The Center for Humanitarian Logistics and Regional Development (CHORD) is a joint venture of Kühne Logistics University (KLU) and HELP Logistics of the Kühne Foundation. CHORD aims to bring together the best of two worlds by combining top-class academic research and education with operational training and consulting excellence. As a thought-leading hub, CHORD is delivering innovative logistics and supply chain solutions validated by rigorous research methods to improve social and economic progress in developing countries. www.the-klu.org/chord.

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In an era marked by unprecedented global challenges, supply chain dynamics within the humanitarian context are more impactful than ever. Humanitarian supply chains are pivotal for delivering vital aid to those impacted by crises.

During 2023, these supply chains navigated a labyrinth of challenges spurred by an array of global crises, including the war in Ukraine, the Israel-Gaza war, and natural disasters like the earthquakes in Turkey, Syria, and Afghanistan. Against a backdrop of crises, global surveys led by CHORD, Kühne Logistics University, and HELP Logistics have gathered over 2,300 responses since 2021 to uncover practices and challenges faced by those at the forefront of the humanitarian supply chain.

The “State of Logistics and Supply Chain in the Humanitarian Context 2023” report captures a year of significant progress and challenges. Thought leaders representing different stakeholders in the humanitarian sector were invited to revise the survey questions to maximize their relevance for decision-making. After gathering input from thought leaders, the revised global survey was launched in 2023 and collected 341 responses from individuals working in humanitarian supply chains around the world, capturing mainly the views of those in field and country offices.

Four highlights emerged, painting a picture of a sector in transition

Localization and environmental sustainability are on the rise in supply chains.

The report shows that supply chains are shifting towards localization and environmental sustainability, as 76% and 81% of respondents respectively considered both aspects strategic priorities. More respondents also indicated assessing the environmental impact and buying from local markets, continuing the similar positive trends in the 2021-22 survey. However, funding and capacity challenges, such as insufficient staff skills, remained major obstacles, requiring innovative financing and strategic collaborations.

Digital transformation boosts supply chain performance.

Digital transformation was recognized for its positive impact on supply chain performance by an impressive 89% of respondents noting this impact. Notably, compared to the 2021-22 survey, more respondents reported using information technology (IT) systems. However, advanced technologies like artificial intelligence were still deemed infeasible due to challenges such as insufficient IT infrastructure and lack of skills. This indicates a gap between possible benefits and practical implementation.

Coordination efforts stagnate amid operational challenges.

Most respondents reported low levels of coordination within and between humanitarian actors, reflecting a complex and challenging operational setting. Following the trends in the 2021-22 survey, more than 50% of the respondents on average indicated sharing resources infrequently within their supply chain network, underscoring a critical area for improvement.

Supply chain preparedness needs more investment.

A concerning trend was observed with a notable 46% of respondents reporting a lack of preparedness in their supply chains to cope with key risk factors. These include a lack of coordination, funding, and reliable demand forecasts for relief operations.

This report provides an overview of the sector’s achievements and the hurdles that lie ahead, setting the stage for a detailed discussion on advancing humanitarian supply chains in the face of an increasingly complex global landscape. Key findings of 2023 emphasize a sector in transition, marked by an increased commitment to localization and environmental sustainability and a cautious yet growing adoption of IT systems, affirming the positive trends of the past years. While these highlights mark significant progress, coordination challenges within and between humanitarian actors, as well as the need for better supply chain preparedness, are still important issues that require attention. These insights not only reflect the sector’s current state but also guide us towards actionable strategies for enhancing supply chain impact in humanitarian operations. The upcoming sections delve deeper into these insights.
1. Introduction

1.1 Objectives and method
The humanitarian sector is constantly evolving to meet the changing needs of aid recipients, facing challenges such as climate-related disasters, geopolitical crises, and man-made conflicts in Gaza and Ukraine. To gain a comprehensive understanding of the challenges and opportunities in 2023, CHORD conducted the global survey, gathering up to 341 responses from individuals across various organizations, hierarchy levels, and regions involved in humanitarian supply chains. After CHORD surveys collected over 2,300 responses since 2021, thought leaders from various stakeholder groups in the humanitarian supply chain, such as donors, internal non-governmental organizations, and the United Nations, were invited to Hamburg for a workshop in 2023. The purpose was to revise and update the current survey questions to maximize their relevance for decision-making. Therefore, insights from the current survey are invaluable for decision-makers to identify areas for improvement within the sector and refine strategies based on evidence amid evolving circumstances.

