Digital Productivity Report

2020

LGAQ

LOCAL GOVERNMENT ASSOCIATION OF QUEENSLAND

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Foreword

Welcome to the fourth in a series of reports funded by the LGAQ into Queensland Local Government digital productivity.

The understanding, appreciation and acceptance of Queensland's councils of the need to embrace digital connectivity and service delivery has increased immensely since these reports began.

About 95 per cent of Queensland councils now understand the challenge while 75 per cent have digital actions under way.

Queensland councils now have a much higher online presence, in large part aided by the LGAQ's roll out of the Jadu Interactive websites and through the initiatives of individual councils.

The drivers for embracing digital connectivity include the ability to increase operational efficiency, provide better public access to council services and provide faster turn-around times in responding to community requests for information or actions.

The survey found the largest challenge for councils collectively was in taking a more strategy driven approach to digitalisation rather than through individual actions or initiatives.

To that end the LGAQ still has an important role to play in both highlighting the need to plan strategically and in showcasing and providing digital services to its members.

The LGAQ's own digital strategy will have been fully rolled out by the time the next generation of councils take office in 2020.

Greg Hallam AM

Chief Executive Officer

Local Government Association of Queensland

Being digital is a priority for councils

95% See value in investing in digital technologies and initiatives

75% Have deployed technologies supporting digital services

Driven by business-focused outcomes

Key drivers for tech solutions

- **60%** Gain cost efficiencies
- **48%** Increase access to council services
- **37%** Improved service times
- **33%** Meet customer demands
- **32%** Increased mobility

Leading to greater online presence

Top services accessed online

- **68%** Enquiries, jobs, cemeteries
- **49%** Communication – restrictions, hazards
- **37%** Animal registrations
- **33%** Planning, contract administration
- **32%** Rates management

Councils are making further progress in digital transformation

Technology investments in the next 5 years

- **84%** Cloud tech
- **58%** Data governance
- **5 year investment plans**
- **65%** Cyber security
- **61%** Real-time dashboards

The divide: small vs others

Respondents who see value in investing in digital technologies

96% From medium and large-sized councils Vs. **76%** From small sized council

My council has access to secure and reliable Internet

Medium and large-sized councils **17%** disagreed Vs. Small-sized councils **48%** disagreed

However, there are many obstacles to tackle on the way

>69% Do not have a digital strategy in place for maximising the business benefits

<32% Employ resources who are highly skilled in digital and other complementary skills

<2% Have predictive models to make corrections and uncover opportunities in the future

1.0
Introduction

1. Introduction

The Local Government Association of Queensland (LGAQ) has been the peak advisory and advocacy body for local government in Queensland since 1893. Its continued mission is to help Queensland councils strengthen their relationship with the community and improve their operations.

A key part of that mandate is encouraging local governments to use the best available tools and technologies to provide the best services to their communities in the most efficient way possible. For this reason, the LGAQ has been a keen driver of innovation-led activities and continues to explore ways that community and business requirements can be met through the adoption of smarter and more sustainable solutions.

This, the fourth biennial Digital Productivity Survey, has been designed to support this mission by assessing the changing digital and technological requirements, maturity and capabilities of local governments across Queensland.

The inaugural survey in 2013 provided the first benchmark on local government digital productivity across Queensland. It sought to gain a better understanding of the digital maturity of the LGAQ's members as they tackled the challenges and opportunities presented by emerging digital technologies. This included an assessment of the current and desired future state of local government digital capability. The 2015 survey explored the rise of smartphones and increasing opportunities to connect via social media and sought to understand how Queensland councils were adjusting their business models to take advantage of new digital technologies. The 2017 survey included a focus on data, including business intelligence, open data and data security, and highlighted some of the challenges around connectivity and the availability of skilled digital resources.

The 2019 survey was designed to ascertain where councils consider their individual capabilities lay in a rapidly changing digital economy. Councils were asked to assess the maturity of their local government's digital productivity and their capability to advance and leverage the benefits of digital technology.

The purpose of the 2019 survey was to collect actionable intelligence on where councils require assistance to embrace the digital future. The outputs will assist the LGAQ and its members to build on their understanding of the level of the current digital maturity of local governments across Queensland, and how this is evolving over time. The insights from this survey will be used by the LGAQ to:

- Support councils in providing greater value to ratepayers through digital initiatives, including increased productivity, improved services and reduction in costs
- Provide suggestions to the digital vendor community enabling them to provide and deliver greater value to councils.

Through the Digital Productivity Survey, the LGAQ is also seeking a deeper understanding of the challenges councils have found most difficult in recent years, and the emerging trends in how councils are using technology to improve service delivery and operations. These insights will contribute to the realisation of strategic objectives, including leading and assisting the digitisation of Queensland councils, creating an innovation culture, and delivering solutions that enable the LGAQ and councils to adapt and respond to the changing digital economy.

1. Introduction

95% of the respondents reported seeing value in investing in digital initiatives such as customer self-service technologies, data analytics and cloud computing

The 2019 report demonstrates an overall increase in the digital maturity of councils across Queensland, highlights the key barriers to local government achieving greater value from digital technologies and provides a series of anecdotes showcasing excellence in digital transformation.

As other levels of government devolve responsibilities, and community expectations shift, local governments across Queensland are being made responsible for an ever-increasing range of frontline community services. However, with only a 3% share of annual taxation revenue, councils are being relied upon to deliver 'more for less'.

This has seen the need for increased productivity arise as a key consideration for councils when investing in technology. And, not surprisingly, gaining cost efficiencies and improving service times are two out of the top three drivers for tech-enabled solutions.

GWI are proud to have partnered with the Local Government Association of Queensland to deliver the past three consecutive biennial local government Digital Productivity Surveys.

The right technology deployed in the right way can be a powerful tool for improving service delivery and operations. For many local governments, in-house digital capability is a luxury they cannot afford. This is often due to funding challenges as well as access to local skilled resources and service providers. The LGAQ wishes to better understand the digital priorities of their members, including emerging areas such as the use of mobility, IoT, shared services, advanced analytics and data to better serve and support them.

1.1 2019 respondent profiles

The 2019 survey attracted a strong response across a variety of councils and roles within those councils. Figure 1 provides an overview of the survey participants by role in Council.

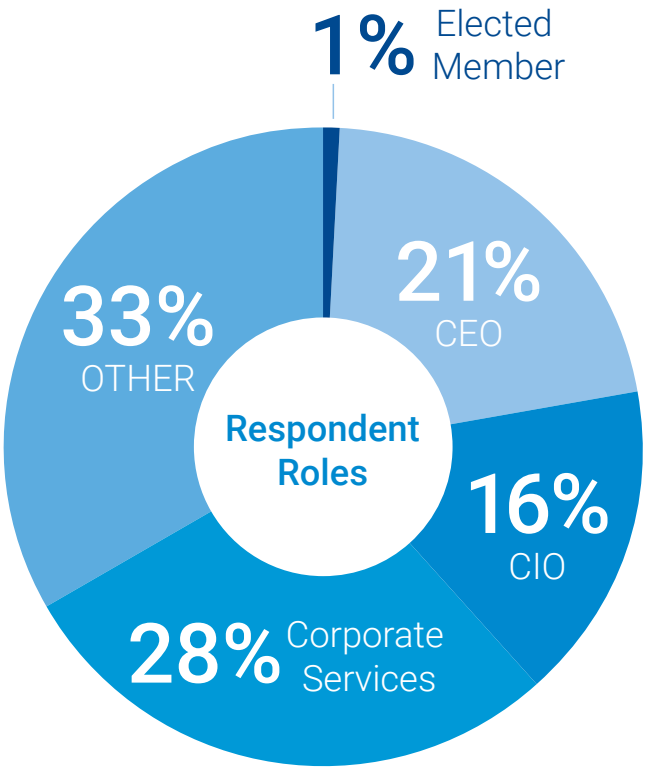


Figure 1: 2019 respondent roles

1. Introduction

Of the 33% of respondents that identified their roles as 'other' the majority had Information Communication Technology (ICT) roles as shown in Figure 1. Overall there was a solid representation of respondents across council sizes and segments as shown above and below in Figure 2 and Figure 3.

Participation (%) by Council Size

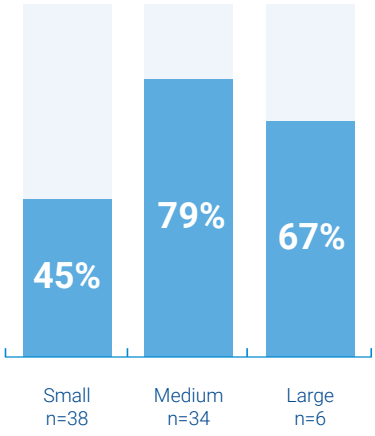


Figure 2: 2019 participation by council size

Participation (%) by Council Segment

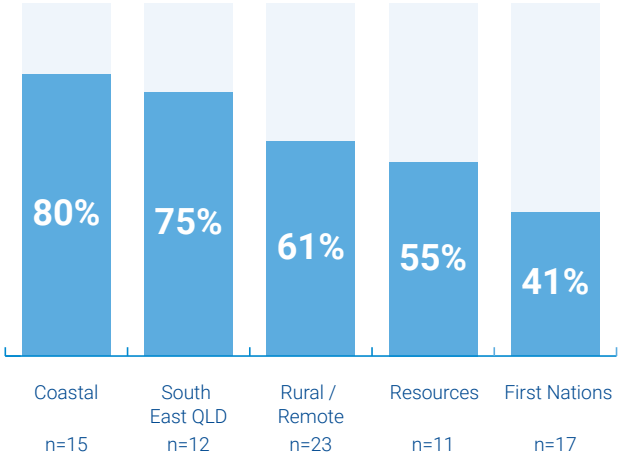


Figure 3: 2019 participation by council segment

2.0
Methodology

2. Methodology

The method for the 2019 survey varied from previous surveys. The number of questions was reduced from 73 (in 2017) to 25 with the addition of a specific open-ended question on the digital initiatives that are currently in progress or that have been recently completed by Queensland councils. The reduction in the volume of questions focused the content on key digital issues for 2019 (informed by research conducted by GWI) as well as reducing the time to complete the survey to approximately 25 minutes. The addition of the request for a real-life example of digital innovation was included to provide insights into the digital technologies that Queensland councils are deploying right now to improve service delivery and operations, as well as to provide inspiration to fellow Queensland councils.

The survey was designed to elicit council responses relating to digital productivity including digital maturity, digital strategy adoption, digital service delivery, digital infrastructure and data-based decision making. The survey was broken into five sections as shown in Figure 4. This report is structured under the same headings.

Digital Maturity Assessment	Digital Strategy Adoption	Enabling Digital Service Delivery	Uplifting Digital Infrastructure	Unlocking the Potential of Data
To understand the current level of adoption of digital tools and technologies to enhance service delivery and every day options	To understand the current focus of QLD councils in respect to technology adoption as part of their overall strategy	To understand what services are enhanced through technology and identifying areas of future growth, including current barriers	To assess current councils needs in order to provide targeted support designed to uplift digital maturity	To understand current areas of need to enhance data analytical capabilities to inform policy decisions and improved services

Figure 4: Survey sections

2. Methodology

The 2019 Digital Productivity Survey was sent to all 77 Queensland councils for response.

Survey data was collected between 22 October 2019 and 11 November 2019 and consisted of 25 questions. In total, 67 responses were received from 48 councils.

The survey questionnaire included a range of qualitative and quantitative measures including open and closed questions to help draw a range of responses. Results are self-reported and have not been independently verified. All results have been rounded to the nearest whole number.

The following definitions of 'digital' were provided to respondents at the beginning of the survey:

Digital technologies are ICT tools, systems, devices and resources that generate, store or process data. Well known examples include social media, internet of things (IoT, e.g. smart sensors), multimedia and smart mobile phones.

Digital productivity is any type of operations or service delivery that uses, or is supported or enhanced by, technology.

Target roles within councils were elected members, CEOs and CIOs, and corporate service roles. However, the survey was open to any individual working for council with responsibilities or an interest in the area of digital productivity.

3.0

Digital maturity

3. Digital maturity

As communities and industry become more digitally savvy, it is imperative Queensland councils match this pace to avoid having to play catchup later. QLD councils understand that investing in digital transformation to leverage technology in everyday operations is a necessity.

95% of the respondents reported seeing value in investing in digital initiatives such as customer self-service technologies, data analytics and cloud computing.

Generally, medium and larger sized councils see more value in investing in innovative digital technology initiatives when compared with small-sized councils. For smaller councils, it is more important for them to be aware of the benefit for each dollar spent on ICT initiatives so that all investments are directed where they are needed the most.

