default to collaborating directly with freight forwarders, usually by forming long-term agreements with them. At the country level, in cases where organisations do not rely on suppliers, they alternatively engage with local transporters. Although long-term agreements are occasionally set up with local transporters, that practice does not appear to be the norm. In rarer cases, organisations utilise their own fleet for in-country transport, employing lighter vehicles for last-mile deliveries.

Several of the interviewed organisations indicated that they include rough estimates for transport costs in their supply plans, primarily for budgetary considerations. However, from a supply chain standpoint, it generally appears that comprehensive transport planning is not firmly established, at either the international or local level. At the international level, only those few organisations working with freight forwarders actually have the flexibility required for optimal transport planning (e.g., they can organise the pickup of goods from different suppliers and consolidate these into one container), but that does not automatically imply that they would seek to do so. They may lack visibility (e.g., no trustworthy “procurement plans” are in place) and fear complications with customs. One organisation shared having fixed international departures from their global warehouses, which incentivised staff to plan around such a schedule. At the local level, some practitioners expressed efforts to consolidate stock movements in trucks wherever feasible, though this appeared primarily reliant on their individual initiatives. Many shared the challenge of receiving last-minute and short-term information regarding the exact stock movements to be performed (i.e., the “distribution plans”\(^1\)), which restricts opportunities for systematic transport optimisation.

The often spontaneous approach to transport planning constrains the potential for collaboration with other humanitarian entities (e.g., sharing space in a truck). Cross-sector collaboration in transport appears to be limited primarily to emergency situations. Overall, opportunities to reach economies of scale and minimise costs might be missed due to the lack of planning.

**Storage**

Humanitarian organisations follow different approaches for the storage of supplies, which imply different related planning efforts—just like with transport. Some organisations prefer to minimise in-country storage in their own facilities, opting to hold their stocks at the suppliers’ facilities or relying on suppliers to deliver stock directly to the final distribution points. On the opposite end of the spectrum, some organisations manage an extensive and multilevel network of warehouses. Regarding the storage of stock at international and regional levels, we observed two trends. Some of the largest organisations interviewed (mostly from the UN and the RCRC Movement) hold stock at these levels. They do so to bring supplies closer to the demand, minimise lead times, and make supply chains more responsive—while limiting financial risks\(^2\). The majority of organisations do not follow such an approach: Holding stock at the international or regional level may not always bring added value, depending on the type of supplies and/or the context involved. It also requires a significant upfront investment (for the revolving funds) that many organisations lack.

A few practitioners from INGOs indicated that their project “procurement plans” included rough storage costs. If they deemed it necessary to open a warehouse for the project, they would estimate such costs and add these to the plans (just like for transport costs). In some cases, such an approach may lead to suboptimal decisions: While opening a warehouse for an individual project may seem justified in isolation, it may not be the most efficient choice when considering all projects or activities collectively. Conversely, for

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1. Not to be confused with the distribution plan as conceived in the commercial sector, that is outlining how products or services will be delivered to the customers, and typically includes considerations about transport, storage and inventory management.
2. Stock pooling (at the international or regional level) reduces financial risks because the demand at that level is more predictable (i.e., demand fluctuations are averaged out).
some larger organisations, warehousing decisions appear to be made at the organisational level. It is unclear what exactly triggers such decisions or their revisions: In some instances, it may be issues like an overutilised warehouse, implying a more reactive rather than proactive approach to warehouse capacity management.

Effective inventory management involves planning for more than just warehousing capacities. Interestingly, only one organisation disclosed having a comprehensive strategy for determining which items should be actively managed in stock and which should not. For others, such decisions seemed to be made at the organisational or programmatic level (e.g., only health products are kept on stock), with little product segmentation. Stock replenishments are usually driven by the availability of funds, but some organisations do rely on actual plans or consumption data. Safety stock targets are almost always defined by Programmes and based on rough estimates¹. Ultimately, the key prerequisite for effective inventory management is visibility across inventories. Encouragingly, most of the interviewed organisations maintained visibility on their stock levels and expiries across the country, which helps to mitigate stock wastage.

Stock is very rarely neutral (i.e., unallocated to programmes or projects), which limits organisational flexibility. However, some practitioners mentioned the concept of “loan and borrow” arrangements for inventory within their organisations across various projects or programmes (i.e., use the stock of one project or programme for another one and replenish at a later stage), as well as extending beyond their organisations where humanitarian entities might lend inventory to one another. This practice of stock pooling across humanitarian organisations appeared to be mostly informal, except for instances like UNHRD where the approach is well established.

Overall and in summary, humanitarian organisations seem to put less focus on logistics planning than

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¹ Only one organisation mentioned calculating safety stock targets that considered both demand and supply variability.
on sourcing and procurement planning. While our interviews highlighted successful individual initiatives in logistics planning, the sector still lacks standardised practices and processes as a whole.

2.3 | Supply chain planning end-to-end processes

After independently describing the demand and supply planning aspects, it is important to take a step back and remember that both are evolving within the overall supply chain planning framework. Based on our research, we want to describe some of the commonalities in framing and applying these processes.

Roles and responsibilities

Regarding demand planning, the responsibility for developing the project “procurement plans” and the annual plans lies with the Programmes team; the involvement of the Supply Chain staff is often inconsistent, limited, or even simply non-existent. Only two organisations we interviewed reported having established demand planner positions held by Supply Chain staff1. Without the input of Supply Chain staff, Programmes staff may create unfeasible demand plans: Procurement lead times and costs might be wrongly estimated; consequently, the plans may be either short on time or budget. The good news is that Programmes staff seem to be increasingly aware of the benefits of including Supply Chain staff in this demand planning process. However, there is still much progress to be made. We come back to this topic in Chapter 3.

