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NAB

AUSTRALIAN BUSINESS INNOVATION INDEX 2019

Business innovation behaviours in Australia

NAB Behavioural & Industry Economics

December 2019

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NAB BUSINESS INNOVATION INDEX OVERVIEW

The **NAB Business Innovation Index** (a measure of innovation based on the extent to which firms' have done things differently; more quickly; and more cost efficiently), fell to a survey low 57.6 points in 2019 - down from 64.3 in 2018 and a survey high 67.6 in 2016. Cost efficiency continues to be the biggest driver of innovation, ahead of doing things differently and more quickly. That said, all 3 components of the Index fell quite heavily over the past year.

By industry, Utilities & Telecoms rated highest for overall innovation and was also up on 2018. Mining was the only other industry to report stronger innovation in 2019 and ranked third highest overall - a turnaround from the previous year when it came in at last place. In all other sectors, innovation levels were broadly similar (but declined). Cost efficiency was the biggest driver of innovation in all industries except Mining, Manufacturing and Retail, where doing things differently was the key driver. QLD led the country for all components of the Innovation Index, while TAS was the least innovative across all measures.

New NAB research provides insights into actual business performance and innovation behaviours. A comparison of firm business conditions against their level of innovation reveals that those firms' experiencing 'extremely' high business conditions were perhaps not

surprisingly also among the most "innovative". Innovation tends to fall away as businesses conditions move closer to 'neutral'. More interestingly, however, the highest level of innovation behaviour was found among those firms at the opposite end of the scale - i.e. those experiencing the weakest business conditions. So very high performing businesses and very low performing industries innovate the most.

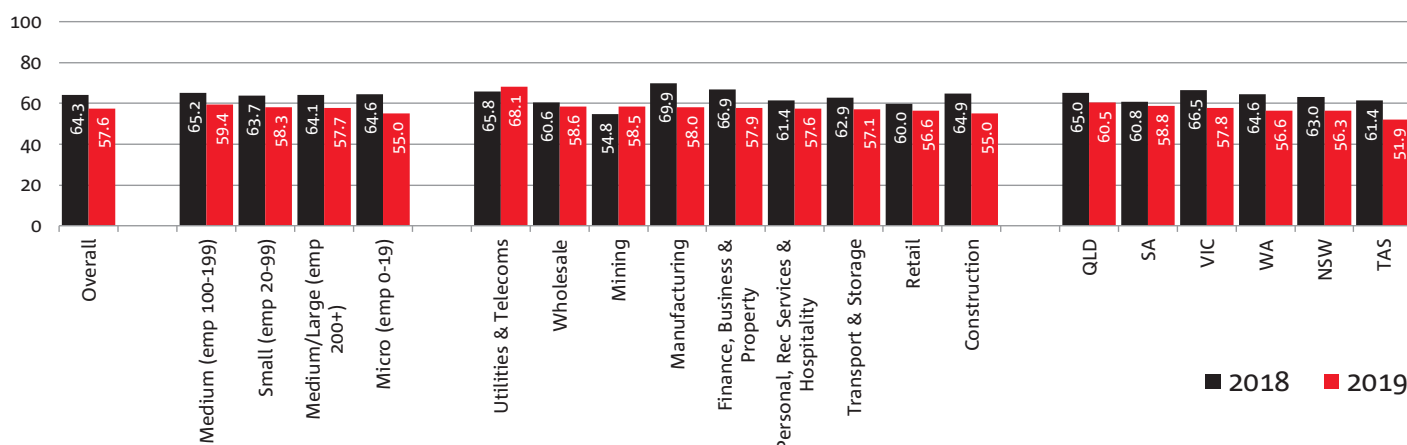
Innovation is often also accompanied by capital investment (e.g. the purchase of machinery equipment and software by organisations). Once an innovation occurs, it is capital investment that typically spreads the innovation throughout a business and the economy to help facilitate growth. In short, innovation creates, investment diffuses¹. A comparison between business conditions and capital expenditure over the previous 3 months (as measured in NAB's latest Q3 2019 Quarterly Business Survey), shows those firms reporting very low business conditions also report negative levels of capital expenditure over the previous quarter. By comparison, those firms with very strong conditions also reported much higher levels of capital expenditure and therefore should be better placed to diffuse their innovation throughout their organisation.

Innovation requires not just an integrated framework to generate ideas, but also a prioritisation or "screening" process.

Australian SMEs score well on the first principle but not the second. Overall, SMEs rated the extent they had a clearly defined business strategy 7.0 points out of 10 (where 10 = completely) and whether innovation was a part of their overall strategy at 7.2, suggesting innovation is well embedded in their overall business plan. But when asked the extent to which they have processes or structures to select and prioritise which innovation projects get approved and/or funded, they scored just 5.4.

Around 6 in 10 SMEs overall indicated their investment in innovation was about the same over the past 12 months as in 2018, while 3 in 10 said they had invested more and only 8% invested less. Looking forward over the next 12 months, innovation intentions are somewhat more positive. Only 5 in 10 SMEs overall plan to invest the same, with 4 in 10 planning to invest more. On average, almost 6 in 10 SMEs are most likely to fund their innovation activities with their own funds, and around 1 in 5 via government grants and equity. A further 16% said they were likely to use debt. Emerging SMEs less than 2 years old were far more likely to source their funds from government grants (29%) or crowdfunding (20%), and SMEs 2-5 years old from family and friends (28%).

NAB BUSINESS INNOVATION INDEX (score out of 100 where 0 = "not at all" & 100 = "extensively")



¹ The Greater Stagnation: The Decline in Capital Investment is the Real Threat to U.S. Economic Growth, Luke A. Stewart & Robert D. Atkinson, October 2013

MAIN REPORT

THE CULTURE OF INNOVATION

One way to measure business innovation is to ask businesses how they view the culture of innovation in Australia, within their industry sector and within their own business.

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In 2019, businesses rated the culture of innovation in Australia lowest since this survey began in 2016 - albeit the range remains very narrow. On average, they scored 5.9 out of 10 points (where 10 is 'extremely' innovative).

Firms remain least positive about the culture of innovation within the industry they operate - scoring 5.7 points, down from 5.9 points last year. They were also a little less positive about the culture of innovation within their own firm, scoring 6.1 points compared to 6.3 points last year.

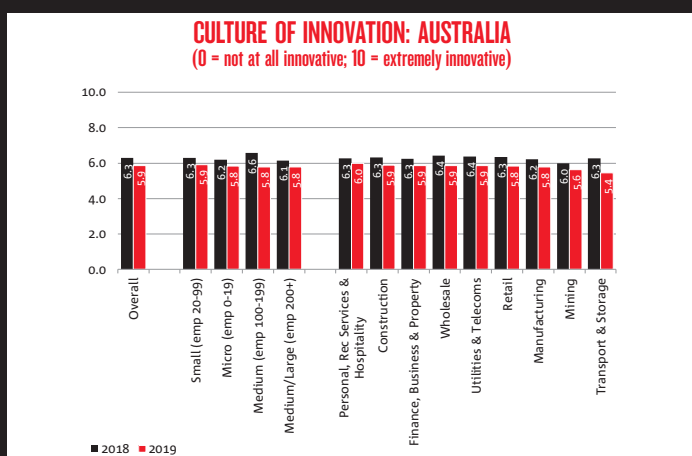
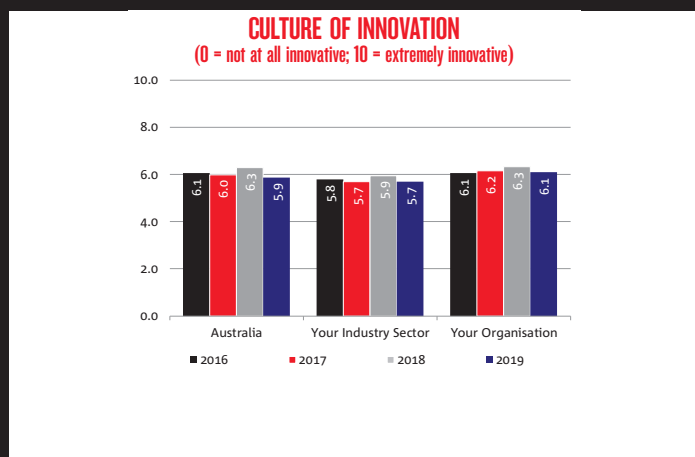
Post the weak outcome for the private sector in the Q2 national accounts, NAB's latest Business Survey is also showing no let-up in the downward loss of momentum in private demand. Business conditions and confidence are now well below the levels seen in 2018.