1.2 Sample of respondents
The majority of respondents were employed at the national level; namely, from country or field offices (68%), aligning with the objective of local voice representation. Respondents from regional offices and headquarters (32%) contribute to the global perspective. Analyzing perspectives by organizational level helps contrast views and assessments of supply chain-related activities.

More than a quarter of the respondents have over 10 years of experience in the humanitarian sector (27%). The majority are engaged in complex disaster operations involving both natural and man-made disasters (57%). Respondents were mainly based in Africa (61%), followed by the Asia-Pacific region (13%), Europe (13%), the MENA region (10%), and the Americas (3%). Local NGOs represent 17% while international NGOs account for 42%, totaling 59% representation. Additionally, there is participation from UN agencies (16%) and governmental actors (14%), as well as commercial logistics service providers (5%) and humanitarian logistics service providers (4%), along with institutional donors (2%).

Figure 1: The national level refers to employees at field and country offices, whereas the global level refers to employees at regional and headquarters offices.

<table>
<thead>
<tr>
<th>Geographic location</th>
<th>Organizational type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa 61%</td>
<td>NGOs 59%</td>
</tr>
<tr>
<td>MENA 13%</td>
<td>Donor 9%</td>
</tr>
<tr>
<td>Europe 13%</td>
<td>Government 14%</td>
</tr>
<tr>
<td>Asia and Pacific 13%</td>
<td>Logistics service provider 2%</td>
</tr>
</tbody>
</table>
2. Localization and environmental sustainability

2.1 Strategic priorities in humanitarian supply chain

The humanitarian sector has prioritized localization and environmental sustainability in recent years. Localization means that local actors own and lead humanitarian operations and have more decision-making power downstream of the supply chain. Environmental sustainability means that humanitarian supply chains have fewer negative effects on the environment. The survey findings indicate that 76% of respondents believed localization and a significant 81% of them considered environmental sustainability to be strategic priorities for their organization in 2023.

Figure 3: The percentages of respondents who reported that localization and environmental sustainability were strategic priorities in their organizations in 2023.
## 2.2 Localization

The survey measured two aspects of localization efforts: commitment to local actors and local market empowerment. Commitment to local actors refers to the degree of ownership given to local partners, such as non-governmental organizations, suppliers, and government entities. Respondents assessed this aspect by rating the frequency with which their organization worked to enhance local supplier capacity, increase decision-making power of local actors, and promote local staff to senior positions in 2023. Compared to only about half of the global level respondents (43-51%), the national level respondents suggested more progress with over 60% indicating consistent increase in the commitment to local actors in their organizations.

![Figure 4.a: The percentages of respondents who reported that their organization consistently engaged in activities to increase commitment to local actors in 2023.](chart)

Moreover, respondents assessed local market empowerment by rating the frequency with which their organization purchased from local markets and expanded cash and voucher assistance programs in 2023. Interestingly, the percentage of respondents who reported local purchasing of supplies and services was significantly higher at the national level (78%) than at the global level (58%). On the other hand, the expansion of cash and voucher assistance programs was reported by slightly more than half of the respondents at both levels (57% and 52%).

Overall, a positive trend for implementing localization efforts has continued in 2023. For example, while an average of 65% reported purchasing from local markets over 2021-22, a similarly high 68% indicated doing so in 2023 (with a significant increase to 78% among national-level respondents). A similar trend was seen with cash-based assistance, with more than half of respondents indicating expanding cash-based assistance from 2021 to 2023.

