Baker McKenzie.

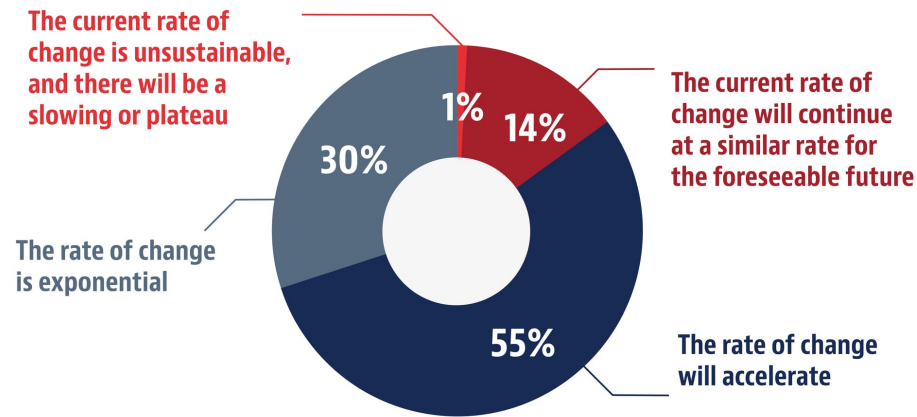# The Age of Hypercomplexity

Technology, Business and Regulators in Asia Pacific

Introduction: Perma-Change

Technological advancement is anything but a straight line, continually creating unique challenges as well as some lucrative opportunities. While many respondents in our survey of 600 senior executives across the Asia Pacific region are turning today's tech revolution into major opportunity, businesses in this region overall are actually less focused on investment in innovation compared with two years ago, as they try to balance their investments against various other significant macroeconomic and regulatory forces.

The current rate of change is unsustainable, and there will be a slowing or plateau

The current rate of change will continue at a similar rate for the foreseeable future

The rate of change is exponential

The rate of change will accelerate

1%

14%

30%

55%

In terms of technology and business, what is your prediction around the trajectory of the change curve?

Change has been said to occur in waves. As highlighted in our first Age of Hypercomplexity report, however, it is perhaps more fitting to say that change is now happening in tsunamis: towering disruptions that wipe away well-established trends, products and processes in sometimes a matter of months.

Indeed, sentiments among respondents across Asia Pacific on the trajectory of the change curve show that changes to the technologies we depend on will not just be a constant, but an accelerating force that will almost permanently keep them on their toes. More than half (55%) of respondents expect the rate of technological change to at least accelerate, with a further 30% now describing it as exponential.
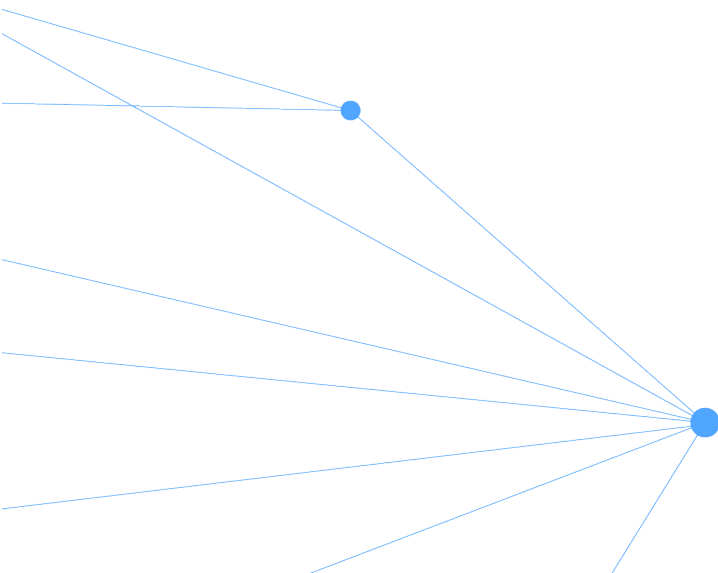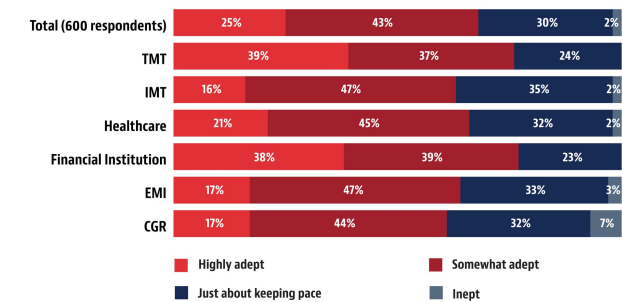
Are Asia Pacific Businesses Prepared for the Next Tsunami of Change?

Despite the view that the pace of technological change will only increase, placing additional pressures on their businesses, most respondents (68%) are confident that their organizations are to some extent adept at exploiting the benefits of new technologies. Within this group, however, a much smaller percentage (25%) say they are highly adept. Notably, large numbers of respondents (30%) also admit they are barely keeping pace.

While largely positive on the ability to harness new technologies, the sentiment between highly adept and somewhat adept is both interesting and revealing. Particularly with reference to subsequent questions where respondents were asked if they considered their companies to be disruptors or disrupted: 25% considered themselves to be disrupting and leading change, in line with the 25% who said they were highly adept at exploiting the benefits of new technologies. Similar percentages and sentiments are noticeable across industries.
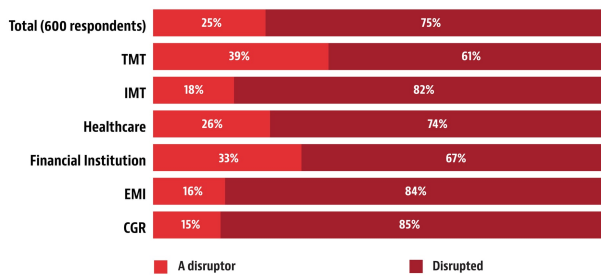
If this fine line serves as the demarcation between companies driving change (disruptors) and those scrambling to adapt (disrupted), being "somewhat adept" today is clearly not enough.