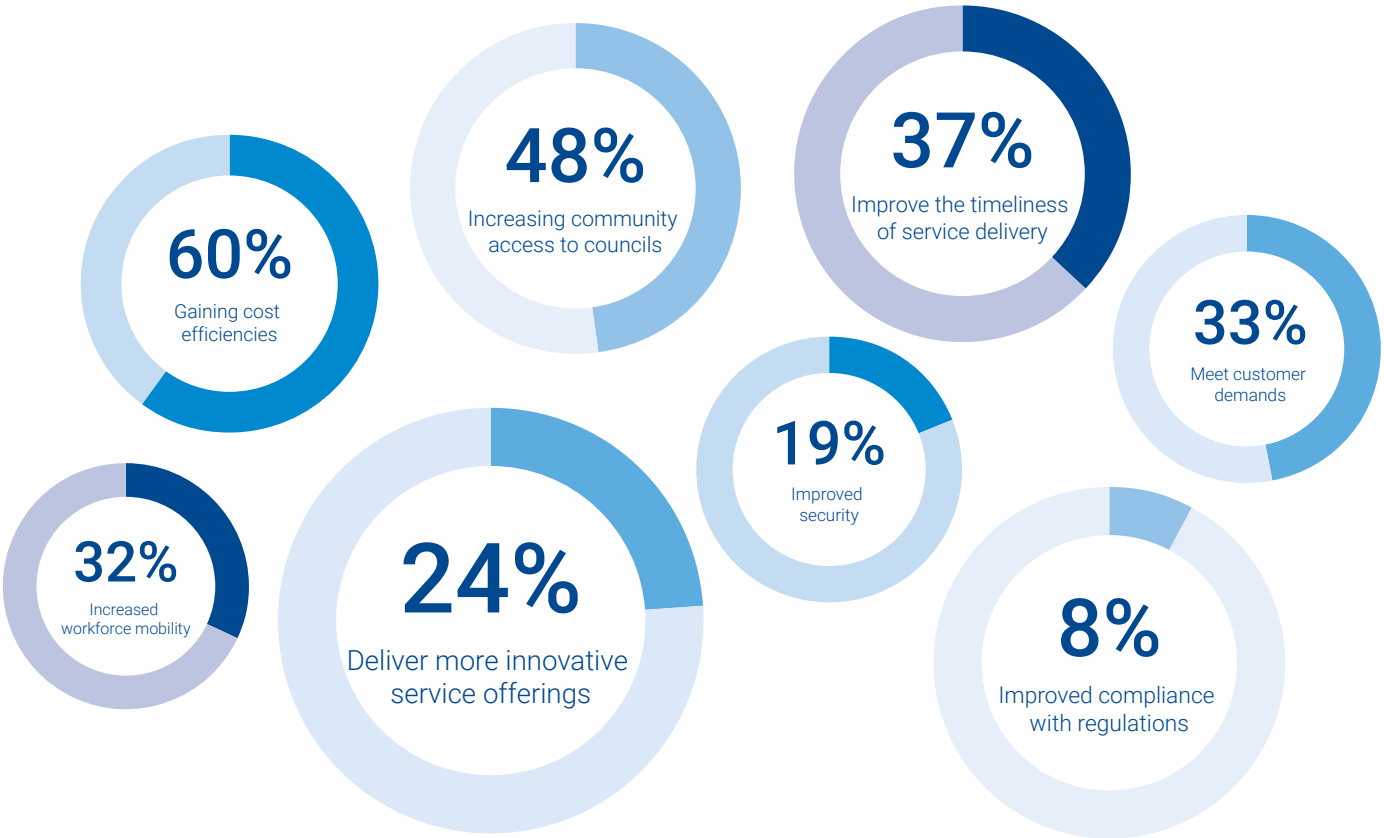
In terms of the types of value councils see in digital technologies, 60% of respondents believe that gaining cost efficiencies is the key value driver for their council investing in digital technologies. Reported value drivers were as follows (note that respondents were able to select multiple value drivers).

Respondents who see value in investing in digital technologies

96% From medium and large-sized councils

Vs.

76% From small sized council



3. Digital maturity

Despite 95% of respondents seeing value in investing in digital technologies, only 64% believe that their council is well positioned to take up digital technologies for improved operations and service delivery and only 25% believe that digital investment is critical to council success.

This highlights that most Queensland councils are most likely experiencing barriers to investing in digital technologies and/or deploying digital transformation initiatives and often do not see them as critical to success.

Technology-enabled solutions are often costly and future return on investment is not always easy to articulate in a tangible way from the outset. Digital transformation is also difficult to implement - even digitally savvy industries have a digital transformation success rate of only 26%[1]. These factors combine to make it especially challenging for councils to get the approval and investment required to get digital initiatives off the ground in the first place.

Despite these challenges, most Queensland councils are on the journey towards digital maturity. Over 80% of respondents are focusing on moving services online for customer convenience and some reported instances of data collection and usage, for instance open data initiatives to promote transparency and customer engagement through digital mediums.

Attracting the skilled resources required to build and support digital initiatives is a barrier for many councils, especially those councils in remote areas. First Nations were the only segment with some respondents indicating that their councils do not have any highly skilled and knowledgeable digital resources. South East Queensland councils have by far the most digitally skilled workforces, which likely reflects access to a larger population and technology providers.

[1] McKinsey and Company October 2018 digital transformations survey

3. Digital maturity

Showcase 1

Gympie Regional Council: Combining creative thinking and technology to improve efficiency

Gympie Regional Council has used a creative and technology savvy approach for reducing the effort to take water readings. In 2016/17, Gympie Regional Council replaced 610 water meters with smart meters as part of the Water Meter Replacement Program. The Council also fitted the garbage collection trucks with smart readers to read information from the meters on the fly while doing bin collections. This resulted in significant time savings for the council and no wasted or duplicated efforts to take readings.

3. Digital maturity

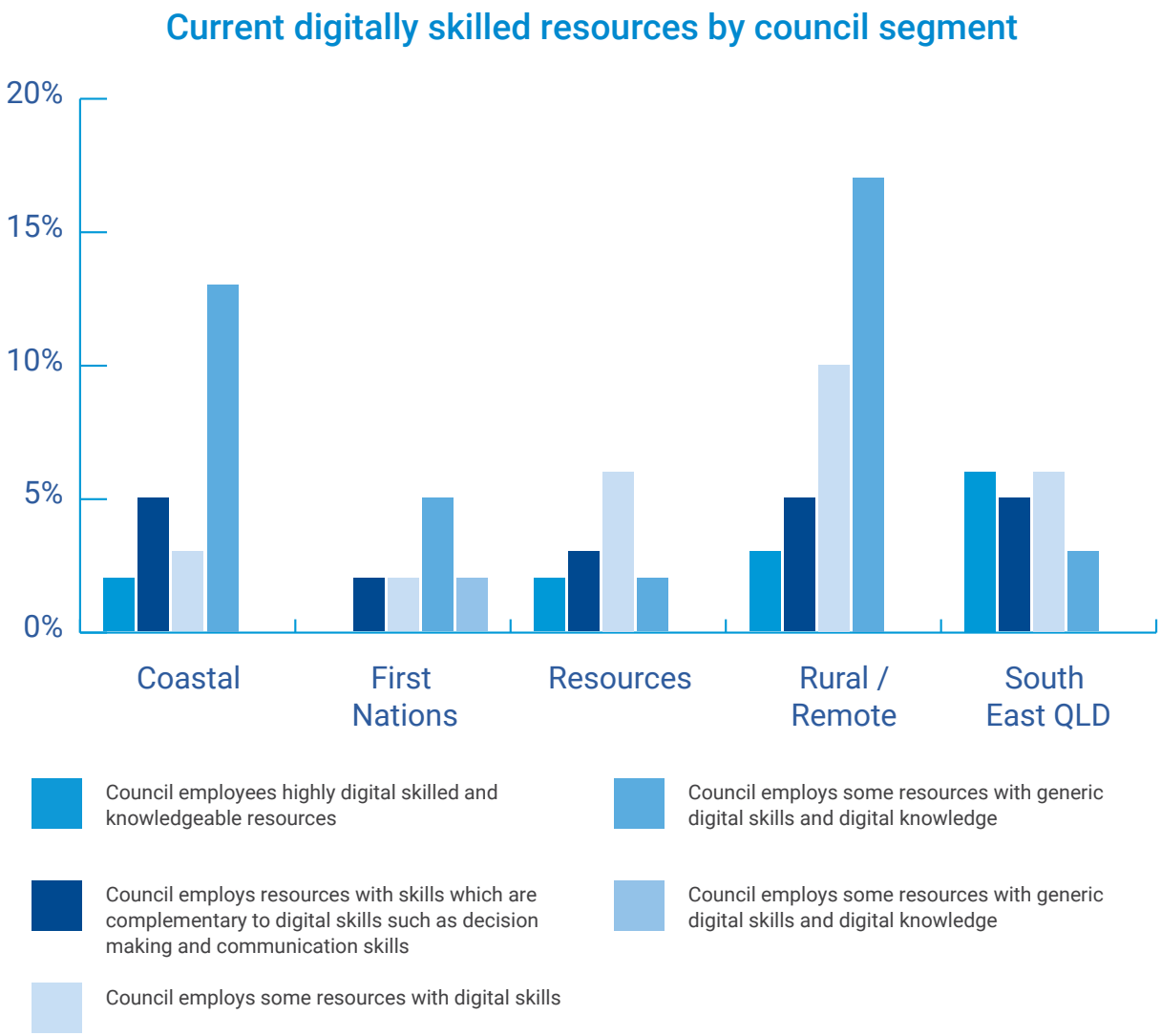


Figure 5: Council segment availability of skilled resources

40% of respondents recognised that attracting skilled professionals would help improve their digital maturity. Digital maturity refers to an organisations ability to adapt to thrive effectively in an increasingly digital environment.

Only a quarter of Queensland councils see the shift to digital working as critical to success. Digital working can be defined as work that is supported and enhanced by technology. As the digital economy emerges and customers become more accustomed to interacting with businesses and government via digital means, a shift to digital ways of working and delivering services will become a critical success factor. Local government will suffer if they lag behind government and industry in this growth area.

3. Digital maturity

The LGAQ is working to identify opportunities to partner with councils to build proof of concepts for various digital initiatives and create a repeatable process for other councils to participate in, helping councils get over the hurdle of obtaining upfront approval and funding to get started on the digital transformation journey.

Data plays a pivotal role for effectiveness of any digital solution and this is where councils require an uplift in maturity to be able to take advantage of digital opportunities. 56% of the respondents say their councils are focusing on moving services online but with only limited instances of data collection and usage. For continuous improvement, it is essential to capture real-time data and use it to enhance service delivery. Implementing tech-enabled solutions also requires advanced digital skills, however 68% of respondents do not believe that their councils have adequate resources with digital related skills and knowledge.

The digital skills divide between smaller and larger sized councils

The availability of skilled resources was reported as a barrier by most councils. However, it is a much larger barrier for small-sized councils. Less than 10% of respondents from small councils reported having access to resources skilled in digital transformation or related fields. This is almost four times lower than in medium and large councils (39%). Overcoming this barrier requires attracting skilled resources to these regions, establishing remote ways of working, sharing skilled resources between councils and/or incentivising digital business to deliver services to smaller regions.

3. Digital maturity

Insights

- 95% of Queensland councils see value in investing in digital technologies.
- Councils are moving services online or improving existing ones but are not yet focusing on reusing consumer data collected for better outcomes.

Challenges

- Only a quarter of Queensland councils see the shift to digital as critical to success.
- Obtaining approval, resources and initial investment to commence digital initiatives is a major problem for many councils.
- Digital solutions often require niche skills and capabilities for development and implementation which are difficult to source, especially in remote areas.

Opportunities

- Encouraging the private sector to partner with councils to build proof of concepts for various digital initiatives.
- The LGAQ is exploring the possibility of facilitating a shared resource model among the councils to make skilled digital resources and required knowledge available to them when needed.
- The LGAQ is currently developing business models around IoT solutions that could deliver value to its members through improved service delivery and the creation of valuable data assets. Through leveraging economies of scale, the LGAQ is exploring ways of providing its members with access to IoT technology and data analytics in a way that is cost effective and minimises delivery and maintenance risk for Queensland local government.

4.0

Digital strategy adoption

4. Digital strategy adoption

The 2019 survey indicated that more councils than ever see the value of digital-enabled service delivery and are increasing investment (actual and planned) in this area. While 98% of respondents indicated their council will be investing in digital initiatives within the next five years, only 31% of respondents indicated that their council has a digital strategy. A digital strategy is key to guiding investments in this area and supporting the achievement of strategic outcomes over the long term.

Figure 6 illustrates where councils plan to invest within the next five years (survey respondents were invited to 'select all that apply').