![Figure 4.b: The percentages of respondents who reported that their organization consistently engaged in activities to empower local markets in 2023.](chart)
2.3 Environmental sustainability

The survey also measured two aspects of environmental sustainability efforts: sustainability practices and sustainability assessments. Sustainability practices include measuring greenhouse gas emissions (GHGs) and solid waste generated by the supply chain, and implementing green logistics, such as fuel-efficient vehicles and sustainable packaging. Respondents rated the integration of these practices in their organization’s supply chain by indicating how often their organization applied them in 2023. On average, only about half of the respondents reported a consistent implementation of environmental sustainability practices in their supply chain. However, there is a noticeable difference between the views of national and global level respondents. In other words, more national level respondents (47% to 69%) reported consistent implementation of sustainability practices, whereas significantly fewer global level respondents (34% to 39%) reported such an implementation in their organization.

Moreover, respondents indicated how often their organization implemented sustainability assessments on their supply chain. First, they rated how often they used environmental criteria in requests for quotes (RFQs) or proposals (RFPs) to select suppliers that met their environmental standards. Second, they also rated the frequency of conducting environmental impact assessments. Interestingly, more national than global level respondents reported using environmental criteria in selecting suppliers (63% vs. 42%) and performing impact assessment (58% vs. 42%) in their organizations.

Overall, there has been a notable increase in awareness and implementation of environmental sustainability in 2023. Particularly, in comparison to the 41% of respondents who always performed impact assessments during the 2021-2022 survey period, half of the respondents on average (including a substantial 58% at national level) reported performing impact assessments in 2023.
2.4 Enablers of localization and environmental sustainability

The survey sought to understand the factors that facilitated the localization and environmental sustainability of supply chains in 2023. Respondents identified investments in partnership with local actors, e.g., non-government organizations, suppliers, and aid recipient communities, as a crucial factor that facilitated the localization of humanitarian supply chain efforts.

“Building strong partnerships with organizations on the ground, as well as engaging with local communities, helped us overcome many of the challenges.

“Partnership with local suppliers of essential goods such as drugs and food supplements has been a great enabler for programs and operations in 2023 for my organization.

Similarly, respondents considered awareness, supportive government policies, and the availability of partners that already implemented environmental sustainability practices to be the key factors that enhanced environmental sustainability in their supply chain in 2023.

“A major enabler in our efforts towards environmental sustainability was the growing awareness and commitment among [our] staff, partners, and host communities.

“There was a notable shift towards embracing sustainable practices, driven by a shared recognition of the importance of preserving the environment for the well-being of displaced populations and future generations.

“Support from international donors and governments that prioritized environmental sustainability and climate resilience in their funding and policies played a crucial role in enabling us to implement more environmentally friendly initiatives.
2.5  Barriers to localization and environmental sustainability

The survey also sought to understand the factors that limited localization and environmental sustainability in humanitarian supply chains in 2023. Funding and budgetary constraints were highlighted by many respondents to be a critical barrier against localizing the supply chain and implementing environmental sustainability practices in the humanitarian sector.

Additionally, respondents identified other specific factors that hindered the localization of the supply chain. Therefore, there is a consensus that "local suppliers’ limited capacity to meet donors’ requirements," is a major constraint for localization efforts.

Moreover, several respondents also described the lack of ownership and clear understanding of localization efforts among humanitarian actors as a problem.

Finally, while environmental sustainability is recognized as a strategic priority in the humanitarian sector, respondents underlined that integrating environmental sustainability practices into their supply chain was impeded by insufficient and poorly enforced policies and field guidelines within the organizations.

"A barrier to localization of the supply chain is the cost of localization. Localization can be expensive, as it requires the organization to invest in new suppliers, new equipment, and new training.

"Budget constraints often limited our capacity to invest in sustainable technologies and infrastructure, despite recognizing their long-term benefits.

