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# Collaboration in Supply Chain Management: A Resilience Perspective



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# Agenda

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- Introduction
- Drivers of Supply Chain Collaboration
  - Level of Collaboration?
- Supply Chain Collaboration & Resilience
  - Exchange of information & incentive alignment in the digital economy
- Public-Private Collaboration: A Humanitarian example
  - Collaboration mechanism & key success factors
- Lessons Learned

# Introduction

- Present day supply chains are becoming more global but also more fragile
- Global supply chains require collaboration with partners to transform from a “plan and execute” to a “sense and respond” way of operating.
- Visibility into events concerning supply chain partners combined with the ability to respond and adjust are the very characteristics that make up resilient supply chains.
- Information needs to flow smoothly and quickly between each supply chain members.
- Collaboration can help develop both tacit and explicit knowledge to support supply chain competitive advantage and sustainability.

# Introduction

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## **The purpose of this presentation is to explore:**

1. How collaboration between stakeholders and the establishment of alliances can help make the supply chain more resilient.
2. Look at innovative ways to operate supply chains, through crowd shipping, gainsharing, and the share economy and how these can reinforce the resiliency of the supply chain.
3. How public-private partnerships can help focus the actions of all stakeholders on making supply chains resilient and hastening the pace of recovery in the event of a disruption or natural disaster.

# Drivers of Supply Chain Collaboration

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The usual consequence of collaboration is presented in the form of:

- Efficiency
  - Cost reduction
  - Reduced inventory
  - Shortened lead time
- Effectiveness
  - Customer service improvement
  - Market share expansion
  - More revenues
- Profitability
- Part of risk mitigation strategy

# Drivers of Supply Chain Collaboration



- Significant gap between theory and practice
- Supply chains tend to be perceived in better shape than in reality
- Foundation of supply chain collaboration requires that:
  - Information is shared
  - Trust and openness is present
  - Coordination and planning is jointly done
  - Mutual benefits and sharing of risk exists
  - Mutual recognition of mutual interdependence
- There exist numerous definitions, types and categories of supply chain collaboration
- The literature has identified 5 key variables for supply chain collaboration

# Collaboration drivers

Driver	Definition	Supporting Literature
Trust	"degree to which supply chain partners have the intention and ability to work for the good of chain"	(Morgan & Hunt, 1994) (Kahn, et al, 2006) (Jones, et al, 2014) (Wiengarten, et al, 2010)
Commitment	"an implicit or explicit pledge of relational continuity between exchange partners"	(Mentzer, et al, 2001) (Min, et al, 2005) (Spekman, et al, 1998)
Decision synchronization	"joint decision making in planning and operational contexts"	(Simatupang & Sridharan, 2005) (Min, et al, 2005) (Cao, et al, 2010)
Incentive alignment	"the degree to which chain members share costs, risks and benefits."	(Slone, et al, 2007) (Simatupang & Sridharan, 2002) (Simatupang & Sridharan, 2005) (Mentzer, et al, 2001) (Cao, et al, 2010)
Information sharing	"the willingness to make strategic and tactical data available to other member of the supply chain"	(Barratt, 2004) (Simatupang & Sridharan, 2005) (Min, et al, 2005) (Slone, et al, 2007) (Simatupang & Sridharan, 2008) (Wiengarten, et al, 2010)