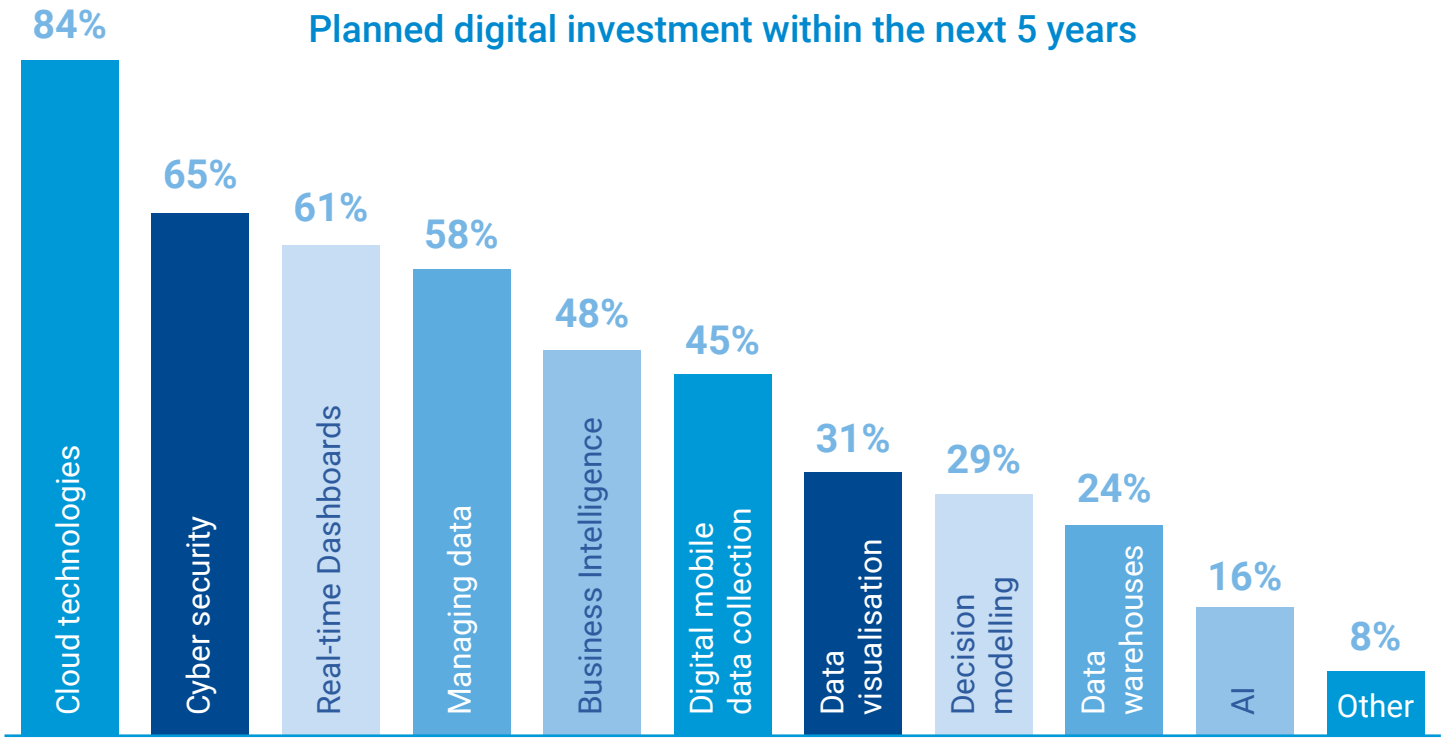


Figure 6: Planned digital investment within the next 5 years

4. Digital strategy adoption

Of the respondents that specified 'other' two were unsure, one specified Robotic Process Automation (RPA), one specified Internet-of-Things (IoT) / sensor data collection, and another specified that they wish to invest in digital initiatives but lack the funding.

94% of respondents reported that their council has multiple digital investments planned within the next five years, with 67% indicating their council has three or more planned, 23% with seven or more planned and only 6% with none planned (see Figure 7). Correlation between concurrent digital initiatives within councils was not assessed as part the survey.

Number of planned digital initiatives within 5 years

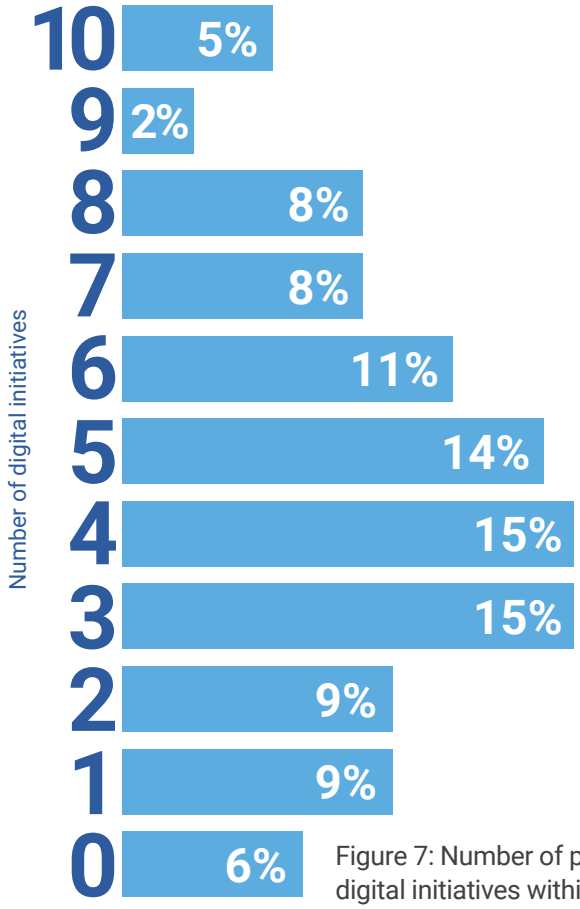


Figure 7: Number of planned digital initiatives within 5 years

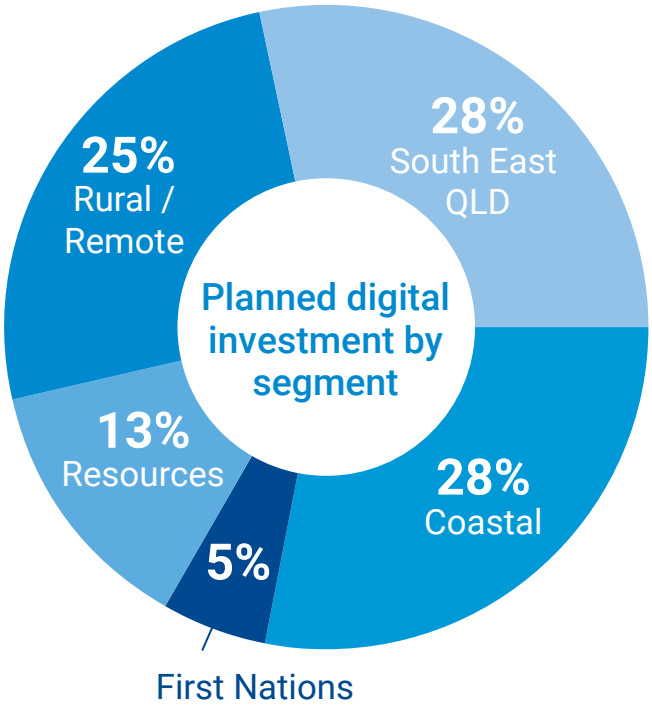


Figure 8: Planned digital investment by council segment

Planned investment in digital initiatives over the next five years are predominantly, and evenly spread across coastal, rural / remote and SEQ councils as shown in Figure 8. The resources and first nations segments had the lowest planned digital investment at 13% and 5% respectively.

The segments with the most planned investment also reported having the highest rate of established digital strategies. 54% of SEQ council and 29% of Coastal council respondents indicated their council has a digital strategy. None of the respondents from First Nations and Resources councils indicated that they had a digital strategy (see Figure 12).

4. Digital strategy adoption

Although the rural / remote segment reported high levels of planned investment, only 14% of respondents from rural / remote councils reported having a digital strategy.

The largest planned investment in digital initiatives within the next five years is within medium-sized councils as shown in Figure 9.

Planned investment by council size

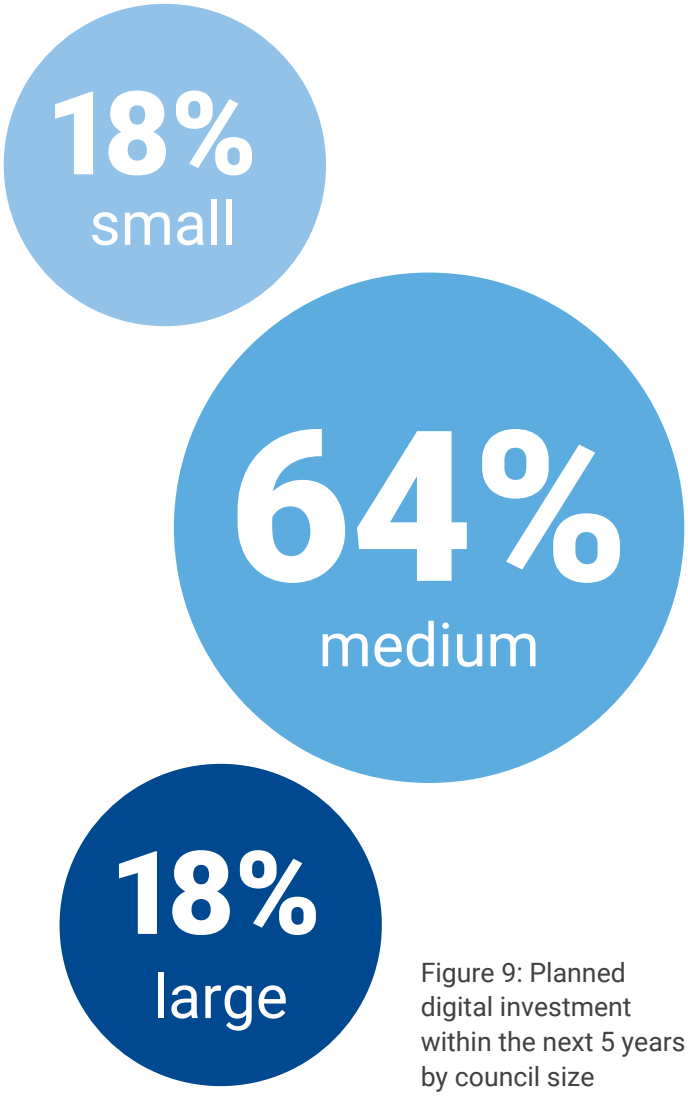


Figure 9: Planned digital investment within the next 5 years by council size

The reason for this may be one or more of the following:

- Smaller sized councils experience greater barriers to investing in digital technologies, such as a lack of available funding and access to skilled resources
- No respondents from smaller sized councils reported having a digital strategy. The absence of planning for long-term digital investment in smaller councils may be as a result of lack of funding and access to skilled resources
- Medium sized councils experience less barriers than smaller councils and are motivated to invest in digital initiatives, for instance, to increase community access in non-city / rural areas
- Large councils may have a large number of the digital technologies already in place.

Overall, respondents from larger councils were the most confident in terms of their council being well positioned to take up digital technologies for improved operations and service delivery. 100% of respondents from large councils either strongly agreed or agreed with the statement 'your council is well positioned to take up digital technologies'. 58% of respondents from medium-sized councils and 66% of small-size councils strongly agreed or agreed with the statement (see Figure 10). The higher confidence in smaller-size councils compared to medium-sized councils was interesting given that none of the smaller-sized council respondents reported having a digital strategy.

4. Digital strategy adoption

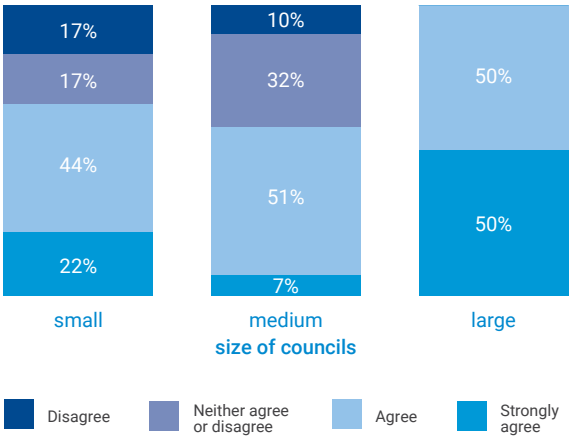


Figure 10: Respondent confidence in their council being well positioned to take up digital technologies

Council is well positioned to take up digital tech by size

When it comes to investing in digital initiatives, large councils are most motivated by meeting customer demands, followed by achieving cost efficiencies, and increasing community access to council. Small and medium-sized councils are most motivated by achieving cost efficiencies, followed by increasing community access to council (see Figure 11). Improving community access and connectivity was a priority for Cherbourg Aboriginal Shire Council as outlined in Showcase 2. Due to these connectivity upgrades, more members of the community have access to wireless internet connection.