	Highly adept	Somewhat adept	Just about keeping pace	Inept
Total (600 respondents)	25%	43%	30%	2%
TMT	39%	37%	24%	
IMT	16%	47%	35%	2%
Healthcare	21%	45%	32%	2%
Financial Institution	38%	39%	23%	
EMI	17%	47%	33%	3%
CGR	17%	44%	32%	7%

How adept is your organization at exploiting the benefits of new technologies?

It seems that successfully breaking through this ceiling may be critical to thriving in the current and future market. Complicating this matter further, our research shows that some business leaders may be getting overwhelmed and distracted with priorities other than the tech imperative.

Since 2017, the need to innovate and deal with tech disruption from competitors has dropped down the list of top macro challenges and complexities that businesses in Asia Pacific are prioritizing. In their place, compliance and regulatory scrutiny and economic uncertainty have risen to the top spots as the
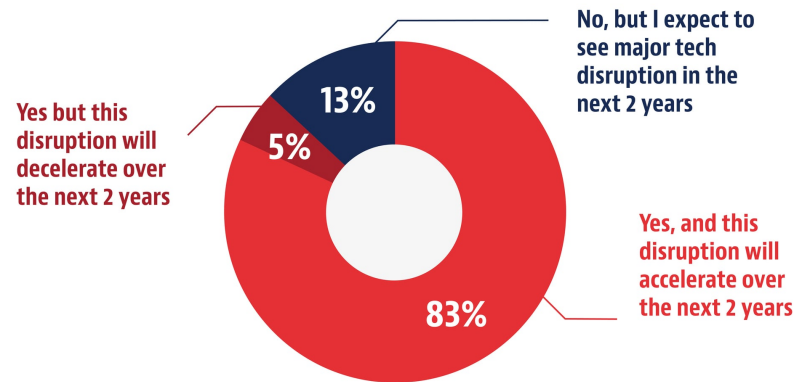

	A disruptor	Disrupted
Total (600 respondents)	25%	75%
TMT	39%	61%
IMT	18%	82%
Healthcare	26%	74%
Financial Institution	33%	67%
EMI	16%	84%
CGR	15%	85%

On balance, would you consider your company a disruptor or disrupted?

US-China trade war causes uncertainties and a growing wall of regulatory and compliance requirements create major challenges for businesses, particularly those operating in multiple markets. Likewise, cost increases will be driven by regulatory and compliance issues according to 73% of respondents, compared to 47% of those surveyed that see cost increases tied to investment in new technology.
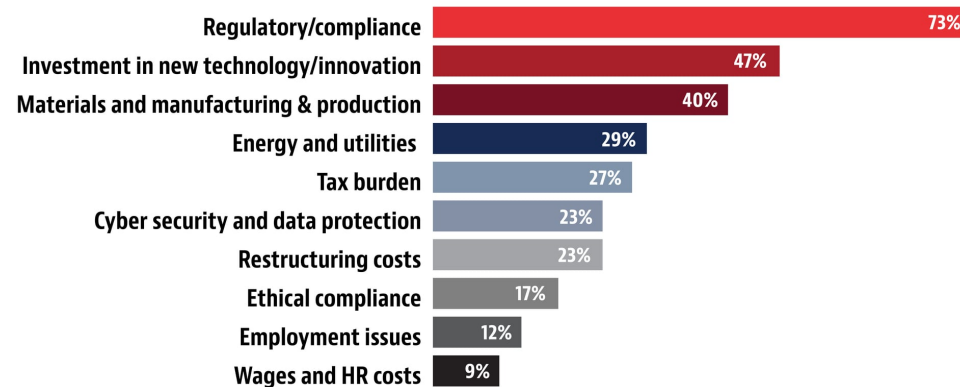
Outlook: Will the Distracted Become the (Further) Disrupted?

As complying with new and existing regulations takes center stage and enforcement becomes a greater material risk, requiring increasing amounts of attention and impacting decision-making on a near-daily basis, it is worrisome that tech and investment in R&D may be taking a backseat at precisely the moment when they should be priorities. Since our research in 2017, the need to innovate has in fact dropped from top spot to fifth, in terms of business priority, with dealing with disruption likewise dropping from third to fourth.

Regarding technological disruption to their primary industries in the past two years, the vast majority of respondents (83%) say that disruption was a challenge for their businesses. They also think this competition will charge ahead over the next two years. The few respondents (13%) that said there has been no substantial disruption in their industries recently also admit that they foresee storm clouds brewing as they advance plans for the near term.

No, but I expect to see major tech disruption in the next 2 years — **13%**

Yes but this disruption will decelerate over the next 2 years — **5%**

Yes, and this disruption will accelerate over the next 2 years — **83%**

Has your specific sector seen major technological disruption in the past two years?

Regulatory/compliance	73%
Investment in new technology/innovation	47%
Materials and manufacturing & production	40%
Energy and utilities	29%
Tax burden	27%
Cyber security and data protection	23%
Restructuring costs	23%
Ethical compliance	17%
Employment issues	12%
Wages and HR costs	9%

Which areas will provide the greatest cost increases in your industry over the next two years?

Industry Focus: Consumer Goods & Retail Falling Behind?

