Supply Chain vulnerability in a time of crisis

Australian Food and Grocery Council
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AUSTRALIAN FOOD & GROCERY COUNCIL

1. Trifecta of Disruptions
2. The Pivoting Supply Chain
3. Supply Chain Risk Register
4. Getting started

Trifecta of Disruptions: Three most recent challenges reveal the need to build more resiliency & agility into supply chains

Common themes:

- Most **supply chains not able to withstand the unexpected**
- **Risk identification and structured mitigation processes not enough** to build resilience

Bushfires

$10M per day in delayed / lost revenues for grocers due to 12-day closure of Western Australia's 1.6KM Eyre Highway

5.5% drop in milk production due to road restrictions and infrastructure disruptions

Ransomware Attacks

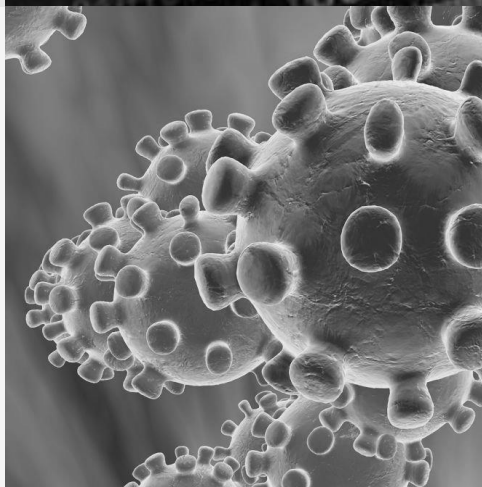
Lost revenue, delayed deliveries for logistics providers and retailers resulting in poor consumer sentiment

$70M in lost wool auction transactions due to cyber attacks on the central IT systems

The COVID-19 Pandemic

Dramatic freight rate fluctuations due to mass reduction in air freight capacity (e.g. Qantas halting Int'l flights until Oct 2020)

Consumer panic resulting in frequent stock-outs and more resources to run factories 24/7 to meet demand