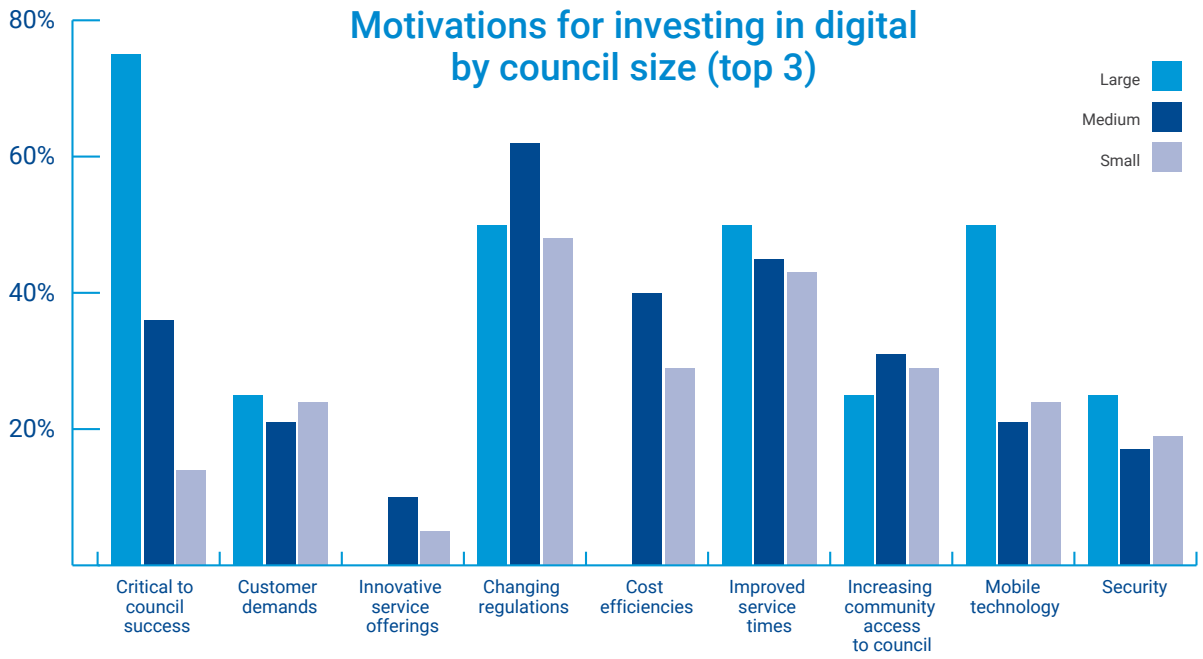


Figure 11: Top 3 motivations to invest in digital technologies by council size

The Harvard Business School describes digital transformation as a necessity for all organisations, requiring fundamental organisational change and a digital strategy that touches all aspects of an organisation, including the business model, customer relationships and culture[2].Establishing a strategy and guiding principles for these planned investments enables councils to plan ahead and align technology to strategic objectives.

[2] Gupa, S. 'Driving Digital Strategy', Harvard Business Publishing 2018

4. Digital strategy adoption

Showcase 2

Cherbourg Aboriginal Shire Council: Improving internet connectivity and ICT infrastructure

Cherbourg, with support from the Queensland government, upgraded its ICT network and improved asset management. The council then used the upgraded network to create a single unified network across all council buildings to improve integration, data sharing and security. Cherbourg has also expanded wireless internet across the community as part of the upgrades.

4. Digital strategy adoption

Respondents from councils with digital strategies had on average six digital initiatives planned over the next five years. Respondents from councils without digital strategies had on average four planned initiatives within the next five years.

Not having a digital strategy in place increases the risk of councils:

- Falling behind other sectors in an increasingly digital environment
- Investing in technology that may be fit-for-purpose now but fail to provide an adequate platform for future requirements
- Investing in multiple technology initiatives without achieving targeted and meaningful business outcomes.

Councils with data strategies by segment

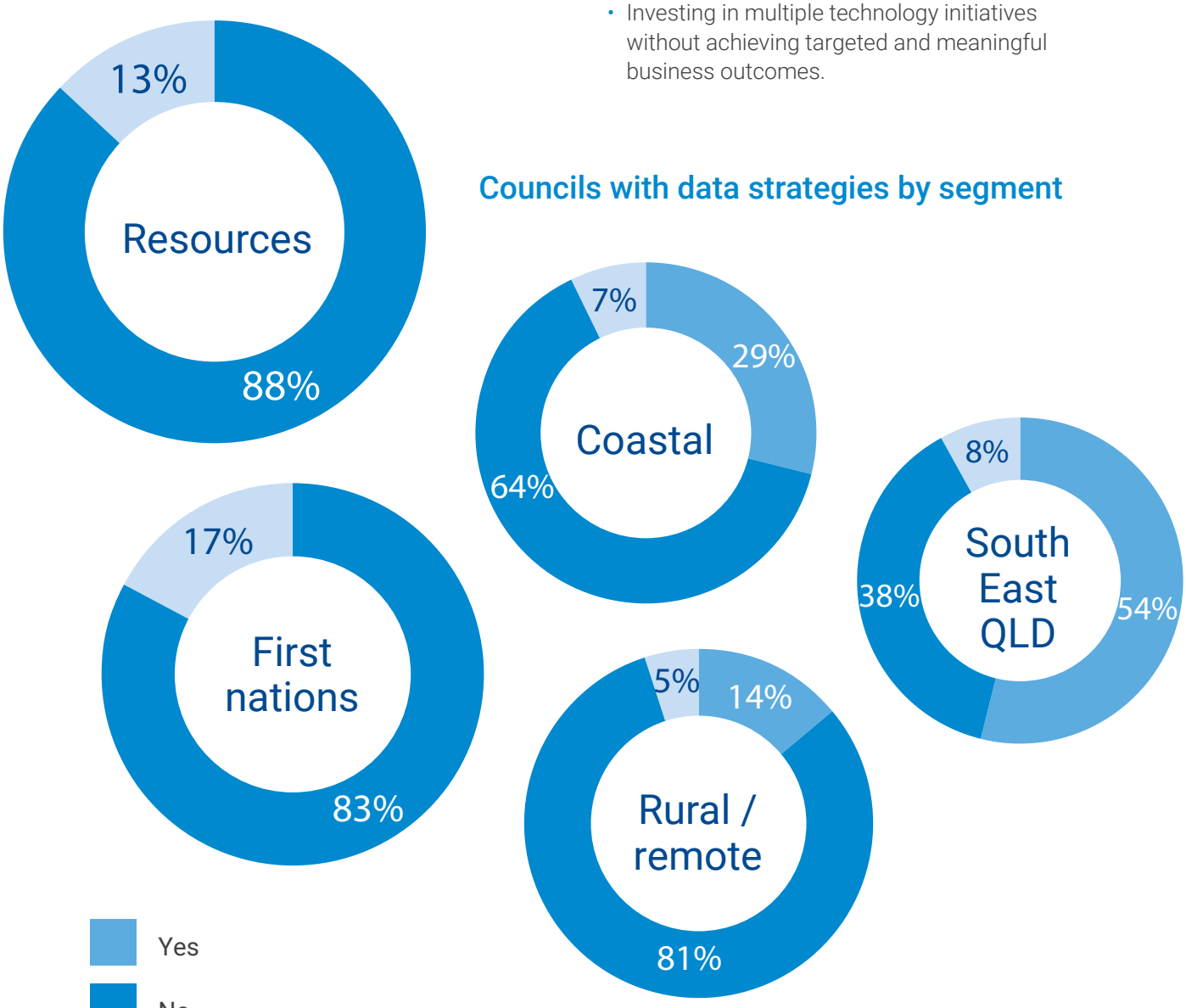


Figure 12: Data strategy prevalence by council segment

4. Digital strategy adoption

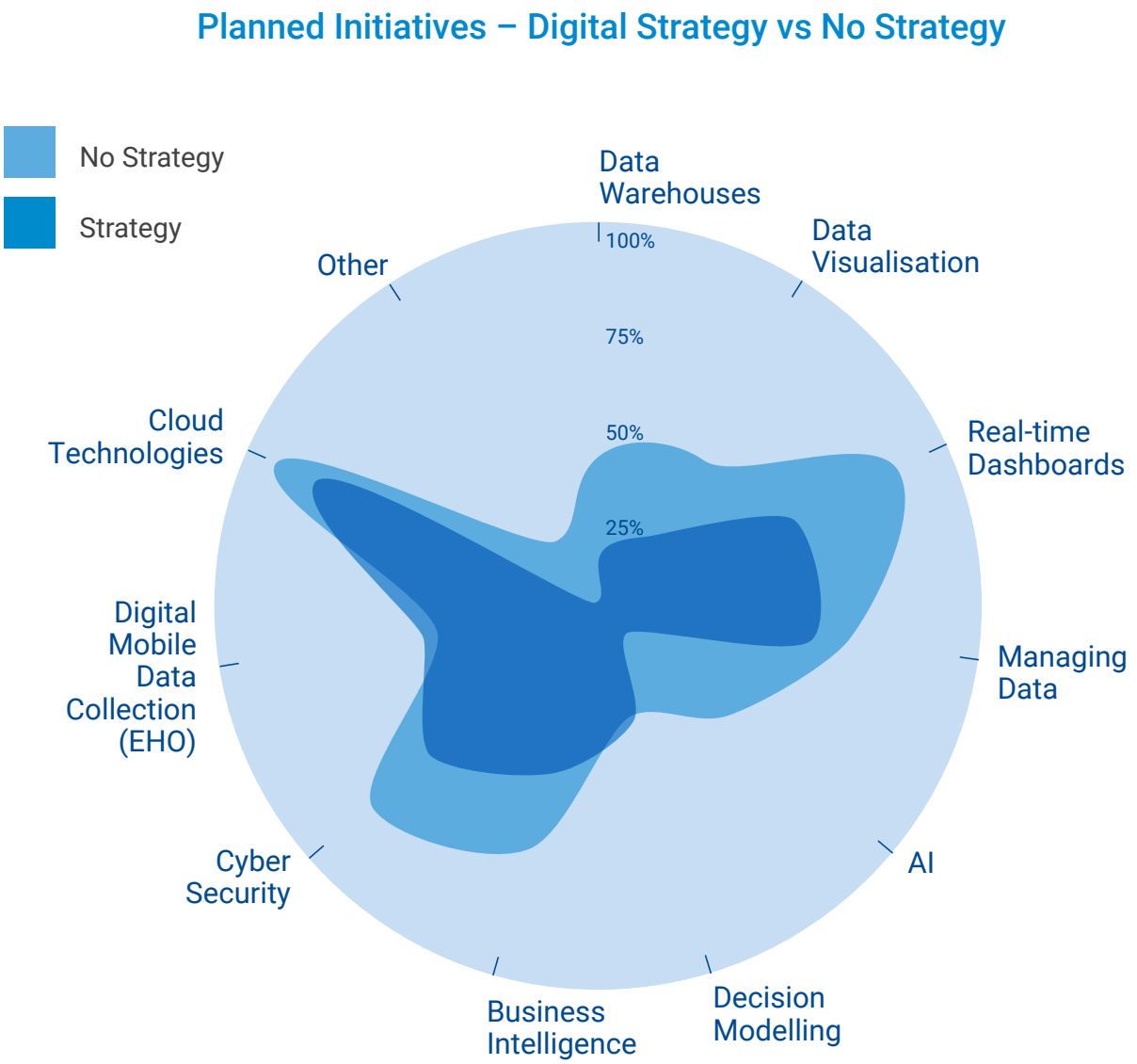


Figure 13: Comparison of planned initiatives between councils with or without a digital strategy

A digital strategy also considers future data needs, establishing a plan for maximising the business benefits of data assets and technology-focused initiatives.

A digital strategy can range from major technology investment, to questions such as 'should we use social media as an official customer engagement channel?'. All digital technology investment should be made with consideration of a digital strategy linked to one or more strategic outcomes of the council.

4. Digital strategy adoption

Insights

- Cloud technologies, cyber security, real-time dashboard reporting and data governance are the digital initiatives attracting the most planned investment in 2019 – 2024.
- Only 6% of respondents reported that their councils have no planned investments in digital technologies within the next five years.
- The highest number of planned investments in digital initiatives within the next five years is within medium-sized councils.
- The biggest drivers for adopting digital technology are achieving cost efficiencies, meeting customer demands and improving community access to council.
- Only 23% of respondents overall indicated that their council has a digital strategy. Councils in SEQ had the highest rate of digital strategic planning with 54% of respondents from SEQ indicating their council has a digital strategy.

Challenges

- Survey results indicate that planned investment in digital technologies is not being informed by a digital strategy that provides a long-term plan for investments aligned to council strategic objectives.
- Not having a digital strategy in place increases the risk of councils investing in technology that may be fit-for-purpose now but fails to provide an adequate platform for future requirements aligned to strategic objectives.

