



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Building Business Resilience

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Overview

Acknowledgement of country

At KPMG, we recognise Aboriginal and Torres Strait Islander peoples as First Peoples of this nation.

We recognise that Aboriginal and Torres Strait Islander history and cultures are inseparable from Australia's collective history and culture and are something we can all be proud of and celebrate.

We acknowledge Elders past, present and emerging as Traditional Custodians of the land on which we live and work. We recognise their continuing connection to the land and waters, and thank them for protecting this land, waterways, coastline and its ecosystems.

We are proud that we live in the country with the world's oldest continuous living cultures, and we are playing our part to support Indigenous people to keep these cultures alive and vibrant.

The University of Queensland (UQ) acknowledges the Traditional Owners and their custodianship of the lands on which we meet.

We pay our respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country.

We recognise their valuable contributions to Australian and global society.

About the report

Industry and Education are being confronted with change at a faster pace and more complex set of disruptions than ever before. Over recent years entire governments, economies and the organisations, that help to make them thrive, have witnessed unprecedented threats to global supply chains, cyber security and critical infrastructure.

Now, industry are also stepping up to the challenge of a new socially responsible investor, customers and employees seeking organisations to demonstrate how they are creating tangible and practical plans for the ESG (environmental, social, and corporate governance) revolution.

This Thought Leadership paper will explore how to build business resilience through the concepts; the customer and community, cyber security, supply chain, ESG and critical infrastructure. Additionally, the key drivers of change, or threats to organisations will be explored; how to take a holistic view on our ability to anticipate trends and variability in order to withstand changes and threats; and finally, what is our collective solution to not just survive, but thrive?

These challenges are complex, intertwined and cannot be solved alone. To this end, this report is the combination of thought from many minds. A collaborative workshop was held, with numerous senior executives from various public and private organisations, guided by KPMG and UQ Business School subject matter experts (SME's) to drive conversation, connection and insight. These conversations were listened to and insights fused to present here - the collective thought.

Context



Undoubtedly, recent times have provided abundant challenge for economies, organisations and individuals. From conflicts and global pandemics to numerous devastating natural disasters - recent times have been turbulent. So “when a system gets shocked, how quickly does it come back?” – Shaun Bond

What is Business Resilience?

The organisational ability to cope with, and recover from, corporate, financial and operational disruption and anticipate trends and variability in order to maintain services for people and protect the natural environment now and in the future.

Why is business resilience important?

Since 1980, the US has experienced 298 natural disasters where overall damages exceeded \$1bn. Unfortunately, Australia has not been immune and also experienced natural disasters. Bond et al, investigated business resilience following natural disasters using data from the commercial real estate market. Firstly, they examined the impact of hurricanes on key business measures and secondly, they considered what types of regional economic characteristics attenuate or exacerbate property-level responses to natural disasters? They find that regions with a more diverse range of industries were more resilient to nature disaster shocks.

(Reference: Bond, McCoy and McDonough (2022) Natural Disasters, Regional Economic Structure and Commercial Real Estate.)

In a related study, Boustan et al 2020 find that natural disasters can reduce household income, increase out-migration, reduce house prices and rents.

(Reference: Boustan, L. P., Kahn, M. E., Rhode, P. W., & Yanguas, M. L. (2020). The effect of natural disasters on economic activity in US counties: A century of data. Journal of Urban Economics, 118, 103257.)

Regional communities frequently affected by disasters display a resilience mindset where they are able to cope and move on with rebuilding and recovery efforts and find alternative supply chains due to more in-depth understanding of disaster risks and better developed eco-systems.



“Resilience isn’t achieved by just looking after your own backyard”

- Andrew Wilson

Two recent academic papers have examined business resilience and lessons learnt from the pandemic. This page summarises some of the key findings from this research.

Lessons from 6,700 companies and 61 economies identified the corporate characteristics that mitigated adverse stock reactions to the pandemic.

These characteristics included:

- Stronger finances (more cash and undrawn credit, less total and short-term debt, more profitable).
- Less exposure to COVID-19 through global supply chains and customer locations.
- Stronger commitment to CSR and better corporate governance.
- Companies controlled by families, large corporates, and governments performed better.
- Companies with greater ownership by hedge funds and asset management companies performed worse.

(Reference: Corporate immunity to the COVID-19 pandemic. Ding, et al (2021) J. of Financial Economics)

A survey of US companies to understand corporate flexibility in times of crisis, found financial flexibility was able to help firms adapt to adversity.

