



Reimagine resilience: Singapore views

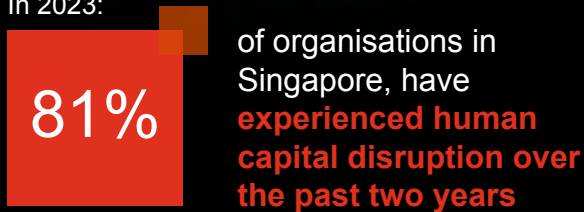
**Global Crisis and
Resilience Survey 2023**





In Singapore, like the rest of Asia where economies are export-oriented, a disruption in global supply chains has the potential to pose cascading consequences onto many parts of business operations.

In 2023:



Beyond the pandemic and geopolitical conflict, Singapore organisations have seen issues with employee retention and recruitment, leadership misconduct, and executive turnover. This is significantly greater than the Asian average of 68%.



This is a significantly larger proportion, compared to 84% in Asia and 76% globally, likely because Singapore's economy is highly dependent on international trade and supply chain operations.

The focus of PwC's Global Crisis and Resilience Survey 2023 is to understand today's threats and how organisations target their resources, efforts and investments to become more resilient.

Data from nearly 2,000 respondents worldwide provide insight into how business leaders are preparing for and responding to this new world. For this report, we have consolidated data from 50 respondents in Singapore and added insights from 499 respondents across India, South Korea, Japan, Malaysia, Thailand, Hong Kong, Singapore, the Philippines, Vietnam and Indonesia to enable us to draw a comparison and derive an understanding of the Asian business environment in which our Singapore-based companies operate.

The resilience revolution is here

The business practice of resilience has evolved. Resilience planning is no longer just for the purposes of mitigating potential losses or meeting regulatory obligations. Today, true resilience is a core competitive advantage and a prerequisite for any successful business strategy.

A staggering 98% of organisations in Singapore have experienced disruption in the past two years. Many are concerned about cyber attacks, supply chain disruptions and operational/ technological failure. Singapore also witnessed a greater-than-average disruption to its workforce and human capital in comparison with its Asian peers.

In Singapore, the top challenge faced during a disruption is the "acknowledgement that the incident was a crisis and therefore required escalation and mobilisation of the appropriate senior team". This is a sobering reminder that culture plays a critical role in how organisations respond to crises.

The ceaseless cycle of change and disruption is the hallmark of today's global business climate. Organisations are contending with an environment in permacrisis – constant movement, continuous disruption – as they attempt to undertake broader business transformations to adapt and address each challenges.

From geopolitical instability and the lingering effects of the COVID-19 pandemic to climate crises, cyber threats and faltering supply chains – a multitude of external macro forces are converging in the market. Against this backdrop, resilience has become one of the most vital strategic priorities in the corporate world. Organisations need to be truly resilient to not only recover and survive from disruptions but to also thrive. This is key to ensuring sustainable growth and meeting a variety of stakeholder expectations from customers to shareholders to employees.

Top 5 challenges faced during a disruption in Singapore:

01

Acknowledging that an incident was a crisis – 38%

Global – 27%

02

Making timely, deliberate decisions – 36%

Global – 31%

03

Restoring critical business services – 36%

Global – 31%

04

Usefulness of response plan – 36%

Global – 33%

05

Enhancing response efficiency with tech – 34%

Global – 29%

We bring you ways to build resilience programmes into your organisation as you address challenges faced during disruption through these articles:

Understanding the resilience gaps

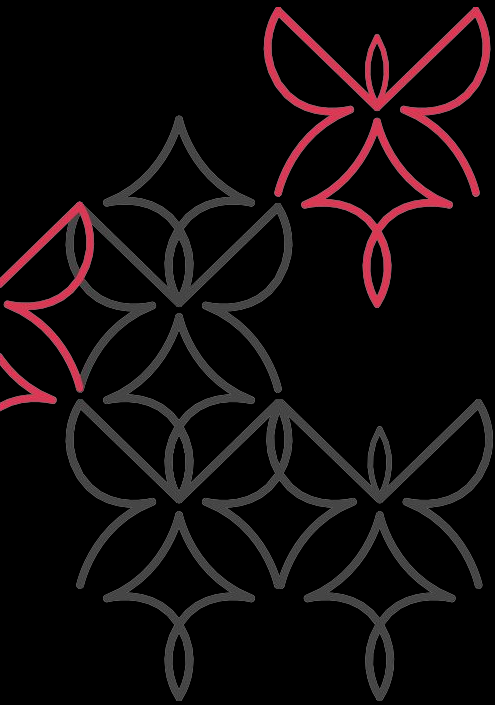
Page 4 to 7

Where are businesses investing?