Opportunities

- Providing smaller-sized, first nations, resources and rural / remote segment councils with support to continue planning for the digital future and establish digital strategies.
- Identify innovative digital initiative opportunities for partnerships and support through economies of scale based on Queensland council initiatives planned within the next five years.

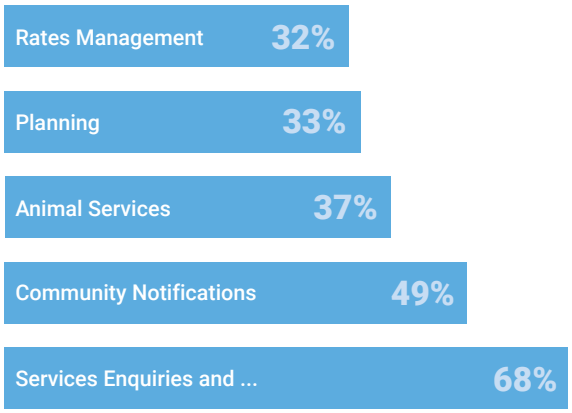
5.0

Enabling digital service delivery

5. Enabling digital service delivery

Councils have an array of offerings through their websites ranging from service enquiries and requests, community notifications to payments:

Assessment Percentages



The majority of services offered online are passive, i.e. pushing information out to customers rather than providing an interactive and automated portal for self-service interactions.

Over the next two years, 79% of respondents indicated that their councils are planning to move more services online. Service enquiries and requests, animal services, planning and rates management were among the top three services most cited as moving online in the next two years.

Of respondents that reported that all their council's services are already online, 60% were from large-sized councils. Of respondents that reported no plans for moving services online in the next two years, 58% were from medium-sized councils and 42% were from small-sized councils.

The top three services planned for online delivery in the next two years were aligned with the current top three services currently accessed by customers online as shown in Figure 14 below indicating that councils are responding to the needs of their communities.

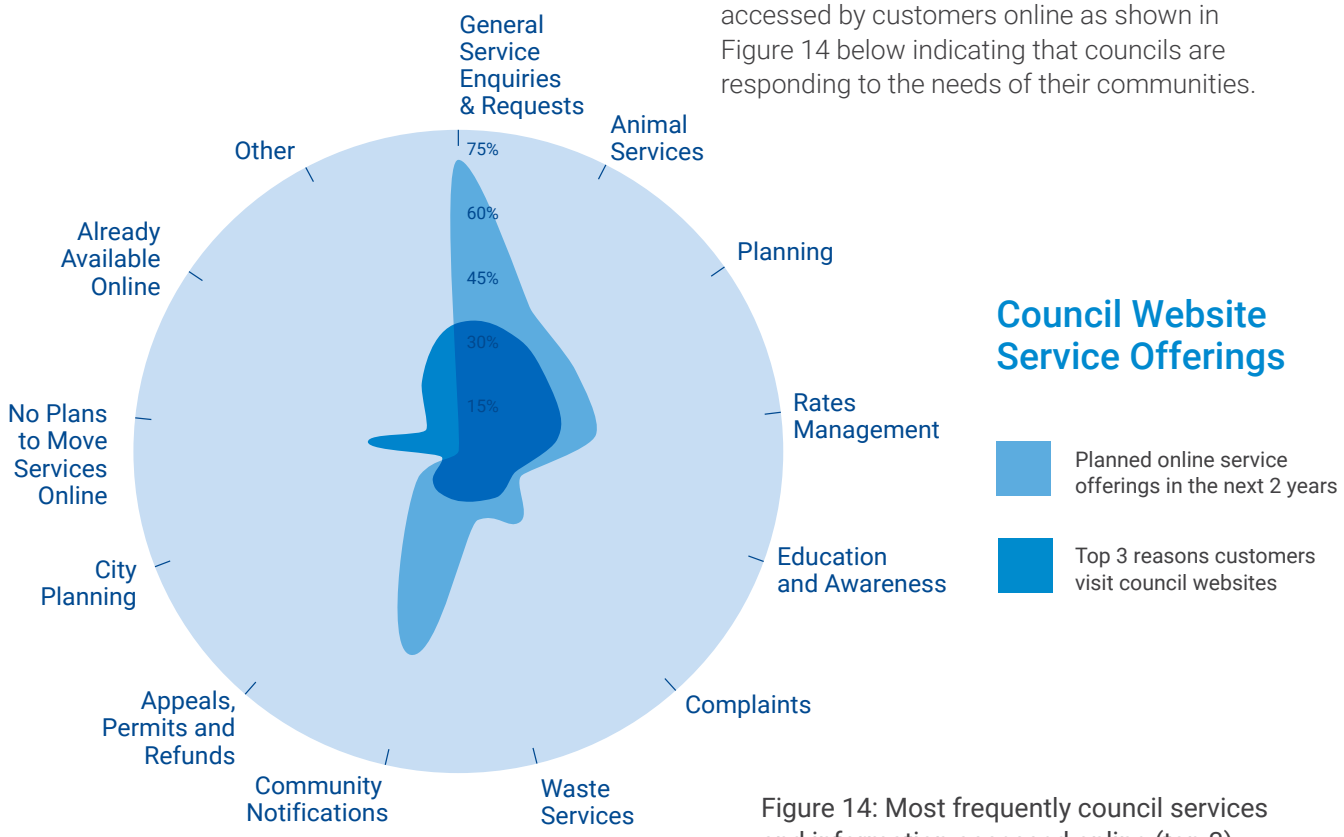


Figure 14: Most frequently council services and information accessed online (top 3)

5. Enabling digital service delivery

Showcase 3

Gladstone Regional Council: improving cemetery services and adding more capabilities

Gladstone Regional Council has developed a new cemetery management system that allows history enthusiasts to search local cemeteries online and map all known graves. In less than six months, a total of 11,333 plots were mapped by members of the public, with 12,000 deceased persons records put into the new system. Registered users have access to a range of information, including the ability to search deceased persons and plot details, view plots on an online mapping system and lodge cemetery applications online.

5. Enabling digital service delivery

Queensland local government works hard to engage with and deliver timely and responsive services to their communities. Investment in online services and data governance and analytics leads to:

- Services available 24/7 for customer convenience
- A reduction in the cost to deliver services
- Increased timeliness of service delivery
- Improvements to the ease of doing business in the LGA
- Improved policy decision making
- Services that are better tailored to customer needs
- Improved service demand and resource management[3].

Over half of the Queensland population lives outside of the state's capital city. Due to this decentralisation across a large geographic area, government needs to work with communities, industry, small business and universities to meet the long-term digital and connectivity challenges across Queensland[4].

There has been a surge in the use of social media in the last two years. 96% of respondents reported that their councils engage with the community most frequently via Facebook, followed closely by email (see Figure 15).

Commonly used online channels for community and business engagement

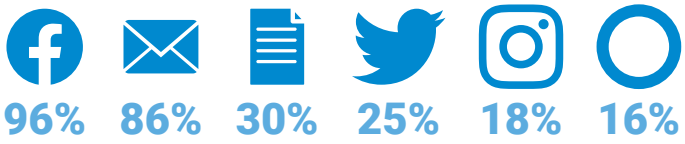


Figure 15: Most commonly used online channels for QLD local government customer engagement

Commonly used online channels by council size

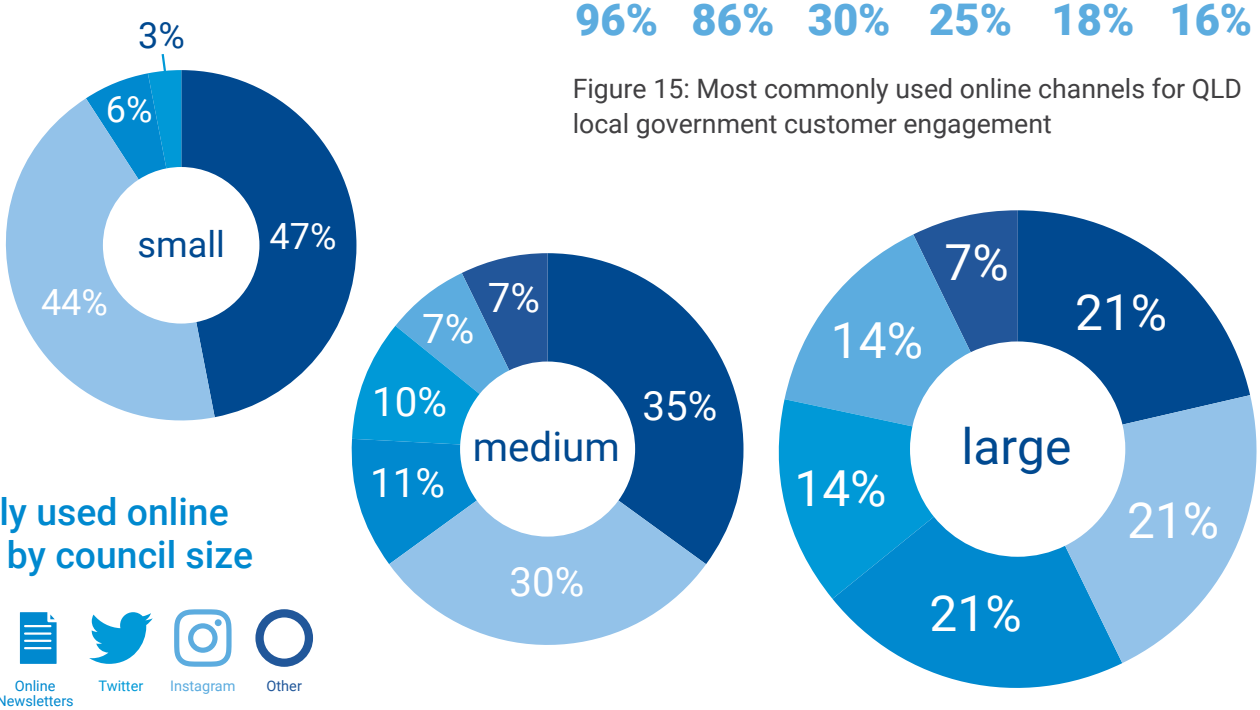


Figure 16: Online community and business engagement by council size

Other digital engagement channels included via a website and through LinkedIn. Smaller councils engage with community and business via Facebook far more than medium or large-sized councils.

[3] Business Queensland, Benefits of Doing Business Online (accessible via https://www.business.qld.gov.au)

[4] 'Digital 1st' Queensland Government Digital Strategy for 2017-2021

5. Enabling digital service delivery

In 2019 community engagement is the most common use of social media, followed by event and council promotion, and crises communication (e.g. updates on severe weather events). The high volume of engagement through social media may present an opportunity to use these platforms for data collection and analysis to better understand community and business needs.

This trend towards online service delivery is encouraging for LGAQ as it aligns with their partnership with Jadu – a leading global provider of digital services to local governments across the US, UK and Asia-Pacific region. Jadu enables councils to process online transactions, such as booking ferry services and camping grounds through mobile phone or desktops, improving the user experience as well as the operational efficiency of service delivery.

The Northern Peninsula Area Regional Council (NPARC) has become the first council to start their digital transformation journey leveraging LGAQ's partnership with Jadu[5] as illustrated in Showcase 4. There is potential for councils to take greater advantage of Jadu to expand their ability to deliver services online. The LGAQ is offering support to assist its members to use the platform.