The recent run of official data on business investment and NAB's Business Survey also suggest that business sector investment has made little contribution to growth outside of mining.

Heightened uncertainty around global trade tensions and growth have also potentially weighed.

Against this background of economic uncertainty, business "innovation" culture has remained steady and unimpressive.

By size, all firms rated the culture of innovation in Australia lower than they did in 2018 (particularly medium-sized firms) and now rate Australia's innovation culture basically the same (5.9-5.8 points). Businesses in all industries also rated innovation culture in Australia lower than in 2018, ranging from 6.0 points in Personal, Recreation Services & Hospitality to 5.4 points in Transport & Storage.

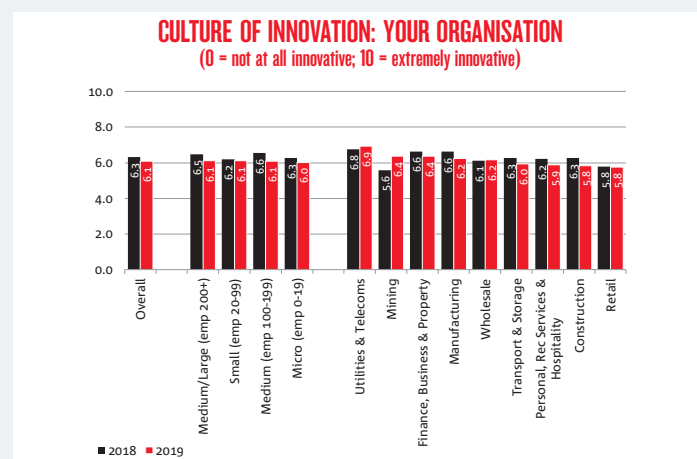
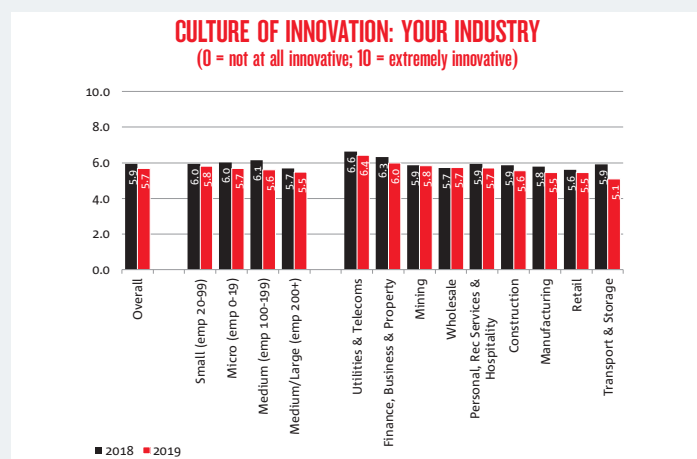


MAIN REPORT

THE CULTURE OF INNOVATION CONTINUED

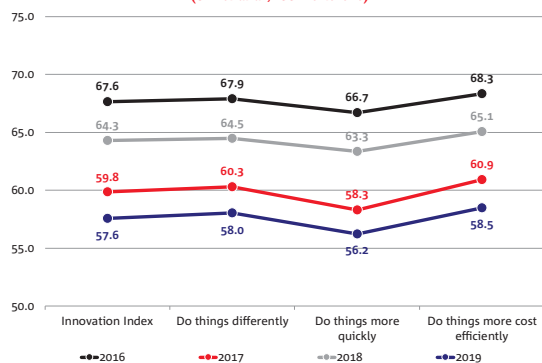
When it came to their industry, small firms (5.8 points) replaced medium-sized firms (5.6 points) as the most positive, and medium/large firms remain the least positive (5.5 points). By sector, all industries rated innovation lower (except Wholesale which was unchanged). Utilities & Telecoms (6.4 points) was again rated the most innovative sector. Transport & Storage (5.1 points) was the least innovative.

When asked to rate their own organisation, all firms by size were less positive (especially medium-sized firms) and they rated innovation basically the same. Results by industry were mixed. Utilities & Telecoms still lead the way (6.9 points), followed by Mining (a big improver at 6.4 points) and Finance, Business & Property Services (6.4 points). Construction (5.8 points) and Retail firms (5.8 points) were the least positive - see charts below.



NAB BUSINESS INNOVATION INDEX

NAB BUSINESS INNOVATION INDEX
(0 = not at all; 100 = extensive)



The NAB Business Innovation Index provides another measure of innovation that is more intuitive and easily applicable to all business, regardless of size, type, industry or location.

The Index is based on the extent to which firms' have "tweaked", "adjusted", "improved" or "changed" anything in their business that allowed them in the past year to do things **differently; more quickly; and more cost efficiently**.

Overall, the NAB Business Innovation Index fell to a survey low 57.6 points in 2019 (where 100 is 'extensive'). This was down from 64.3 points in 2018 and a survey high 67.6 points in 2016.

Cost efficiency (58.5 points) continued to be the biggest driver of innovation in 2019, ahead of doing things differently (58.0 points) and doing things more quickly (56.2 points). All 3 components of the Index fell quite heavily over the past year.

In 2019, innovation fell across all sizes of business. It fell most for micro-businesses - to 55.0 points from 64.6 points in 2018 - and ranked lowest overall. Moreover, innovation in micro-businesses was lowest for all index components.

Medium-sized business again scored highest for overall innovation (59.4 points), but well down from last year (65.2 points). They scored highest for doing things differently (60.0 points) and doing things more cost efficiently (59.7 points).

Small businesses were the next most innovative group (58.3 points), but also less innovative than in 2018 (63.7 points).

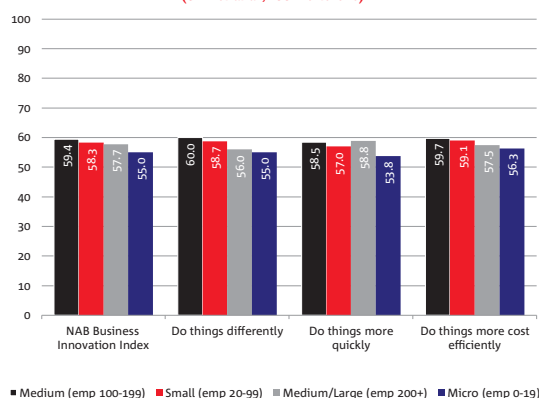
The Innovation Index for medium/large businesses fell to 57.7 points in 2019 (64.1 points in 2018), but it out-performed for doing things more quickly (58.8 points).

By industry, Utilities & Telecoms (68.1 points) rated highest for overall innovation by some margin, and higher than in 2018 (65.8 points). Innovation in this industry was also significantly higher across all index components than in other industries.

Mining was the only other industry to report higher innovation in 2019 (58.5 points in 2019 vs. 54.8 points in 2018) and ranked third highest overall after having filled last place in 2018. But while innovation in Mining rose sharply for doing things differently and more quickly, innovation from cost efficiency declined.

In all other sectors, innovation levels were broadly similar (but declined) and ranged from 58.6 points for Wholesale to 55.0 points in Construction.