Page 8 to 10

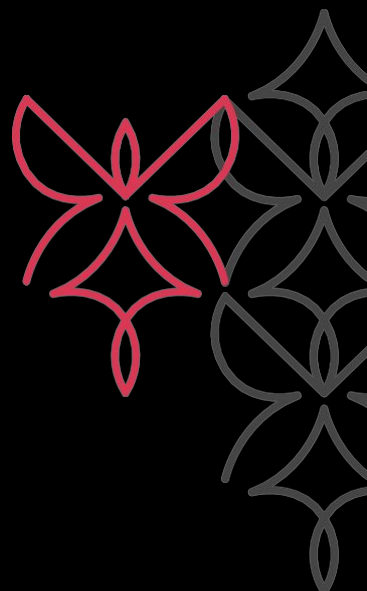
How to design organisations for resilience?

Page 11 to 15



Understanding the resilience gap

The lack of confidence in organisational capabilities to address a crisis results in unmitigated risks and untapped opportunities during disruptions.



Having unaddressed resilience gaps is expensive in the long run

While our survey results confirm that business leaders recognise resilience as a strategic imperative, the data also reveals a “confidence gap” for some organisations. Despite confidence in the ability to navigate disruption, only a third of Singapore’s respondents (32%) report that they have proper foundational elements, such as:

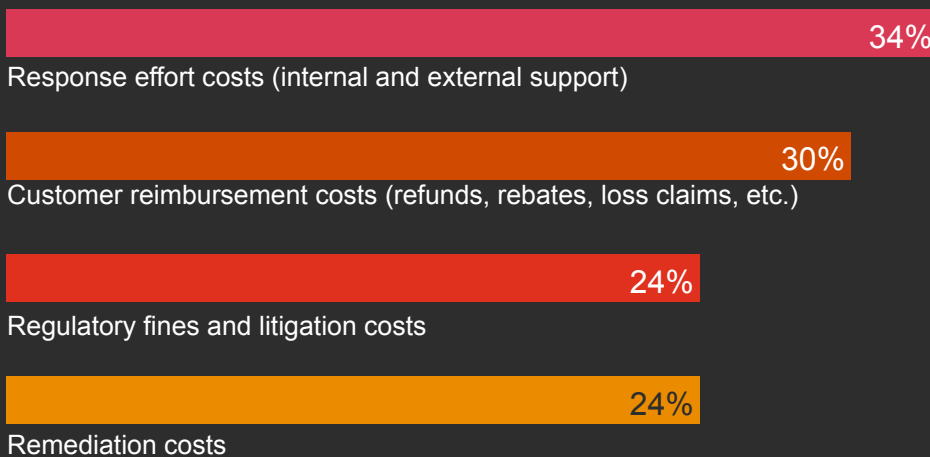
- Crisis management
- Workforce resilience
- Cyber recovery

The lack of these foundational elements would leave organisations exposed to a number of challenges, including the inability of leaders to rally their workforce to respond quickly to crises, and to monitor and track progress and recovery. Such concerns would lead to an erosion of the organisation’s competitiveness over time.

Investing into crisis resilience: a Singapore view

Singapore firms have been putting substantial amounts into their risk efforts to close current resilience gaps. The inability to address these gaps can be expensive for firms, often leading to large response costs. The required response effort costs cause a big concern, with 34% of respondents setting aside more than US\$1 million for it.

In which areas of risks as a result of resilience gaps have firms in Singapore spent at least US\$1 million?