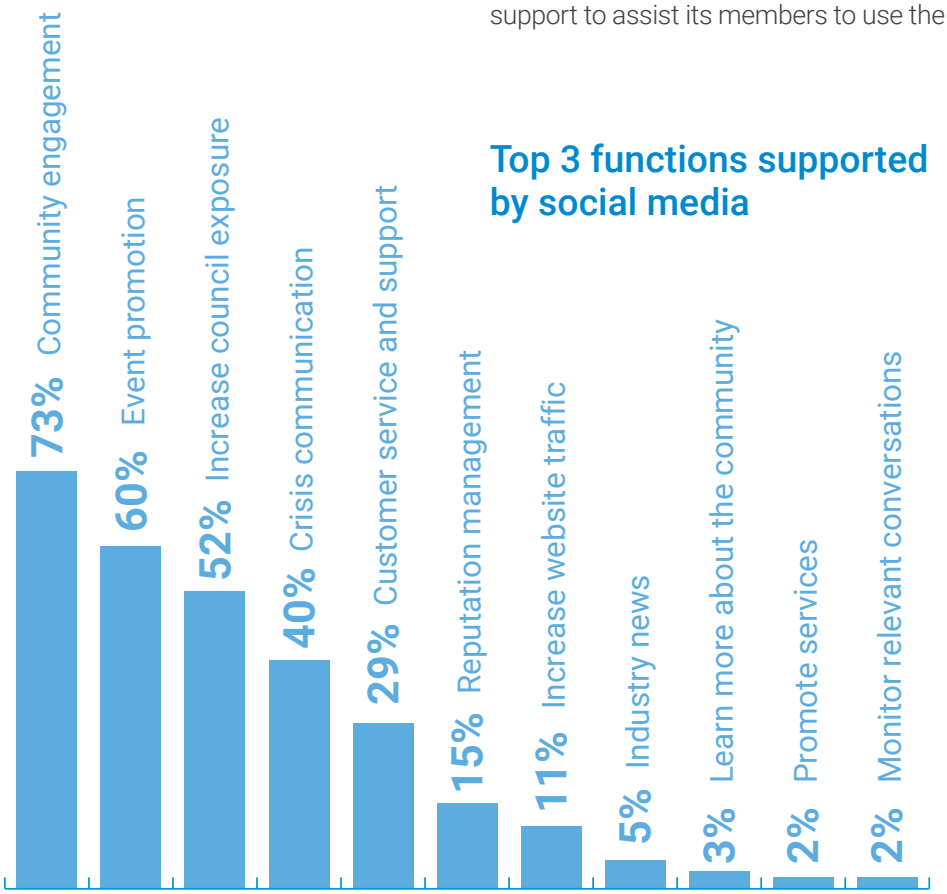


Figure 17: Council functions supported by social media platforms

[5] Council Leader, Dec 18-Jan 19 edition, https://en.calameo.com/read/00037349514336db5ce95

5. Enabling digital service delivery

Showcase 4

Tablelands Regional Council: improving online convenience and accessibility for community and business

Keeping pace with the changing needs of their community, Tablelands Regional Council has introduced significant improvement to the way they do business. The council has invested in a new system that automates a number of applications and payments, enabling the community to lodge applications and make planning requests online. The system also allows customers to pay fees and charges, search cemeteries, hire facilities, apply for licences, conduct property searches, and make right to information requests online. The online system is a major leap towards simplifying community engagement. It is also representing a shift towards a centralised data repository and the migration of corporate systems to the cloud for better integration of services

5. Enabling digital service delivery

Insights

- Overall there is an increasing shift to online service delivery. Almost 80% of respondents indicated that their council will be moving more services online in the next two years.
- The most common services being offered online include general enquiries and service requests, animal services and planning.
- Councils most frequently use social media platforms for community engagement and event promotion.
- Facebook was the most popular online community and engagement channel.

Challenges

- Making online services more interactive and enabling self-service, including linking these services to automated workflows for improved operational efficiency.
- Obtaining the support, funds and skilled resources required to invest in digital technologies that enable greater digital engagement and service delivery.
- Collecting, governing and using customer data to inform policy development and service delivery decisions.

Opportunities

- Use of social media platforms for data collection and analysis to better understand community and business needs.
- Opportunities for councils to take greater advantage of the LGAQ's partnership with Jadu (global provider of digital services to local governments) to expand their ability to deliver services online. The LGAQ is offering support to assist its members to use the platform.
- Including online service delivery in digital strategy planning.

6.0

Uplifting digital infrastructure

6. Uplifting digital infrastructure

While councils across Queensland are at different levels of digital maturity, 81% of respondents reported seeing value in their council's current digital infrastructure. In addition, 75% indicated that their council has already deployed technologies that enable the delivery of digital services.

Survey respondents reported that the key drivers for digital transformation are automation of processes, achieving better business outcomes, increasing the flexibility of the workforce, enabling and supporting the digital delivery of services, and lower operational and service delivery costs (see Figure 18).

What drives your council's strategy for digital transformation?

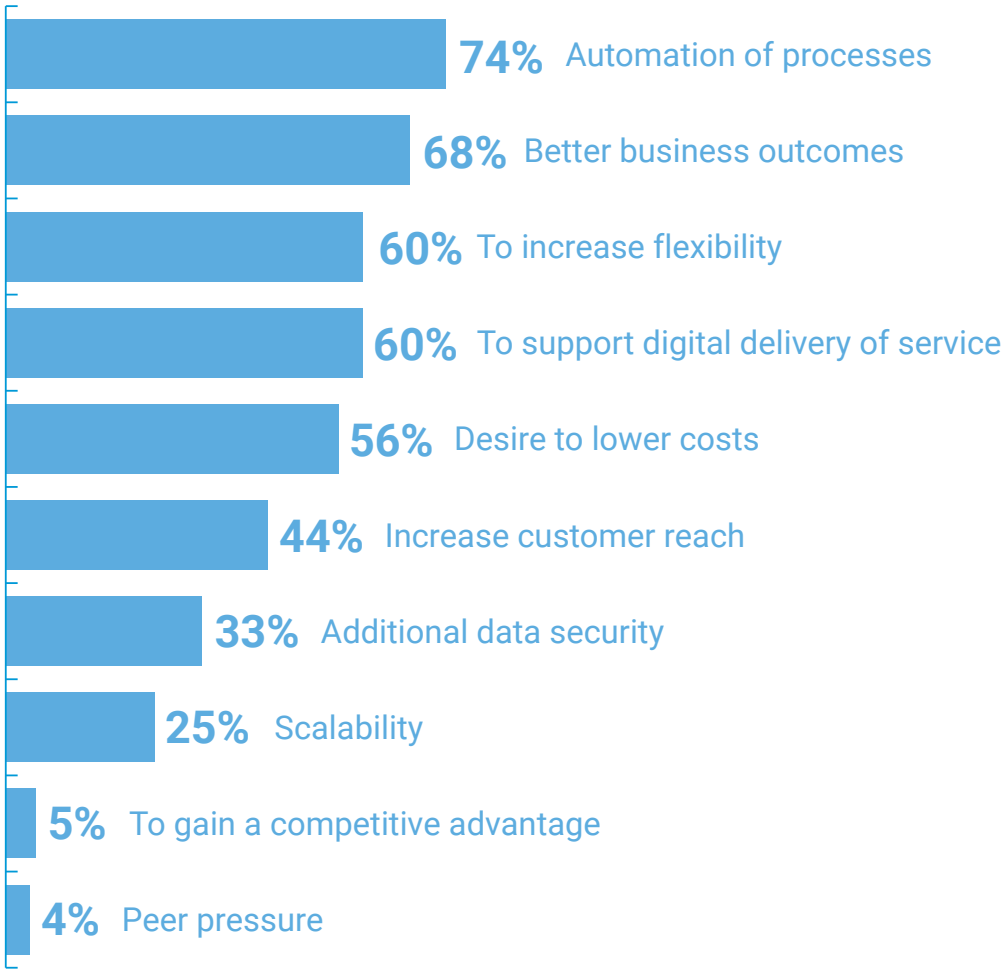


Figure 18: What drives your council's strategy for digital transformation? (note: these percentages are based on a 'select all that apply' question)

6. Uplifting digital infrastructure

Showcase 5

Moreton Bay Regional Council: using smart technology to improve community experience

Moreton Bay Regional Council (MBRC) is one of the first local governments to use Artificial Intelligence (AI) to improve services when responding to matters reported through the MBRC's Request Application. AI enables service requests to go directly from a customer to the relevant work team and be managed 24/7 through automated workflow. This has improved service availability and reduced service response and delivery timeframes.

MBRC is also introducing many connected devices as part of its Smart City initiatives. This includes smart parking, smart LED street lighting, road flooding monitoring and environmental sensing. Data from these smart devices are being used for improved asset management, work order fulfilment and field service management, as well as enabling data analytic capabilities for improved service design and delivery.

6. Uplifting digital infrastructure

Respondents from different council segments indicated slightly different top three strategic drivers for digital transformation.

Top 3 strategic drivers for digital transformation by council segment

The top three drivers for Coastal councils

1. Process automation (19%)
2. Digital service delivery (17%)
3. Better business outcomes (14%)

The top three drivers for Rural / Remote councils

1. Process automation (19%)
2. Increased flexibility and lower costs (15%)
3. Digital service delivery (13%)

The top three drivers for First Nation councils

1. Better business outcomes (31%)
2. Process automation (25%)
3. Additional data security (19%)

The top three drivers for Resource councils

1. Better business outcomes and increased flexibility (21%)
2. Lower Costs (17%)
3. Digital service delivery and increased customer reach (14%)

The top three drivers for SEQ councils

1. Better business outcomes and lower costs (16%)
2. Process automation (14%)
3. Increased flexibility, digital service delivery and increasing customer reach (13%)

6. Uplifting digital infrastructure

From a decision-makers perspective, achieving better business outcomes was the biggest driver, followed closely by supporting digital service delivery, automation of processes, increased flexibility, lowering costs and increasing customer reach (see Figure 19).

The CIO and CEO respondents that selected 'other' specified customer service and evidence-based decision making.

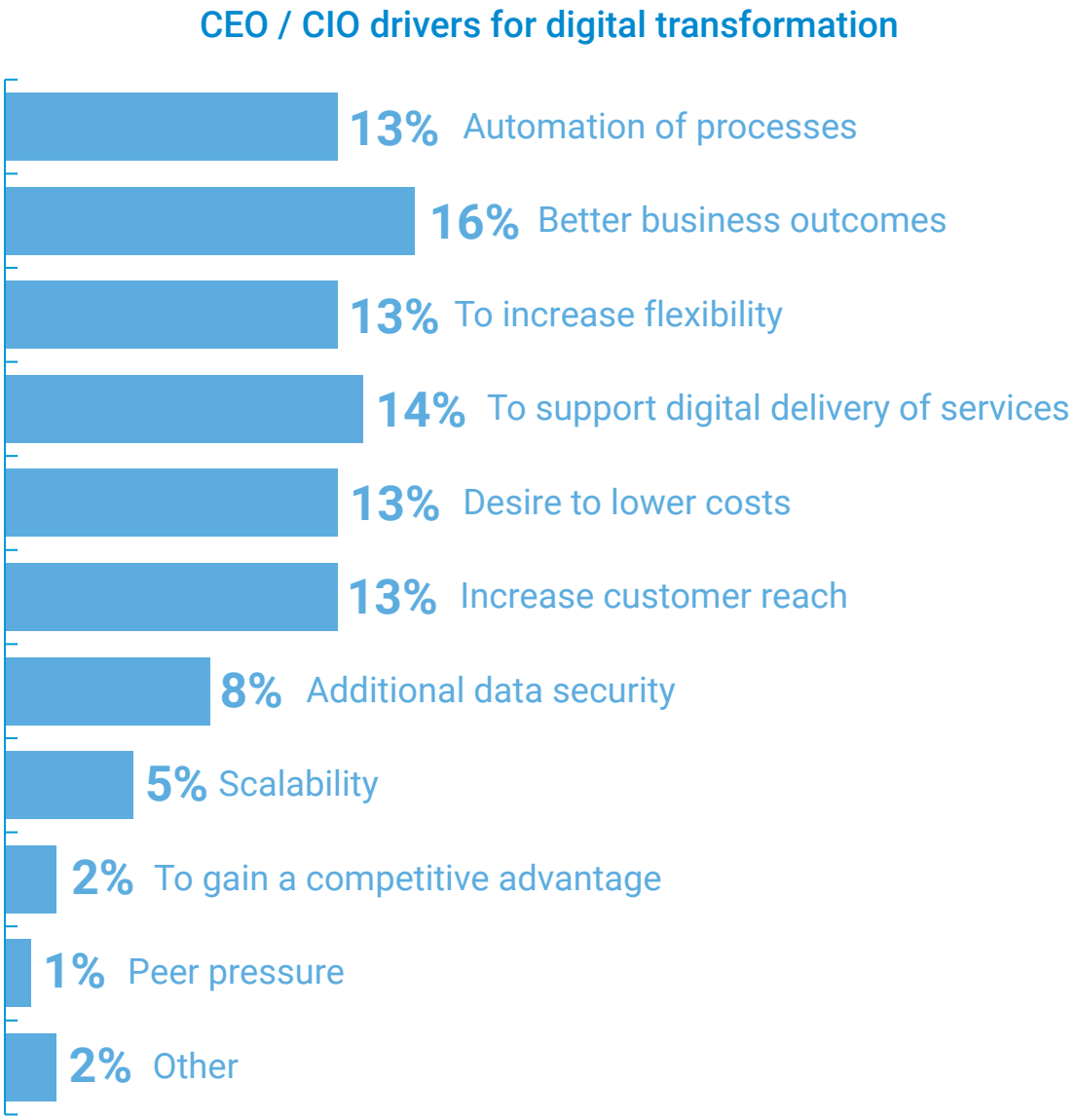


Figure 19: CEO and CIO responses to what drives their council's strategy for digital transformation

6. Uplifting digital infrastructure

When asked what would give their council the most confidence to invest in digital infrastructure and initiatives, 60% of respondents cited understanding of cost and benefits to the council (see Figure 20).