We observed that the theoretical responsibility for supply planning lies with the Supply Chain function, but the distinction between demand planning and supply planning is often unclear. Therefore, the demand plans—developed and owned by Programmes—frequently incorporate supply considerations. In such cases, Supply Chain staff become more reactive to this mix of demand and supply plans already predefined by Programmes, rather than being involved in tactical and strategic decision-making. However, a few organisations did mention having a Supply Chain function that held complete ownership of the supply planning processes.

Review of the plans

As previously mentioned, project “procurement plans” usually get created at the proposal stage, while annual plans are created yearly. That said, the frequency of reviewing such plans throughout the project’s lifecycle or the year varies within the sector. In the least desirable scenario, the plan remains untouched: Programmes staff only create it to support the proposal or to check a box, with no intention of utilising it (or even sharing it with the Supply Chain staff), because the plan is considered low-quality. While this suboptimal practice is still present in the sector, it does not appear to be the prevailing standard. Instead, the project “procurement plan” is more commonly evaluated at various points in the project’s life cycle, typically before initiation and subsequently on a quarterly basis (in certain less frequent cases, even monthly), while the annual plan is reviewed at a given frequency (monthly to bi-yearly). That said, this process often lacks a well-defined framework and is therefore loosely implemented. It is also important to note that the review scope is limited to the approved timeframe of a project or the calendar year; there is no consideration of a rolling horizon, even for projects and programmes with a high likelihood of renewal.

Measuring the accuracy of (or adherence to) previous plans should be part of the review process. Yet, such practice appears surprisingly rare in the sector.

Consolidation

Maintaining a focus at the project level (or more generally, at the programmatic activity level) is crucial because funds are often earmarked; consequently, demand needs to be specified at that level. Supply plans and the corresponding spend data should also be tracked at that level. However, when adopting a supply chain planning lens, it becomes evident that the plans should be consolidated across projects and/or activities to facilitate tactical supply chain considerations. The practice of aggregating demand and supply plans at the organisational level (i.e., country level, but also regional or global levels where applicable) varies within the sector. While some organisations do implement this approach, the majority do not seem to do so, leaving it to Supply Chain staff to remember interconnections between projects and adopt a supply chain-oriented (rather than project-oriented) perspective. This lack of aggregation appears to stem from two main factors: firstly, a lack of appropriate tools or templates to enable such consolidation, and secondly, a prevalent culture focused more on project planning rather than supply chain planning. We revisit these two points in Chapter 3.

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1. This is, by contrast, a common practice in the commercial sector. Demand planners belonging to the Supply Chain department create baseline demand plans, which are later reviewed and validated by Sales staff.
2.4 | Emergency preparedness

Up to this point, our focus has primarily centred on supply chain planning within the context of development work, protracted crises, or stabilised operations. However, it is equally important to examine supply chain planning in the scope of sudden-onset emergencies. While a few organisations employ identical processes for emergency and non-emergency planning, most of our interviewees shared having implemented various initiatives to prepare and plan for emergencies.

At the country level, organisations usually create what-if scenario plans to identify potential risks and the corresponding supply chain responses. These preparedness plans account for internal capacities, an understanding of the local markets, and sometimes historical data. They appear to be updated on an annual basis at best. They often include plans for staff training, ensuring that trained resources are ready to be deployed to the affected areas when emergencies occur. On rare occasions, organisations conduct joint preparation exercises with partners, including suppliers with long-term agreements or local agents, to ensure their collective capability to respond. Contingency stock (also known as prepositioned stock) is often constituted locally based on the preparedness plans, when funds are available. This contingency stock, intended to cover the demand generated by sudden emergencies, complements the safety stock (if any), which is designed to cover demand and supply variability.

At the regional and global levels, early warning analyses are often performed and reported on globally, sometimes resulting in global supply chain contingency plans. Global and regional prepositioning appears to be common practice among the UN agencies and the Red Cross and Red Crescent Movement, which maintain global stockpiles at different strategic locations. The availability of funding, especially flexible funds, significantly impacts the creation of contingency stock. Interestingly, the practice of maintaining prepositioning stock at the global level appears to be declining among INGOs, many of which hold only very limited stocks within the United Nations Humanitarian Response Depot (UNHRD) premises and prioritise local prepositioning.

In the event of an emergency, operational response plans are developed at the national (or sometimes global) level, relying on rapid needs assessments. Stock can then be rapidly dispatched from prepositioned stock at the national, regional, or international levels. It appears that collaboration between Programmes and Supply Chain increases during operational response. The two functions engage in regular communication to jointly navigate the new and complex operational environment, driven by a shared objective of delivering rapid and efficient relief. This increased collaboration during emergencies is also reflected in the organisational charts, where emergency units sometimes include staff from both the Programmes and Supply Chain functions.

Although the humanitarian sector is generally proficient in managing emergencies, given the inherent nature of the work and the presence of internal procedures, it is worth highlighting the variation in the quality and regular updates of the emergency preparedness plans, which seem to be dependent on the country of operations and the people involved. For example, one organisation mentioned developing preparedness plans only for operations in areas frequently impacted by specific disasters. Another organisation suggested that these preparedness planning processes function more effectively in countries frequently impacted by emergencies, but less so in others.

The picture shows the arrival of school kits delivered by plane to Madagascar following the impact of Tropical Cyclone Gamane, which affected the northern and northeastern regions of the country. Emergency response is part of the sector’s DNA, and supply chain planning for emergencies appears to be better established in the sector than for non-emergencies.
Chapter 3
Common challenges and positive trends
Chapter 3: Common challenges and positive trends

Having established the supply chain planning practices in the humanitarian sector, we now uncover the main challenges regularly faced by humanitarian actors as well as some positive trends. This understanding will help us devise practical recommendations in Chapter 4.