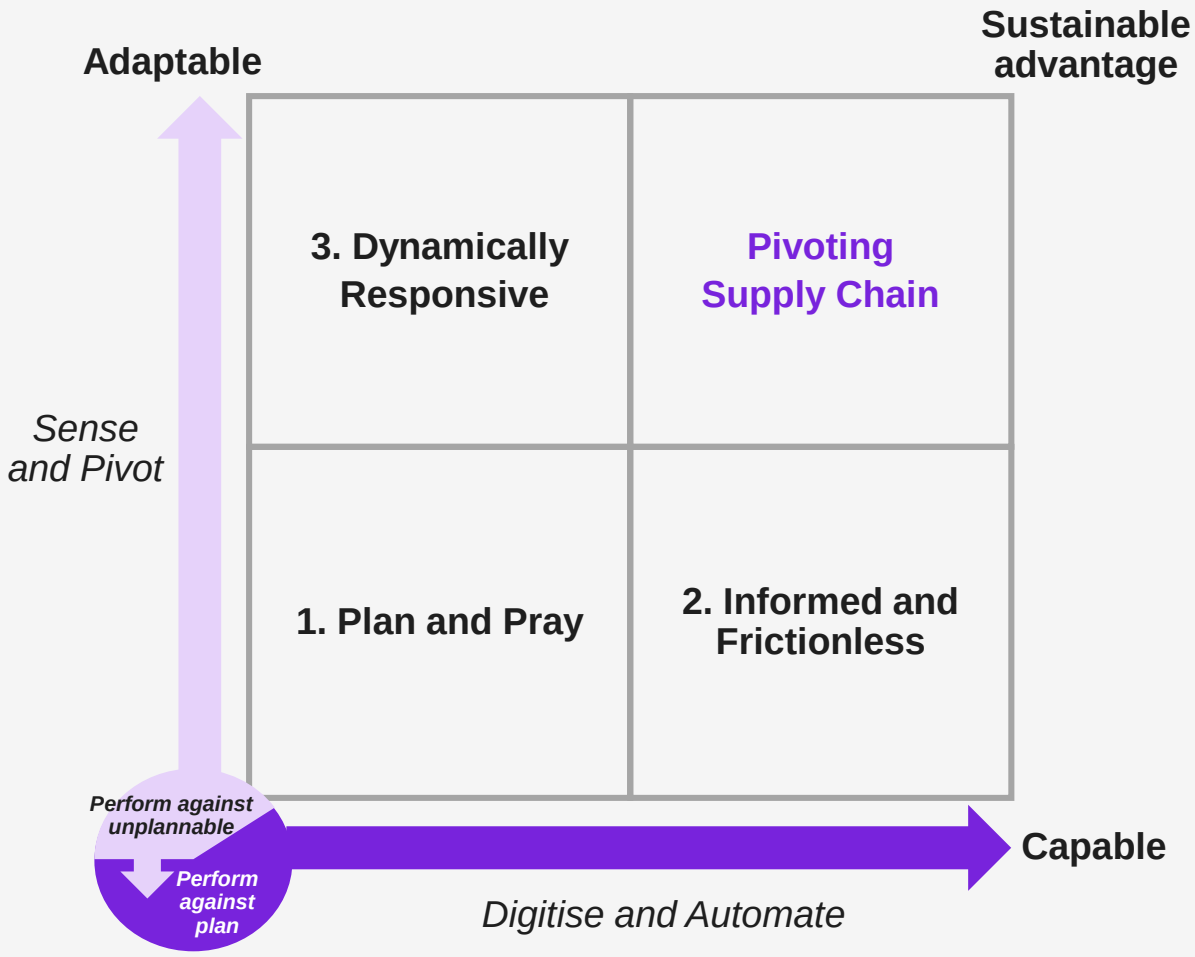


In search of an answer - Resilience: In light of recent volatility, companies can benchmark resiliency in their supply chains across 8 core dimensions

Non-Exhaustive

Geographic make-up	– **Proximity & diversity** of supply and demand
Planning capabilities	– Maturity **of demand sensing technology** – **Supply chain responsiveness** to changes in demand
Supplier landscape	– **Visibility of supplier base** (e.g. raw inputs, reliance on customers)
Inbound transportation	– **Control** of inbound logistics – **Diversity** in transport modes
Manufacturing footprint	– Spare **capacity availability** – **Repurpose potential** to increase core product manufacturing – Extent of **vertical integration of core products/inputs**
Product platform	– **Interchangeability** among product inputs – **Capability to substitute** custom inputs for generics
Outbound logistics	– **Diversity in carrier base**; alternate modes or suppliers
Financial health	– Healthy volume of **safety stock inventory** for core products – **Rapid access to capital** to ramp up incremental production

In search of an answer – Pivoting Supply Chain: Responsiveness & agility means having the ability to *sense* a changing environment and to *pivot* using digital & technology