- Availability of internal fund and access to external financing, is particularly important when firms have more fixed costs.
- Positive interaction between workplace flexibility and investment flexibility.
- More flexible workplaces can take advantage of investment flexibility to boost capital spending. Whereas the opposite is true for less flexible workplaces.
- Large firms and firms with lower workplace flexibility were inclined to automate to reduce dependence on labour.

(Reference : Corporate Flexibility in a time of crisis, Barry, et al (2022) J. of Financial Economics)



Current themes challenging business leaders



“No organisation is immune but there is an opportunity to come together to understand challenges and collaboratively solve them”

– Lisa Jenkinson

Key themes are emerging consistently across organisations. There is a growing need to not only think about these challenges in isolation, but also how they interconnect with each other, to truly understand how to build a resilient business.

We are seeing an acceleration of change in how we use infrastructure.

There are significant uncertainties as a result of the COVID-19 pandemic in terms of how we use infrastructure, and how key inputs needed to understand the future (such as population location) may change. In addition to this, the *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022* (SLACIP Act) came into effect on 2 April 2022, driving further need for change.

The SLACIP Act amends the *Security of Critical Infrastructure Act 2018* (SOCI Act) to introduce the following key measures:

- A new obligation for responsible entities to create and maintain a critical infrastructure risk management program, and
- A new framework for enhanced cyber security obligations required for operators of systems of national significance (SoNS: Australia’s most important critical infrastructure assets)

A large number of organisations own and manage ageing infrastructure and processes, which makes it challenging to segment their critical workloads from other workloads using legacy network infrastructure. While many organisations have business continuity and disaster recovery plans, their existing configurations may not allow for easy recovery because they were not designed to be resilient against destructive cyber-attacks. In addition, existing incident response plans and playbooks may not be effective against evolving cyber threats.

(Reference: <https://www.ibm.com/blogs/services/2020/12/09/building-cyber-resilience-an-imperative-for-surviving-threats-today-and-in-the-future/>)



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“There is an opportunity to challenge the business as usual approach to delivering and maintaining assets.”

– Dan Brown

Literacy around critical infrastructure in the community is a major challenge. Generational change and increased migration have reduced local knowledge with regards to critical infrastructure. Ensuring communities are aware of the weaknesses of local infrastructure, particularly during a crisis, cannot be overlooked.

Cyber security or cyber resilience?

Nonetheless, resilience should not only consider threats to physical infrastructure. News of cyber-attacks have been hitting the headlines with increasing frequency. With attacks becoming more malicious and techniques more advanced, the strategies and plans to mitigate the impacts of such attacks must also change.

While a cyber security strategy can reduce the likelihood or mitigate the impact of a data breach, a cyber resilience strategy ensures an organisation can bounce back stronger when a breach does occur.

It is imperative that organisations take a holistic view of their information security risks and build a robust cyber resilience program to keep their business processes and operations functional during and after a cyber-attack.

In a cyber-resilient environment, IT is at the forefront of fostering relationships with business leaders and partnering with them to confidently drive their digital transformation journey forward.

Poor understanding of assets, their criticality and associated risk makes it difficult to be assured that we have resilience. For example, the cost of data loss is hard to grasp.

Should we be focused on preventing cyber-attacks or protecting our assets during a crisis?

Supporting this need will be a challenge. Australia is facing issues with developing and retaining talent. And forecasts suggest Australia needs 17k more cyber security employees by 2026.

(Reference: <https://theconversation.com/australia-finally-has-a-dedicated-minister-for-cyber-security-heres-why-her-job-is-so-important-184322>)

We are seeing exponential growth of customer expectations

Exasperated recently by the COVID-19 pandemic, the environment businesses and customers operate in is constantly changing. This has impacted how customers interact with businesses and their expectations for the level of service they receive. Notably, it has changed what their value propositions are, which may be vastly different to what their ideas of genuinely sharing value with a business have been previously.

Increasingly, there is an emerging need for businesses to focus on 'customer episodes' not just single customer interactions. Customers are becoming increasingly demanding on what they expect from their user experience with organisations and want more of a 'one stop shop' experience.