The cross-section of respondents shows clear leaders and laggards in the race to remain relevant. Unsurprisingly, respondents in the TMT sector and financial institutions feel they are, on balance, disruptors of their primary markets.

For tech companies, this is of course due to the nature of their industries; as the "cradle of disruption" as one respondent describes it, these businesses must perpetually remain focused on innovating, less they fade into irrelevance. For financial services businesses, many are finally adapting and thriving as the fintech wave wipes away traditional business practices in the transition to digital.

While several other industries fall into the laggard category, consumer goods and retail (CG&R) stands out with its lowest percentage of respondents (15%) claiming to be disruptors. It is also the lowest ranked industry in terms of adeptness at exploiting new technologies and the highest where respondents actually think they are incapable of incorporating innovation into their business practices.

This is surprising given the huge pressure on traditional retail, on the heels of various bankruptcies and restructurings among major consumer goods brands. With lessons to learn from these poor business outcomes, why have CG&R companies not corrected course? What would it take for them to do so?

"Technology-driven disruption is affecting every industry, even those that previously assumed their sector to be immune. While it's hitting different firms from various directions, and with varying speeds, the consistent message is that disruption is accelerating and timeframes for a considered response are contracting dramatically. Firms that are failing to appreciate that disruption requires a top-down, across the business response are falling behind and risk reaching a point where they will never catch-up."

**Adrian Lawrence –
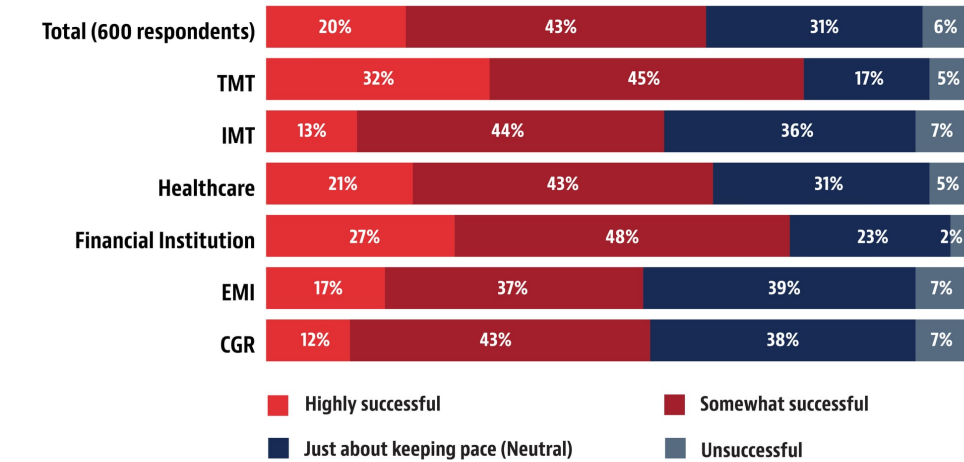Head of Technology, Media and Telecoms Group, Asia Pacific, Baker McKenzie**

Managing Tech Risk

While a core of our respondents say currently they are largely successful at managing the risks from new technologies, a larger percentage admits they are only just keeping pace.

The upsides to adopting new technologies can be obvious – increasing manufacturing capacities, improving efficiencies, and delivering a better customer experience, to name a few – but the risks are often less talked about, until things go wrong. However, it is clear from the various data that amidst breaches, scams and security scares, which we see almost daily in the press, increasing tech change is associated with increased risk.

	Highly successful	Somewhat successful	Just about keeping pace (Neutral)	Unsuccessful
Total (600 respondents)	20%	43%	31%	6%
TMT	32%	45%	17%	5%
IMT	13%	44%	36%	7%
Healthcare	21%	43%	31%	5%
Financial Institution	27%	48%	23%	2%
EMI	17%	37%	39%	7%
CGR	12%	43%	38%	7%

How successful is your organization at managing the risks of new technologies?

It's for these reasons and others that only a small group of respondents (20%) feel confident in their ability to manage tech-related risks. And while only 6% of executives say they have been unsuccessful in this area, most still question their organization's ability to handle pressures from the rapidly evolving tech space. Similar sentiments hold true within various industries, particularly among those in the TMT and financial services sectors. The comments of those rating their businesses as "highly successful" shed light on several best practices and overall approach to navigating these risks.
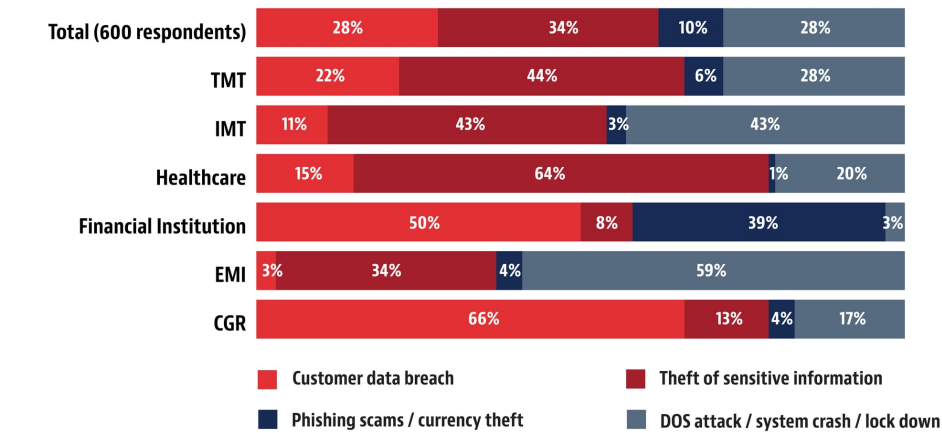
The strategy executive at a TMT company says: "There's no reason for us not to be successful at managing these risks. Our organization has always been flexible and that encourages our development teams to explore new fields and create technology that is better than what's out in the current market. If there is a risk, we can always find a solution to it." Other respondents reinforce this sentiment, noting that flexibility and fast response to change have been key to their success. Likewise, understanding the risks also allowed some companies to pivot to new business lines as a last resort.