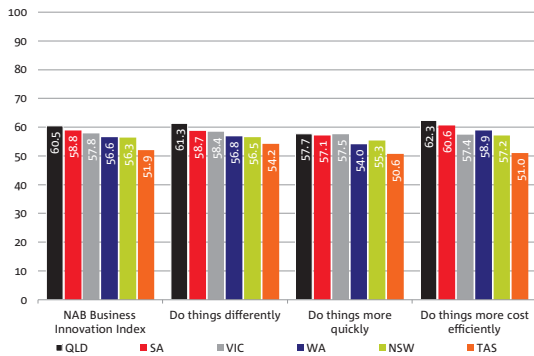
NAB BUSINESS INNOVATION INDEX: BUSINESS SIZE
(0 = not at all; 100 = extensive)



NAB BUSINESS INNOVATION INDEX: INDUSTRY
(0 = not at all; 100 = extensive)



NAB BUSINESS INNOVATION INDEX: STATES (0 = not at all; 100 = extensive)



Cost efficiency was the biggest driver of innovation in all industries except Mining, Manufacturing and Retail, where doing things differently was the key driver.

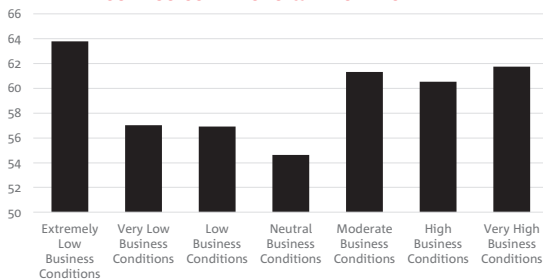
Innovation was lower in all states over the past year, with particularly large falls seen in TAS (51.9 vs. 61.4 points in 2018), VIC (57.8 vs. 66.5 points) and WA (56.6 vs. 64.6 points).

QLD (60.5 points) was the most innovative state and TAS (51.9 points) the least innovative.

QLD led the country for all components of the Innovation Index, while TAS was the least innovative across all measures.

Cost efficiency was the biggest driver of innovation in QLD (62.3 points), SA (60.6 points), WA (58.9 points) and NSW (57.2 points). Doing things differently was the biggest driver of innovation in VIC (58.4 points) and TAS (54.2 points).

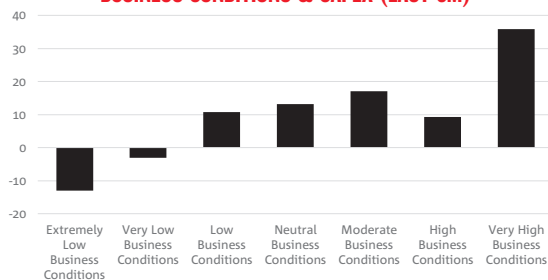
BUSINESS CONDITIONS & INNOVATION INDEX



New NAB research provides insights into business performance and innovation behaviours. The chart opposite shows that firms experiencing 'extremely' low business conditions were also the most innovative over the past 12 months. Innovation tends to fall away as businesses conditions move closer to 'neutral'. In contrast, firms with positive business conditions have higher levels of innovation, as they are more likely to be also benefitting from higher levels of innovation.

Innovation is often accompanied by capital investment (i.e. the purchase of machinery equipment and software by organisations). Once an innovation occurs, this investment can spread the innovation throughout a business to help facilitate growth. A comparison between business conditions and capex over the previous 3 months (as measured in NAB's latest Q3 2019 Quarterly Business Survey), shows those firms reporting very low business conditions also report negative levels of capital expenditure over the previous quarter. By comparison, those firms with very strong conditions also reported much higher levels of capital expenditure and therefore should be better placed to diffuse their innovation throughout their organisation.

BUSINESS CONDITIONS & CAPEX (LAST 3M)



INSTACLUSTER: AT THE LEADING EDGE OF OPEN SOURCE SOFTWARE

The field of data services architecture is global and fast moving, so Instacluster executives have recognized that they need to be driving their innovation efforts with high intensity on a continuing basis. Started in late 2014, this business now employs 102 people, 80 of whom are in Australia. It has grown from revenue of US\$5,000 per month to achieve over US\$10 million this year. This has been a doubling of revenue every year since its inception, that came with the usual growth challenges, according to Chief Operating Officer Peter Lilley.

As an innovator, Instacluster has had to look well beyond its domestic shores and its base in Canberra, and indeed it achieves 95% of its revenue from outside Australia.

In its provision of open source software to global clients, Instacluster has had to finely balance being simultaneously customer led, with being technology enabled. It puts great effort into bringing the voice of the customer clearly and centrally into its innovation processes, and its leadership team is ultimately responsible for integrating customer requirements with engineering capability, marketing directions and overall business and innovation strategy. They lead the development and implementation of innovation initiatives, giving staff enough 'voice and time' to be fully engaged in innovations. As an example, the company introduced this year a five day staff professional development program to bring the best of their ideas in a framework that is "relevant to the business and passionate to you". Instacluster has

recently started conducting 'hackathons', devoting up to four days per year, aimed at being inclusive and capturing everyone's potential ideas for improvement and innovation.

Once the ideas are generated, they go into an evaluation process whereby they are prioritized, using criteria such as revenue potential, customer value, strategic alignment, time to implement, talent availability and resources needed. The best initiatives are then chosen, planned and resourced for implementation.

Peter Lilley is acutely aware of the notion that innovation means sensibly accepting risk. They approach at Instacluster is to embrace some risk, with a healthy and sensible appetite, remain agile in approach, and to ensure continuous learning from experiences. At the same time, leading brands in the customer base place their trust in Instacluster as a supplier, so the company makes sure that product development risks are not translated into customer reliability and market risk issues.

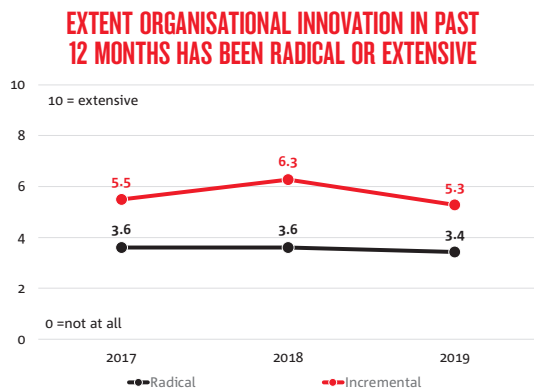
This is managed through a product release strategy of 'early access' similar to the traditional lead user concept. Prototypes are provided to selected customers for trials prior to release, providing for a fine balance between Instacluster's desire to be on the leading edge, but not the bleeding edge of innovations.

With a dual focus on innovation and reliability in supporting databases and other software such as Apache Cassandra on multiple platforms, Instacluster is developing an international market and reputation as it scales up its business model of 'open source as-a-service, delivering reliability at scale'. As one of the world's largest Cassandra suppliers and support organisations, adding complementary technologies such as Kafka and Elasticsearch to its services, and with the advanced approach to innovation being implemented, profitable growth should be expected to continue

THINGS BUSINESSES HAVE DONE “DIFFERENTLY, “MORE QUICKLY” OR “MORE COST EFFICIENTLY”