3.1 | Common challenges

Interviewees repeatedly mentioned that supply chain planning in the sector is poorly implemented. The maturity level in supply chain planning varies across organisations (with some performing much better than others) and even within the same organisation (e.g., where one country office may significantly outperform others). Despite a few organisations adopting some good initiatives, the global perception is that tactical plans, may be demand or supply plans, are often suboptimal and offer limited utility for decision-making. This perception is influenced by a variety of external and internal factors, which we describe below.

Challenge 1: The humanitarian context

Humanitarian supply chains operate in environments characterised by uncertainty. The volatility of the demand—and perhaps even more importantly, the fluctuating availability of the funds both in protracted crises and sudden emergencies—make it hard to plan accurately. Past trends might not serve as exact references for future ones, and the context might even change between the submission and approval of a project proposal. On the supply side, currency instability and inflation may disrupt supply plans, necessitating budget adjustments and hampering long-term agreements with suppliers. Planners often have to engage in more conservative, suboptimal planning to account for long lead times, the uncertainty of delays, and the resulting difficulty of estimating reliable procurement and transport lead times. Finally, challenges can arise from the lack of maturity and corporate culture at suppliers, particularly at the local level, which can complicate collaboration and planning.

The humanitarian sector also lacks flexibility when planning. A large portion of funds being earmarked, coupled with the often-short horizon of projects, makes it challenging to consolidate and plan tactically across projects and for the long-term. Meanwhile, the absence of neutral stock often reduces the risk pooling effect: In other words, it is difficult to control the demand variability by aggregating supplies between locations and projects.

Finally, staffing issues in both the Programmes and Supply Chain functions—often related to the funding gap and the operating context—make it challenging to dedicate a specific workforce to supply chain planning, which is often perceived as a nonessential activity anyway. Likewise, the high staff turnover hinders continuity and knowledge-sharing, preventing the accumulation of expertise in supply chain management that is needed for continuous...
improvement.

However, it is important not to use the complex humanitarian context as an excuse to consider planning in the sector impossible—some of the above challenges can be addressed head on. Furthermore, poor planning performance usually also stems from internal challenges, which we describe next.

**Challenge 2: Lack of supply chain planning process framework and supporting tools**

Supply chain planning is not an institutionalised function in the humanitarian sector. Only a few humanitarian organisations have implemented a structured framework for supply chain planning, and even fewer have designated positions dedicated to this task. Typically, supply chain planning is not regarded as a distinct function; thus, formal routines are largely absent. Consequently, supply chain plans may not be updated as frequently as necessary, or in some cases, they may not be created at all (or with poor quality). While there are some exceptions, the overall reality is that supply chain planning has not yet found its place in the sector.

On top of missing process frameworks, most humanitarian organisations also lack dedicated and well-connected planning tools. Supply chain planning in the sector seems to run mostly on Microsoft Excel. A good majority of organisations have Enterprise Resource Planning systems (ERPs) in place, which helps with extracting the necessary input data for planning and uploading output data, but ERPs are not suitable for planning. Several interviewees also mentioned not having proper data in place (e.g., product master, lead time data, historical data), which makes supply chain planning an incredibly difficult task.

**Challenge 3: Unclear division of supply chain planning work**

With a few notable exceptions, humanitarian organisations fail to clearly distinguish between demand and supply at the tactical level. Annual or project plans often include procurement requirements which are based on the demand but also reflect supply-related aspects (e.g., the expected delivery date rather than the date when supplies are actually needed, the demand for prepositioned stock not clearly identified as such). This results in a lack of clarity regarding what the plans truly reflect and leaves little space for Programmes and Supply Chain staff to do their respective work—and take ownership for it. In general terms, Programmes staff should be responsible for the demand plans (with input from Supply Chain staff) and Supply Chain staff should be responsible for the supply plans (with input from Programmes staff). “Procurement plans” blur that division of work and do not enable a stepwise approach where demand planning, sourcing, procurement planning, and logistics planning are effectively run in the right sequence.

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1. For instance, some practitioners have addressed the challenge of currency instability in long-term agreements by expressing prices in USD or including a clause for price adjustments based on the USD exchange rate. As another example, some organisations proactively seek multi-year grants, which result in better visibility on upcoming funds and thus also on the (constrained) demand.
Challenge 4: Poor integration of supply chain planning

The other problem with the “procurement plan” (and similar annual plans) is that it resembles a task list, shared by Programmes staff to Supply Chain staff. In this dynamic, Supply Chain staff’s role is mainly centred around fulfilling the requests of Programmes staff, leaving limited space for them to make tactical or strategic supply chain decisions alongside Programmes. In our view, a “procurement plan” reinforces—and embodies—the idea that Supply Chain staff primarily serve as support for Programmes staff rather than as a strategic partner. Collaboration between Programmes and Supply Chain staff is not just limited by this “procurement plan” practice; the interviewees repeatedly mentioned that the problems stemmed from organisational cultures across the humanitarian sector. Silos are real: Programmes staff often fail to properly include Supply Chain staff across the lifecycle of projects (or programmes), whereas Supply chain staff may lack the proactivity to get involved.

Several factors can explain this absence of integration, but a recurring theme in our interviews was a lack of awareness that manifested at multiple levels: Programmes staff (and, to a broader extent, the entire organisation including Finance and HR) often view the Supply Chain as a support function and may lack training in end-to-end supply chain planning, thus preventing them from investing in deeper collaborations with the supply chain. Simultaneously, Supply Chain staff may not fully comprehend the benefits of their involvement in the early stages of the supply chain planning processes.