# Drivers of Supply Chain Collaboration

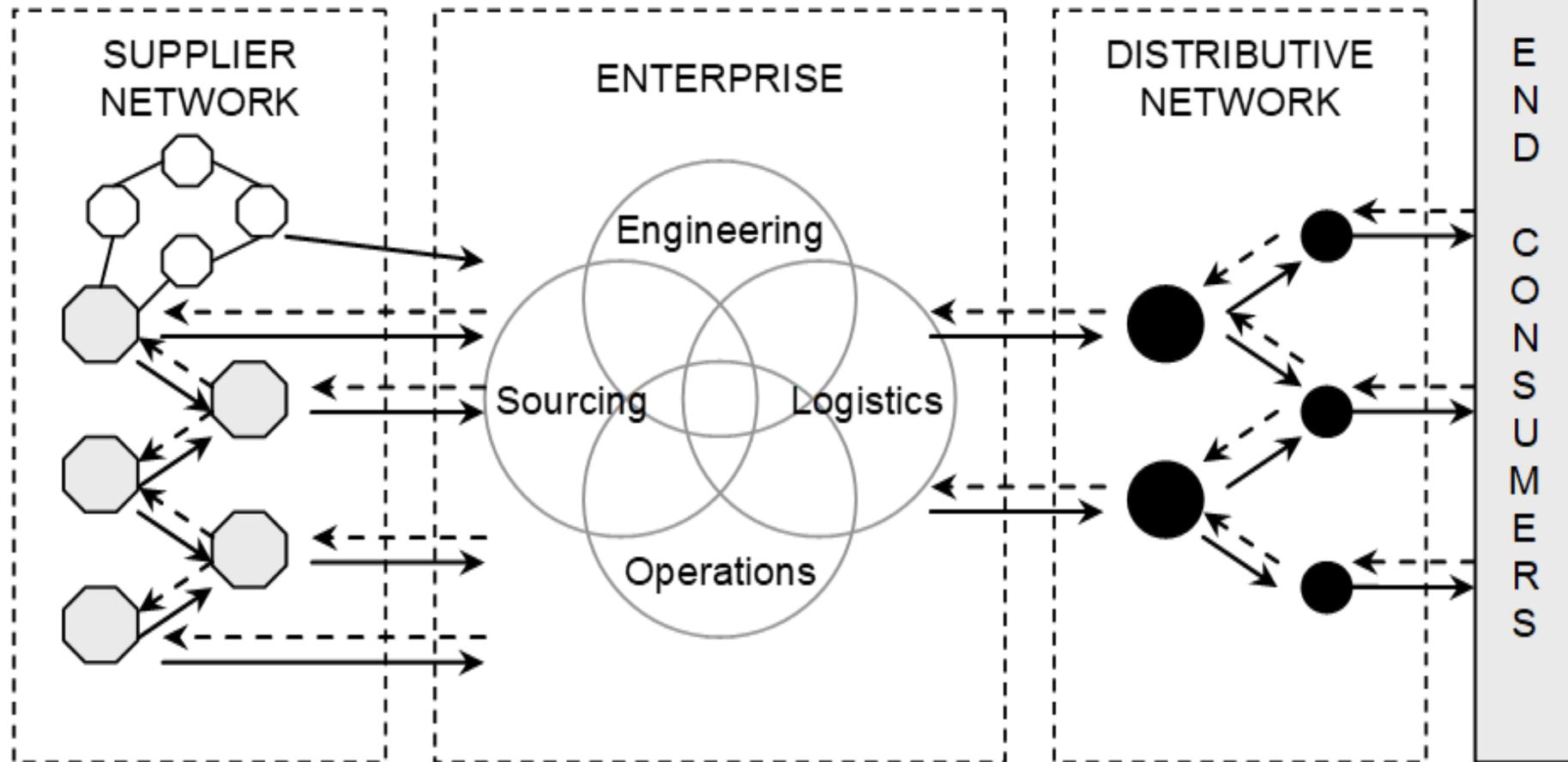


- Collaborative relationships have been proposed as a key capability for enhancing supply chain resilience (Randall, 2012)
- Extent of supply chain collaboration (Lee, 2000) will depend on:
  - Organisational relationship linkages
  - Information integration
  - Co-ordination & resource sharing
- Close relationships should result in more effective use of combined resources. An integrated supply chain is an outcome of supply chain collaboration (Handfield & Nicols, 2012)

# Integrated Supply Chain

Relationship Management

Flows of Information, Product, Services, Funds and Knowledge



Resource Base (Capacity, Information, Core Competencies, Financial)

# Level of Collaboration?

- The debate in the literature is not about full collaboration versus no collaboration.
- It is about how much collaboration is justified and under what circumstances.
- The answer to these questions depends very much on the nature and purpose of the individual supply chain as:
  - Not all relationships should be based on full collaboration (Cox, 2001)
  - Collaboration type should be matched to supplier/customer dependency (Cox, 2001)
  - Collaboration should be more exploited during high demand uncertainty (van Donk & van der Vaart, 2005)
  - Demand collaboration is warranted when there is sufficient demand variability (de Treville, 2004)