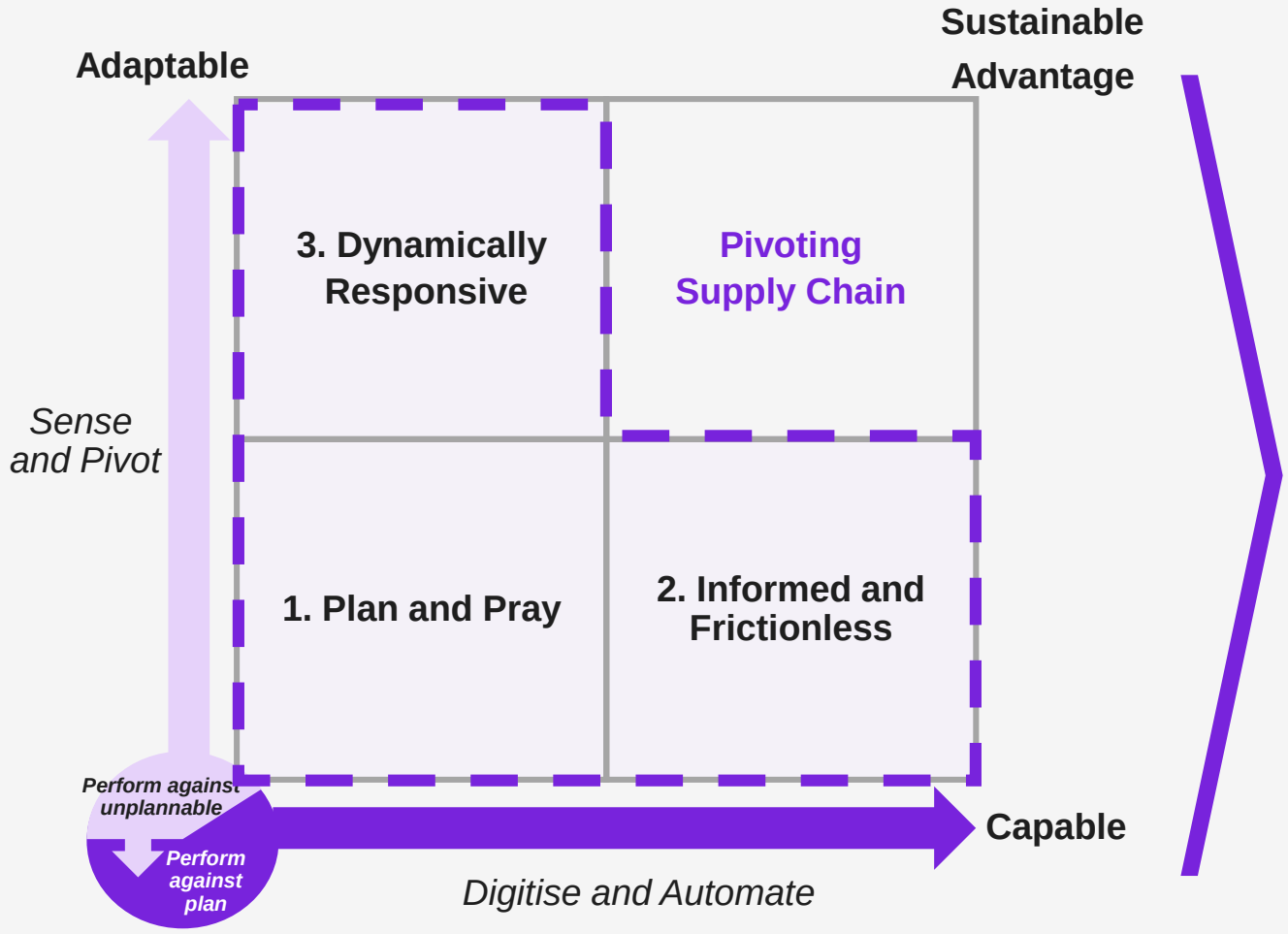
Digitise & Automate

Adopting technologies to develop a **COGNITIVE SUPPLY CHAIN** for E2E visibility and execution to pivot

Sense & Pivot

Creating a tech-enabled **SENSING PLATFORM** to capture market trends and early risk indicators

In search of an answer – Pivoting Supply Chain: We see companies at three broad levels of maturity before transitioning into a truly pivoting supply chain



Levels of Maturity	Key Characteristics
1 **Plan and Pray** *Prepared for the foreseen but unable to react to unforeseen / under-estimated events*	– Static & detailed risk management buried deep in organisation – Insufficient level of technology enablement
2 **Informed and Frictionless** *Tech-enabled but lack distinct set of solutions to 'sense & pivot'*	– Rising investments in latest technology but lack of strategic suite of solutions to enable flexibility
3 **Dynamically Responsive** *Built-in operating agility to respond but slow and manual to detect change*	– Adaptability and agility built in WoWs – Lack of technological capabilities suited to act faster and smarter.

Pivoting Supply Chain – Technology Adoption: A cognitive supply chain leverages technology to deliver benefits across plan, source, make and deliver activities

Selected use cases across primary Supply Chain functions

Plan

- **Predictive demand and supply planning** – utilise alternate consumer preferences/trends in real-time
- **Touchless forecasting & replenishment** – AI/ML enabled algorithms for automated triggers
- **Rapid inventory deployment** – segmented shipment frequency, fwd. deployment / postponement

Source

- **Real-time alternate sourcing decisions** – multiple make / buy options to balance service / cost
- **Preemptive JVs / RFPs** in response to M&A activity / other supply market disruptions
- **Predictive VE / recipe changes** in response to regulations, commodity prices, trends

AI / ML algorithms

Optimisation Models

Scenario Modeling

Make

- **Scenario-based maintenance** – high-frequency prioritisation based on equipment criticality, failure probability
- **Asset performance tracking & RCIs** – IoT enabled devices to plan for consistent mfg. capacity
- **Agile production planning within "freeze" zones** – adjust plans based on daily/weekly demand

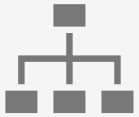
Deliver

- **Real-time product flow-path adjustments** – based on product segment and customer needs
- **Predictive service/cost projections** – enabled by telematics, GPS-enabled services
- **Manage unexpected service interruptions** – rapidly crowdsourcing capacity w/ peers and 3PLs

Pivoting Supply Chain – Operating Elements: By aligning to key operating elements, companies can empower moves that bolster supply chain agility

Non-Exhaustive

Key operating elements



Streamlined layers
and clear decision rights for global, regional and local teams

Clear cross-functional accountabilities
and ownership that delivers process speed whilst breaking down supply chain silos

Agile & Digital pathways
to uplift supply chain capabilities and pivot readiness

Swift decision-making & governance through E2E metrics, rich data-driven insights that inform performance mgmt. & customer-focused decisions