Challenge 5: Siloed project-level planning

As mentioned in the previous chapter, organisations do not always consolidate their supply chain plans at the organisational level (i.e., it could happen at the country, region, or global level). Specifically, organisations that work with project plans may not form a consolidated view across all activities. Given such shortcomings, Supply Chain staff may find themselves without the comprehensive visibility necessary for making the most informed tactical supply chain decisions. Consequently, staff might make decisions that are optimal for one project, but suboptimal when assessed across all projects. In addition, the horizon of a project plan is fixed to the duration of the project, which limits visibility as the project progresses. Note that the same is also true for annual plans fixed to a 12-month horizon.

In other words, many humanitarian organisations are very project-focused—an approach that extends to supply chain management. Instead of planning for a consolidated supply chain at the organisational level, multiple projects’ supply chains are planned individually on their own timeframes. We contend that synergies are lost in the process.

Challenge 6: High variability across people and offices

The last main challenge we observed came from significant variations in supply chain planning maturity—both across different countries of operation within the same organisation, and within different projects in the same country of operation. This variability may stem from different factors, including the inconsistent awareness of the importance of supply chain planning among leadership; varying levels of supply chain management expertise at the leadership and Supply Chain staff levels; and sometimes a lack of supply chain culture that hampers talent retention. As a result, organisations may struggle to monitor and homogeneously build supply chain planning capabilities.

Despite all these challenges, organisations can seemingly achieve good results in supply chain planning when they rely on staff with a strong background in this field and/or have leadership that understands the importance of planning and is committed to its improvement.

3.2 | Positive trends

Aside from illustrating the previous challenges, the interviews also underscored that supply chain planning is slowly improving in the sector.

Positive trend 1: Internal collaboration is increasing

Internal collaboration is improving: Certain Supply Chain staff, depending on their profile and background, are taking a proactive approach towards Programmes to improve communication and push for joint planning efforts. Supply Chain staff are also becoming increasingly involved across the entire lifecycle of projects and of the broader programmatic activities: They actively participate in programmatic discussions and have a voice in the decision-making process. This is reinforced by the improving implementation of cross-functional planning routines that involve Supply Chain, Programmes and Finance at the country level (and sometimes staff at the
Through these coordination meetings, staff members regularly review all project aspects and collaboratively address any supply issues. In general, the interviews indicated that emergency situations trigger more collaboration between Programmes and Supply Chain than non-emergency operations.

**Positive trend 2: Tools are improving visibility**

In general, the implementation of tools is improving organisational and supply chain visibility while supporting more informed decision-making. This has created a virtuous cycle, where investments in tools contribute to a deeper understanding of the importance of supply chain planning, which then generates more investment in planning capabilities.

**Positive trend 3: Awareness-building leads to continuous improvement**

Internally, awareness is improving both horizontally and vertically. Our interviews revealed an increased understanding of supply chain planning among Programmes, coupled with a growing awareness of supply chain planning among leadership. This positive shift has been driven by many initiatives to educate Programmes and leadership on supply chain management and planning. These initiatives include planners’ monthly meetings, feedback mechanisms at all levels of the organisation, documentation effort, modernisation projects, health check workshops, self-rated assessments, and overall collaborative efforts to identify improvement areas.

Furthermore, the interviews indicated that the ongoing efforts towards increased sustainability in the humanitarian sector are creating traction for supply chain management and supply chain planning, given their intertwined nature.

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Visual 6: Overview of common challenges and positive trends related to supply chain planning in the sector

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Positive trends</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External humanitarian context, with challenges on the demand and supply</strong></td>
<td><strong>Internal collaboration is increasing</strong></td>
</tr>
<tr>
<td>side**</td>
<td><strong>Tools, when used, improve visibility</strong></td>
</tr>
<tr>
<td>Missing or poorly implemented supply chain planning processes and tools</td>
<td><strong>Awareness building leads to continuous</strong></td>
</tr>
<tr>
<td><strong>Unclear division</strong> of supply chain planning work</td>
<td><strong>improvement</strong></td>
</tr>
<tr>
<td>Poor integration of supply chain planning within the organisation</td>
<td><strong>Unity</strong></td>
</tr>
<tr>
<td><strong>Project-oriented</strong> rather than supply chain approach</td>
<td><strong>Cross-functional understanding</strong></td>
</tr>
<tr>
<td>Varying maturity levels across one organisation</td>
<td><strong>Visibility</strong></td>
</tr>
</tbody>
</table>

Supply chain planning has not yet fully matured in the sector and many organisations face similar challenges. Yet, positive trends emerge and supply chain planning is gaining traction in the sector.
Chapter 4
Directions for improved supply chain planning
Chapter 4: Directions for the future

As detailed in Chapter 1, supply chain planning relies on some fundamental enablers: streamlined processes, data and tools, and people. In this chapter, we outline recommendations that can guide future supply chain planning initiatives. A vast majority of these recommendations are based on successful practices observed in specific humanitarian organisations (as revealed by our interviews), as well as relevant best practices from the commercial sector, that we hope can serve as inspiration to others.

4.1 | Processes

**Recommendation 1: Elevate Supply Chain as a strategic partner**

After examining the organisational charts of the 15 interviewed organisations, we observed that supply chain management is predominantly perceived as a support function. Eleven of the fifteen host their Supply Chain units within departments bearing names that fail to adequately reflect the importance of supply chain management: Support, Support Services, Corporate Services, or Operations (see Appendix 3 for the complete results). Additionally, some organisations still name their Supply Chain units “Logistics”, even though the term is less comprehensive (and thus less powerful) than Supply Chain.