# Supply Chain Collaboration & Resilience

SC Collaboration Activities	SC Resilience
Information sharing	Visibility
Collaborative communication	Velocity
Mutually created knowledge	Flexibility
Joint relationship efforts	Source: Scholten & Schilder (2015)

Collaborative exchanges enhances resilience by reducing uncertainty about the state of the supply chain

# Exchange of Information

- “Digital” economy is re-writing the rules of collaboration with new business models
  - “Crowd” shipping is a business model where online platform acts as coordinator of supply and demand information
- Real-time business intelligence & predictive analysis needed for decision-making
- Firms in SC must demonstrate willingness to share sensitive information related to risk
- Exchange of information critical but other conditions need to be fulfilled for collaboration to occur and develop SC resilience

# Incentive Alignment

## Gainsharing/Vested Outsourcing

- Firm & LSP have vested interest in each other's success and to work collaboratively to achieve mutually created "desired outcomes"
- Vested outsourcing makes process more visible with both parties accountable
- Incentive alignment needed to achieve collaboration
- Key Success Factors
  1. Focus on outcomes, not transactions
  2. Focus on the "What", not on the "How"
  3. Agree on clearly defined and measurable outcomes
  4. Optimise pricing model for cost/service trade-offs
  5. Insight, not oversight governance structure

# MacDonald's Supply Chain Success



- Rule 1: Focus On Outcomes, Not Transactions
  - McDonald's consciously makes a decision to NOT conduct business with strategic suppliers on a transactional relationship, but instead insists suppliers have long-term relationships that drive business value and achieve McDonald's key business outcomes.
- Rule 2: Focus on the What, Not the How
  - One of the ingredients of Kroc's secret sauce was to know McDonald's core competency versus his suppliers. While Kroc had the vision, he knew he needed to rely on the suppliers and restaurant owner/operators for implementation.
- Rule 3: Agree On Clearly Defined & Measureable Outcomes
  - While food safety and quality is at the top of what McDonald's measures with suppliers, it's only part of the picture.

# MacDonald's Supply Chain Success



- Rule 4: Pricing Model/Incentives for Cost/Service Trade-Offs
  - The pricing system comes back to the concept of the three-legged stool. McDonald's, store owner/operators and suppliers each must secure a profitable, long term financial picture – one that keeps the company first and, as such, secure stable futures for all.
- Rule 5: Govern for Insight, Not Oversight
  - McDonald's and its suppliers do business the old-fashioned way, with a handshake instead of a formal agreement.
  - When you have a “no contracts” philosophy with suppliers, values matter when it comes to governance, or as Kroc wrote, “The basis for our entire business is that we are ethical, truthful, and dependable. It takes time to build a reputation.
  - We are business people with a solid, permanent, constructive ethical program that will be in style years from now even more than it is today.”

# Public-Private Collaboration: A Humanitarian example

- A humanitarian supply chain tends to be more unstable and unpredictable than a traditional supply chain so more collaboration is needed.
- In the humanitarian relief context, firms' strategy should focus more on collaboration, not only within internally and among firms' supply chain partners but also with public agencies to increase efficiency and effectiveness in disaster response (Johnson et al, 2011)
- Humanitarian supply chains have often adopted a participatory approach method that allows local communities to collaborate in the design and the development of humanitarian relief plans processes
- Collaboration between humanitarian stakeholders create “win-win” outcome

# Strategic collaboration continuum

Nature of Relationship	Stage I (Philanthropic)	Stage II (Transactional)	Stage III (Collaborative)
Level of engagement	Low	⇒	⇒
Importance to mission	Peripheral	⇒	⇒
Magnitude of resources	Small	⇒	⇒
Scope of activities	Narrow	⇒	⇒
Interaction level	Infrequent	⇒	⇒
Managerial complexity	Simple	⇒	⇒
Strategic value	Minor	⇒	⇒
		⇒	⇒

# Public-Private Collaboration: A Humanitarian example

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- Collaboration in order to achieve resilience and responsiveness is a key issue in disaster relief as aid should arrive in time, in the right place, and in the right condition to beneficiaries
- Procter & Gamble (Thailand) was involved in the 2011 Thailand flood by donating water purifier to help people affected by the flood through a relief organization.
- This case is chosen as an illustrative example on how public-private collaboration can enhance resiliency.