Scenarios

Organisational maturity in resilience planning

An integrated resilience programme makes all the difference when disruption strikes. Here's what can happen:



Evaluation criteria

Company A

(Poor resilience planning)

A ransomware attack disabled a global manufacturer's critical business services. **Lacking key strategic components needed for resilience in the face of disruption**, the organisation **lost several weeks of business – and close to one billion dollars.**

Company B

(Better resilience planning)

When a massive disruption dismantled a global manufacturer's shipping operations, the organisation's integrated plan of centrally governed crisis management capabilities kicked in, as it was already weaved into operations and culture, allowing the business to **swiftly shift its shipping routes and supply chain without interrupting service to customers.** The organisation tapped into its resilience to weather the disruption – **and emerged stronger.**



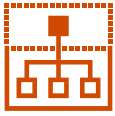
Sponsorship and integration

The organisation went into the crisis with **resilience in silos**. There was neither clear sponsorship nor dedicated central resources with authority over the resilience programme. The organisation **lost valuable time, money and energy** attempting to come to consensus on critical processes.

With an **executive-level "owner" to oversee the entire resilience programme**, the organisation had invested in integrating its resilience programme prior to the crisis. The integrated approach laid the **foundation for holistic insight** into the impact of the issue as it arose, as well as clarity on who was accountable and had the authority to make decisions.

Company A

Company B



Prioritisation

Without an established agreement regarding the most important elements of the business, the crisis forced **executives to waste valuable time** trying to reach consensus on what to address first.

The executives had **agreed on the critical business services**, hammered out in resilience planning over the course of designing their overall programme. They were able to **quickly execute their continuity strategies** in a prioritised fashion.



Mapped end-to-end processes

Each team knew their individual process / part, but there was **not a clear understanding of end-to-end business processes and associated dependencies**. Individual teams trying to reduce the effects of the crisis on their process **exacerbated certain processes downstream**.

By **mapping their entire operational capabilities**, leveraging a holistic **resilience software tool**, executives also knew at the start of the crisis how each process would affect functions down the line and had the **ability to quickly assess the broader impact** of the event.



Regular testing

Executives **did not regularly test their crisis response plan**, and there was a **lack of awareness of broader recovery plans and strategies**, so gaps that could have previously been identified and closed resulted in additional pain points. Moreover, the **organisation lacked response muscle memory** and essentially **developed response plans and playbooks on the fly**, costing valuable time.

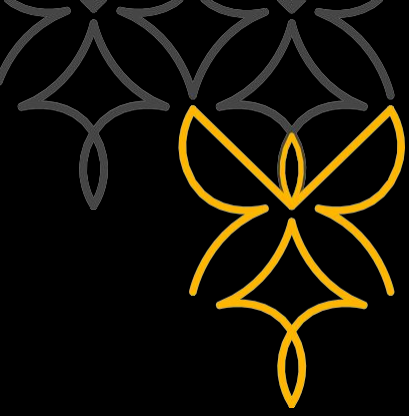
The **organisation updated its programme periodically** in response to external pressures and internal changes – **enhanced technology**, for instance, **alerted the testing team to needed adaptations in several key processes**. Gaps that could have haunted them with this crisis had been previously addressed as a result.



Advice for resilience leaders:

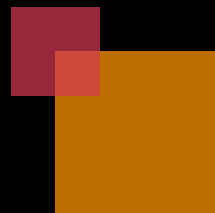
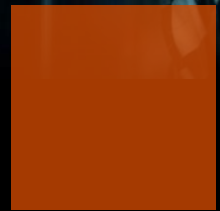
Encourage crisis preparedness through rehearsal of roles and responsibilities and scenario planning within your team to identify and remediate any existing gaps so that your organisation emerges from crisis stronger.

Further, customisable incident and crisis management exercises for C-suite leaders, incident management teams and employees can also be considered to equip your people with the knowledge and skills needed to navigate a crisis.



Where are businesses investing?

Despite current market conditions, organisations are not reducing their investment in resilience, which is further testament to business leaders' recognition that resilience is an essential function in their firm.





Majority of organisations know the importance of investing into cyber resilience, business continuity management, risk monitoring and even workforce resilience. Almost 90% of respondents in Singapore have indicated “some investment” or “significant investment” planned in these critical aspects of resilience for the next two years.

Given the volatility of the past few years, we are surprised to see that some respondents are still not planning for any investment in a number of areas foundational to resilience: 5-8% of Singapore’s respondents are not investing in supply chain resilience, disaster recovery, incident response and threat monitoring.