ESG is now part of the common lexicon

The United Nations Climate Change Vision for climate resilience is to be achieved through three interdependent outcomes:

- Resilient People and Livelihoods
- Resilient Businesses and Economies
- Resilient Environmental Systems

This vision puts a focus on people as agents of change to act now and tomorrow to transform systems for an equitable, low-carbon, resilient and sustainable future. This will involve everyone, especially women, youth, Indigenous peoples and



“ESG is about stakeholders. It's not about you, it's about your community, and what you are doing to the society“.

– Stewart Moore

those living with disabilities. It means helping shape COVID-19 recovery investments to build a low-carbon and resilient future. This vision recognises that building climate resilience requires mitigation and adaptation actions that must be combined to tackle the current and future impacts of climate change.

(Reference: https://unfccc.int/sites/default/files/resource/ExecSumm_Resilience_0.pdf)

Additionally, social license is becoming increasingly important. People are starting to prioritise working for and buying from companies that have strong ESG principles, including good sustainability and social impacts.

Australia is more challenged to respond to ESG pressures because the majority of businesses in Australia are Small to Medium Enterprises and don't have the resources to invest in the ESG agenda. The equity issue needs to be addressed.

There is a perception that ESG can lead to an increase in costs in the whole supply chain and ultimately in the final cost to customers.

A resilient supply chain is defined by its capacity for resistance and recovery.

“Over 1 in 5 businesses have experienced disruptions to their supply chain, with a greater impact felt by businesses with less than 20 employees” – Australia Post Brand and Customer Experience Health Metrics Report, June 2020

The number of supply chain disruptions organisations encountered in 2020 was higher than any other year in the report's history: 27.8% of organisations reported more than 20 supply chain disruptions during 2020, up from just 4.8% reporting the same number in 2019.

- Almost half of items consumed or used in households in Australia's largest cities come through a shipping container.
- Many of Australia's sectors rely heavily on overseas suppliers for vital goods such as medical equipment and have struggled with the sudden changes in global trade.
- Building relationships between suppliers/ companies can help provide us with quantitative data to help understand vulnerabilities.

Preventing and preparing for a disruptive event: How do we take a holistic view on our ability to anticipate trends and variability in order to withstand change and threats?

Resilience through understanding value, uncertainty and trade-offs

In an ever-evolving threat landscape, there are a broad range of future scenarios that need to be considered for business strategy, planning and execution. A deep understanding of value and what that means (unique to organisational context) needs to be understood by all stakeholders. This allows for a consistent understanding of risks and uncertainty, and provides a mechanism to determine trade-offs between varied value measures.

At an organisational level, decisions regarding improving resilience will have impacts on other functions within the business. For example; decisions to improve cyber security through introducing additional controls in online interfaces, may result in a reduced customer experience. Notwithstanding this, customers expect information will be confidential, available, and accessible. This highlights the need for considered controls, based on what is most valuable to the organisation.

Resilience through data-informed decision making

Decision-making in an environment with limited data can create a lack of confidence in the outcome in terms of efficacy, i.e. “are we doing the right thing?”. Leveraging lessons from Emergency Management practices, understanding early warning signals, or leading risk indicators are crucial in the ability to prevent or prepare for a disruptive event.

This approach allows for the “right” information or data to be identified and monitored to inform business decisions. For longer-term investment decisions, more detailed data are required to understand the complexity of the business ecosystem, now and into the future.

Access to high quality data also allows for analysis of historical data. Whilst historical data is not always an indicator of future performance, it does provide a mechanism to identify insights for improved decision-making.

Resilience through improved knowledge sharing and literacy

The breadth of knowledge required to anticipate trends is vast. There is a level of complexity involved in deeply understanding multiple discipline areas, and their interdependencies that requires shared knowledge across a group of people.

Bringing together diverse skillsets with the common objective of improving resilience, allows for a holistic approach to the challenge. This also allows for knowledge sharing and an improved literacy of other discipline areas.

This expands beyond the boundaries of an organisation’s employees. There is an increasing demand for bi-directional knowledge sharing between organisations and communities. This need extends further to also involving government and educational facilities in the conversation.

In addition to knowledge sharing, there is an emerging demand for particular capability areas such as data analysis, risk management, and people who can play the role of multi-disciplinary integrators. Capability development in such areas will improve an organisation’s ability to anticipate trends and potential disruptive events.

Leveraging customers, community and your people as an enabler for improved resilience

No individual or organisation is immune to disruption. Any decision that is made to prevent or prepare for a disruptive event, will need to be shaped around customer and community at the heart, and be dependent on the workforce to carry out, or stakeholders to contribute to the preventative activity. For this reason, people (both internal and external to organisations) are key enablers to being resilient.