# Objective of Case Study



**P&G**  
Children's Safe  
Drinking Water

- Propose a framework and document the lessons learned from humanitarian relief for future reference



# Supply Chain Members



P&G as  
Provider for  
in-kind  
donation of  
PUR™



Relief agency

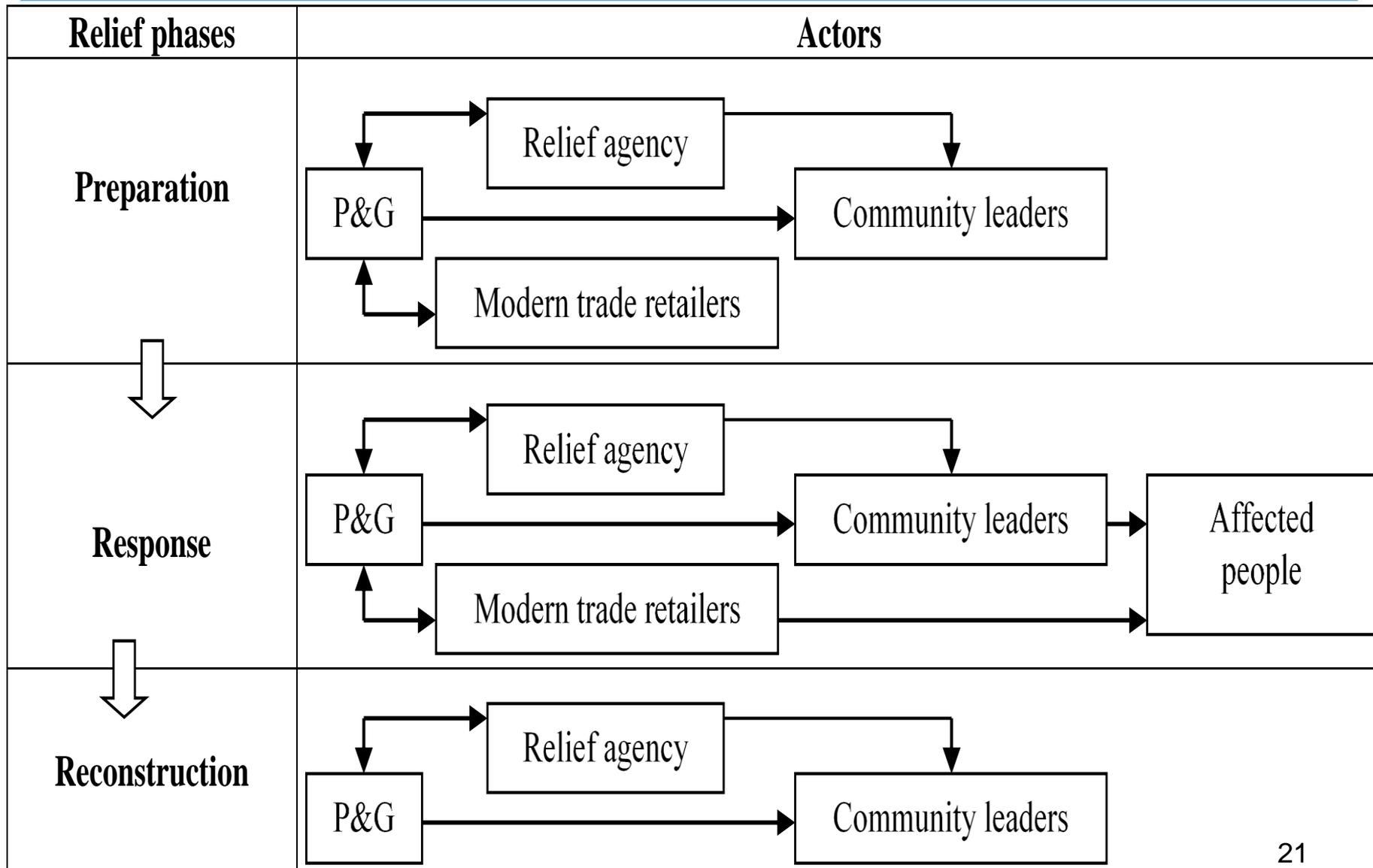


Community  
Leaders

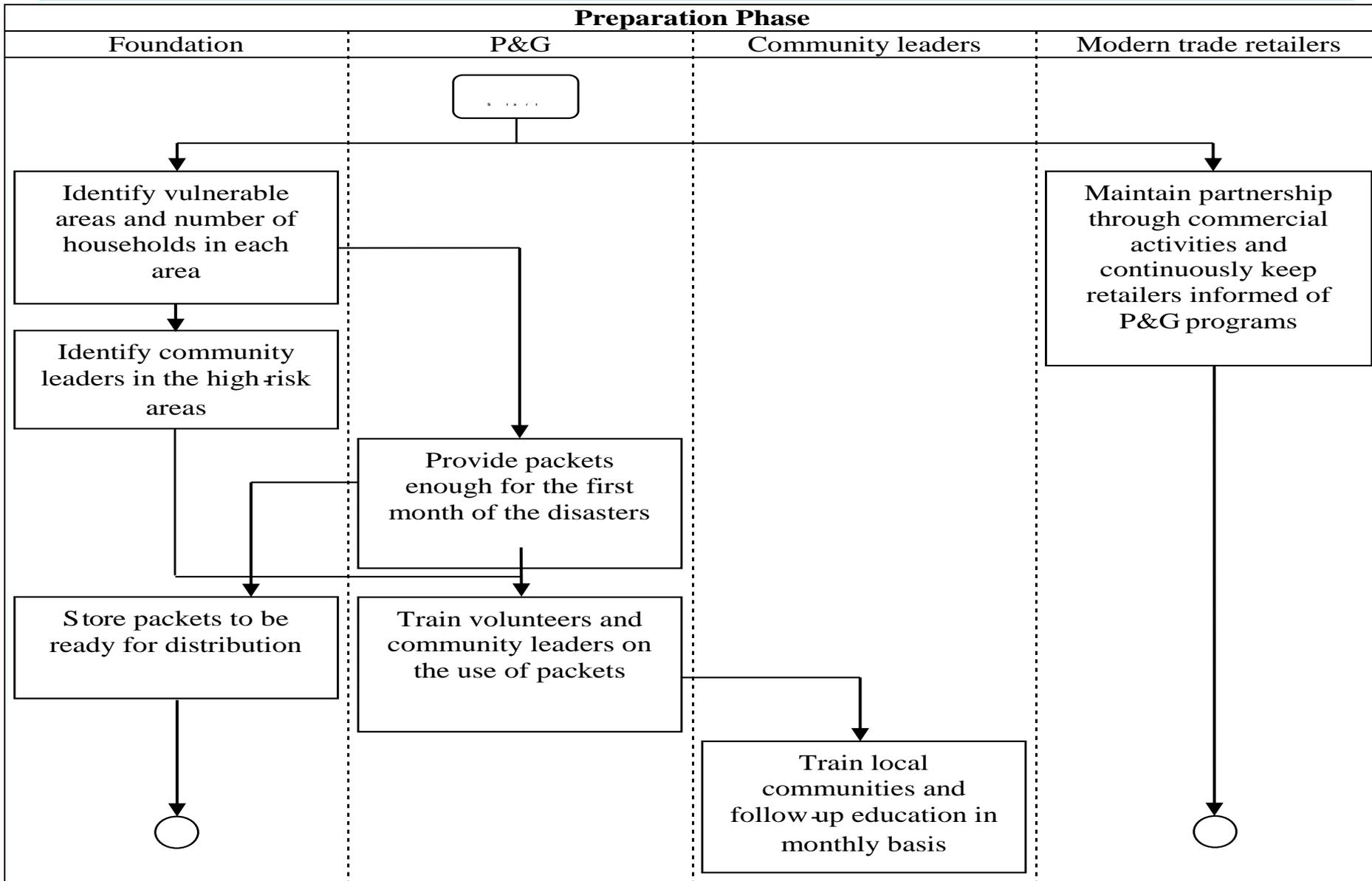


Modern Trade  
Retailers