Whatever their success levels, most respondents agree that there will always be hidden risks when it comes to new technologies. An executive at a financial institution notes that the introduction of machine learning and AI, while beneficial to helping employees and customers, created new challenges and questions that needed to be answered. Another TMT executive says that the revolutionary pace of change means that new risks also emerge as current technologies find new uses in different fields, industries and markets.
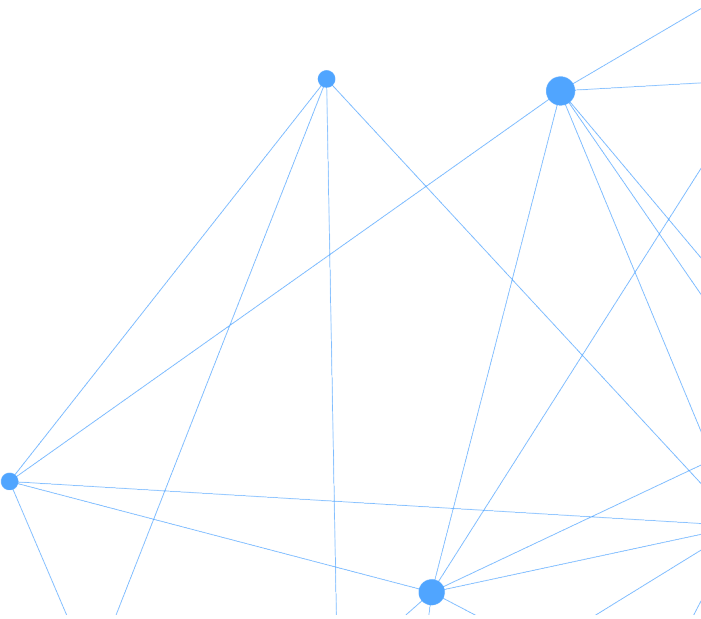
Top Risks: Guarding Information and Data

Theft of sensitive information – be it trade secrets or internal communications – is the main tech-related concern among executives across Asia Pacific, according to 34% of respondents. As most respondents agree, information is a vital asset and critical details about internal operations or development of new products could have a very serious negative impact on the business. "Critical information being leaked or stolen could allow our competitors or even new participants to develop identical products and strategies that will challenge our position in the market," says a strategy executive in a large consumer goods company.
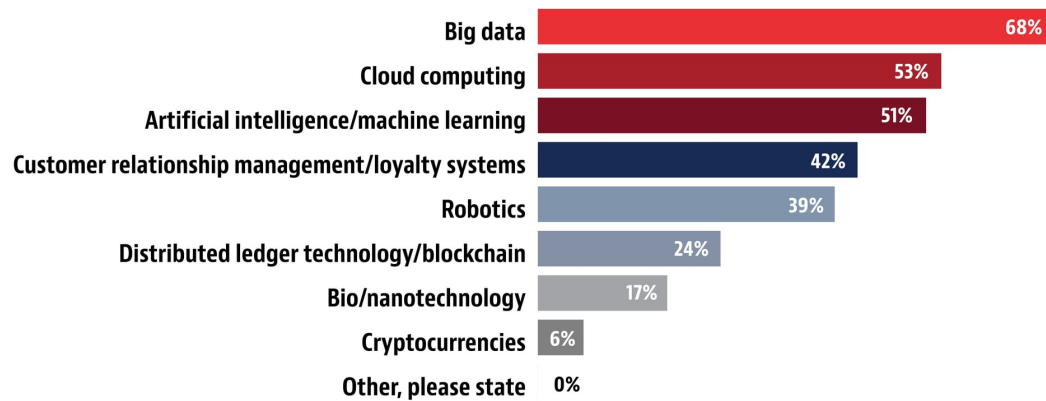
The CMO of a healthcare company says: "Any compromise of sensitive information could have a cascading effect on our reputation." The CMO goes on to note that there could be irreparable damage in trust with shareholders, customers and suppliers. In that vein, 28% of respondents also see a customer data breach as a major threat, with the highest percentages among executives of consumer goods and retail companies and financial institutions. Likewise, 28% also see denial of service (DOS) or system crash as the greatest risk.

	Customer data breach	Theft of sensitive information	Phishing scams / currency theft	DOS attack / system crash / lock down
Total (600 respondents)	28%	34%	10%	28%
TMT	22%	44%	6%	28%
IMT	11%	43%	3%	43%
Healthcare	15%	64%	1%	20%
Financial Institution	50%	8%	39%	3%
EMI	3%	34%	4%	59%
CGR	66%	13%	4%	17%

Which tech risk is greatest in your industry?

Indeed, protecting information assets is a priority, especially given the significance respondents lend to Big Data: 68% see it as the top technology that will impact their business over the next two years. Aside from being the fuel of the digital economy–providing analytics on customers, operational processes and numerous aspects of the modern enterprise–it also complements other technologies that will drive business in the future.

Technology	Percentage
Big data	68%
Cloud computing	53%
Artificial intelligence/machine learning	51%
Customer relationship management/loyalty systems	42%
Robotics	39%
Distributed ledger technology/blockchain	24%
Bio/nanotechnology	17%
Cryptocurrencies	6%
Other, please state	0%

Which of the following technologies will have the greatest impact on your business in the next two years?