Introducing this human element highlights unique challenges that need to be considered:

- Trust in the decision-making process and outcomes is emerging as a key element to being able to unlock the power of customers, community and employees.
- Restrictions in global movement of people has introduced a talent shortage for many Industries.



“Trust is multi-dimensional... hard to build but easy to lose ”

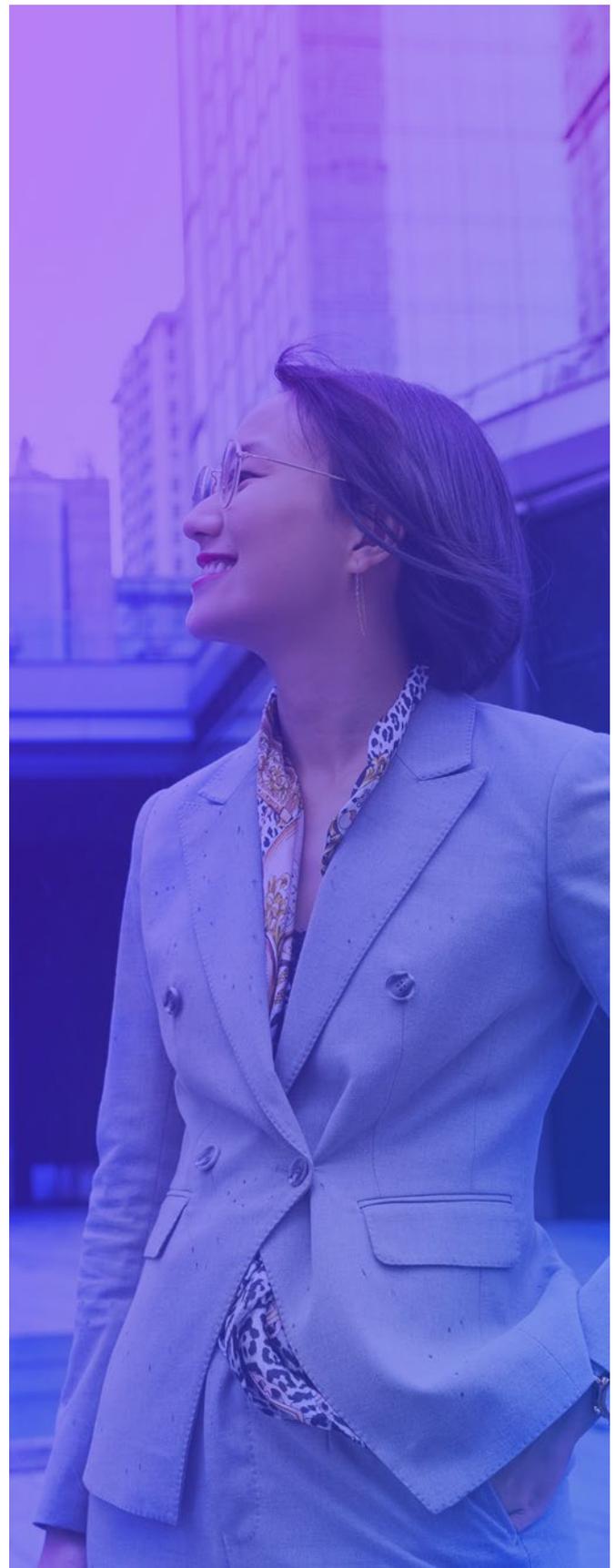
– Samantha Clark

Organisations who treat their customer insights, community partnerships and their team as assets, and focus on their core needs, desires and wellbeing will be well placed to prepare for disruptive events.



“Resilience is front and centre of everyone’s mind”

- Shaun Bond



Responding to and recovering from a disruptive event: What is our collective solution to not just survive, but thrive?

Resilience through innovation and diversification

Forward-thinking proactive deliberate policies encourage local supply and procurement and lead to learnings on pivoting and creation of local supply chains. Survival of businesses affected by crises can be increased through innovation and diversification of business offerings.

Business developing a hybrid model of sourcing both locally and globally is a good practice, where local sourcing and procurement also helps sustainability (due to reduced transportation requirements). Pivoting between local and global supplies keeps customers happy but reduces revenue. Diversity into localised supply chain helps to de-risk; furthermore, customers are retained as a result.