DIFFERENTLY	MORE QUICKLY	MORE COST EFFICIENTLY
<p>“Accessing data on-line.”</p> <p>“Added fully digital.”</p> <p>“Flexible hours.”</p> <p>“Apply cost assignment activity.”</p> <p>“Approached another country for business.”</p> <p>“Automated most processes.”</p> <p>“Built an app for work order management.”</p> <p>“Changed banks.”</p> <p>“Changed from analogue to digital delivery of images.”</p> <p>“Change of routine”</p> <p>“Changed from a store to online.”</p> <p>“Changed marketing focus to other segments.”</p> <p>“Chose different shipping route for import.”</p> <p>“Have embraced diversity.”</p> <p>“Fusion menu that reflects culture differences.”</p> <p>“Have undertaken more of a social media marketing angle.”</p> <p>“More input from staff.”</p> <p>“Decided to give promotion to customer by buying one and get one free.”</p> <p>“Introduced new brands in response to customer recommendations.”</p> <p>“Moved some staff into other positions for a few days so they can really understand what everyone else does.”</p> <p>“Institute more coding in our business.”</p> <p>“Introduced new technologies that have moved away from manual processing.”</p> <p>“Marketing on social media.”</p> <p>“Moved from placing ads to having my own business website.”</p> <p>“New website.”</p> <p>“Outsourced packaging and mailing of orders.”</p> <p>“Overnight delivery.”</p> <p>“Providing paid leave system for dads with new-born babies.”</p> <p>“Utilising cloud services.”</p> <p>“Written code to account for changes made by competitors.”</p>	<p>“Added more software.”</p> <p>“Migrated all forms on the cloud.”</p> <p>“Invested in office based lean management principles.”</p> <p>“Arrange appointments to flow into each other with gaps.”</p> <p>“Automated some repetitive processes like payroll.”</p> <p>“Better control of stock going out.”</p> <p>“Better technology to be able to provide faster answers.”</p> <p>“Can start selling stock direct from storage rather than transporting to outlying locations.”</p> <p>“Consciously improved cognitive function to facilitate faster decision making.”</p> <p>“Created more streamlined checkout process.”</p> <p>“Electronic billing.”</p> <p>“Going online.”</p> <p>“Different system to allow faster reaction time to online sales coming through.”</p> <p>“Having enough raw materials on hand so we can act on a job quickly.”</p> <p>“Hired extra full-time staff to speed up service.”</p> <p>“Improved our IT to speed up customer interaction.”</p> <p>“New POS has given quicker stock availability info.”</p> <p>“Obtained faster computer program to speed up work output.”</p> <p>“Bought new state of the art machinery for visually inspecting product to replace people doing same task.”</p> <p>“Same day response to any queries.”</p> <p>“Scaled down on paperwork.”</p> <p>“Shorter shipping route for imports.”</p> <p>“Type of vacuum being used.”</p> <p>“Use online web service and technology to cut down on travel requirements.”</p> <p>“Use third party software to auto create the mailing label.”</p> <p>“Using cloud software for accounting.”</p> <p>“Adopting agile.”</p>	<p>“All cost-related things to be reasonable and best value.”</p> <p>“Altered processes and invested in office based lean management principles.”</p> <p>“Automated most processes.”</p> <p>“More energy efficient with paper usage, power and water usage.”</p> <p>“More selective with suppliers.”</p> <p>“Better removal of discharged clients.”</p> <p>“Bill smoothing across key financials.”</p> <p>“Brought in staff with expert knowledge of software.”</p> <p>“Changed a range of suppliers for a better deal.”</p> <p>“Changed the brands we are sourcing.”</p> <p>“Cheaper raw material.”</p> <p>“Contain costs by tendering and using Click/Collect.”</p> <p>“Control labour costs with more effective rostering.”</p> <p>“Engaging overseas virtual assistants.”</p> <p>“Getting rid of single use plastic items.”</p> <p>“Give staff members more work to do to save hiring new staff.”</p> <p>“Less choice of payment types.”</p> <p>“More advanced technology used to manage our finance.”</p> <p>“Moved warehouse.”</p> <p>“New POS stores all electronic - no need for paper-based records.”</p> <p>“No full-time staff.”</p> <p>“Outsourcing less intense chores to third parties.”</p> <p>“Purchasing up to date equipment.”</p> <p>“Recontracted phone services and internet.”</p> <p>“Reduced cost overheads in energy, storage, technology and transport</p> <p>“Reduced cost through system integration.”</p> <p>“Reduced stocks of slow-moving products.”</p> <p>“Installed solar panels.”</p> <p>“Switched to NBN from cable.”</p> <p>“Went paperless.”</p>

RADICAL & INCREMENTAL INNOVATION



Innovation can be “radical” (e.g. the development of a new business, product and/or process that transforms a business) or “incremental” (e.g. an improvement to an existing product, service or process).

Businesses in the 2019 survey were again asked to identify the extent to which their innovation behaviours had been radical or incremental over the past year.

On average, radical innovation levels fell slightly to 3.4 points out of 10 (3.6 points in 2018). They also reported more ‘moderate’ levels of incremental innovation (5.3 vs. 6.3 points in 2018).

RADICAL & INCREMENTAL INNOVATION: BUSINESS SIZE & INDUSTRY

	2019		2018	
	Radical	Incremental	Radical	Incremental
All Businesses	3.4	5.3	3.6	6.3
Medium (emp 100-199)	3.6	5.5	4.1	6.4
Medium/Large (emp 200+)	3.6	5.6	3.3	6.4
Small (emp 20-99)	3.4	5.3	3.5	6.1
Micro (emp 0-19)	3.2	5.0	3.8	6.2
Utilities & Telecoms	4.9	6.2	4.4	6.9
Manufacturing	3.9	5.7	4.6	6.9
Transport & Storage	3.6	5.0	3.3	6.6
Mining	3.6	5.9	2.3	5.0
Personal, Rec Services & Hospitality	3.6	5.2	2.9	5.8
Finance, Business & Property	3.3	5.5	3.7	6.7
Retail	3.3	4.8	3.6	5.6
Wholesale	3.3	5.5	3.3	5.8
Construction	3.2	4.9	3.6	6.3

All firms irrespective of size reported relatively low levels of radical innovation in 2019 (ranging from 3.6 points in medium and medium/large firms to 3.2 points in micro firms). Radical innovation levels were also lower across all business sizes relative to last year, except in medium/large firms (3.6 vs. 3.3 points in 2018).

Incremental innovation levels were broadly similar across all sizes of business (ranging from 5.6 points in medium/large firms to 5.0 points in micro firms). Incremental innovation was however lower than in 2018 across all business sizes.

By industry, Utilities & Telecoms firms scored highest for radical innovation (4.9 points) in 2019, followed by Manufacturing (3.9 points). Radical innovation was lowest in Construction (3.2 points), Wholesale (3.3 points), Retail (3.3 points) and Finance, Business & Property (3.3 points). Construction, Retail, Finance,

Business & Property Services and Manufacturing were the only industries reporting lower levels of radical innovation than in 2018.

Incremental innovation was also highest in Utilities & Telecoms (6.2 points) and Manufacturing (5.7 points), albeit somewhat lower than in 2018. Incremental innovation was lowest in Retail (4.8 points) and Construction (4.9 points). Mining was the only sector where incremental innovation was more extensive than in 2018 (5.9 vs. 5.0 points).

PENTEN: AWARD WINNING INNOVATION

With 75 employees in Australia and 35 in a sister company in the UK, Penten has grown from its start five years ago to be named and awarded as the 2018 Australian Business of the Year at the Telstra Business Awards. This is all due to one key factor: innovation.

According to CFO, Sarah Bailey: “Innovation is in our heartbeat, not something we do on the side. We find customer problems that are unsolved and we do cutting edge work to solve them.” Penten works on products and services such as secure mobility and applied artificial intelligence, serving primarily the defence and government sectors with highly specialised solutions to their information and communications security challenges. An example is a USB sized device, called AltoCrypt Stik. It provides users with access to classified information and can be used in a variety of locations, such as in the office and in the battlefield. The AltoCrypt Stik, which was recognised as the AIIA (Australian Information Industry Association) Innovation of the Year in 2018, is a game changer for Defence and Government users. Previously these workers used brief case sized products to access information needed to do their important work. The AltoCrypt Stik is only one example of innovative products being created and built by the Penten team.

Penten has a leadership committee of seven executives, who steward the innovations in a hands on manner. Led by its chief technology officer, Penten has a process for prioritising the range of innovative ideas generated by the team. The challenge is not in coming up with the ideas, it's in prioritising which ones will be invested in.