As previously highlighted, supply chain management is key to guaranteeing an effective and efficient humanitarian response. Moreover, it may contribute to programmatic results through localised and sustainable sourcing. Certain organisations also provide supply chain advisory services to local governments and help them strengthen their supply chains. Most organisations, however, still seem to lack a culture that recognises these roles for the Supply Chain department. Without such a culture, Supply Chain staff may feel undervalued (this was reflected by several interviewees) and thus less motivated to strive for optimal outcomes that lie beyond their direct tasks.

Organisations must undergo a cultural shift in order to create an environment where the value of supply chain management is understood within and beyond Supply Chain units, and where Supply Chain staff receive the space, support, and trust to thrive. While this shift will not happen without leadership’s drive, Supply Chain staff should support such shift and be their own best advocate (e.g., by providing evidence related to the impact of supply chain planning). This recommendation comes first as we believe it is foundational to the subsequent recommendations outlined below.

**Recommendation 2: Institutionalise and formalise the function of supply chain planning**

One of the important insights underscored by our research is that supply chain planning is poorly institutionalised across humanitarian organisations. If they exist at all, supply chain planning processes are often loosely implemented and/or limited in scope (focusing primarily on sourcing). Organisations should overcome this by recognising supply chain planning as a foundational supply chain function and working to have a clear process framework in place that considers the three planning levels (operational, tactical, and strategic). This should also include ensuring staff’s availability to effectively drive such processes, with dedicated demand and supply planners, or by integrating demand and supply planning into existing roles.

Supply chain planning should be an iterative process (i.e., continuously repeating in time), also known as a planning cycle. Each iteration should involve a series of tasks and activities aimed at updating plans with the latest information available while ensuring alignment among stakeholders. Tactical planning cycles could, for example, repeat monthly or quarterly, while operational and strategic planning cycles could be weekly and yearly, respectively. A cycle should involve all relevant stakeholders—including

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1 Interestingly, one interviewee shared that, within their organisation, a debate about whether to push some supply chain positions to the Programmes department was ongoing. Whether this is a good idea or not remains open, but it highlights the recognition of Supply Chain management’s direct contribution to Programmes.

2 Supply chain management may even be regarded as a programmatic activity, an idea that was first introduced at the Global Logistics Cluster meeting in 2019.

3 The decision on whether supply chain planning should be conducted solely at the country level, or also at the regional and global levels, depends on each organisation and how its supply chain operates. A global centre of excellence supporting all countries of operations (already in place for some organisations) may also be considered.
those from Supply Chain, Programmes, Finance, and HR—to foster genuine collaboration. Having clearly defined roles and responsibilities, possibly through an RACI (Responsible Accountable Consulted Informed) matrix, enhances coordination and accountability.

The concept of planning cycles also invokes the notion of a rolling horizon. With a rolling horizon, the planning window extends further into the future with each planning cycle, as opposed to being fixed. Such an approach ensures that organisations keep a constant level of visibility (e.g., the next 12 months for tactical planning) rather than lose visibility as time progresses. Almost all of the interviewed organisations followed a fixed horizon approach: The project plans are limited to the duration of their respective projects (even when organisations expect funding to be extended), while annual plans are limited to the calendar year. The sector needs to switch to an approach where supply chain plans are decoupled from funding cycles.

Beyond updating their plans, organisations need to establish routines with each planning cycle where they review the performance of the previous cycle. Unfortunately, the humanitarian sector faces a significant gap in tracking the performance of supply chain plans. Organisations must shift towards measuring performance\(^1\) in order to incentivise individuals to strive for planning excellence. Mere measurement is insufficient; there should be well-defined processes for analysing the root causes of poor performance and implementing corrective actions. To this end, organisations need to establish clear governance structures. The combination of robust analysis and strong governance will drive continuous improvement in supply chain planning, eventually making the whole supply chain and operations more efficient, effective, and sustainable.

**Recommendation 3: Carefully design supply chain plans**

As highlighted in the previous chapter, supply chain plans seem to be lacking structure and fail to incorporate certain elements that are considered good practices. In that regard, humanitarian organisations should invest in and prioritise the design of clear and effective supply chain plans. To achieve this, we recommend the following structural adjustments:

- Distinguish between demand and supply: Clearly differentiating the demand and supply aspects in two different plans is essential to supporting the overall planning process. This will also help to clarify the roles and responsibilities of all stakeholders involved in supply chain planning.

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\(^1\) For example, with KPIs such as forecast accuracy and forecast bias, or planning adherence.
• Use time buckets: Instead of relying on plans with a single date column, adopt the use of time buckets. For instance, organise plans with a column for month (i.e., monthly time buckets) for tactical planning or a week (i.e., weekly time buckets) for operational planning. This approach enhances the understanding of demand volumes over time, facilitating the efficient organisation of the supply chain.

• Consolidate plans effectively to have a holistic supply chain view: Plans should be designed to be consolidated. Granular plans (e.g., plans at the project level) should be designed to be coherent and easily aggregated at a higher level (say at the country level, but also at the regional or global levels where applicable). This consolidation can lead to a comprehensive view of the supply chain, which is essential for decision-making (e.g., externalising the logistics processes to suppliers for certain products; centralising procurement for others).

• Incorporate funding visibility: Plans should encompass both confirmed and unconfirmed funding. Specifying the likelihood of the unconfirmed funds is essential for formulating a realistic demand plan that will be used for supply planning activities.

4.2 | Data and Tools

Recommendation 4: Invest in data and IT tools (even small changes make a difference)

Effective supply chain planning processes depend on the quality of their underlying data. Investing in the maintenance of structured and consistent master data, along with recording real-time transactional data, provides a strong foundation for the development of demand and supply plans.