"The biggest barrier has been quality assurance. Because of the increase in the price of materials, most local suppliers have resorted to producing substandard products.

"[Localization] is an unclear concept, and then everyone gives their own definition.

"The biggest obstacle to localizing the supply chain is first and foremost the ownership of the concept, which is sometimes misunderstood by the supply chain and the program divisions.

"The biggest barrier has been the policy framework related to sustainable supply chain [which] is not well pronounced and catered for in the strategic plan of the organization.

"Policy is an essential element of the [environmental sustainability] approach. What we are missing is the enforcement and the follow-up on its implementation by the organization.

"HQ is producing policy, but we are waiting for realistic field guidelines and standards. We do not have such expertise in the field of operations, and experts are often in the HQ or working for research groups."
3. Digital transformation

3.1 Digital impact

Digital transformation is the process of integrating advanced technologies\(^1\) and digital solutions into supply chain activities. The survey revealed that most respondents recognized the positive impact of digital transformation on their organization’s supply chain in 2023. A notable 89% of respondents reported improvements in their supply chain performance due to the use of advanced digital technologies beyond basic tools like Excel. The survey found a strong consensus among national and global respondents on the impact of digital transformation on their supply chain.

3.2 IT system usage

Information technology (IT) systems are digital platforms that support supply chain activities, such as Enterprise Resource Planning (ERP), Project Information Management Systems (PIMS), or Warehouse Management Systems (WMS). The survey showed that the adoption of IT systems in supply chain activities varied between national and global level respondents in 2023. Only 48% of the global respondents reported that they constantly used IT systems in their supply chains, compared to 68% of the national respondents. However, this also implies that a significant proportion of respondents at both levels never or only occasionally used IT systems.

\(^1\) Advanced digital technologies refer to modern technologies such as Internet of Things, cloud computing, robotic process automation, blockchain technologies, artificial intelligence, advanced analytics software, mobile devices, geographic information systems, or predictive modeling software.

In 2023, significantly more respondents used IT systems compared to previous survey periods. While an average of 53% of respondents reported using IT systems over 2021-22, a higher average of 63% of respondents (with a notable 68% at the national level) indicated doing so in 2023.

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Figure 6: The percentages of respondents who reported that digital transformation positively impacted the performance of their supply chain in 2023.

- **Agreement**: 89%
- **Disagreement or neutral opinion**: 11%

Figure 7: The percentages of respondents who reported that they consistently used IT systems in their organizations in 2023.

- **National level**: 68%
- **Global level**: 48%

20pp pp refers to the percentage point difference between the national and global perspective.
3.3 Advanced technology usage

The survey also explored the likelihood of implementing advanced digital technologies, beyond IT systems. Findings suggest that common technologies, such as mobile devices and cloud computing, are already in use or in pilot stages for most respondents (88% and 71%, respectively). However, emerging technologies were perceived as less feasible in humanitarian supply chains, as over half of the respondents considered them unlikely to be adopted in 2024. The most skeptical technologies were artificial intelligence (AI) and robotic process automation, with 52% and 54% of the respondents, respectively, expressing a low likelihood of adoption.

3.4 Implementation barriers to advanced technology usage

The survey also investigated the barriers to digital transformation in the humanitarian sector. The findings show that 54% of respondents cited insufficient IT infrastructure as the main barrier, followed by inadequate funding and poorly trained staff, both at 44%, as critical challenges to adopting digital technologies in the humanitarian sector.
4. Coordination

4.1 Supply chain representation in senior leadership

Supply chain representation is the inclusion of supply chain personnel and perspectives in strategic planning and decision-making. The survey results indicate that more than half of the global respondents (54%) never or only occasionally observed supply chain personnel in strategic decisions in their organization. National respondents reported this experience less frequently (43%).

Compared to the trends of 2021-22, the involvement of supply chain personnel in strategic decisions at the senior management level remained unchanged, with an average of 52% of respondents indicating little to no representation.