Resilience through flexibility and ability to pivot

Organisations are trying to find the balance between having the fluidity to make the best decisions with the information available at the time and what the financial impacts of those decisions are. Historically, profits have been the core driving factor for businesses, however we are increasingly seeing the value of ensuring the customer departments in organisations have a more prominent seat at the table to drive growth and expansion. Customer and community centricity at the heart of decision making will ensure ongoing relevance and resilience

Rapid acceleration of technological growth, coupled with the uncertain environment businesses are now operating in, is making it harder for businesses to 'keep up' and match customer expectations with the services they are providing.

There is a need to constantly change or transform the way organisations do business with their customers to ensure they are accommodating their needs. This will require organisations to have 'slack in the system' to ensure rigid processes do not hinder creativity and adaptability and the need to be flexible.

This flexibility needs to be considered in other business contexts too, such as financial, workforce and operations. Consideration as to how to build in sufficient slack in the system to recover from a disruption, whilst still being a viable business is a key challenge.

Resilience through better use of technology

The collective solution, to this challenge, will be heavily reliant on technology, data and customer insights and intelligence. Speed of technology change and automation will continue to evolve and looking to these will provide continuous improvement and transformation opportunities for building business resilience.

Data and analytics will be part of the solution, for example in building resilience within our supply chains:

- Identifying characteristics and patterns in relevant supply chains to enable the use of predictive analytics and automation.
- Data analytics allow for forecasting and prediction which enable pre-ordering and planning of orders and items based on trends.

The use of data and technology allows for us to achieve efficiency and enough slack in our systems.

Additionally, preparing for a disruption by testing our response capabilities will also form part of the collective solution. Do we know what to do when an event strikes? Can our systems be restored within expected timeframes? Are backups in place and are they fit for purpose? Are we prepared through testing the restore processes? Are we ready?



“Inherently, a shift towards a global Circular Economy means we are not making changes within an Industrial Revolution linear system, we are changing the system itself.”

- Michael Geros

Build the resilient mindset

There is a recognition that we need to define what critical infrastructure is and whether criticality is defined over a scale of potential impacts for the community. Further, building resilience in critical infrastructure requires a trade off with costs. With this comes an acknowledgement that strategies used to build resilience in the past may not necessarily be sustainable in the future. Though useful for insights, historical assumptions and information don't necessarily represent the future.

Crises force us to shape our thinking. Changes to behavioural patterns through major world events are required and everyone, including individuals, organisations, education providers and governments need to think differently. Leveraging these lessons from negative events into a positive and taking these learnings into better planning is crucial so we don't just survive but thrive.



“Ensuring organisations are able to be agile, resilient and accommodating is crucial when operating in volatile times or environments. Change is unavoidable and is quickly becoming the new normal, so we need not look at it like change anymore ”

- Ellie Hubbard



Where to next?

We have viewed the challenge through numerous lenses: the customer and community, cyber security, supply chain, ESG and critical infrastructure. We have explored collective solutions to the seemingly insurmountable task of building business resilience. With the upcoming 2032 Brisbane Olympic Games on the horizon, this event may be the platform to focus business resilience efforts and encourage momentum.



“Brisbane 2032 will put us in the eye of the storm, with some of the largest economic investment seen in decades”

– Andrew Barrett

Nonetheless, many more questions need to be explored. For example;

- How can we understand changing social behaviours?
- How can we build uncertainty into planning for our critical infrastructure?
- Who has the social obligation to pay for resilience?
- How can we gather data and information to support our decision making and understand a range of potential futures?
- How do we build and attract talent to deliver the change needed?

Building business resilience is a multi-faceted challenge, which no one organisation or individual can solve alone. Partnerships will play a crucial role towards building business resilience. And not just reactive partnerships, formed in the response to an adverse event, but long-term partnerships built on a common commitment. These partnerships will build mutual trust where knowledge is shared, combined and turned into wisdom.



“Shared commitment to co-creation”

– Tim Kastelle

Partnerships will be required to bring together the ecosystem of participants including governments, corporates, small and medium sized enterprises, communities and citizens. Collaboration from Federal, State, Local Governments, along with industry and academic institutions will all be needed. Each partner will bring unique skills and capabilities to contribute to the collective thought. These partnerships will be formed on a shared commitment to co-creation, so that when the system gets shocked, it can come back quickly.





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