Essential master data should contain, at the very least, a product master data that includes hierarchical attributes and average costs, a supplier database with estimated lead times, and a location master data. This master data should be maintained consistently across all organisational systems and appropriately utilised in planning processes. For instance, it is important to use verified lead time data when developing procurement plans, or to use the same location data between Programmes’ demand plans and Supply Chain’s supply plans. Beyond master data, transactional data such as inventory on-hand\(^1\), pipeline inventory\(^2\), historical demand\(^3\) and consumption rates should also be captured and made easily accessible to inform planning decisions\(^4\).

IT tools, like an ERP or a Logistics Management Information System (LMIS), are essential for effectively maintaining and recording the data. While these tools are suitable for managing operational supply plans, they may not be ideal for tactical and strategic planning. Dedicated planning systems are often a better fit for these higher-level tasks. Organisations should ensure that these tools seamlessly integrate into a comprehensive IT infrastructure and are easy to access across the organisation to guarantee complete visibility.

In the long term, sustainability is key. While the journey of supply chain planning might begin with ad-hoc tools, sustained success demands organisational and strategic decisions about the toolkit. When developed by a global team, the tools need to be tailored to the specific operational contexts in which they are deployed.

4.3 | People

Recommendation 5: Promote collaborative supply chain planning at all levels

The supply chain planning processes described earlier are inherently collaborative and rely on the involvement of individuals across all organisational functions. While Supply Chain staff are at the centre of the spider web, their efforts alone are insufficient. As explained earlier, collaborative planning operates on both horizontal and vertical axes.

Horizontally, strong collaboration should be promoted among various functions, including Supply Chain, Programmes, Finance, and HR. Establishing transparent information flows through internal communication channels is key to improving the effectiveness and durability of planning. External collaboration with other humanitarian organisations is equally important: for instance, by sharing demand or supply plans. This will facilitate a coherent response for, e.g., facilitating logistics pooling. This white paper also exemplifies the fact that organisations have a lot to share and learn from each other.

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1 Inventory that an organisation has available at its own warehouses or at warehouses from its partners (including with suppliers).
2 Inventory not readily available to meet the demand (e.g., open purchase requisitions, purchase orders, or stock transfer orders).
3 Meaning the actual demand from the past, and not just the distributed goods and used services.
4 This recommendation may not apply to the first days of response following a sudden-onset emergency.
Vertically, it is important to ensure internal alignment within the Supply Chain department at all stages: from local offices to the global level. Regular alignment and feedback mechanisms are essential to maintain coherence and alignment with the overarching plan, as well as empower staff members. External collaboration, especially joint planning with suppliers, contributes to a proactive and resilient supply chain. Establishing long-term agreements with suppliers and freight forwarders can be a simple strategy to ensure cost-efficiency and flexibility in planning.

**Recommendation 6: Strengthen internal and cross-functional supply chain planning capacity**

Effective planning faces significant challenges due to a pervasive lack of understanding between different functions or organisational levels (e.g., between the country and global levels). There are two ways to address this issue: fostering a knowledge-sharing culture at the individual level and promoting organisational training.

A simple yet impactful approach to cultivating a knowledge-sharing culture is to engage in colleagues’ work by gaining first-hand experience of their daily constraints. This can be facilitated in different ways:

- **Role swapping**: Temporarily swapping roles, allowing members of different departments (e.g., Supply Chain, Programmes or Finance staff) or levels (e.g., global and national staff) to immerse themselves in each other’s roles.
- **Specific positions opening**: Implementing a long-term placement of a Supply Chain staff within Programmes or vice versa.
- **Joint analysis**: Conducting joint analyses involving Programmes and Supply Chain can help to break the silos. A successful example of this is joint market analysis.
- **Global support to local teams**: Aiming to support country-based staff when sitting at global level. For instance, tools developed at the global level should be tested first across different operations to prevent a one-size-fits-all strategy that might burden local teams.

These processes enable all staff to collectively face the same reality, develop complementary mindsets and similar vocabulary, and ultimately build better and stronger collaborative plans. This empathetic approach contributes to personal relation-building and compromise while pushing staff members towards the same objective: delivering the programmes and projects effectively, efficiently, and sustainably while remaining compliant with the rules from the organisation and its donors.

Supply chain planning also requires continuous training and formalised capacity building, both within the supply chain and across all organisational functions. The training strategy should encompass different levels:

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1. This was successfully implemented in one of the interviewed organisations.
2. Also successfully carried out in one of the interviewed organisations.
Training for Supply Chain staff: All Supply Chain staff should receive a training about the fundamentals of supply chain planning that covers all steps of the process. In addition, the training should be tailored to the organisation’s context in order to ensure effective and consistent planning within the organisation.

Training for other functions: Equally important is training staff from other functions that contribute to supply chain planning processes. This ensures a comprehensive understanding across teams and promotes collaboration. As a Supply Chain staff member, listen carefully to specific concerns and challenges raised by non-supply chain functions, and actively seek ways to address them through training if applicable.

Leveraging internal and external capabilities: Internal capabilities can be leveraged: for instance, building on supply chain planning initiatives set up in other operations or getting advice from supply chain planning experts at the regional or global levels. Additionally, support can be provided by partner organisations, or by engaging with supply chain planning experts from academia or consultants from the private sector.

Recommendation 7: Retain supply chain planning talents

Skilled staff with supply chain planning expertise are vital for efficient planning and capacity-building. It is therefore critically important to nurture and retain skilled supply chain planners within humanitarian organisations.