"The world is facing a number of massive risks as a result of more than a decade of weak regulation of data-intensive businesses. This means that business success to date in monetizing data may have laid a foundation for material risks to society. The question therefore isn't about either complying to a new, costly regulatory and compliance regime, or finding ways to navigate compliance in order to reduce cost. The question is whether the material risks of not encouraging better regulation that is protective of both private and public interests may be potentially disastrous."

**Sanjay Khanna – Director and Futurist, Whitespace Legal Collab, Baker McKenzie**

Tech Regulators:
An Impossible Brief?

While many businesses in Asia Pacific claim to be keeping pace with tech-related change within their industries, senior executives in these same companies see most regulators across the region and globally are lagging behind.

Such is the sentiment among most Asia Pacific executives, with 83% saying policymakers were behind the curve in terms of the laws they passed relating to technology and innovation. Of those, 46% say these officials are lagging well behind.

Yes, they are ahead of the curve

17%

They are somewhat behind the curve

38%

They are well behind the curve

46%
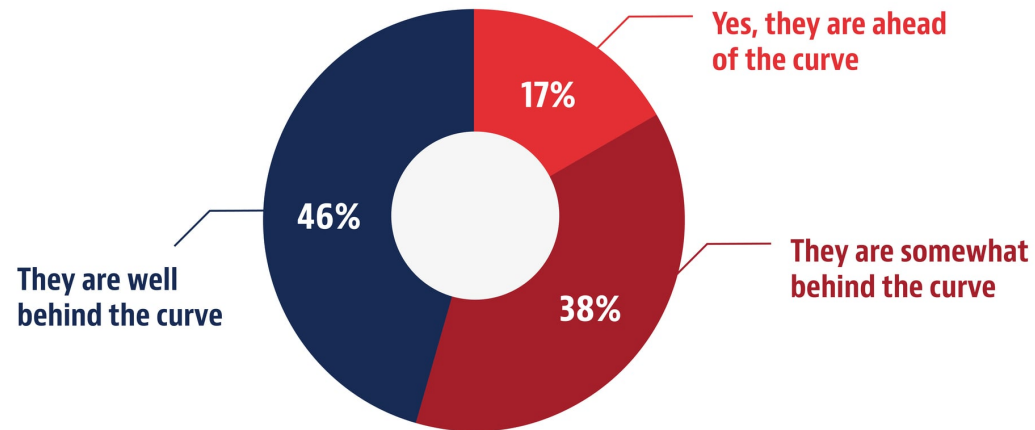
In your opinion, are regulators around the world keeping up with technology-driven change?

According to an executive at a financial institution, the regulatory lag is because the pace of change makes it virtually impossible for laws and legislators to keep up. "Every time regulators introduce new policies, technology chooses a new course, sometimes to avoid these new regulations," says this respondent.

The CFO of a TMT company had similar sentiment, noting that it is incredibly difficult for regulators to track each and every technology being developed within their jurisdiction, not to mention those in foreign markets which could impact their own.
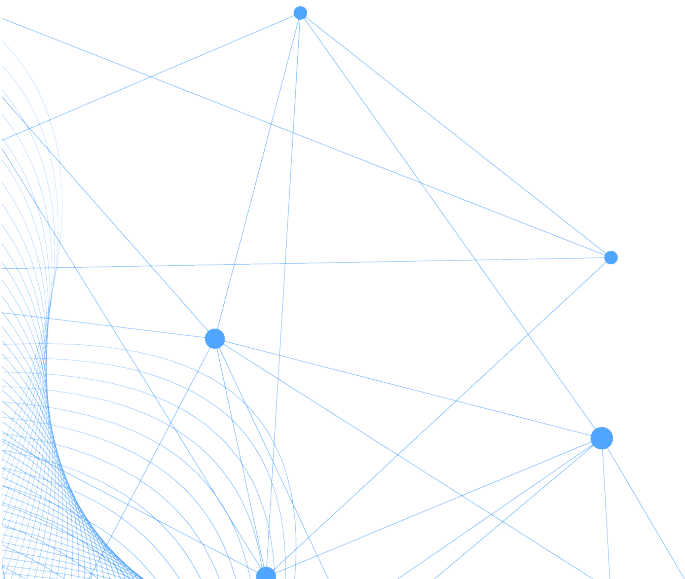
Working with Regulators

From the overall sentiment, falling behind the curve may not be the real problem. Rather, policymakers moving forward with laws that inadvertently – or quite intentionally – create roadblocks for innovation could create the most setbacks for businesses.

To avoid this situation, many respondents mention that a hand-in-hand approach to policymaking is necessary. One where businesses proactively engage lawmakers in their home territories and the global markets where they operate to address concerns and pave a path to legislation that fosters innovation.

A strategy executive at a TMT company says his organization is working with regulators to develop strategies that will keep them abreast of new technologies that will impact their jurisdictions and constituents so that they can more effectively implement new laws. The CFO of a CG&R company also mentions a course correction toward a more collaborative approach with legislators.

In some of the more advanced regulators, there is an emerging school of "fail fast" policymaking that aims to worry less about consequences so that regulators stop fearing large private entities. The point is to introduce something and get a market response, much as tech innovators do.

Another benefit to collaborating with regulators is the fact that such work could give businesses the inside track on new laws likely to impact their industries. As many respondents in the 38% who said that policymakers were only somewhat behind the curve – and the 17% who said they were actually ahead of the curve – point out: lawmakers may be behind now, but they will eventually catch up. This could place new costs on the business in terms of compliance or implementing new systems to remain compliant.

