



# SUPPLY CHAIN RESILIENCE

In the time of Covid-19



# Introductions



**Sharne Usherwood**

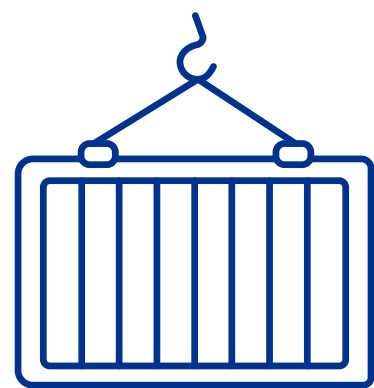


**Bruce Ravesloot**

# Overview

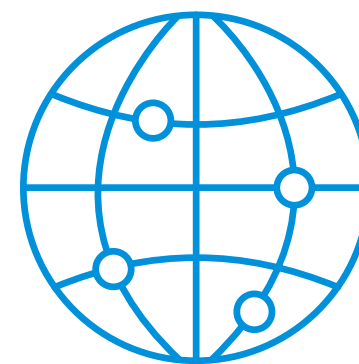
1

How can we think about resilience in the supply chain space?



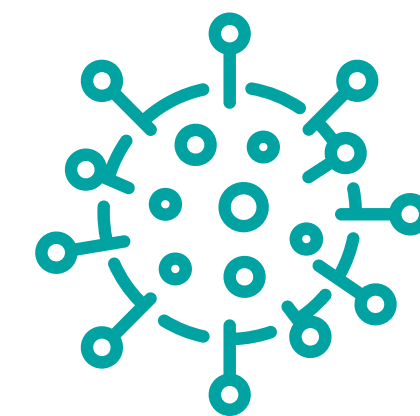
2

What are the resilience concepts and frameworks adopted by major actors in complex crises response globally?



3

What can we learn from global resilience experience in the context of COVID-19 in NZ?



1

# RESILIENCE AND SUPPLY CHAINS



# Enterprise Resilience

Enterprise resilience can be considered to be made up of three factors:

<p><b>1 Financial</b></p>	<p><b>Financial resilience</b> The ability to withstand the financial impact on liquidity, income and assets.</p> 
<p><b>2 Operational</b></p>	<p><b>Operational resilience</b> The ability to withstand operational shocks and continue to deliver your core business.</p> 
<p><b>3 Commercial</b></p>	<p><b>Commercial resilience</b> The ability to respond to changing market and consumer pressures.</p> 



## SUPPLY CHAIN CHALLENGES AND CONCERNS

- Lost revenue and poor customer service due to failure of supply
- Limited time and resource to develop contingency supply options
- Limited understanding of how much working capital stock may be tied up in logistics routes, impacting operations and liquidity
- Managing high risk contracts with suppliers and service providers
- Limited understanding of inventory cover
- Operations staff stretched with reduced workforce and backlogs

## Industry trends

- Supplier risk assessments and partnering
- End to end supply chain and supplier mapping projects
- Increased scenario modelling
- Increased communication with service providers and suppliers
- Prioritisation of demand
- Consider near-shore options to shorten supply chains
- Establish integrated business plans to synchronise across all business functions
- Restructure supply chains to be more robust
- Increase modelling capability – predict customer behaviour, deal with uncertain events



2

# RESILIENCE IN GLOBAL CRISES



# Resilience defined

The ability of people, households, communities, countries, and systems to **mitigate, adapt** to, and **recover** from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth  
- USAID

Disaster Resilience is the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses - such as earthquakes, drought or violent conflict – without compromising their **long-term prospects**.  
- DFID

Resilience is the ability of an individual, a household, a community, a country or a region to withstand, adapt and to quickly recover from **stresses** and **shocks**  
- EU

The ability of a system and its component parts to anticipate, absorb, accommodate or recover from the effects of a hazardous event in a **timely and efficient manner**, including through ensuring the preservation, restoration or improvement of its essential basic structures and functions  
- World Bank/IPCC