4.2 Coordination between supply chain and program division

The coordination between the supply chain and the program division involves collaborative activities, such as joint planning and decision-making, resource sharing, close collaboration, goal alignment, and regular meetings. The survey results reveal that more than half of the global respondents (55%) experienced low or no coordination between their supply chain and program divisions in 2023. In comparison, only 35% of the national respondents reported limited internal coordination.
4.3 Coordination between humanitarian actors

Coordination between humanitarian actors such as international NGOs or the United Nations agencies involves cooperative operational activities, such as joint needs assessment, joint planning, and joint funding appeals. The survey results show that more than half of respondents (52%, 59%, and 59%, respectively) experienced low coordination in all three categories of activities in 2023.

4.4 Resource pooling

Resource pooling is the use of shared resources among different humanitarian actors to improve supply chain efficiency. The survey results indicate that most respondents (57% on average) never or only occasionally pooled supply chain resources with other humanitarian actors in 2023. The survey also found that warehousing was the most frequently pooled resource (50%), while funding, procurement, and human resources were the least pooled resources, with 63%, 60%, and 59% of the respondents, respectively, reporting low or no pooling.

The lack of coordination in supply chain resource pooling continues into 2023, showing no improvement from past years. On average, 57% of respondents reported that their organization rarely or never engaged in resource pooling with other humanitarian actors, similar to the trend seen in 2021-22.
4.5 Coordination with the private sector

The survey assessed the impact of coordination between humanitarian actors and the private sector on supply chain performance in 2023. The survey results indicate that most respondents (62%) experienced a positive impact from such coordination, while a considerable minority (38%) perceived low or no impact on their organization’s supply chain.

Moreover, the level of joint supply chain planning and flexibility in dealing with unexpected changes (e.g., in delivery time, location, or quantity) characterize the coordination with the private sector. The survey results show that 35% of the respondents never or only occasionally had flexibility in their coordination with the private sector partners, whereas more than half (56%) reported very limited joint supply chain planning with the private sector partners.

Figure 14: The percentages of respondents who reported their perception of the impact that collaboration with the private sector had on their organization’s supply chain in 2023.

- **38%** No or low impact
- **62%** High impact

Figure 15: The percentages of respondents who reported that their organization never or only occasionally coordinated activities with private sector partners in 2023.

- **35%** Flexibility in responding to changes
- **56%** Joint supply chain planning
4.6 Coordination with donors

Donors’ role is particularly marked by two characteristics: Providing technical support and promoting resource sharing among their funded partners in the humanitarian sector. About half of the national level respondents reported that donors never or only occasionally encouraged resource sharing or provided technical supply chain support, while most global level respondents (61%) reported the same.

Figure 16: The percentage of respondents who reported that donors never or only occasionally participated in providing supply chain support to their organization.

<table>
<thead>
<tr>
<th>Encouraged resource sharing</th>
<th>Provided technical supply chain support</th>
</tr>
</thead>
<tbody>
<tr>
<td>National level: 48%</td>
<td>Global level: 50%</td>
</tr>
<tr>
<td></td>
<td>National level: 61%</td>
</tr>
<tr>
<td></td>
<td>Global level: 61%</td>
</tr>
</tbody>
</table>

13 pp refers to the percentage point difference between the national and the global perspective.
5. Supply chain risk mitigation and preparedness

5.1 Supply chain risks

The humanitarian supply chain is highly uncertain and risky. In 2023, over 50% of the respondents reported that their organizations did not mitigate supply chain risks effectively. The most critical risk factors were related to coordination, funding, and demand, with low-risk reduction efforts reported by 55%, 54%, and 52% of respondents, respectively.

![Figure 17: The percentage of respondents who reported low risk reduction in their organization's supply chain in 2023.]