The lack of investment indicates a potential risk in the event of a disruption. Organisations that underfund their resilience programmes are putting themselves at a disadvantage in their day-to-day operations.

Advice for resilience leaders:

Equip your organisation with the right partners, processes and tools that are strategically aligned to your existing resilience planning to enhance and simplify the process.

‘Personal and emotional resilience’ remains the least invested aspect of crisis and resilience management. 18% of respondents in Singapore indicated that they had not invested in this aspect in the *last* two years. Looking ahead at the *next* two years, this number is up to 22% of respondents in Singapore who indicated that they will not be investing in personal and emotional resilience. This serves as a timely reminder of the need to place the human experience at the heart of their resilience programmes to truly make a meaningful impact.

What are businesses in Singapore planning to invest into in the next two years?
(significant investment planned)

No. 1 answer 

51%
Business continuity management

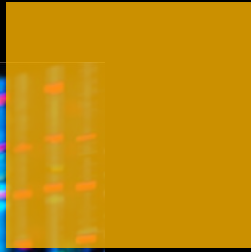
49%
Disaster recovery

45%
Cyber resilience

After a catastrophic event, most organisations will move quickly to invest in building resilience. That is no surprise; even moderate disruption can be a prime motivator for change.

Leaders need to view investing in resilience as a strategic imperative, rather than a tactic motivated by compliance needs or fear. Those who act on that imperative with urgency will emerge from crises with invariably better results.

Bottom line: Rethink why you're investing in resilience. Fortify your resilience programme – not just in the wake of disruption – but before it happens. Start by assessing the maturity of your organisation's business continuity management (BCM) capabilities. Then, design a BCM programme that is tailored to your unique needs. Afterwards, simulations and training to help you practise roles and responsibilities in a safe environment.



Designing organisations for resilience

Building a resilient organisation by design has become a strategic imperative. Business leaders today need to put in place the key components of an effective resilience programme, so that they have the system and resources needed to help them work through crises effectively.

Three key foundational elements need to be factored into a resilience programme:



Integration

An integrated resilience programme is essential – and if you are not developing a strategy to move in that direction, you are falling behind.



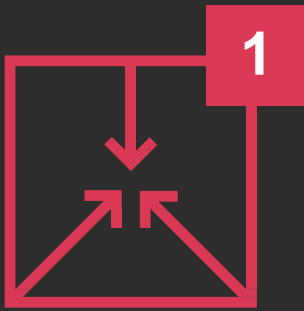
Leadership

Thriving in permacrisis requires senior leadership, executive sponsorship and upskilled teams.



Operational resilience

Leading organisations are adopting an operational resilience (OpRes) approach and leveraging technology to enable a panoramic view of their risk and resilience landscape.



An integrated resilience programme is essential

It is no longer sufficient for organisations to continue with their current ways as they address today’s complex and interconnected risks. Enterprises are moving to an integrated resilience approach, centrally governing and aligning multiple resilience capabilities around what matters most to the business, and embedding the programme into operations and the corporate culture.

To start, leaders should consider the roles, responsibilities, governance, objectives, strategy and other key elements, and design a programme that extends across the enterprise and into every facet of the business. In Singapore, almost nine in ten organisations have a C-suite level sponsor for their resilience programmes.

Organisations with a resilience strategy and an integrated programme are not only able to identify and manage risks better, but can see opportunities amid disruption. This allows business leaders to take appropriate risks in a way that is aligned with the overall business strategy. Prioritising investment based on what is critical to the organisation and stakeholders also enables senior leaders to coordinate their response to disruption and execute a faster and more effective recovery.

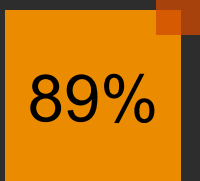
The result:

Improved risk management, better financial performance, competitive advantage in the marketplace, a protected reputation and stakeholder trust.

Advice for resilience leaders:

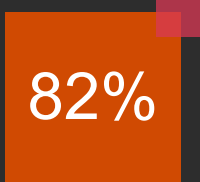
Conduct frequent exercises to validate your existing plans to be able to respond effectively during a crisis.