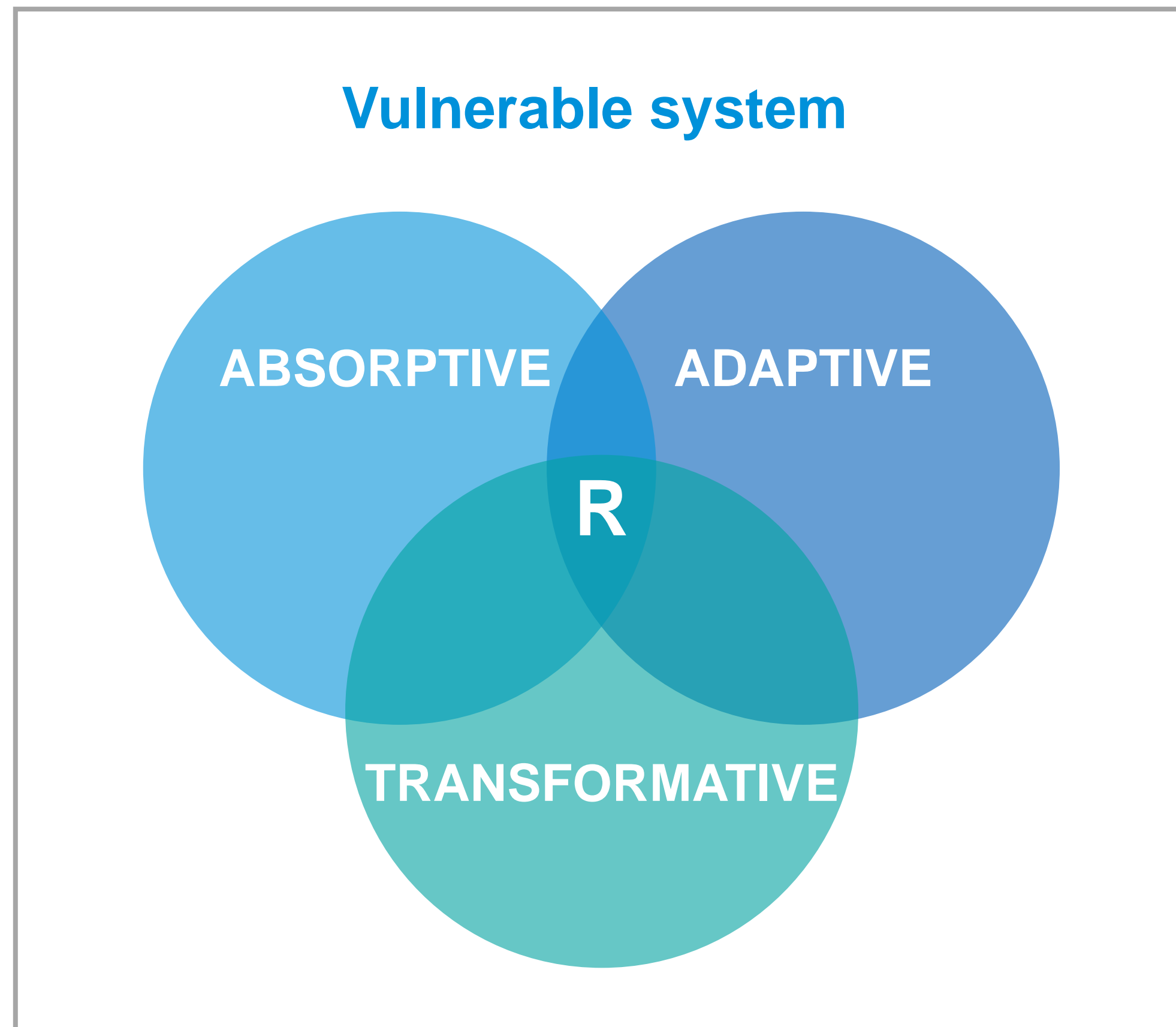


# The Resilience Framework



# Resilience capacities and attributes

## Resilience capacities



## Resilience attributes

- ✓ Robustness
- ✓ Self-organisation
- ✓ Learning
- ✓ Redundancy
- ✓ Rapidity
- ✓ Scale
- ✓ Diversity & flexibility
- ✓ Equity