5.2 Supply chain risk mitigation strategies

The survey assessed how respondents mitigated supply chain risks in their organizations in 2023. It identified three main risk mitigation strategies: Improving relationships with suppliers, diversifying the pool of suppliers, and contingency supply chain planning. Most respondents at the national and global levels (75% and 69%, respectively) indicated using long-term framework agreements to improve supplier relationships. However, more national level respondents (74%) reported diversifying their suppliers than global respondents (54%). Similarly, more national level respondents (70%) suggested implementing contingency planning as a risk mitigation strategy than global respondents (57%).

![Figure 18: The percentages of respondents who reported that their organization consistently implemented a risk mitigation strategy in supply chain in 2023.]

pp refers to the percentage point difference between the national and the global perspective.
5.3 Supply chain preparedness

Preparedness refers to proactive strategies to improve the organization’s supply chain in responding to disasters. The survey measured the supply chain preparedness of the respondents’ organizations based on their recent disaster response. While 54% of the respondents said their organization was highly or fully prepared for supply chain challenges, worryingly, 46% of them reported no or low preparedness levels.

5.4 Supply chain capacity building

Supply chain training and capacity building are vital for the humanitarian workforce. The survey shows that a significant 72% of the respondents indicated having well-trained staff for supply chain and logistics roles and responsibilities.

Figure 19: The percentages of respondents who reported the level of their organization’s supply chain preparedness in 2023.

- 46% Low preparedness
- 54% High preparedness

Figure 20: The percentages of respondents who reported the level of supply chain training provided by their organization in 2023.

- 28% No or inadequate training
- 72% Adequate training
6. Conclusion

The humanitarian supply chain reached a turning point in 2023, as it made remarkable advances but also faced persistent obstacles.

This report presents the views of over 300 practitioners who provide a snapshot of the sector’s current situation. Our survey results show an urgent need for supply chains that align strategically with the principles of localization, environmental sustainability, and digital transformation. Fortunately, most survey respondents reported that their supply chains have become localized and environmentally friendly. Furthermore, IT systems have been more widely adopted, and digital transformation was considered crucial for improving supply chain performance. However, the sector still struggles with some challenges. Coordination within and between humanitarian actors was severely deficient, and supply chain preparedness was deemed inadequate by a significant proportion of respondents, despite their efforts to reduce risks. Consequently, most survey respondents cited insufficient coordination, funding, and demand uncertainty for relief as the main risk factors affecting their supply chains.

These areas reflect the humanitarian sector’s achievements and challenges in pursuing its mission of easing human suffering with effectiveness and efficiency. Hence, this report emphasizes the urgency of tackling these issues. The main findings from the global survey offer a basis for strategic action, giving essential recommendations for the leaders in the humanitarian sector to enhance the performance and impact of their organization. The next section of this report elaborates on these recommendations.

"This report enables supply chain colleagues to learn annually about developments and trends in the sector. It provides findings they can use to identify priority areas to consider in their organization's planning efforts at field and headquarters level and facilitates informed decision-making. It also strengthens our collective advocacy, ensuring humanitarian supply chains are recognized as essential to our mission's success.

Mailin Fauchon, Coordinator, Global Logistics Cluster"

"This report shows the huge opportunities and the urgent need to act now. We need this kind of high-level, strategic overview to guide leadership decisions in the humanitarian sector on supply chain. The document is unique in that it reflects the voice of the whole community on the big strategic questions facing the humanitarian supply chain, based on a comprehensive survey. It provided hard evidence that the time is ripe for a more strategic approach to supply chain and provides a useful analysis for humanitarian leaders of areas to focus on. It is a powerful tool for change.

Richard Kneller, Coordinator - Strategic Supply Chain, DG ECHO"

"In today's pressing global challenges, this report cuts through the complexity of humanitarian supply chains, not only identifying critical issues but also laying down a strategic roadmap for leaders. We're steering towards a future where efficiency in supply chain management is fundamentally linked with the well-being of communities. It is more than navigating crises; it's about transforming emergency response through innovation, strategic partnerships, and a deep commitment to sustainability and digital advancement. We need to take the necessary steps towards a supply chain that is both humanitarian in intent and sustainable in impact. This report is a call to action for the humanitarian sector, urging to rethink, innovate, and build supply chains that are smarter, more responsive, lead with foresight, and deeply attuned to the needs of the communities.