While Singapore has similar levels of sponsorship and resources with their global counterparts, our resilience enterprise systems have existed for longer than those globally. Are they due for an update?



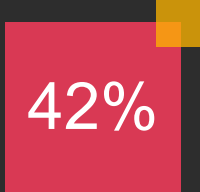
have a **C-suite level sponsor**

that accounts for the organisation’s enterprise resilience programme and competencies



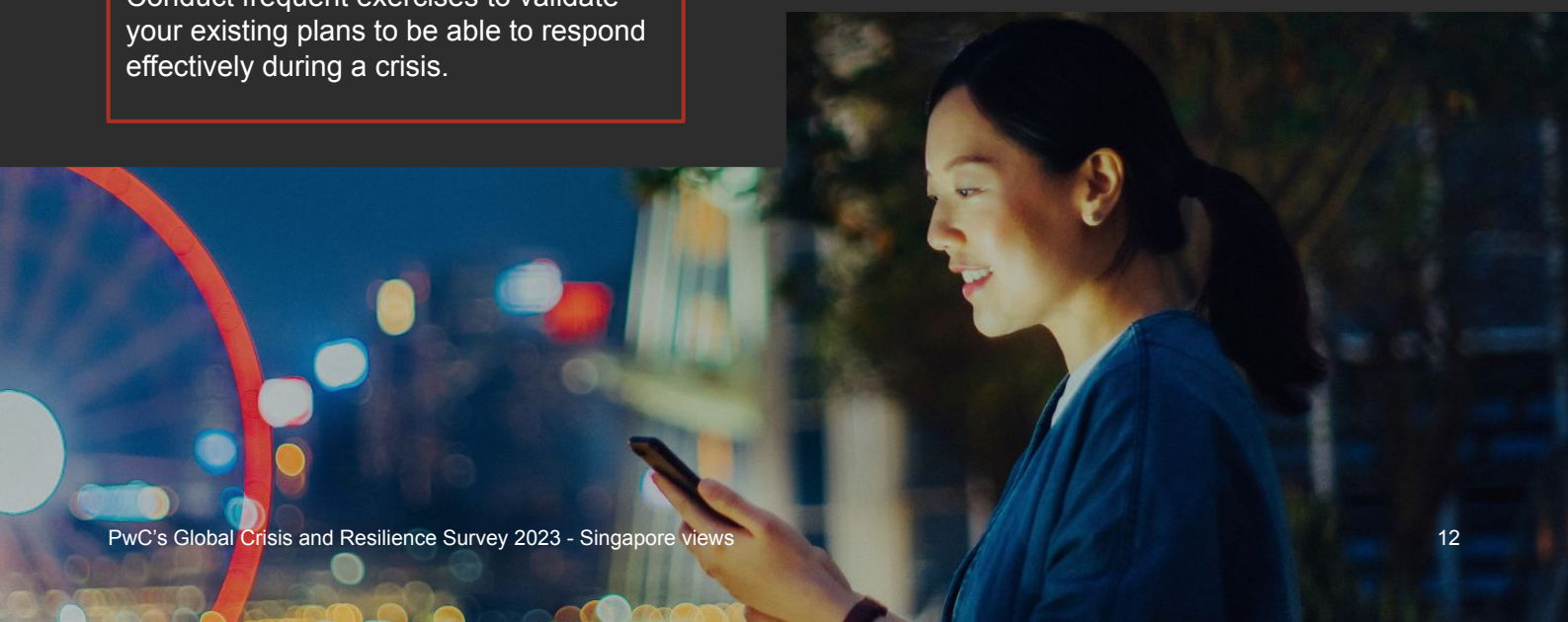
of organisations in Singapore **have had their programme in place for more than three years**

As opposed to 72% of organisations globally. When the timeline extends to five years, it is observed that



of organisations in Singapore **have had their programme in place for more than five years**

As opposed to 28% of organisations globally





Thriving in permacrisis requires an executive leader and upskilled teams

We often refer to resilience as the enterprise's immune system. Building immunity requires layers of resilience – from employees to leadership and the Board. A successful resilience strategy and programme needs:

1. Sponsorship from the C-suite
2. A programme leader with clear responsibility
3. A skilled team to do the day-to-day work