# Resilience capacities and example components

ABSORPTIVE	ADAPTIVE	TRANSFORMATIVE
Bonding social capital	Bridging social capital	Bridging social capital
Informal safety nets	Linking social capital	Linking social capital
Shock preparedness & mitigation	Human capital	Formal safety nets
Hazard insurance (where applicable)	Access to financial services	Access to markets
Household savings	Livelihood diversity	Access to infrastructure
Asset ownership	Exposure to information	Access to basic services
Conflict mitigation	Asset ownership	Communal natural resources
	Aspirations & confidence to adapt	

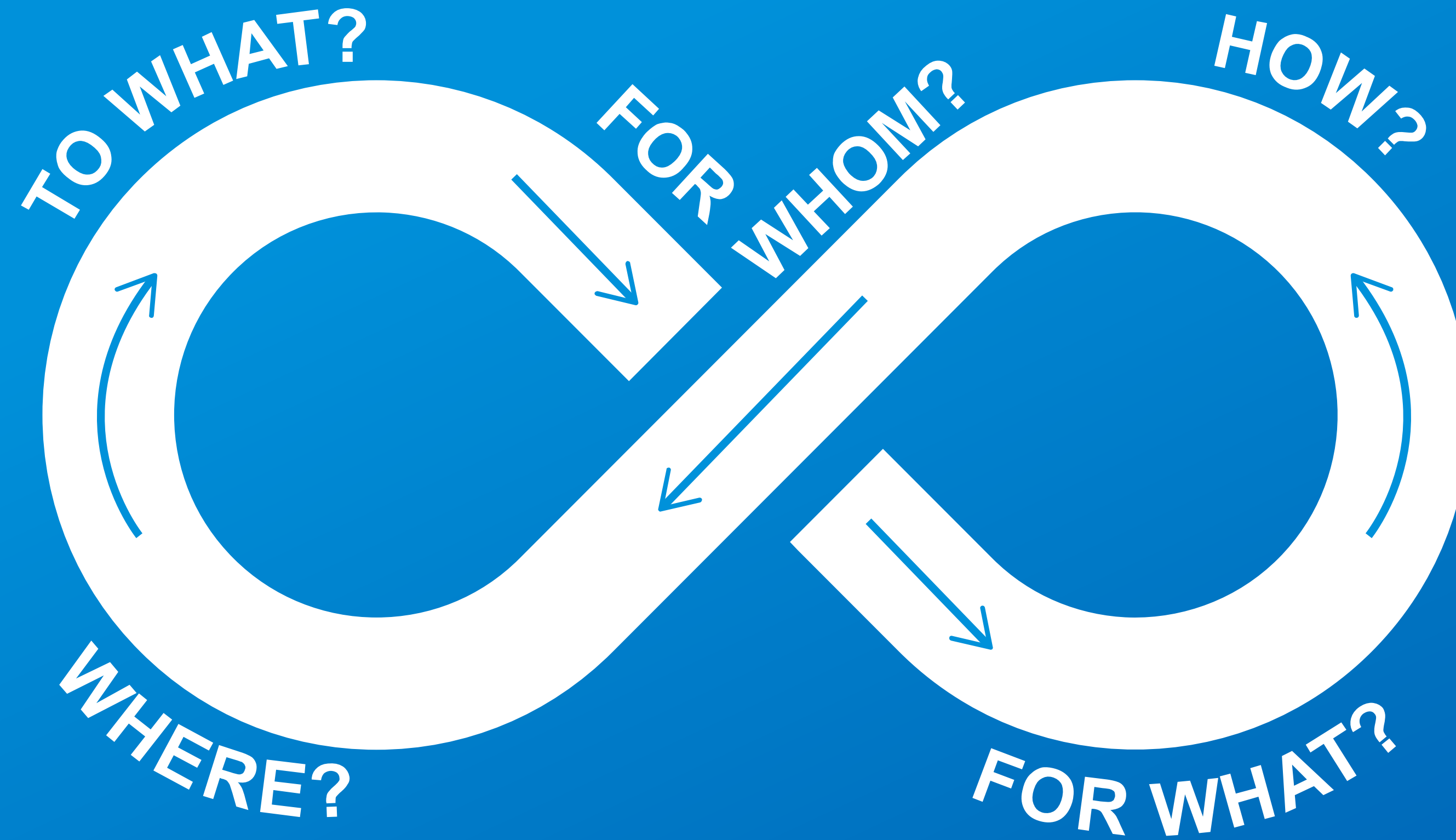
# Resilience capacities and attributes

ABSORPTIVE	ADAPTIVE	TRANSFORMATIVE
Robustness	Self-Organization	Scale
Redundancy	Learning	Diversity and Flexibility
Rapidity		Equality => equity => social justice

# Resilience capacities in the business sector

ABSORPTIVE	ADAPTIVE	TRANSFORMATIVE
Risk / Vulnerability awareness	Demand sensing	IT and innovation
Early warning by partners	Scenario-based forecasting	Flexible supply chain partners
HR/staff capacity	R&D/product design capacity	Contingency planning at sector level
Inventory	Consumer loyalty	Non-competitive spirit
Excess operating capacity	Management	Government assistance/relief packages
Redundancy and diversification	Information visibility	Consumer loyalty
Insurance	Investor flexibility and support	Tax relief/support
	Diversification	

# Operationalising resilience



# Examples of resilience in practice

## Nepal Earthquake

- Access to formal / informal safety nets