Seán Rafter, Managing Director, HELP Logistics"
7. Recommendations

Localization and environmental sustainability

“Supply chains account for up to 60% of the emissions, so we need to define what greening entails and avoid the greenwashing. We need clear and consistent green criteria throughout the chain, and we need to acknowledge that value for money may not be the main driver. Moreover, having sustainability policies is not enough, they need to be translated into actions that match the donors’ requirements and funding.

Cecile Terraz, Director of Supply Chain and Procurement, Plan International

“There is a consensus on the urgency to reduce our environmental impact, yet it’s evident that such ambitions are not being realized as fast and as thoroughly as we would wish. One of the underlying causes is the lack of a clear understanding of the different tools and approaches to measure our footprint, which would allow us to demonstrate improvements not only within the Red Cross but throughout the humanitarian sector. Work should continue to identify the optimal approach to ensure we can both measure and compare improvements, as well as adopt and disseminate valuable insights throughout the sector.

Michael Goodhand, Senior Supply Chain Lead: Strategy and Design, IFRC

The humanitarian sector is committed to advancing the Agenda for Humanity and the Grand Bargain. Hence, it is vital that leaders in the sector make localization and environmental sustainability their top priorities as part of these initiatives by integrating them into their supply chain actions. To achieve this, we recommend leaders to:

• Implement localization and environmental sustainability practices within the supply chain by defining clear criteria that align both aspects. These criteria should weigh the costs and benefits of different sourcing options in each operational setting. For example, localizing procurement may lower transportation costs and emissions but risk product quality if sourced from countries with weak environmental standards. On the other hand, sourcing from environmentally responsible countries may raise transportation costs but guarantee product quality and compliance with donors’ requirements. Clear criteria can guide supply chain personnel and program planners to make decisions that support localization and environmental sustainability objectives.

• Allocate budgetary resources to localization and environmental sustainability consistently. Leaders should invest in supporting local actors, such as governments, non-government organizations, and commercial suppliers, to deliver humanitarian aid while reducing the environmental impact of their operations, such as greenhouse gas emissions, waste generation, and resource depletion. This requires balancing the value for money principle (i.e., cost efficiency) with localization and environmental practices in humanitarian supply chains, as the latter may result in more time-consuming procurement and higher costs in the short term.

• Ensure donor requirements support environmental sustainability practices by engaging with them continuously. Leaders should raise awareness about how donor requirements and policies affect environmental sustainability within supply chains. Donors may not always provide enough and flexible funding to support environmental sustainability. This poses a challenge because humanitarian actors may need to invest in capacity building efforts to implement sustainable practices, as they often lack the expertise and skills. Otherwise, environmental sustainability could be compromised or neglected.
**Digital transformation**

“Apps are only one aspect of digitalization. The real value lies in end-to-end systems and the benefits of big data. Yet, we are not fully leveraging this value, and lagging far behind the private sector where even competitors use these systems to collaborate when it is mutually beneficial to do so. We need to invest more in digitalization. The way current funding models are used is not ideal to facilitate this. As an example, one challenge faced is that some organizations are very decentralized, whereas this kind of change typically requires a more centralized budget for whole-organization software solutions.”

Richard Kneller, Coordinator - Strategic Supply, Chain, DG ECHO

“Digital transformation in humanitarian supply chains is about much more than introducing new technology; it’s about fundamentally rethinking how we deliver aid. Learning from the private sector, we see the power of digital tools and, increasingly, AI, to streamline operations and enhance decision-making. Yet, success hinges on more than just technology adoption; it requires a significant shift in organizational culture, emphasizing data literacy and the skills needed to effectively utilize these tools. This shift extends beyond IT professionals, highlighted by the emergence of generative AI and no-/low-code platforms that democratize technology and make it accessible for all staff members. With these advancements, it’s imperative to protect sensitive data, adhere to ethical guidelines, and ensure accountability to those we serve in crises. Equally crucial is breaking out of organizational silos to build strong, collaborative partnerships.”