Leaders must recognise the importance of retaining trained staff who possess a deep understanding of supply chain planning intricacies, but also have analytical skills, decision-making capabilities, and the ability to collaborate seamlessly with internal and external stakeholders. To that end, organisations should implement policies that promote talent retention, attract experts from the commercial sector, and sustain robust supply chain planning capabilities over time. Organisations can enact strategies such as minimising turnover, enabling career progression for supply chain planners into expert or management roles, ensuring continuity at all levels of the organisation, and recruiting from the private sector. By investing in qualified staff, organisations gain the flexibility to navigate complex processes, thereby improving overall agility and resilience in the face of dynamic operational challenges.

Recommendation 8: Be proactive

In supply chain planning, even the smallest improvements are important. To enhance the overall process, all staff can proactively engage in a variety of actions:

- Implement quick wins at the individual level. For instance, Supply Chain staff can consider actions such as consolidating or staggering orders and shipments, closely monitoring stock levels, and establishing stock level targets.
- Strengthen supplier partnerships through sharing plans and jointly managing stock. This will also support the maintenance of a rationalised and trustworthy supplier base when possible.
- Maintain data such as product masters or lead time estimations, which are essential across the organisation.
- Track KPIs and leverage data to demonstrate the power of supply chain planning. KPIs such as expiries, stock-outs, or on-time in-full can be regularly tracked to gain buy-in from your colleagues and management on the value of supply chain planning. Staff with data expertise can also introduce proof of concepts related to supply chain planning tools.
- Enhance integration by proactively sharing plans, whether those be tentative demand plans to be shared by Programmes staff or tentative supply plans to be shared by Supply Chain staff.
- Improve communication between all functions through different channels: monthly coordination meetings, cross-functional communication, or simplified templated reports. Ad-hoc communication can also be used to explain unexpected changes, such as a surge of demand in a location that requires a specific delivery schedule or reshuffling the supply plans due to shipment delays. Communication is important not only within a function, but also between functions (Supply Chain, Programmes, Finance…) and vertically between the different units at the country, regional and global levels.
- Be curious and committed to improving supply
Embrace the idea of a cultural change to improve supply chain planning—do not panic and instead actively contribute to pushing supply chain planning in the right direction.

### 4.4 | Recommendations for donors

While we have outlined multiple recommendations for organisations to improve their supply chain planning capabilities, donors also play an instrumental role in shifting this perspective.

#### Recommendation 9: Advocate for and invest in supply chain planning

Beyond their normal advocacy efforts, donors can proactively drive positive change and scalability for supply chain planning in the humanitarian sector. A starting point for donors is to establish clear requirements for supply chain planning, emphasising the dynamic nature of the process. For instance, this includes encouraging regular updates and reviews of the supply chain plans to move away from viewing them as mere paperwork. These additional supply chain planning considerations could be documented in the donor’s supply chain policies.

Additionally, donors can also actively invest in the supply chain planning capability building within humanitarian organisations, fostering a culture where supply chain planning is recognised as a strategic component, thereby enhancing the overall efficiency and effectiveness of humanitarian operations. Ultimately, a coordinated effort between donors and organisations can lead to a paradigm shift in the sector, bringing more robust and sustainable supply chain planning practices.

#### Recommendation 10: Increase flexibility in funding to support optimised operations

Increasing flexibility in funding is key for optimising operations and elevating the value of end-to-end supply chain planning within the humanitarian sector. One effective strategy is to promote neutral stock based on non-earmarked funds, or to at least encourage a shift towards programme earmarking rather than project earmarking. The flexibility introduced through programme-based approaches allows organisations to holistically address larger issues (e.g., food insecurity) with increased adaptability. Moreover, organisations can achieve smoother operations by reducing their dependency on earmarking and instead facilitating internal borrowing or encouraging loans between organisations. Donors can further aid the process by providing longer-term funding or at least by facilitating grant extensions, where relevant. This shift in funding strategy not only improves the agility of the overall supply chain (and its planning), but also contributes to a more sustainable and impactful humanitarian response.

### General recommendations for humanitarian organisations

<table>
<thead>
<tr>
<th>Processes</th>
<th>People</th>
<th>Data and tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevate Supply Chain as a strategic partner</td>
<td>Promote collaborative supply chain planning</td>
<td>Invest in data and IT tools (even small changes make a difference)</td>
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<tr>
<td>Institutionalise and formalise the function of supply chain planning</td>
<td>Strengthen cross-organisational supply chain planning capacity</td>
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<tr>
<td>Carefully design supply chain plans</td>
<td>Retain supply chain planning talent</td>
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Visual 8: Overview of recommendations to humanitarian organisations and donors
Conclusion
Conclusion

A summary of our findings

The primary objective of our research was to evaluate the current state of supply chain planning within the humanitarian sector. Our findings indicate that supply chain planning is not yet fully institutionalised. While the 15 organisations we consulted engage in some form of supply chain planning, these efforts are frequently limited by a lack of processes, poor tools and data, as well as weak governance. Additionally, a significant barrier to effective supply chain planning is the existence of organisational silos, which appear to persist in many organisations, particularly between Supply Chain and Programmes staff. These silos hinder cross-functional collaboration, thereby impeding planning.

Our research also highlighted a narrow understanding of supply chain planning within the sector. In most organisations, supply chain planning is predominantly focused on sourcing activities. However, planning for procurement and logistics, as well as market research to inform the modality decision (in-kind aid or cash and voucher assistance), is often underdeveloped. Additionally, planning efforts are typically dedicated to specific projects or activities, lacking a broader, organisation-wide supply chain perspective. Consequently, a comprehensive, strategic approach to supply chain planning that encompasses the entire organisation and integrates various supply chain areas is generally absent.