- Linking / Bridging social capital
- Access to information
- Livelihood diversification
- Education levels



## East Africa Droughts

- Access to formal / informal safety nets
- Linking / Bridging social capital
- Asset ownership ; household savings
- Access to financial services
- Disaster preparedness and mitigation: info, trigger funds



# Examples of resilience in practice

## Ebola Outbreak

- Strong inclusive leadership and comms
- Social capital, community engagement
- Access to information / trust among health system stakeholders, flexibility in response
- Scenario-based planning / evidence



## COVID-19

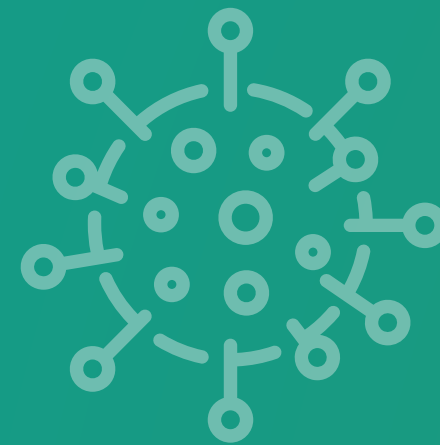
- Strong inclusive leadership and comms
- Social capital / buy NZ
- Access to information / trust among health system stakeholders, flexibility in response
- Scenario-based planning / evidence





3

# RESILIENCE LESSONS LEARNED



# Applying global resilience principles to supply chains

- How can we most effectively operationalise resilience in supply chains?
- How do we learn faster and share what we learn so we all improve?
- How do we continue to unleash the power of our people and fully leverage human and social capital?
- How can we use information and data more effectively to help us deal with disruption better and faster?
- How can create a robust, diverse supply chain in a cost-effective manner?
- What impact will changing consumer behavior have on the way that we run our supply chains? Is now the time to transform?





# DISCUSSION AND QUESTIONS