Figure 20: What would give your council the most confidence to invest in digital infrastructure and initiatives?

Understanding costs and benefits to council was consistently the most selected across small, medium and large councils. However, the respondents that selected 'other' specified different elements depending on whether they were from a small, medium or large council. Respondents from small councils specified skilled resources, including governance, ICT, information management, operations, finance and economic development staff. Respondents from medium councils specified insight and innovation resources, and respondents from large councils specified having a Chief Digital Office (CDO).

Confidence to invest in digital transformation by council size

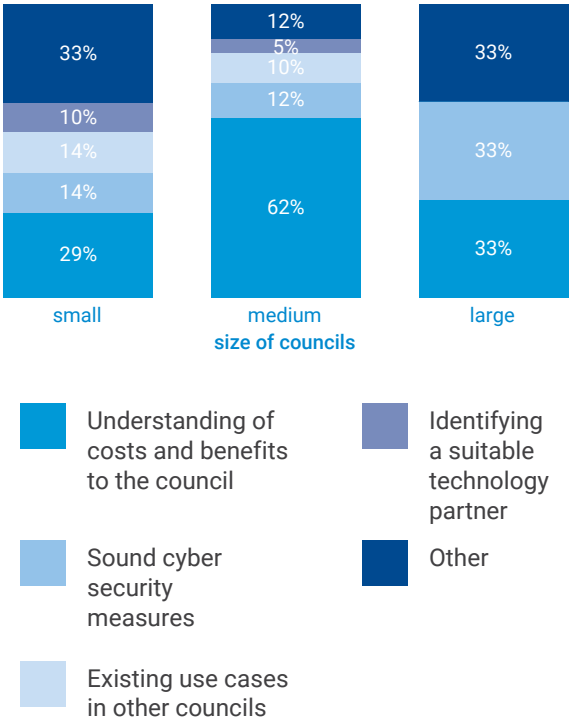


Figure 21: What would give your council the most confidence to invest in digital infrastructure and initiatives – by council size

6. Uplifting digital infrastructure

59% of CEOs and CIOs that responded to the survey indicated that understanding the cost and benefit to council would also give their councils the most confidence to invest in digital infrastructure and initiatives, followed by sound cyber security measures (see Figure 22).

What would give your council the most confidence to invest in digital transformation?

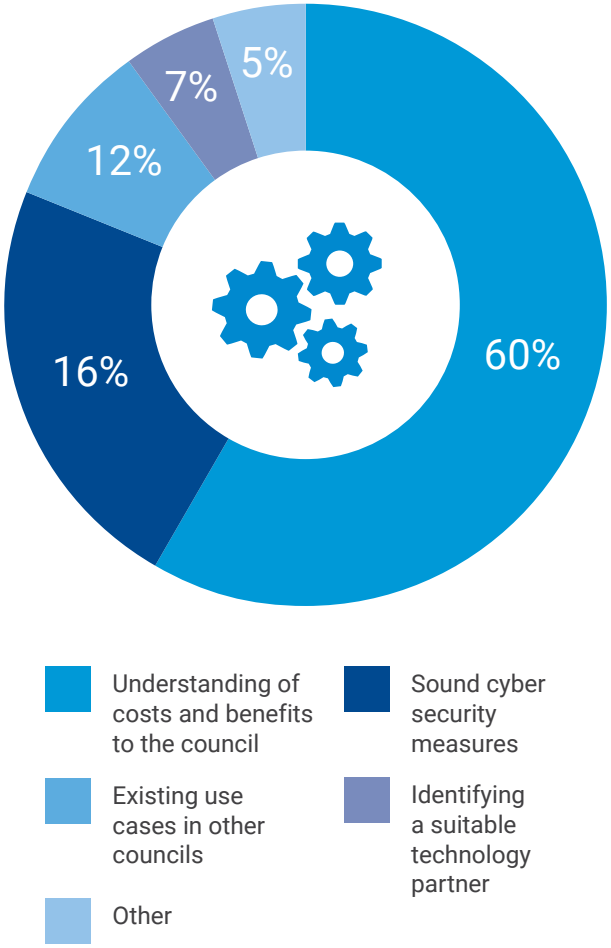


Figure 22: CEO / CIO responses to 'what would give your council most confidence to invest in digital infrastructure and initiatives'?

The CEOs and CIOs that selected 'other' specified that budget and resources, reliable connectivity and reliable technology would give them the most confidence to invest in digital infrastructure and initiatives.

Respondents were asked how much they agreed with several statements relating to their council's connectivity and digital infrastructure management and support (see Figure 23). Key insights include:

- 58% of respondents believe that their council has access to reliable, secure and affordable high-speed broadband
- 46% of respondents believe that businesses in their LGA have access to reliable, secure and affordable high-speed broadband
- 46% of respondents believe that their community has access to reliable, secure and affordable broadband
- 75% of respondents believe that their council has deployed technologies that enable the delivery of digital services
- Only 32% of respondents believe that their council's IT operational resources can quickly launch customer-facing digital applications or upgrades
- Just under half of respondents' councils measure IT maintenance metrics such as incident data, defects in code and help desk enquiries.

6. Uplifting digital infrastructure

Preparedness for managing cyber security risk

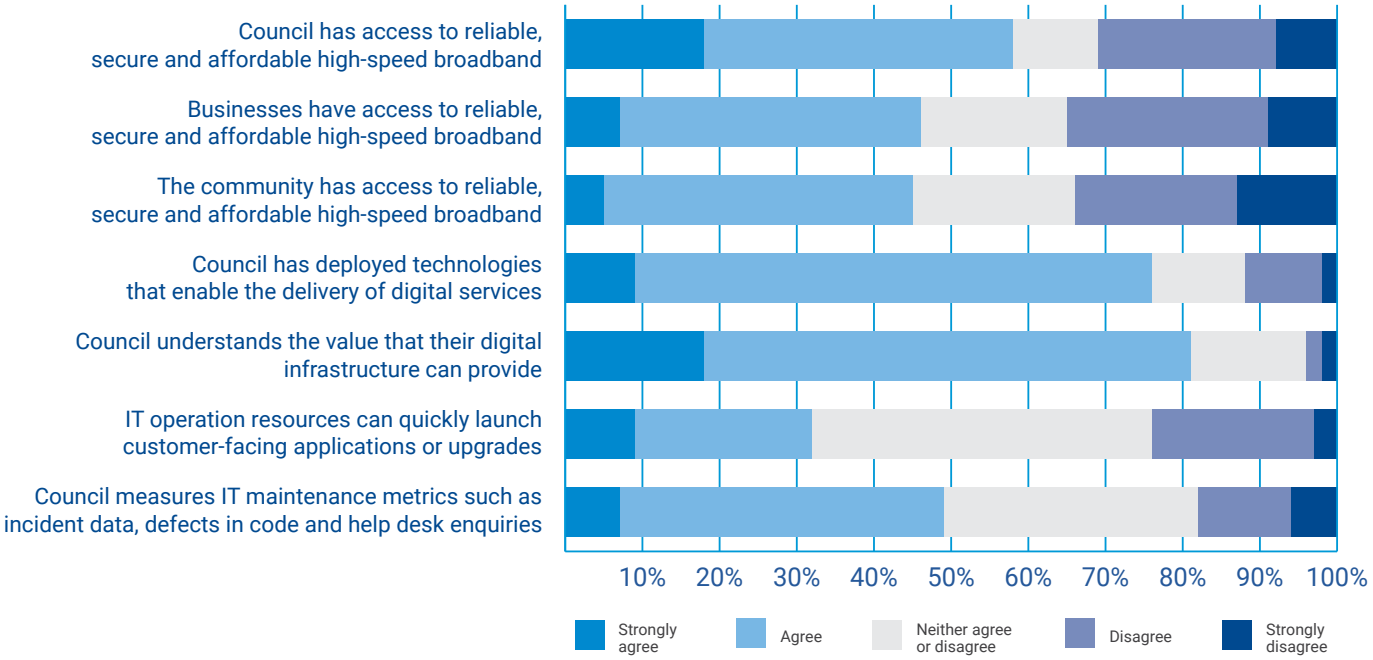


Figure 23: Connectivity and digital infrastructure management

Cloud technologies, cyber security, real-time dashboards and data management and governance are among the top technologies on councils' investment radar within the next five years. Even though councils are expanding digital technologies and focusing on integration and business intelligence, they understand the importance of governing the data resulting from these types of initiatives. That cyber security and data management are among the top priority investments reassures that councils are cognizant of the risks associated with extensive use of data.

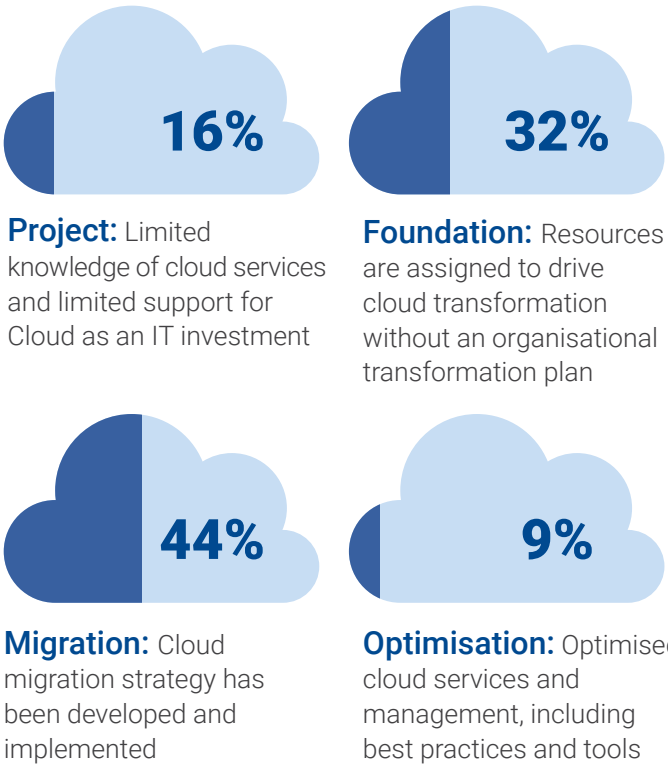
Respondents were asked to rate their council's current cloud position by selecting one of the following statements that best describes their council:

- **Project:** While council makes use of cloud technologies, it has limited advanced knowledge of cloud services and limited support for cloud as an IT investment. Council is unable to purchase all of the required services and has limited confidence in current and future cloud service capabilities. There is no clear cloud direction or ownership informing its use or further investment.
- **Foundation:** Council has assigned resources to drive its cloud transformation activities but lacks an underpinning organisational transformation plan. Council has some cloud security, compliance, cost and budget concerns.
- **Migration:** Council has developed and implemented an effective cloud migration strategy. Council can manage its cloud environment efficiently and has migrating all targeted applications successfully.
- **Optimisation:** Council is optimising their cloud costs, service management and application management with the latest best practices and tools. Council is continuously seeking ways to improve shared services.

6. Uplifting digital infrastructure

As shown in Figure 23, 44% of respondents indicated that their council has developed and implemented an effective cloud migration strategy. 32% indicated that their councils are laying the foundations for further cloud transformation but still lack an organisational transformation plan. 16% of respondents reported that their council has limited knowledge of their cloud services and limited support for cloud as a digital transformation tool. These councils have low confidence in their current cloud service capabilities. Only 9% of respondents reported that their council is optimising their cloud costs, service management and application management with the latest best practices and tools, including continuously seeking ways to improve shared services.

Current Cloud position



Project: Limited knowledge of cloud services and limited support for Cloud as an IT investment

Foundation: Resources are assigned to drive cloud transformation without an organisational transformation plan

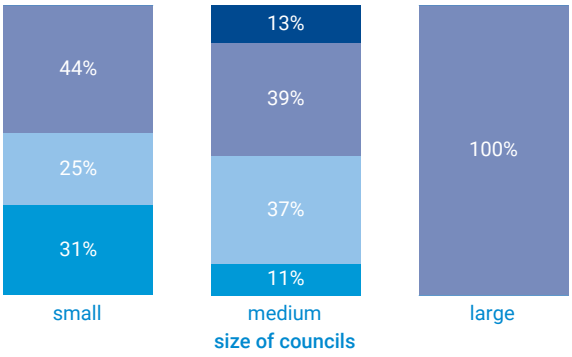
Migration: Cloud migration strategy has been developed and implemented

Optimisation: Optimised cloud services and management, including best practices and tools

Figure 24: Current position with respect to cloud services and management

Respondents from small-size councils reported the highest instances of having limited advanced knowledge of cloud services and limited support. 44% of small-size councils surveyed have developed and implemented a cloud migration strategy, and a quarter have assigned resources but are without a transformation plan (see Figure 26).