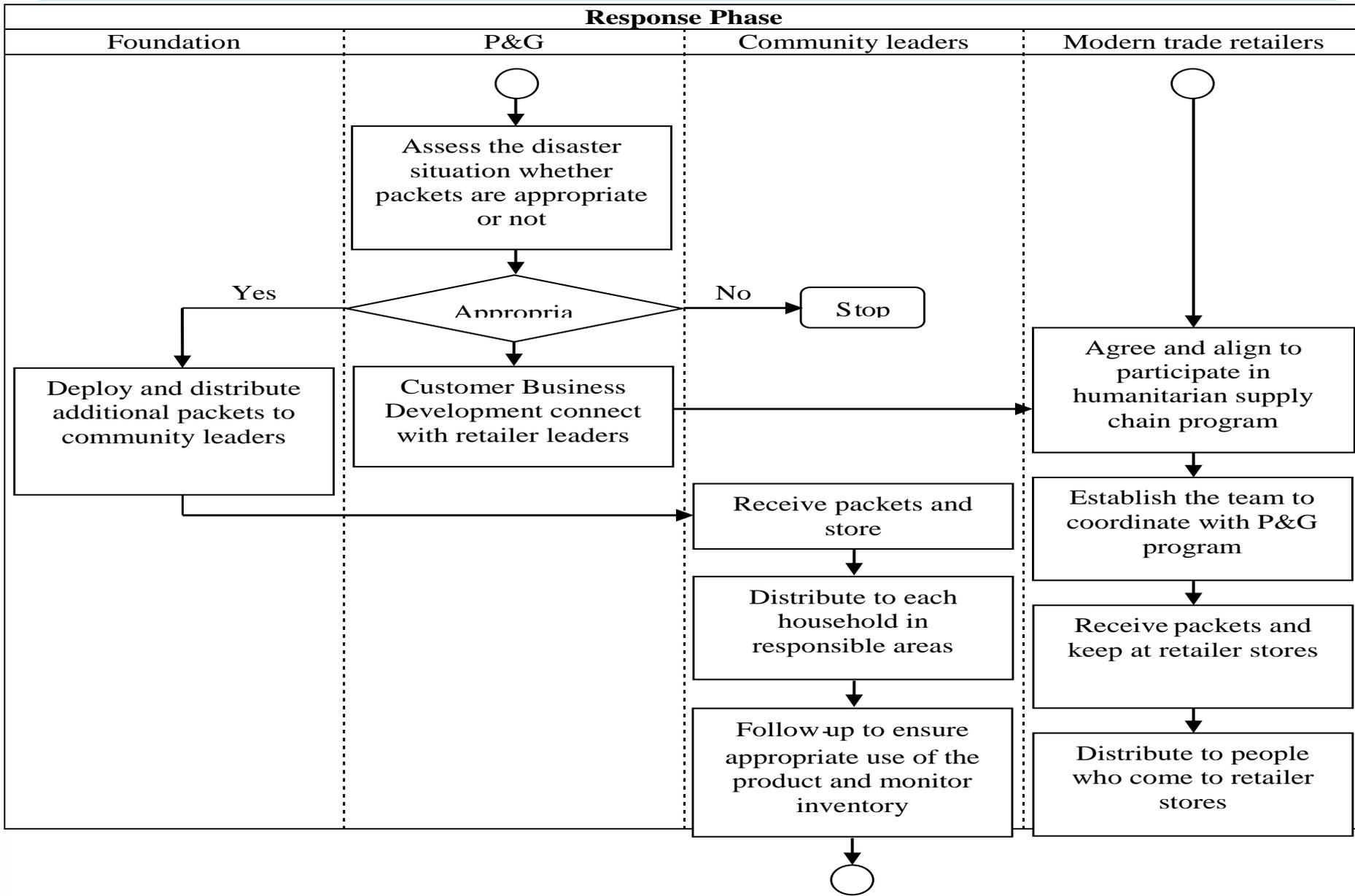
# SC members' role



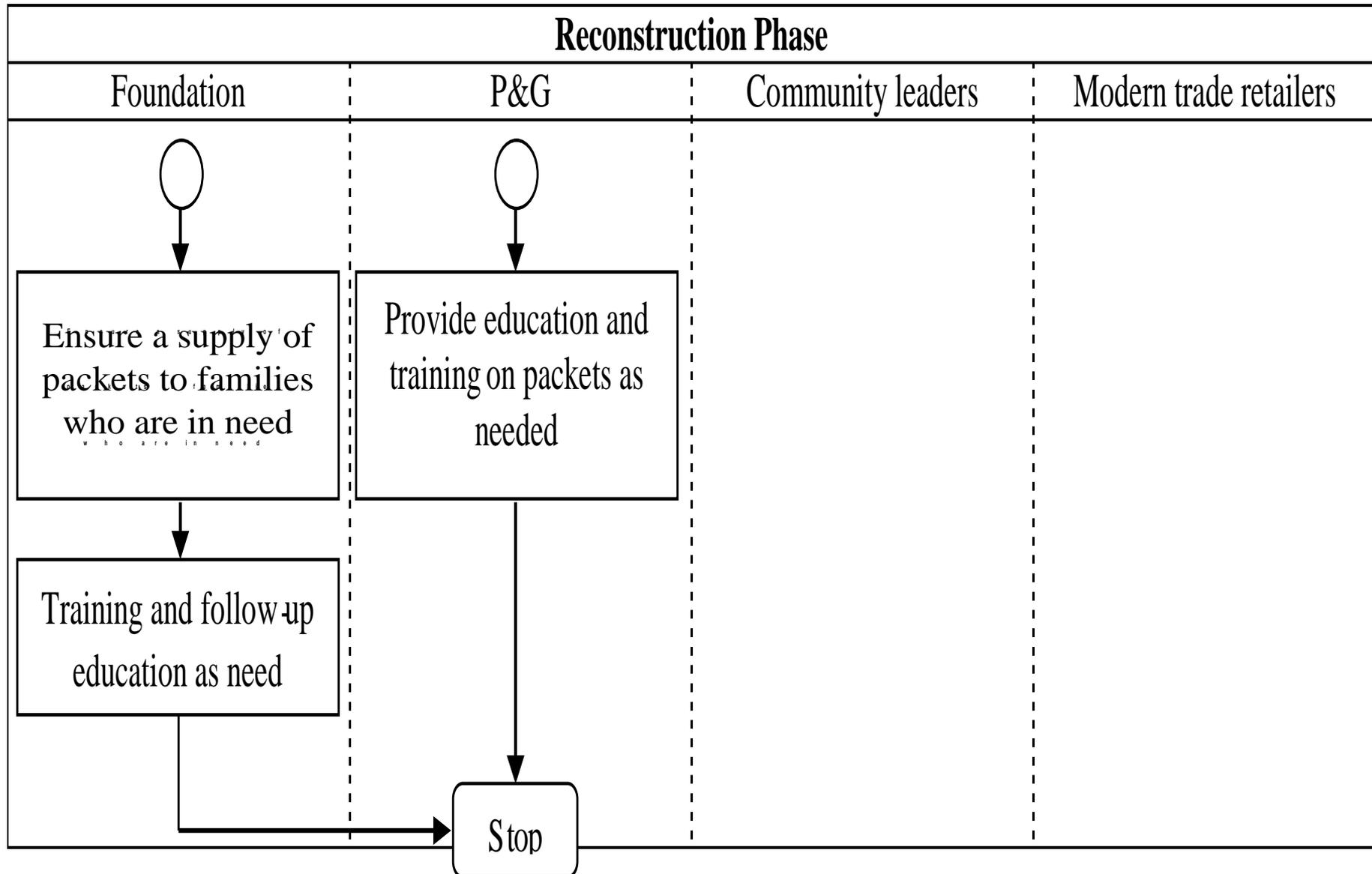
# Collaboration requirement in Preparedness phase