Penten makes a large investment in research and development. They believe that this keeps them, to date, some two to three years ahead of their competitors on a global basis.

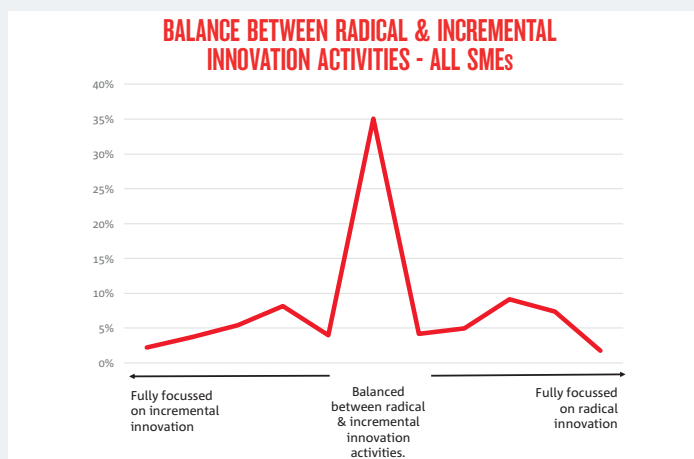
These technological developments and their commercialisation combined with close relationships with their customers, ensures that their projects are aimed squarely at meeting unmet customer needs. For example, working with the Defence Innovation Hub, provides an opportunity for Penten's innovative ideas to be funded, reviewed and tested by customers effectively reducing Penten's risk profile. As a result of contracts with

the Defence Innovation Hub and other customers, Penten's business performance has been consistently strong, having doubled revenue every year since inception, whilst being profitable.

Even in this high technology world, the heart of Penten is its people, comprising commercially astute people right across the company. This includes four staff with PhD qualifications, and a culture of deep internal trust, a family like atmosphere, and a strong, united mission. Their key value is respect for all individuals and their talents, that leads to great team efforts in their innovations. This drives customer satisfaction, and hence business performance. Penten has worked closely with their bank, NAB, during their rapid growth phase. The Telstra business award recognises not only their world leading technical edge, but also their overall innovation-driven organisational excellence.

A DEEP DIVE INTO INNOVATION AMONG SMES

In this part of the report, we take a closer look at some innovation behaviours of Australian SMEs. We asked around 400 SMEs how they balance radical and incremental innovation, which groups are most involved in their innovation activities and the extent to which innovation plays a part in their overall business strategy. Finally, we examine how their level of innovation investment has changed recently, how it will change in the future, and the sources they are most likely to use to fund their innovation activities.

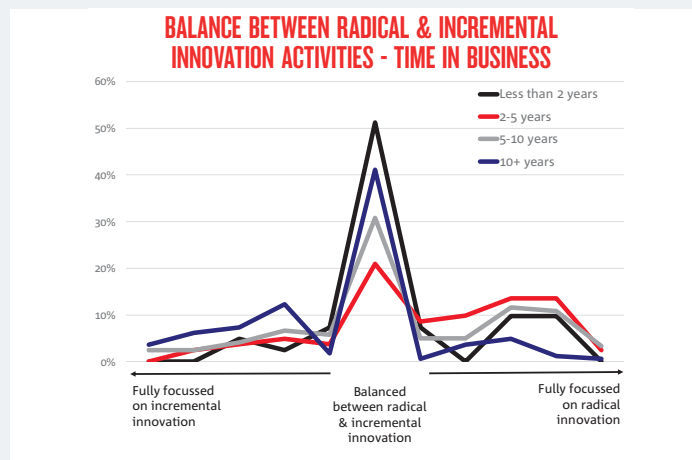
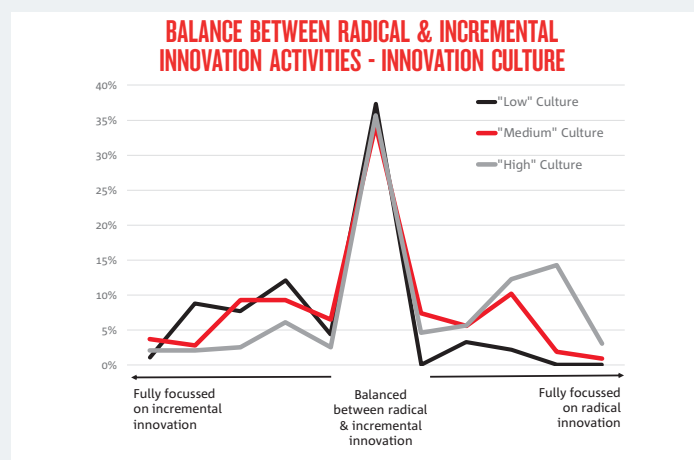


As noted above, incremental innovation among SMEs was much more extensive than radical innovation in 2019. This is not surprising. Incremental innovations (such as tweaking a product or service) are usually far easier and less risky to introduce. Radical innovation however is usually a far more complex, difficult, costly and risky process.

However, when SMEs were asked to describe the “balance” of their innovation activities, around 1 in 3 (35%) described them as being a balance between both incremental and radical initiatives.

Around 23% were tilted more towards incremental innovation, and 27% more inclined to focus on radical innovation.

The chart below on the left looks at this balance based on SMEs own perception of the “culture of innovation” within their organisation. Around 37% of SMEs with a “low” culture of



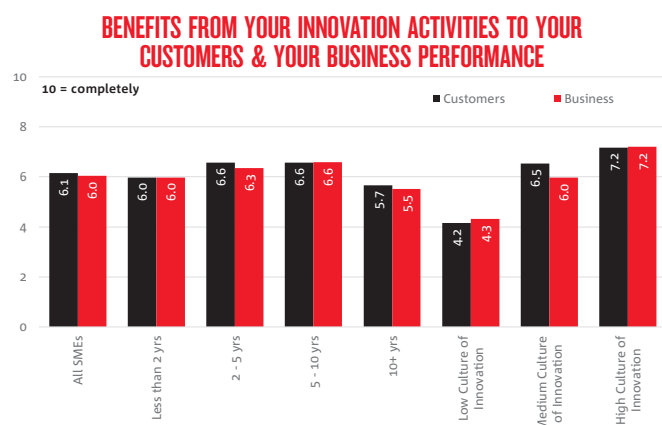
innovation said their innovation activities were balanced, as did 34% of SMEs with a “medium” culture and 36% of SMEs with a “high” culture of innovation. Importantly, SME’s with a “high” culture of innovation (40%) were much more likely to be focused on radical innovation than those with a “medium” (26%) or “low” (5%) culture of innovation.

The chart above on the right looks at this balance by time in business. Around 1 in 2 (51%) SMEs that had been operating for less than 2 years and 41% operating for more than 10 years adopted a balanced approach, compared to just 21% and 31% of SMEs operating between 2-5 years and 5-10 years respectively. But 4 in 10 (40%) SMEs that had been in business between 2-5 years and 31% between 5-10 years were more likely to be focused on radical innovation, compared to just 10% of SMEs that had been operating for more than 10 years. Instead, noticeably more SMEs that had been operating for over 10 years (31%) were tilted toward incremental innovation.

WHY INNOVATION IS BALANCED IN THIS WAY

The table below highlights some reasons why SMEs behave this way.