Guiding principles that challenge the norm and shape mindsets and behaviors towards agility, responsiveness & speed

Empowered moves
(non-exhaustive)

1 Build Tech-enabled & Agile teams

Example: Real-time data & feedback to empower in-the-field line managers

2 Run regular reviews of risks and pivot tactics ★ Supply Chain Risk Register

Example: Built-in flexibility in supplier contracts to on/off contingencies in other geographies, access to pre-approved 'emergency' finance

3 Create a Simulation-first Culture

Example: Use of digital twin to stress test actions & simulate consequences

Supply Chain Risk Register – What is it?: AFGC and Kearney co-developed a launching point to identify 6 megatrends and systematically classify supply chain risks across and 3 dimensions

Mega trends

1. **Corporate social responsibility and sustainability**
2. **4th Industrial Revolution & Tech Adoption**
3. **Consumer centricity**
4. **Geopolitical Instability**
5. **Demographic Shifts**
6. **Urbanisation**

Risk Register structure *(example)*

Issues	Consequences	Timing	Impact	Likelihood
Decarbonised supply chain	– Investment required – Increased operating costs	*Long-term*	*Moderate*	*Likely*
Provenance *(supply chain transparency)*	– Increased cost, complexity – Network design review	*Mid-term*	*Minor*	*Likely*
Responsible sourcing	– Increased operating costs	*Long-term*	*Significant*	*Likely*
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Keys to success

– **Level of impact & probability regularly updated & shared at industry level** (amongst AFGC committee members)

– Progressively **more mature research & extensive modelling inputs**

FOLLOWING THIS PRESENTATION - DEEP DIVE INTO REGISTER SPECIFICS

Supply Chain Risk Register – What can I use it for?:

Embedding the risk register into your regular business decision making is an essential part of the journey

5 Risk Register use cases

Structure the risk dialogue

– Start a **structured dialogue about the impact of disruptions** & likelihood of risks

Stress test options

– **Facilitate simulation or wargaming exercises** to help build and test options

Assess risk positions

– **Formulate and document industry and company positions** on key issues

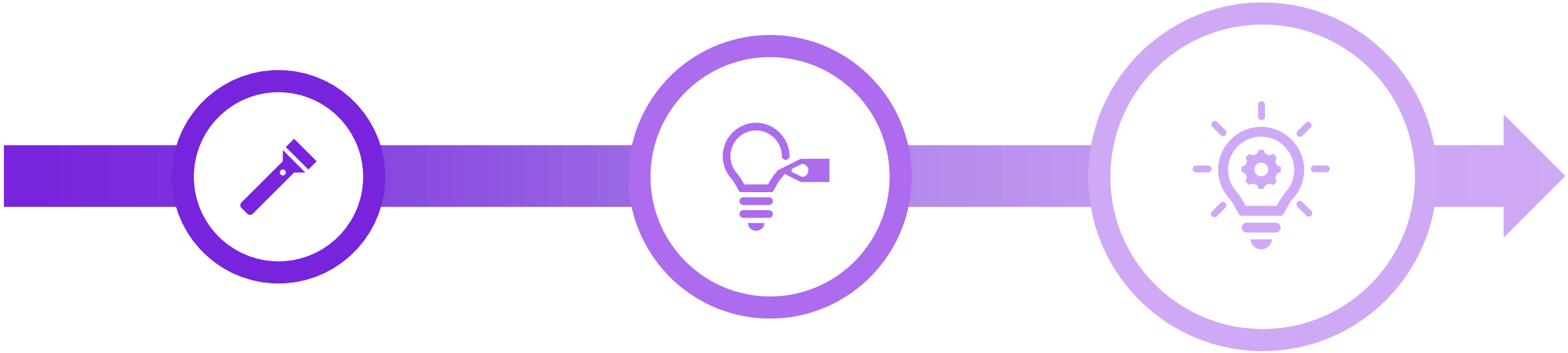
Engage with relevant parties

– **Engage with regulators, suppliers and customers** on co-efforts to mitigate key risks

Gain access to expertise

– Provide a starting point to **understand relevant expertise required** to bolster capability

Your next step is to future proof your supply chain so that it is ready for the next big challenge



1. Identify

Utilise the **supply chain risk register to identify and assess impact and likelihood**

2. Plan

Plan for the expected and **start dialogue** around what might be beyond the horizon

3. Design and build

Design and build the **necessary operating model, enabled by processes, technology and talent,** to develop a ‘Pivoting’ capability in order to react to those risks as they eventuate

Thank you

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