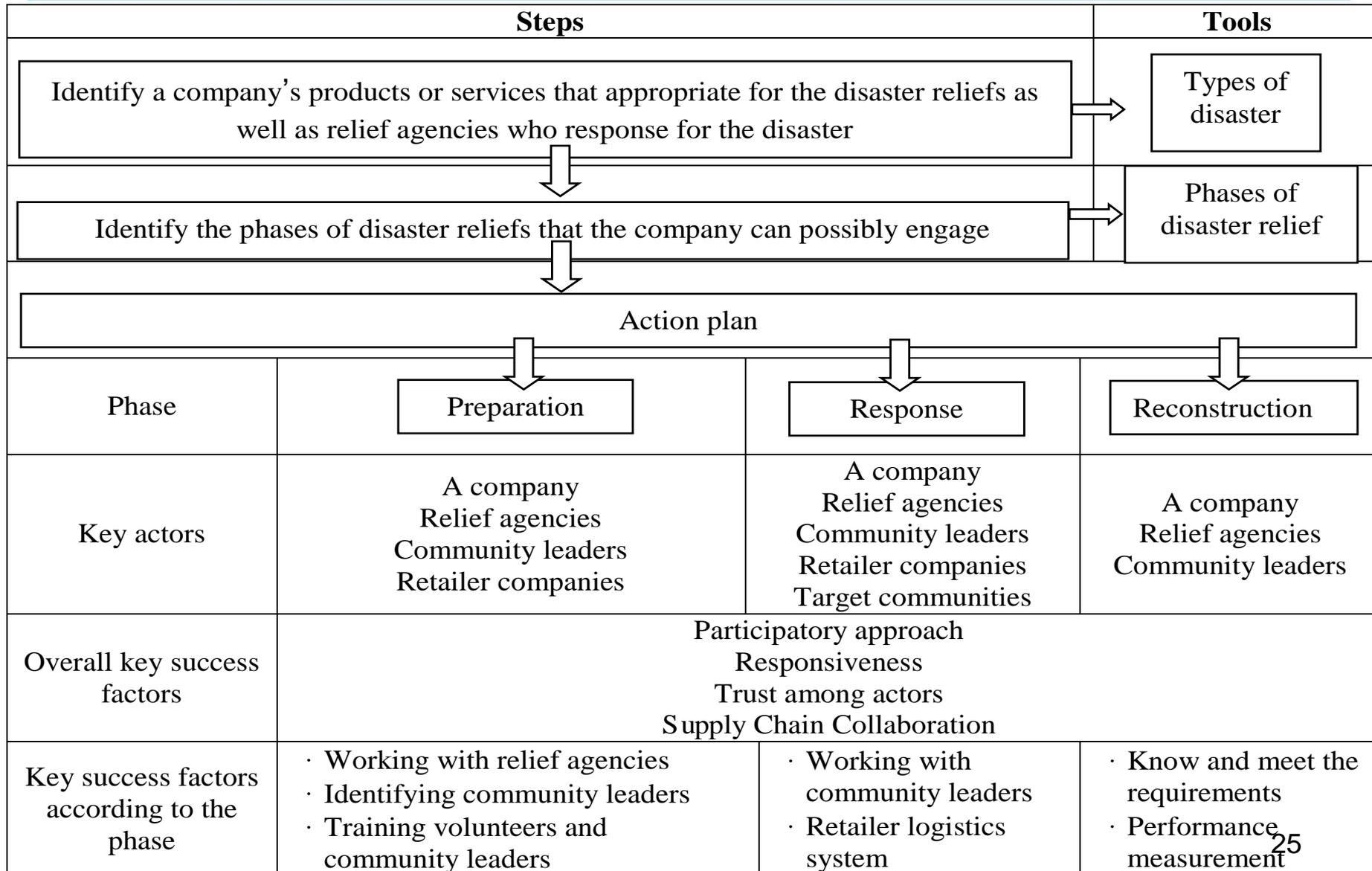
# Collaboration requirements in Response phase



# Collaboration requirements in Reconstruction phase



# Collaboration framework for humanitarian relief



# Lessons learned

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- Scope of collaboration needs to be clarified
- Coordination and cooperation often considered as antecedent of collaboration
- “Trust” is key driver
- “Commitment” need to follow from ”Trust” (even more in case of disruption)
- SC decisions need to be synchronized
- Incentive alignment must not be forgotten
- Information sharing is just a pre-requisite for collaboration
- In order to achieve SC resilience, collaboration need to involve public, NGOs and other supply chain stakeholders