That said, we observed significant variability in supply chain planning maturity levels across humanitarian organisations in the sector, with some organisations being much more advanced than others. This variability also exists within organisations, where certain country offices demonstrate greater maturity than others. This means there is a significant opportunity for organisations and their offices to learn from one another and practitioners should be encouraged to exchange success stories and best practices. As supply chain planning gains traction in the sector, a culture of shared learning and collaboration will be key to achieving meaningful progress.

Driving a transformative change in supply chain planning within the humanitarian sector necessitates the active engagement of all stakeholders. Collaborative efforts between donors and organisations, leadership and their respective staff members, and Supply Chain and Programmes will drive meaningful change at scale. The delicate balance between accountability, typically brought by the Supply Chain, and the flexibility required by the Programmes underscores the importance of planning at all levels in order to facilitate a cross-functional consensus. Supply chain planning also emerges as a cornerstone for sustainability, as sustainability requires effective supply chain planning across operational, tactical, and strategic planning. Overall, it is important to recognise that supply chain planning extends beyond paperwork, serving as a catalyst for effective, efficient, and sustainable action and execution.

Initiating collaboration in supply chain planning will require targeted efforts. With modality planning occupying the interchapter between programmatic and supply chain activities, market analysis stands out as a promising opportunity for cross-functional collaboration. Additionally, collaboration with academia and the private sector can also elevate organisations’ capabilities to the next level. Future research avenues include exploring the integration of cash in supply chain planning, embedding emergency aspects into broader supply chain planning activities, and initiating concrete supply chain planning consulting partnerships with humanitarian organisations.

We invite you to play an active part in these ongoing conversations, sharing your insights and perspectives as well as showing curiosity for seeking and exploring new possibilities for supply chain planning in the sector. For those eager to dig deeper, we invite you to read about the topic and learn about Sales and Operations Planning (S&OP) and Integrated Business Planning (IBP), fundamental frameworks in the commercial sector that shape planning practices.

We extend our sincerest gratitude to you, our esteemed reader, for your time and consideration in engaging with our white paper.

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1 We namely recommend the following book about S&OP: Wallace, T. F. (2004). Sales and operations planning: the how-to handbook. T.F. Wallace & Co. We also recommend the following podcast about IBP: Let’s Talk Supply Chain Episode 47: How Integrated Business Planning is Bringing Sexy Back w/ Int’l Guest speaker, Steven Harney.
Appendix
Appendix 1 | Organisations which took part in our research

Fifteen international humanitarian organisations participated in our research project, encompassing INGOs, UN agencies, the RCRC Movement, and one governmental organization. The figure below details the organisations involved, along with the number of individuals interviewed from each.

<table>
<thead>
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<th>Number of individuals consulted</th>
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</tr>
<tr>
<td>World Health Organization (WHO)</td>
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<tr>
<td>Medair</td>
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<tr>
<td>World Food Programme (WFP)</td>
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<tr>
<td>Danish Refugee Council (DRC)</td>
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<td>Foreign, Commonwealth and Development Office (FCDO)</td>
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<td>Médecins Sans Frontières (MSF)</td>
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<td>United Nations International Children’s Emergency Fund (UNICEF)</td>
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Appendix 2 | Interviewees who took part in our research

We conducted interviews with 39 practitioners from the 15 humanitarian organisations participating in our research project. The table below provides additional details about these practitioners at the time of the interview, specifically: (1) their organisation, (2) whether they were part of the Supply Chain or Programmes staff, (3) their geographical focus, (4) their location, and (5) their years of experience in the humanitarian sector.

<table>
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<th>Geographical work scope</th>
<th>Location</th>
<th>Years in humanitarian sector</th>
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*Two interviews were conducted with these persons.
Appendix 3 | The Supply Chain unit across organisations

We asked to each organisation participating in our research how they name the Supply Chain unit at the country office level of their organisation, and to which wider department it belongs to. The results are shown in the below table.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Name of the Supply Chain unit at country office level</th>
<th>Name of the department to which the Supply Chain unit belongs to at country office level</th>
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<td>Organisation 2</td>
<td>Logistics</td>
<td>Logistics (as a standalone department)</td>
</tr>
<tr>
<td>Organisation 3</td>
<td>Supply Chain</td>
<td>Supply Chain (as a standalone department)</td>
</tr>
<tr>
<td>Organisation 4</td>
<td>Supply Chain</td>
<td>Support Services or Supply Chain (as a standalone department)</td>
</tr>
<tr>
<td>Organisation 5</td>
<td>Logistics</td>
<td>Support</td>
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<tr>
<td>Organisation 6</td>
<td>Supply Chain</td>
<td>Support Services</td>
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<td>Organisation 7</td>
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<td>Support</td>
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<td>Organisation 8</td>
<td>Supply Chain</td>
<td>Programmes Support</td>
</tr>
<tr>
<td>Organisation 9</td>
<td>Supply Chain</td>
<td>Programmes Operations or Supply Chain (as a standalone department)</td>
</tr>
<tr>
<td>Organisation 10</td>
<td>Logistics</td>
<td>Logistics (as a standalone department)</td>
</tr>
<tr>
<td>Organisation 11</td>
<td>Supply</td>
<td>Operations</td>
</tr>
<tr>
<td>Organisation 12</td>
<td>Supply</td>
<td>Operations</td>
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<tr>
<td>Organisation 13</td>
<td>Logistics</td>
<td>Corporate Services or Operations</td>
</tr>
<tr>
<td>Organisation 14</td>
<td>(No country office)</td>
<td>(No country office)</td>
</tr>
<tr>
<td>Organisation 15</td>
<td>Supply and Logistics</td>
<td>Business Operations or Emergencies</td>
</tr>
</tbody>
</table>
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We would like to thank all interview respondents who provided us with valuable insights and information about supply chain planning within their organisations. This report would not have been possible without their openness and willingness to contribute.

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