In the short term, however, if governments are too slow to regulate, businesses may face unforeseen risks if they use the regulatory laxity as a way to reduce compliance costs while upping risks to the business longer term. Increasingly, businesses need to take steps that are costly but provide a competitive advantage because regulators are struggling to cope with the pace of change.

"The relentless pace of tech change necessarily requires companies to work closely with regulators and policy makers to ensure that companies are heard in the policy-making process and have a sense of where legislation is headed. This can reduce compliance surprises down the road - and that certainty is good for business."

Stephanie Magnus – Head of Financial Institutions Group, Asia Pacific, Baker McKenzie

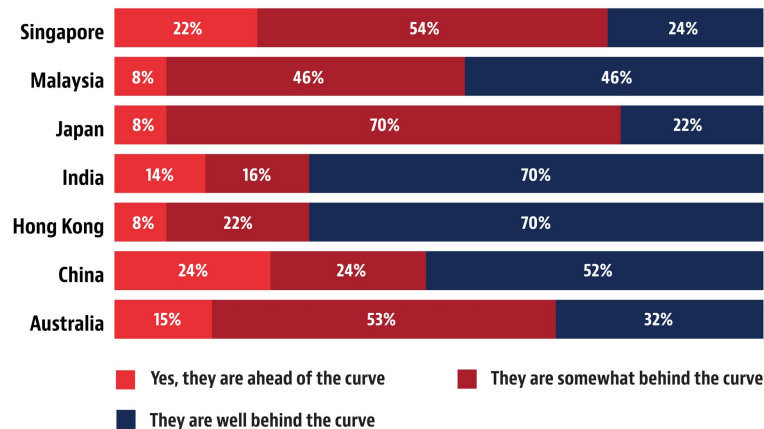# Asia's Tech Centers: Leaders and Followers

Chinese and Singaporean regulatory bodies are seen as most advanced in terms of regulatory awareness to tech-driven change, according to the largest percentage of respondents from those geographies (24% and 22%, respectively).

In Singapore, policymakers have worked diligently to recreate a Silicon-Valley-like environment, led by the government's commitment to a strong IP regulatory framework. Equally, Singapore boasts several other key ingredients that make it one of Asia's top tech centers: modern IT infrastructure; a highly skilled, tech-savvy workforce; and proximity to several of the world's largest emerging markets and an East-West gateway for MNCs.[1]

China, likewise, is a hotbed for innovation, with digital applications positioned to drive the country's growth and economic transformation. However, despite the 24% praising policymakers' acumen, more than half (52%) say laws in China are well behind.

Large percentages (70%) say the same for Hong Kong and India. In Hong Kong, despite its market sophistication and modern, high-speed infrastructure, the autonomous region's government has been less focused on innovation and emerging technologies in recent years, specifically those for the shared economy. In India, one respondent says regulators have limited awareness of the technology that is actually being used and developed, creating a significant lag in laws being rolled out. The rapid pace of IT innovation would "take them ages to update policies in real time."


	Yes, they are ahead of the curve	They are somewhat behind the curve	They are well behind the curve
Singapore	22%	54%	24%
Malaysia	8%	46%	46%
Japan	8%	70%	22%
India	14%	16%	70%
Hong Kong	8%	22%	70%
China	24%	24%	52%
Australia	15%	53%	32%

In your opinion, are country regulators keeping up with technology-driven change?

[1] "5 Reasons why the world's tech firms are moving to Singapore." Forbes. 21 September 2018.

Regulatory Outlook: Different Directions

Convergence of tech regulation seems unlikely, and most respondents (63%) say such policies will only diversify and possibly become more complex in future. According to the CMO of a TMT company, "Tech regulations will diversify because the use of technology is diversifying. No two companies use the same technology which is why regulators will have to develop multiple regulations."

A finance executive from a healthcare company reinforces this opinion, noting that technology will branch out in multiple directions and the possibilities of this diversification appear almost endless.

However, a strategy executive at a tech company says otherwise, noting that a convergence of these policies is more likely than not. "It will have to converge as the systems that are running organizations will be dependent on systems from other industries for data so that they can complete their task. The future is going to be interconnected organizations and industry jurisdictions," the respondent says.

Converge
37%
63%
Diversify
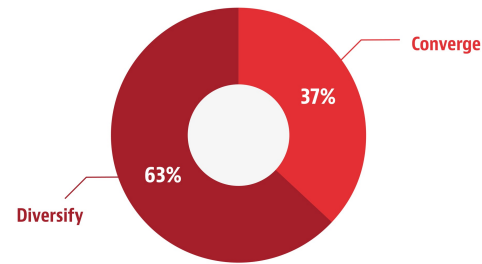
Do you believe tech regulation across various jurisdictions in the future will... ?

Conclusion

Conclusion

Complexity and change will increasingly be woven into the fabric of doing business today and in future. To stay ahead, executives must be aware of but not allow themselves to be completely distracted by the swarm of macro factors and external influences impacting their businesses. When it comes to technology and change, business leaders in Asia Pacific will be mindful to remember the following points:

The change curve will not flatten any time soon. To keep up, companies must be smart and proactive.
Exponential change and a rising tide of disruption will be a sweeping aspect of the future, which means businesses must prepare today or face lost market share (or irrelevance) tomorrow. Tech investment and digitization has the obvious benefit of helping the business keep pace with competitors and emerging trends. It also paves the way for the organization to explore and deploy advances into automated work processes along the supply chain, efficiencies that can prove incredibly cost beneficial to the bottom line. Equally, digitization can make the business inherently more cross-border in nature, with these technologies helping to bridge and simplify international communications, operations and capital flows.