Niklas Jaeschke, Chief Digital Officer, HELP Logistics

New technologies have the power to transform the humanitarian supply chain for the better. To make the most of these technologies in the sector, we recommend leaders to:

- Partner with experts and stakeholders to develop a digital transformation strategy for your organization. Leaders should define a clear vision for technology use, including key performance indicators to measure the impact of digital transformation on the supply chain. They should also adopt data protection policies and ethical guidelines for AI and other emerging technologies to prevent risks such as privacy breaches, data misuse, and harm to individuals and communities.

- Find grants and funding opportunities for IT and show the benefits of digital transformation to donors. Leaders should pursue funding to support the development, upgrade, and maintenance of IT systems, as well as staff training on data literacy. Digital transformation needs significant investment and capacity building.

- Pilot emerging technologies such as end-to-end IT systems by partnering with technology providers. Leaders should implement digital technologies with private sector partners, customizing them to meet specific needs and challenges in humanitarian supply chains, such as interoperability with existing platforms in the sector. Ideally, private sector partners can help create an end-to-end IT system that digitally integrates and coordinates supply chain activities, from planning to execution.
Coordination

“Supply chain management is the largest expense, the greatest risk, and the most significant opportunity for any organization that delivers aid. However, top management still pays little attention to supply chain, despite its enormous impact and potential.”

Cecile Terraz, Director of Supply Chain and Procurement, Plan International

Coordination is key for humanitarian actors to work effectively. To improve coordination within and between their organizations, we recommend leaders to:

- Treat supply chain as a strategic function in the organization. Leaders should include supply chain perspectives in high-level decision-making to enhance internal coordination, especially in program planning. Joint planning teams, cross-functional committees, and regular meetings can help supply chain provide valuable input on program feasibility, cost, and risk assessment.

- Coordinate with other stakeholders in supply chains by leveraging their complementary resources, expertise, and technology platforms. Leaders should encourage collaborative approaches with a wide range of actors within the humanitarian ecosystem, including sharing resources with their supply chain stakeholders. Additionally, by rewarding private sector partnerships in humanitarian supply chain activities, leaders can promote innovative supply chain solutions.
Risk mitigation and preparedness

“Preparedness means more than responding to disasters; it means empowering local communities to build their own resilience, by strengthening their national systems and capacities. Preparedness fosters a culture of collaboration and trust, where international assistance is a last resort, not a default option. It is the key to a more sustainable and secure future.

Martin Keitsch, Head of Community Solutions, Global Logistics Cluster

A prepared supply chain can improve efficiency and effectiveness in aid delivery. To strengthen their supply chain preparedness, we recommend leaders to:

- Invest in local partners and diversify suppliers. Leaders should enhance the preparedness of their local partners for disaster response by sharing knowledge and skills, providing essential support, and aligning procurement plans with project objectives. Moreover, diversifying suppliers to meet demand and lower supply risk is vital; this means sourcing from multiple vendors, regions, or channels and having backup or alternative suppliers ready.

- Optimize supply chain functions by using big data and analytics. Leaders should develop data-driven decision-making capacities to improve both in-house and outsourced supply chain functions. Big data and analytics can help them find the best balance of internal and external resources.

We call upon all stakeholders in the humanitarian supply chain to embrace these recommendations as both a blueprint for immediate action and a commitment to ongoing improvement. Together, we can ensure that the humanitarian supply chain not only responds to the challenges of today but is also prepared for the uncertainties of tomorrow. We are deeply grateful to all participants and partners who offered their insights in the 2023 global survey and the previous surveys since 2021. Let us continue to share knowledge, innovate, and collaborate, for in unity lies our strength to make a lasting impact on the lives of those we serve.