Globally, 32% of resilience programmes are sponsored by CEOs. In Asia,

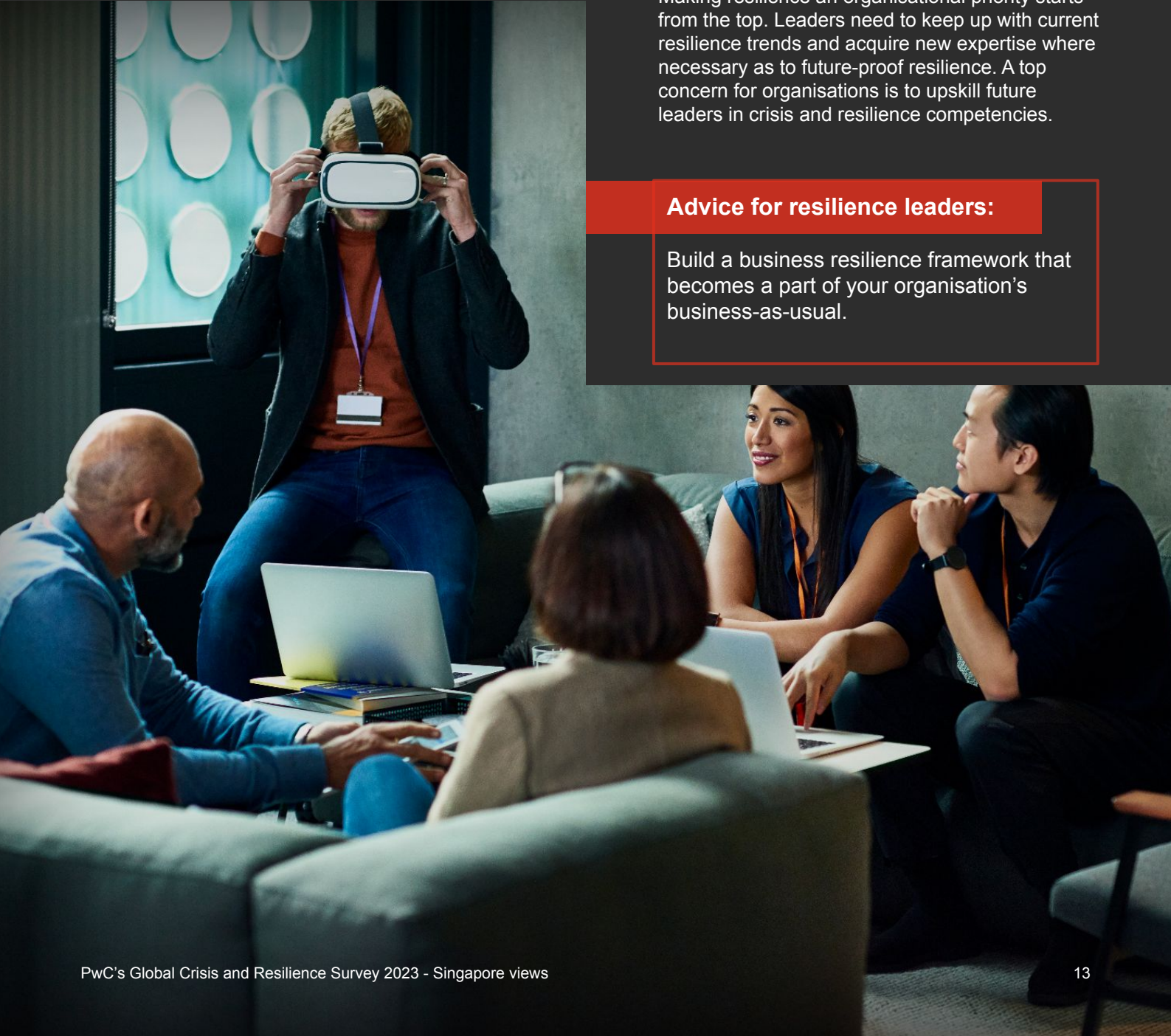
41%

of enterprise resilience programmes are sponsored by the organisation's CEO

Making resilience an organisational priority starts from the top. Leaders need to keep up with current resilience trends and acquire new expertise where necessary as to future-proof resilience. A top concern for organisations is to upskill future leaders in crisis and resilience competencies.