When investing in tech, know the realities. Business leaders must be aware of several factors in the road to innovation. Such investment is never free and will almost certainly be a time and money intensive process. Nor is it easy; the process of making the jump to digital is inherently laborious and oftentimes messy. While the risk of failure will be high for digital transformation initiatives, across a portfolio of digital transformation activities, overall success should be achievable. Regardless, the alternative of not doing anything or failing to pivot and learning from past failures can be far worse.

Methodology:
To assess the key challenges affecting Asian corporations and uncover which issues are keeping executive leadership and boards of directors up at night, we surveyed 600 respondents to capture the opinions of CEOs and other C-suite executives and director level managers of their respective organizations. Respondents were based in the Asia Pacific region and split across corporations with a primary industry focus in: energy, mining and infrastructure (EMI); technology, media and telecommunications (TMT); healthcare; financial institutions; consumer goods and retail; and industrial, manufacturing and transportation (IMT). Within the graphical data, numbers may sum to more/less than 100% due to rounding.

Working with regulators. Business leaders must not focus entirely inwardly when it comes to innovating and driving change. Time must also be invested engaging with regulators and working collaboratively with policymakers to produce tech regulation that is beneficial to both public and private organizations. Guiding policymakers and avoiding an "Us vs. Them" mentality will help to create a future that fosters innovation at economic, commercial and social levels within jurisdictions across the world. Equally important is to remember that while regulators may be lagging today, any new regulations they pass will still place new costs and compliance requirements on businesses. In this way, it's clearly better to proactively collaborate and guide legislation than react to new laws or pay the price of compliance breaches. There is a big gap between checking boxes versus ensuring the business has a fail-safe approach to the regulatory challenge as a kind of self-insurance against policy failures that could materially threaten the long-term viability of an organization.
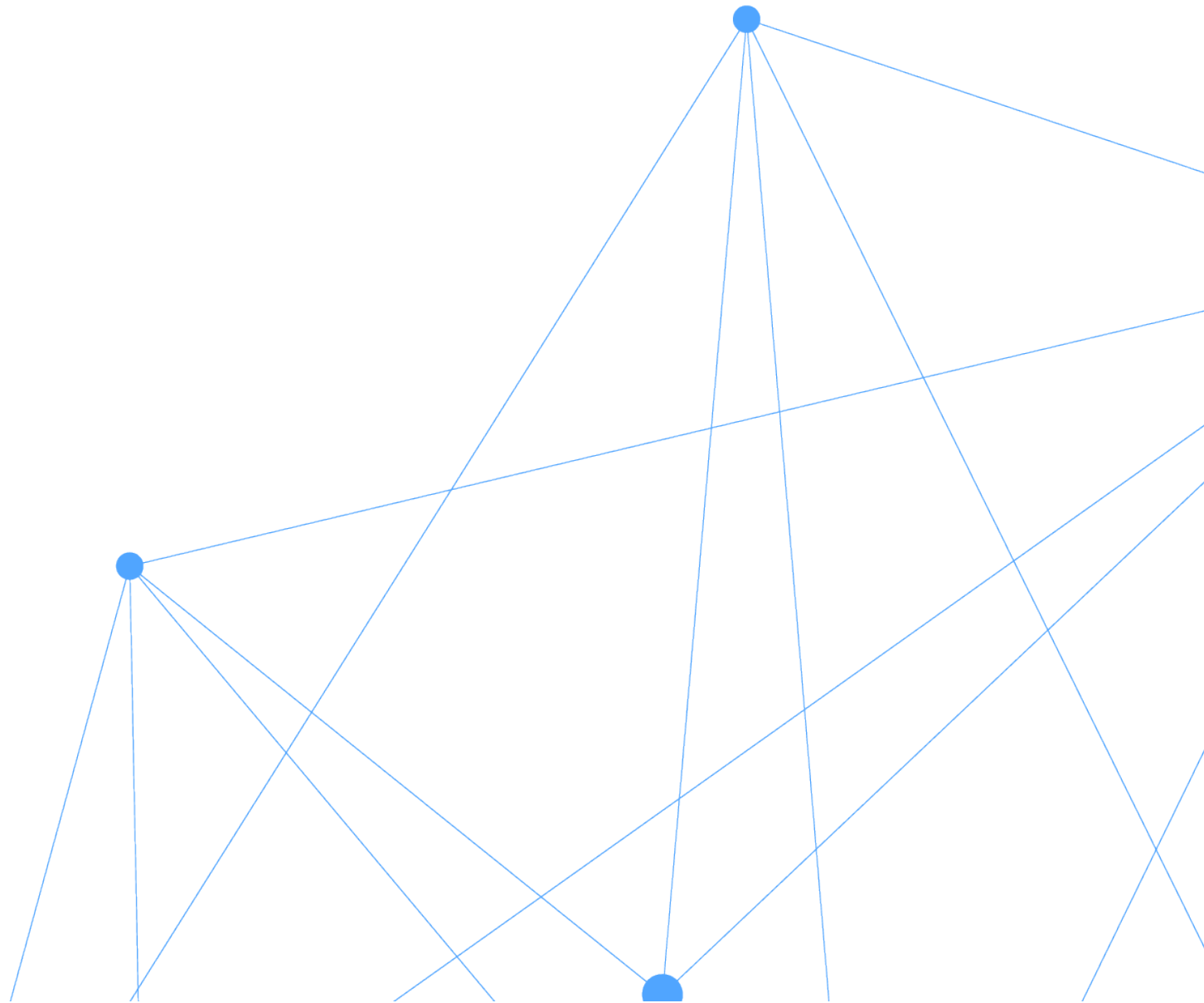
Key Contacts