<p>“Change for the sake of change is counter-productive.”</p> <p>“Radical change disrupts the flow of the business too much.”</p> <p>“My company is new and we don’t want to make radical changes that might affect us negatively.”</p> <p>“We have a process that works and we don’t want to change it.”</p> <p>“Breakthroughs are harder to come by.”</p> <p>“We can only improve so much in terms of cash flow. Little steps at a time. At the moment, business is going well so we don’t feel the need to focus on radical innovation until the time comes to it.”</p> <p>“Conservative approaches lead to conservative solutions. I don’t want to risk it all but rather prefer small steps from which I can retreat if needed.”</p> <p>“Fully focused radical innovation attracts significant investment.”</p> <p>“I don’t want to go too radical because I might lose business, not gain business.”</p> <p>“I have no control over the industry narrative and merely have to work within the structure provided by the industry as a whole.”</p>	<p>“I have to balance what we can do with what people are capable of doing.”</p> <p>“Innovation is what sets businesses aside. It’s very competitive at the moment.”</p> <p>“It’s an established business. We know what we’re good at and specialise in.”</p> <p>“It’s easier and more profitable to provide an improvement within the current process.”</p> <p>“It’s necessary to stay relevant.”</p> <p>“Radical innovation tends to be too disruptive.”</p> <p>“Radical innovation is too difficult to implement due to employee reluctance.”</p> <p>“We’re more incrementally innovative than radical because we don’t have the finances for large scale changes and it takes years for us to develop a new product.”</p> <p>“We tend to like the idea of fast improvement. Staying ahead of the game is hard and radical innovation is one way to stay up and in front.”</p>
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Do SMEs believe that innovation will benefit their customers or provide a clear market benefit to them and improve their business performance?

Overall, it appears they agree “moderately”. On average, they scored the benefits to their customers at 6.1 points out of a possible 10 (where 10 = completely), just ahead of their business (6.0 points).

But perceptions vary by the amount of time a firm has been business and how SMEs view their own culture of innovation.

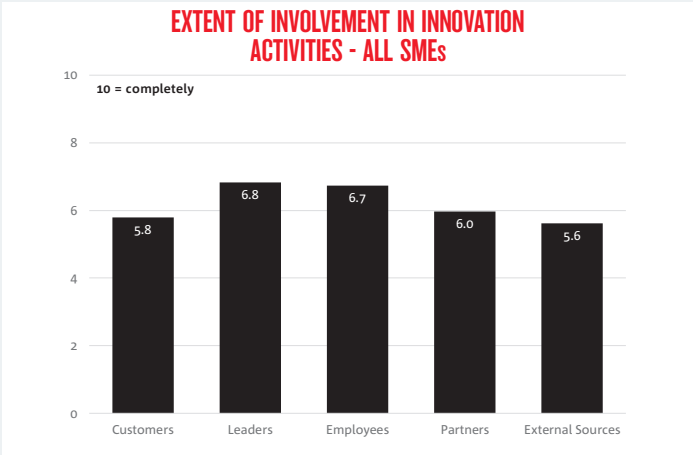
Innovation benefits are most highly valued by SMEs that have operated 2-10 years. Those operating 10+ years or just starting out were less inclined to see any benefits to both their customers and their own business.

It’s also clear SMEs with a “high” culture of innovation see much greater innovation benefits for customers and their business than those with a “low” culture.

When asked to describe how innovation provided benefits to their customers, over 1 in 5 SMEs cited things such as a “better product, service, experience” and 1 in 10 “cheaper, easier, more convenient or efficient”. When it came to their own business, around 1 in 5 highlighted “financial benefit”, and around 1 in 10 “improved product or service”, “competitive advantage”, “customer satisfaction and retention”, “better systems/processes” and “increased market share”.

See some more detailed responses below.

BENEFITS TO OUR CUSTOMERS...	BENEFITS FOR OUR BUSINESS...
<p>“Cost efficiencies that will lead to a more efficient operation overall. The data collected means we can service our clients more effectively and this helps improve customer loyalty.”</p> <p>“We’re able to run the business more efficiently and offer our customers a better service for the same price.”</p> <p>“Improved invoicing and distribution means I’m providing an improved service to my customers.”</p> <p>“Parking services are now moving to a full online and app-based direction. The new ways of operating are less manually intensive. They provide a more efficient payment service for the user, and are more cost effective with less consumables and down time.”</p> <p>“Better work outcomes for employees has resulted in a greater number of referrals for our services from new customers and great service results in customers sharing their experiences about us.”</p>	<p>“If we understand where our inventory is at, if we have more accurate data on our manufacturing, packaging and media we can better deliver what our customers need and reduce our costs, lower inventory means we have more cash in the bank and less reliant on banks for funding. This technology helps be more innovative through digital media that means we can reach the right audience at the right time.”</p> <p>“Instead of using the old way to calculate our sales we started using an application which is faster and time saving.”</p> <p>“Most people in our game are so rigid regarding work environments, getting into the area of allowing the work to be done from anywhere is saving us office space and saving us in leave taken by employees. Our competitors who have not moved into this space are struggling.”</p> <p>“We offer a point of difference to other businesses in our field, and the bottom line is showing it’s working.”</p>



Who are the main influencers of innovation activities for SMEs? The survey results suggest it mostly comes from within, with SMEs identifying leaders and employees as the most extensively involved groups in their innovation activities.

When asked to rate the extent of their involvement, leaders and employees scored 6.8 points and 6.7 points out of 10 respectively (where 10 = completely involved). Partners (6.0 points) were also relatively important. Other external sources (5.6 points) and customers (5.8 points) were less extensively involved.

The table below highlights the extent of involvement according to time in business and culture of innovation.

By time, all groups had far less involvement in the innovation activities of SMEs that have been in business for more than 10 years. Interestingly, these SMEs were also the least inclined to see innovation benefits for their customers and for their business.

It’s also clear SMEs who have a “high” culture of innovation are more heavily involved with all key groups than those with a “medium” or “low” culture of innovation.

EXTENT OF INVOLVEMENT IN INNOVATION ACTIVITIES

	Customers	Leaders	Employees	Partners	External Sources
All SMEs	5.8	6.8	6.7	6.0	5.6
Operating less than 2 years	6.0	6.3	6.3	6.5	5.8
Operating 2-5 years	7.1	7.3	7.1	6.8	6.7
Operating 5-10 years	6.1	7.8	7.4	6.7	6.2
Operating 10+ years	4.9	6.0	6.2	4.8	4.5
"Low" Culture of Innovation	3.2	5.1	4.6	4.0	3.5
"Medium" Culture of Innovation	5.5	6.6	6.6	5.2	5.4
"High" Culture of Innovation	7.1	7.8	7.8	7.4	6.7

EXAMPLES OF HOW GROUPS ARE INVOLVED IN SME INNOVATION ACTIVITIES

YOUR CUSTOMERS

"Adoption of new delivery channels."

"Customers are consulted, feedback is sought, surveys for quality assurance."

"Demanded certain software upgrades be enforced."

"I test out ideas on them to see if they work."

"Involved through social media advances in the company."

"My customer will receive information of new product by message or email."

YOUR LEADERS

"Brainstorming sessions for ideas."

"Decision making to shift working process."

"Gives me motivation. Setting examples and challenging others."

"Implementation and leading the initiative from the top."

"Re-assess the business process and suggests improvements."

"Setting direction, applying funds, engaging specialists."

"Supports the latest and cost-effective technology."

"Listen to staff members and reviews to see how things are going."

YOUR EMPLOYEES

"Able to change their work conditions and adapt to change."

"Attended courses to upskill and learn. Being trained to provide the service."

"Brainstorming sessions for ideas and ideas boxes around the office."

"Embracing innovative initiatives and ideas."

"Employees are profit shared and rewarded for contribution and ideas."

"Feedback provided and adopting the changes brought in."

"Have been empowered to make decisions and share ideas."

YOUR PARTNERS

"Accept different payment options."

"Adapting to change within the organisations processes."

"Can share management duties with immediacy."

"Give me their opinion on what will benefit the business most."

"Help drive our best practices culture."

"Partners provide the financial support to move forward."

OTHER EXTERNAL SOURCES

"Media."

"Correspondence with external stakeholders."

"Provide training, development and financial assistance."