Advice for resilience leaders:

Build a business resilience framework that becomes a part of your organisation's business-as-usual.



What does the data show?

1 Accountability:

Today, we see that many organisations have established a C-level sponsor. In Asia, 89% of organisations with a resilience programme in place have established a C-level sponsor. Singapore is on par with its Asian counterparts, with 88% of organisations having assigned a C-suite member to drive enterprise resilience. In fact, for both Singapore and Asia, CEOs are the primary sponsors at 32% and 41%, respectively, demonstrating the criticality of top leadership to the success of the organisation. Executive sponsors are accountable for establishing the target maturity for the resilience programme and making sure it is appropriately funded and staffed, and ensuring it meets expectations.

2 Responsibility:

On the other hand, we are not seeing organisations coalesce around a single role that is responsible for managing the implementation of an enterprise resilience programme – a Chief Resilience Officer, for instance, was named by only 11% of our Asian survey respondents. Appointing a Chief Resilience Officer might not be the answer for every industry, but this lack of clear enterprise-wide responsibility undermines focus and direction. In the absence of a dedicated role with responsibility for the programme, organisations are unlikely to fully integrate resilience into operations and culture.

3 Upskilling:

Constraints around resilience expertise present another challenge: 31% of our respondents said building a team with the right skills is a major hurdle in establishing a resilience programme. To date, the field lacks a pool of talented resilience professionals with the experience and skills to execute on a strategic, integrated programme and to respond effectively during a crisis.

Furthermore, 39% of organisations also indicated that maintaining and maturing their existing programme was a prominent challenge. To build resilience, senior resilience leaders must be clear about how the organisation works, how to deliver on the right priorities, and the role they play as leaders. So how do we get there if the expertise pool is shallow? By providing the right investment in training and professional development, organisations can overcome this challenge and develop the team they need.

Business resilience in a permacrisis requires heightened accountability and ownership. Recognising the interconnectedness of crises, businesses must make informed decisions to address climate change and promote sustainability. For organisations in export-driven economies like those in Asia, supply chain and marketplace disruptions often have a larger impact on them compared to organisations in other economies.

30%

of respondents in Asia are worried about **competitive / marketplace disruption**

19%

of respondents globally feel the same

Similarly, sustainability considerations are greater in Asia due to its greater susceptibility to climate-related risks in a rapidly industrialising environment.

27%

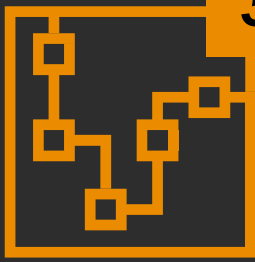
of respondents in Asia are worried about **climate change / natural disaster / environmental event**

21%

of respondents globally feel the same

Advice for resilience leaders:

To help your workforce navigate risks, invest in training for your teams to grow their confidence, as part of your organisation's BCM programme.



Building operational resilience is the future

As more organisations move to integrate their resilience programmes, there is a clear trend toward adopting core principles of an OpRes approach that allows organisations to manage risks with high reliability and to drive efficiency.

OpRes focuses on establishing and continuously maintaining core elements of non-financial resilience, informed by a strategic view of what is most important to the organisation and its stakeholders. What is most important should determine business service outcomes — and not, as conventional business continuity approaches generally dictate, just the systems that deliver them.

From there, organisations should carefully map them, end-to-end; clearly understand the impact and priority of systems, applications, third parties, people, physical property and data; and establish mature exercise and testing capabilities based on arduous — but plausible — scenarios. Existing risk appetite can help determine the degree of resilience required, but leaders should also consider setting tolerances based on external impacts to customers and the wider system or market in which the organisation operates in.

In addition to the shift toward OpRes, organisations are looking to technology as a driving enabler. Business leaders are also looking to use technology to create a living resilience programme they can continually test and evolve.

Advice for resilience leaders:

Design and implement technology resilience frameworks that enable an effective recovery for your critical business operations from technology incidents.

```

elif _operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
elif _operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

#selection at the end -add back the deselected mirror modifier object
mirror_ob.select= 1
modifier_ob.select=1
bpy.context.scene.objects.active = modifier_ob
print("Selected" + str(modifier_ob)) # modifier ob is the active ob
#mirror_ob.select = 0
done = bpy.context.selected_objects[0]
obj_data.objects[obj.name].select = 1

```

Advice at a glance

To our resilience leaders:

Build a business resilience framework that becomes a part of your organisation's business-as-usual.