Helping clients overcome the challenges of competing in the global economy.
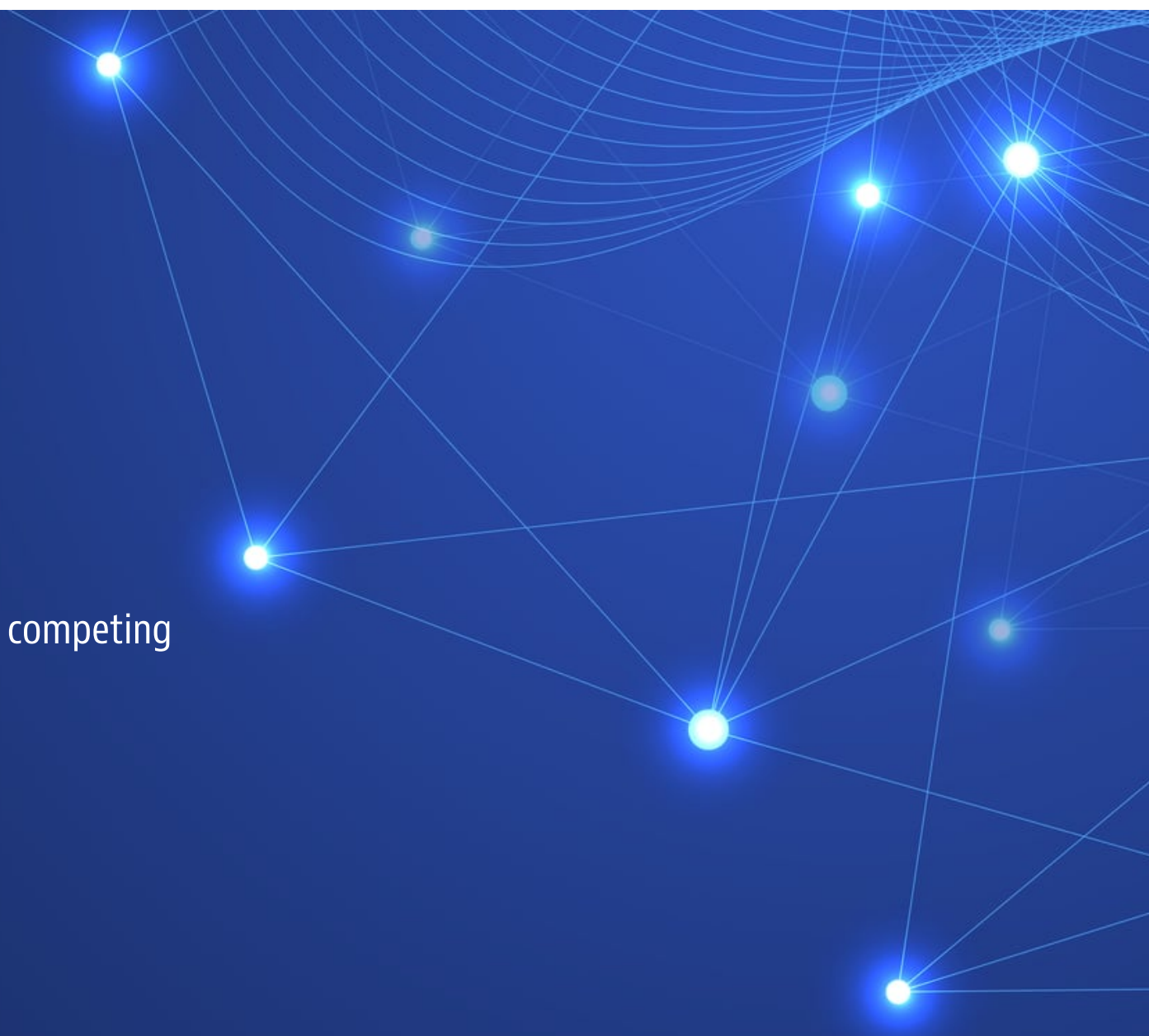
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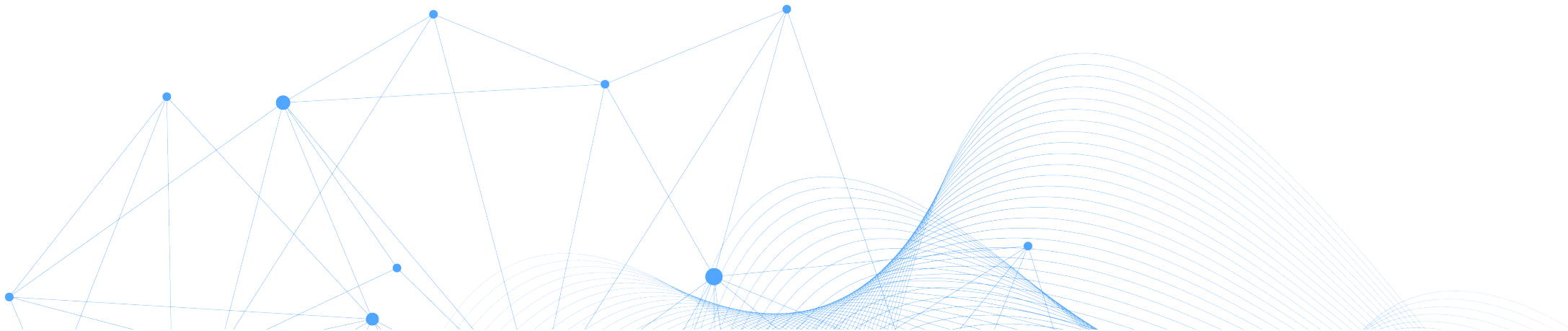Asia Pacific, Baker McKenzie
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Thank you for reading

The Age of Hypercomplexity

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