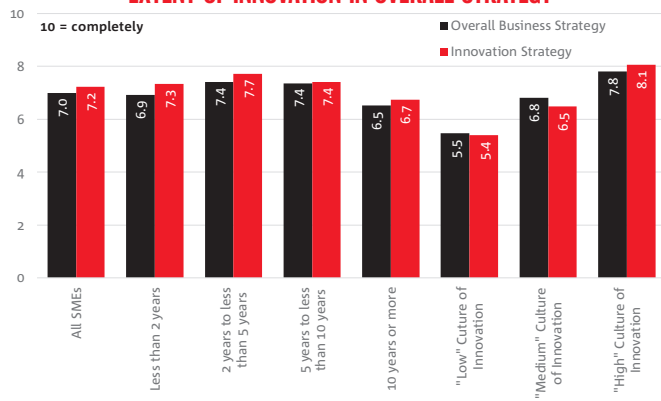
"Industry group has some very innovative ideas."

"Other monitoring agencies can come up with new methods that may replace those currently in use."

"Provide technical support on hardware and software."

"They have expertise in areas we're trying to improve."

CLEARLY DEFINED OVERALL BUSINESS STRATEGY & EXTENT OF INNOVATION IN OVERALL STRATEGY



SMEs regularly define their overall business strategy and specify how various functions (e.g. marketing, finance, human resources etc.) will support their plan. But do they align their innovation strategies with their overall business strategy?

Overall, SMEs rated the extent they had a clearly defined business strategy 7.0 points out of 10 (where 10 = completely). And when asked the extent innovation was a part of their overall strategy, they scored 7.2 points, suggesting "innovation" is well embedded in their overall business plan.

Having a clear business strategy was most extensive in SMEs operating 2-10 years (7.4 points). However, innovation was most extensively embedded in the business strategy of SMEs operating 2-5 years (7.7 points). Having a clearly defined business strategy (6.5 points) and an embedded innovation plan (6.7 points) was least extensive for SMEs that have been operating for more than 10 years.

SMEs who have a "high" culture of innovation are also the most likely to have a clearly defined business plan (7.8 points) and an extensive innovation component (8.1 points), particularly when compared to SMEs with a "low" culture of innovation (5.5 points and 5.4 points respectively).

Innovation strategy can vary widely across SMEs. But there were common themes, most revolving around "better product, service or practice", "progressive and forward thinking", doing things differently", "technology" and "customer focus". See table below for some more detailed responses.

YOUR INNOVATION STRATEGY IN A FEW WORDS

"Use new digital platforms that help analyse and collate data and implement strategic and creative procedures that are highly effective for the business and our consumers. We fully embrace these initiatives to help us best understand our business and the direction we wish to pursue."

"Adopting the latest technology and adding new products."

"Anticipating consumer needs, at times before the consumer thinks of it."

"Automate processes."

"Creating a social media and in-house culture."

"Embrace technology as it evolves and enhance the customer experience by providing them quick and efficient shopping experience."

"Ensure our equipment, software and cyber security and training of staff is high quality and up to date."

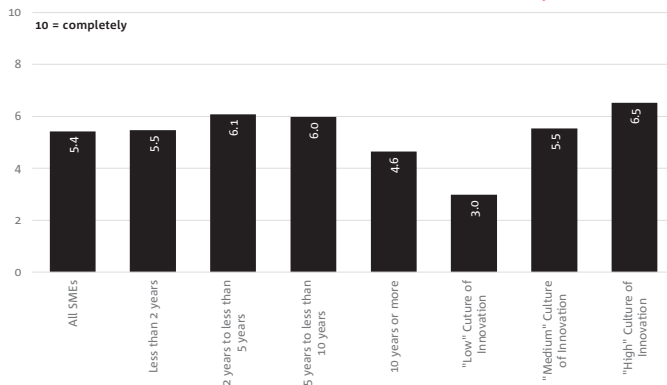
"In these times, where everything moves so quickly and develops so deeply, we constantly read professional magazines, local and overseas, attend conferences and work shop in our line of business, to learn the latest developments and meet influencers and thought-provoking managers."

"It's aimed at incremental growth and not towards radical changes. It allows us to take care of business and not to make dramatic overhauls all the time."

"Product improvement or disruptive or breakthrough."

"Remain abreast of the immediate competition and research world best practice."

EXTENT BUSINESS HAS PROCESSES/STRUCTURES TO SELECT/ PRIORITISE WHICH INNOVATION PROJECTS ARE APPROVED/FUNDED



SMEs rated the extent they had embedded “innovation” into their overall business strategy, relatively high. But when they were also asked the extent to which they have processes or structures to select and prioritise which innovation projects get approved and/or funded, they fell well behind. Overall, they scored just 5.4 points out of 10 (where 10 = completely).

By time in business, having these structures or processes in place was most common in SMEs that had been operating for 2-5 years (6.1 points) or 5-10 years (6.0 points), and least likely for SMEs in business for more than 10 years (4.6 points).

SMEs who have a “high” culture of innovation had the most extensive processes in place (6.5 points), and those with a “low” culture of innovation the least extensive (3.0 points).

See below for some examples of how innovation ideas are evaluated and taken forward.

HOW SMES INNOVATION IDEAS ARE EVALUATED AND TAKEN FORWARD

“We analyse the data and present to the board the findings and recommendations. We look for innovative approaches to help keep us ahead of our competition.”

“A market study is done.”

“A working group of experts in the field are brought together to assess the needs of the business.”

“Action is taken and implemented after customer requirements are assessed.”

“All ideas from all employees are collated each month and then strategies developed around ideas that will progress. From this testing and evaluation takes place. Ideas that are not progressed but have merit are saved for future use.”

“All managers sit down and discuss what would work best for their team and then we determine what needs to be implemented now or later on.”

“Because it is a small company we work together and brainstorm ideas all of the time. We’re open to all ideas and suggestions from all employees and customers.”

“Formal process for submission that involves management scoring and implementing which then results in rewards for staff submitting successful ideas.”

“Management and a specialist team evaluate process and outcomes and relate to targets set in previous period to measure efficiencies and cost benefits and saving.”

“Projects and ideas are tabled then along with company accountant can decide which ones we can afford to prioritise.”

BROADBAND SOLUTIONS: INNOVATING IN THE CLOUD

As one of the two co-founders of Broadband Solutions, Sam Bashiry has implemented his passion for entrepreneurship and innovation, that he says is a field of great opportunity in Australia. Starting the company (with a friend) in 2005, this company now provides broadband solutions and capacity to 80% of all hotels in Australia and many other commercial clients who need highly reliable internet services. Now employing 42 people, about 2/3 in Australia and 1/3 in Sri Lanka, this company is driven by its ideas and vision, through implementing its reliability of supply and innovation to clients as its point of difference. Expansion from its domestic client base to New Zealand, Fiji, Vietnam and Singapore is in process, as a natural next growth phase.

The core problem that Broadband Solutions initially solved was of poor internet uptime availability in hotels, that led to those hotels having undesirable levels of customer satisfaction. The service is of multiple levels of redundancy that are automated and provider-independent, driven through the company's own network, that is a highly differentiated offering to other internet service providers used by retail customers. Broadband Solutions network uptime is over 99.95%, and it offers 24x7 services.

Innovation continues apace in this company. Most recently, after some 12 years of research and development, a cloud-based phone system is market ready, built internally, that connects to many other partner organization systems. For example, with commonly used software systems such as MYOB and XERO, automated phone-based approaches are able to track and support receivables collection. For professional service providers such as

lawyers and accountants, phone calls to or from clients can be automatically logged for fee generation purposes. Many other highly customized applications are emerging, such as for community-based events including government elections, whereby the phone system links with artificial intelligence capabilities to collect and analyse data on community concerns and views on a regional basis. The phone system has capability to immediately link to other public data bases about community members, such as Facebook profiles, or customer relationship management software platforms such as Salesforce, providing for customized responses that add value to client experiences. New application opportunities based on digitalized connectivity and artificial intelligence are constantly developing, based on this platform.