Design and implement technology resilience frameworks that enable an effective recovery for your critical business operations from technology incidents.

Conduct frequent exercises to validate your existing plans to be able to respond effectively during a crisis

Encourage crisis preparedness through rehearsal of roles and responsibilities and scenario planning within your team to identify and remediate any existing gaps so that your organisation emerges from crisis stronger.

To help your workforce navigate risks, invest in training for your teams to grow their confidence, as part of your organisation's Business Continuity Management (BCM) programme.

Equip your organisation with the right partners, processes and tools that are strategically aligned to your existing resilience planning to enhance and simplify the process.

How to thrive in permacrisis

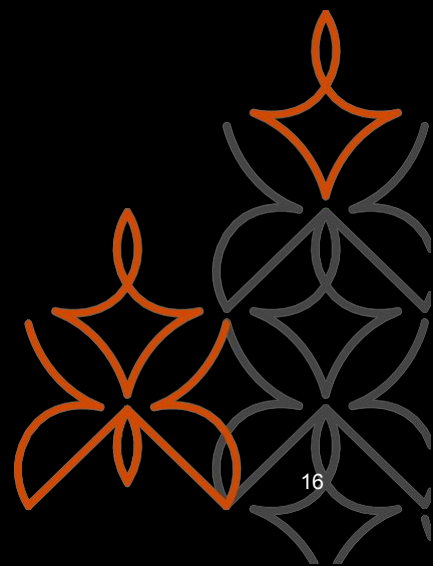
Being resilient by design is critical both for survival and for strategic advantage in an era of disruption as the norm, and it is an imperative for leading organisations. The ability to adapt and respond to disruption is vital to maintaining the trust built with stakeholders and protecting shareholder value and reputation. Certainly, the pandemic has shown us the importance of being able to respond adequately to crisis, for businesses and government alike, regardless of how unknown or unexpected a situation may be.

Resilient organisations build and maintain trusted relationships across their stakeholders; customers know they can count on consistency and results. This, in turn, preserves and enhances the reputation of the organisation.

To build a trusted and agile organisation, it is vital to invest in resilience across functions and people, and to focus on an integrated approach. This includes aligning resilience goals with business and strategy, embedding resilience into key critical services, and fostering a culture of resilience.

Communicate the value of resilience throughout your organisation; embrace resilience as a strategic imperative and an opportunity to strengthen your organisation as you prepare for disruption, manage crises, recover, and thrive.

Be resilient by design.





About the survey

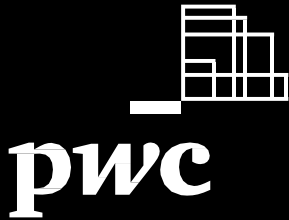
The 2023 Global Crisis and Resilience Survey is a survey of 1,812 business executive, business continuity and technology leaders conducted from 23 September 2022 to 24 November 2022. Respondents are based in various regions: Asia Pacific (39%), Europe (32%), North America (including the Caribbean) (13%), Latin America (6%) the Middle East (5%), Africa (3%), and others (2%).

There were 51 respondents in Singapore. Business executives make up 20% of the sample, and the rest is split across functions such as business continuity (12%), technology (10%), operations and production (8%), human resources (8%), risk management (6%) compliance (4%), customer services (4%), finance (4%), marketing and sales (4%), procurement (4%), resilience(4%) , fraud investigations and financial crime (2%), legal (2%).

42% of respondents are executives in large companies (US\$1 billion and above in revenues); the rest are in companies with less than US\$1 billion in revenues.

Respondents operate in a range of industries, including industrial, manufacturing, automotive (IM&A) (24%), consumer markets (CM) (22%), government and public services (G&PS) (22%). financial services (FS) (20%), technology, media and telecommunications (TMT) (8%), and energy, utilities and resources (EUR) (4%).

PwC Research, PwC's Global Centre of Excellence for market research and insight, conducted this survey.



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