Sam Bashiry and his team look for continuing innovation as the company evolves and develops new offerings and

applications of its core technologies. It is moving increasingly with the market into 'software-as-a-service' domains. To date, revenues have grown significantly every year since start up, and "opportunities abound" according to Sam, for those who want to work hard and innovate with passion! The world of digitalization has become a platform for creativity and business growth, which in this instance started with a differentiated broadband service, but has gone on to reinvest in cutting edge digital products and services, that have no foreseeable limit on their growth potential.

HOW SMES DECISIONS ON RESOURCE ALLOCATIONS AND WHEN TO INVEST AND WHEN KILL OFF INNOVATION PROJECTS ARE MADE

“After cost and potential benefit analysis - and competition analysis if applicable.”

“Allocate one-quarter cash flow to it and check on term report after the innovation plans.”

“Assessed by the group as to whether the idea has any chance of success or not.”

“At Board level.”

“Availability of a product or service with more attractive consumer properties.”

“Decisions are based on cost versus return and the proven ability and use of current innovations.”

“Do a 12-month and 5-year business plan and keep across industry market changes and whether priorities need to adjust.”

“Follow examples of other like businesses and industry innovations. Money is invested either when necessary or slowly over time.”

“Follow the latest innovations and purchase appropriate equipment.”

“Management and specialist team meet every two months to evaluate outcomes, achievement of targets and measuring efficiencies and cost benefits and if consistently positive allow additional funding.”

“Money, time and market readiness are key significant contributing factors in deciding what goes ahead and what does not go ahead.”

“Overall appraisal of decisions and procedures that we feel are working in a positive direction for the business and those that are not making the business better. Those procedures more positive are allocated increased finances and conversely the reverse for those unsuccessful.”

“Quarterly review of existing projects and new project assessments if submitted.”

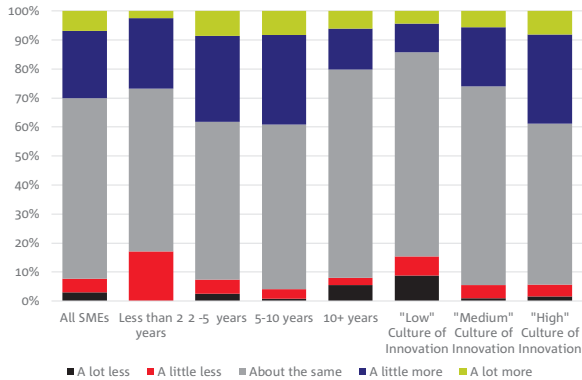
“We allocate funds based on the data and research, we increase this year on year by 7 per cent. If we need to move quickly we have the resources to do so.”

Are SMEs investing more in innovation? It was mostly unchanged in the past 12 months, with around 6 in 10 (62%) SMEs overall indicating their investment levels were about the same. But 3 in 10 (30%) said they invested more - 23% a little more and 7% a lot more. Only 8% invested less - 5% a little less and 3% a lot less.

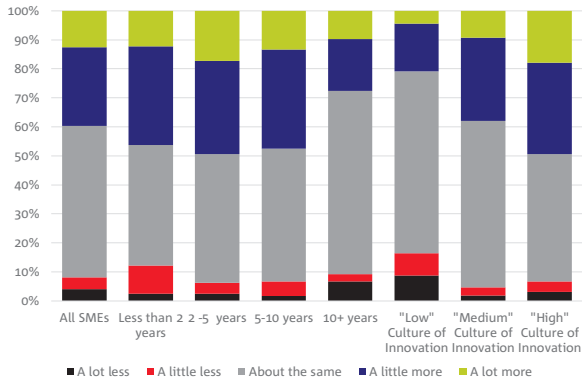
Investment in innovation did however vary by time in business and innovation culture. By time, around twice as many SMEs operating for 5-10 years (39%) and 2-5 years (38%) increased their innovation investment than did those had operated for 10+ years (20%).

Having a “high” culture of innovation was also an important driver, with 39% of these SMEs investing more - almost 3 times as many than those with a “low” culture of innovation (14%).

FINANCIAL INVESTMENT IN INNOVATION: CHANGE IN PAST 12M



FINANCIAL INVESTMENT IN INNOVATION: CHANGE IN NEXT 12M



Looking forward 12 months, innovation intentions are somewhat more positive. Only 5 in 10 (52%) SMEs overall plan to invest the same, but 4 in 10 plan to invest more - 27% a little more and 13% a lot more. That said, 8% still expect to invest less - 4% a little less and 4% a lot less.

More SMEs, irrespective of time in business and culture of innovation, said they would invest more in the next 12 months, than did those who invested more in the past 12 months. By time in business, intentions are most positive for SMEs that have operated for 2-5 years, where 48% said they would invest more (compared to 38% who invested more in the past 12 months) and 5-10 years (48% vs. 39% in past 12 months). Around 28% of SMEs in business more than 10 years said they will invest more in the next 12 months, compared to 20% who invested more in

the last 12 months. The biggest increase was noted in SMEs less than 2 years in business, where investment intentions almost doubled to 46% (compared to just 27% who invested more in the past 12 months).

Around 1 in 2 (49%) SMEs with a “high” culture of innovation also planned to invest more in innovation in the next 12 months, compared to 39% who did so in the past 12 months. Around 38% of SMEs with a “medium” culture said they would invest more (compared to 26% who did in the past 12 months), while 21% with a “low” culture of innovation will also invest more (compared to 14% who did in the past 12 month14%).

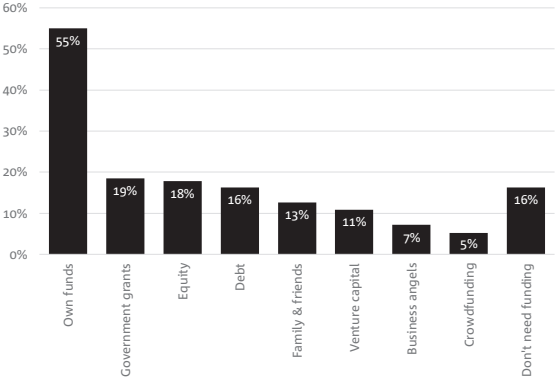
On average, almost 6 in 10 (55%) SMEs are most likely to fund their innovation activities with their own funds, and around 1 in 5 via government grants (19%) and equity (18%), with a further 16% likely to use debt.

While using their own funds was the most common source of funding for all SMEs irrespective of time in business and their innovation culture there were important differences.

For example, emerging SMEs less than 2 years old were far more likely to source their funds from government grants (29%) or crowdfunding (20%), and SMEs 2-5 years old from family and friends (28%).

More SMEs with a “high” culture of innovation were more likely to source their funding from all avenues than those with a “medium” or “low” culture of innovation. This was particularly evident when it came to government grants (24%) and business angels (11%).

FUNDING SOURCES FOR INNOVATION ACTIVITIES
ALL SMEs



HOW INNOVATION ACTIVITIES ARE FUNDED

	All SMEs	Less than 2 years	2-5 years	5-10 years	10+ years	Low Culture of Innovation	Medium Culture of Innovation	High Culture of Innovation
Own funds	55%	56%	59%	56%	52%	52%	58%	57%
Government Grants	19%	29%	22%	21%	12%	11%	16%	24%
Equity	18%	10%	20%	24%	14%	14%	16%	20%
Debt	16%	20%	21%	19%	11%	11%	15%	20%
Family & Fiends	13%	17%	28%	13%	3%	7%	9%	15%
Venture Capital	11%	7%	17%	13%	7%	2%	11%	14%
Business Angels	7%	7%	11%	11%	2%	0%	4%	11%
Crowdfunding	5%	20%	6%	6%	1%	3%	4%	7%
Don't need funding	16%	10%	2%	16%	25%	21%	16%	14%

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