Current cloud position across different council sizes



Project: Limited knowledge of cloud services and limited support for Cloud as an IT investment

Foundation: Resources are assigned to drive cloud transformation without an organisational transformation plan

Migration: Cloud migration strategy has been developed and implemented

Optimisation: Optimised cloud services and management, including best practices and tools

Figure 25: Cloud position by council size

6. Uplifting digital infrastructure

Medium-sized councils reported the only instances of having optimised cloud services and best practice management. The majority of medium-sized councils have a cloud migration strategy or have assigned resources to drive further cloud transformation. All respondents from large-sized councils reported that their council has a cloud migration strategy.

Sound cyber security measures were rated by respondents as the second most important factor for giving their councils confidence to invest in digital transformation. The 2019 JLT Public Sector Risk Report 2019, created by risk consultancy JLT in conjunction with the Local Government Professionals Australia, found that cybersecurity is the second biggest risk for local government following financial sustainability.

The majority (67%) of respondents felt that their council is prepared for managing a cyber security risk. 21% were uncertain and 13% felt that their council is not prepared for managing these types of risks (see Figure 26).

The second highest response, as shown in Figure 25, was 'neither agree nor disagree' – this survey question also had the greatest number of non-responses, i.e. question left blank. This level of uncertainty is understandable given that the majority of a council's employees are not aware of cyber security measures going on in the background on a day to day basis. However, for cyber security to be robust it needs to be embedded in the culture, including ongoing awareness of the role everyone in the organisation plays in ensuring cyber security by remaining vigilant and following security practices every day. For example, updating passwords and reporting scam emails.

Is your council prepared for managing cyber security risks?

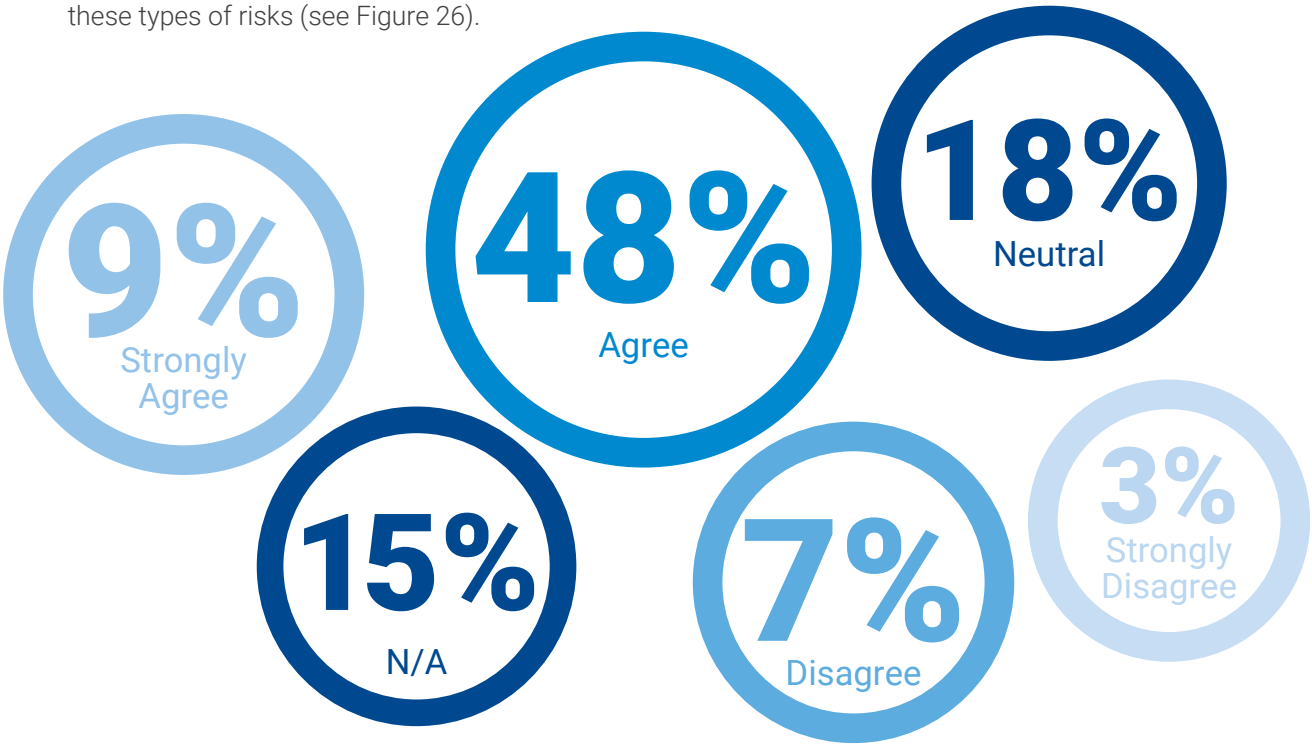


Figure 26: Preparedness for managing cyber security risks

6. Uplifting digital infrastructure

Although most councils have measures in place to manage cyber security risks, cyber security risks are not uncommon for Queensland local government. 39% of respondents were aware of a cyber security incident occurring in their council. Some examples of these include:

- Hacker attacks
- Spyware and malware
- Data breaches, for instance in third party hosted solutions or due to software vulnerability
- Email phishing attacks (i.e. scam emails), including malicious links and attachments
- Attempts to fraudulently alter banking details
- Unauthorised access by employees that no longer work for the council
- Identity theft.

Queensland innovation in digital security using Blockchain

With their technology partner, Everledger, the LGAQ created a working Blockchain, smart contract-enabled procurement prototype in 2018.

The prototype received the tick of approval from the Auditor-General and successfully demonstrated homomorphic encryption – allowing data to be analysed and computed without having to decrypt it first, the ultimate in security.

The LGAQ is working with key industry and procurement experts to turn its successful and nationally awarded Blockchain proof of concept into something to offer its members. For example, smarter and fraud proof council systems.

6. Uplifting digital infrastructure

Insights

- The biggest drivers for councils investing in digital transformation are automating business processes, followed by achieving better business outcomes
- C-suite respondents' biggest driver for investing in digital transformation are achieving better business outcomes, followed by automating business processes
- Understanding costs and benefits to council gives council CEOs and CIOs the most confidence to invest in digital transformation
- 77% of councils either have assigned resources to drive further cloud transformation, or have developed and implemented a cloud migration strategy that informs their use of cloud computing
- 67% of respondents believe that their council is prepared for managing cyber security risk, and 39% reported cyber security incidents that have occurred in their council

Challenges

- Embedding cyber security awareness in council workplace culture
- Keeping ICT security defences current to prevent ever evolving and advancing cyber security threats
- Accurately measuring the costs to council and future benefits of investments in digital transformation to inform CEOs and CIOs

Opportunities

- Explore the feasibility of a digital connectivity initiative facilitated by the LGAQ with the participation of councils across Queensland to improve internet connectivity to more remote areas
- Develop resources and tools that councils can use to promote cyber security best practice within their workplaces
- Provide information and support to councils to assist them in keeping their cyber security measures current, including compliance with relevant cyber security and breach notification legislation
- Leverage the LGAQ's Blockchain cyber security proof of concept into something of use and value to Queensland councils

7.0

Unlocking the potential of council data

7. Unlocking the potential of council data

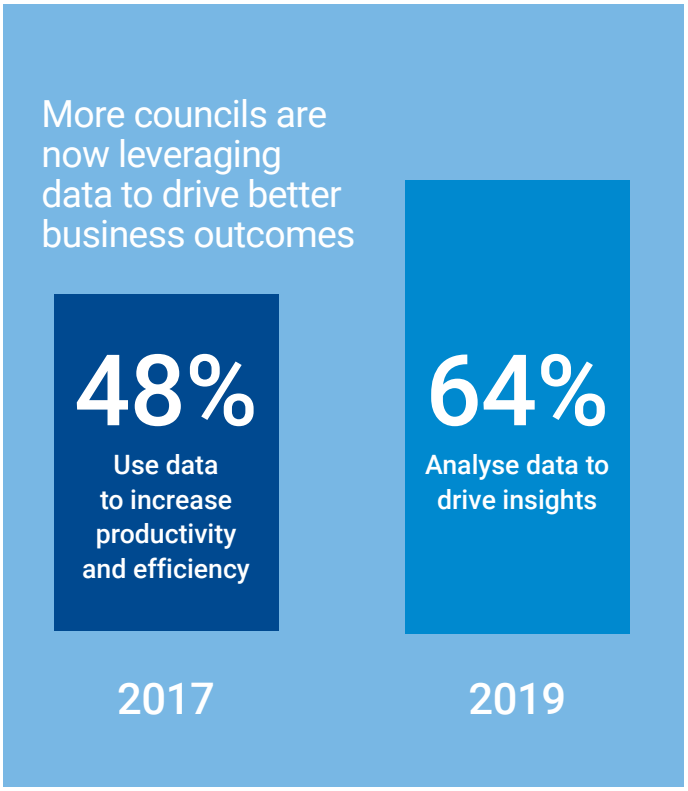
Respondents were asked how they would best describe their council's data-based decision-making capability by selecting one of the following:

- **Descriptive:** Council can answer "what happened" by using typical reports, dashboards and knowledge after the fact.
- **Diagnostic:** Council has advanced capabilities to discover insights from their data. Council has skilled resources and appropriate tools to analyse data, understanding why an outcome or trend has occurred.
- **Predictive:** Council is capable of identifying root causes from their data analysis and can answer "what's likely to happen" based on patterns that have been modelled or generated.
- **Prescriptive:** Information gained from predictive models are integrated into council processes to make corrections, avoid issues and uncover opportunities in the future. Council can answer "what should we do; given what's happened or is likely to happen."

The survey results indicated that the majority of councils are using data in a passive form to understand trends that have already occurred without looking into the predictive capabilities of data. The results are shown in Figure 27.

67% of respondents have descriptive data-based decision-making capability for their data and can identify what happened in a situation using reports, dashboards and knowledge after the fact. 24% operate with diagnostic capabilities, using analytics to discover insights and understand why an outcome or trend has occurred. Only 7% of respondents indicated that their council has some kind of predictive analytical capabilities. Fewer than 2% indicated that their councils were positioned to integrate information gained from predictive models into council processes to make corrections, avoid issues and uncover opportunities in the future.

Data is a powerful asset for councils. Very few Queensland councils appear to take advantage of opportunities to derive greater business value from their data through diagnostic, predictive and prescriptive data analytics.



Councils are eager to drive operational improvements by leveraging business insights gained through data analytics. However, data collection and analysis can be daunting and time consuming, especially deciding the right data to collect, how to collect it and how to analyse it. This is made more challenging when data is not properly governed, managed and used.

One in three respondents indicated that their council accesses data manually and on ad-hoc basis without any data governance in place.

When asked about the support their councils require for expansion of data analytics, uplifting data analytics tools (47%) and attracting skilled professionals (40%) were the top two areas cited by respondents.

7. Unlocking the potential of council data

Data-based decision making maturity

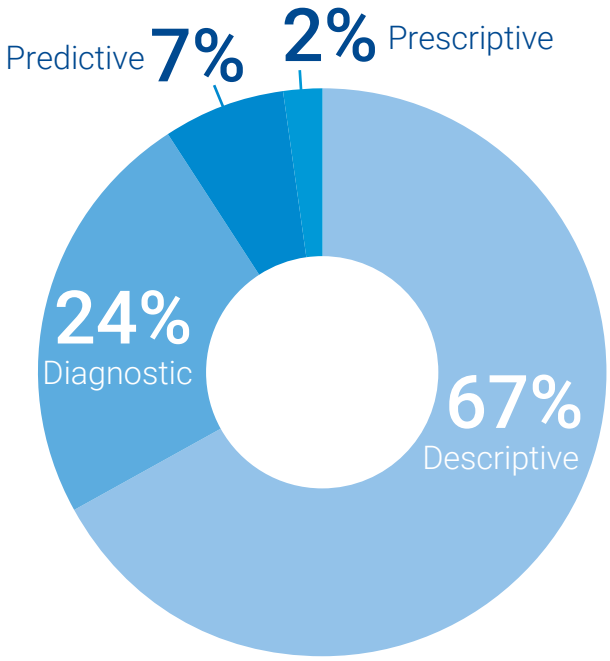


Figure 27: Best description of councils' data-based decision-making capability (beyond financial planning and budgeting)

Vital to collecting data is having the knowledge and skills to know what data to collect and the best methods in which to collect it. 36% of respondents identified this knowledge as a key requirement in helping them expand their use of data analytics.

In 2015, 84% of respondents had a high level of commitment to using information to provide better services to the community, while 40% needed to overcome the challenge of attracting skilled data professionals.

In 2017, 60% of councils were concerned that the digital economy would only increase the current skills shortage, which was up from 36% in 2015.

In 2019, 40% of respondents reported needing to overcome the challenge of attracting skilled data professionals in order to expand their use of data analytics.

The power of Queensland-wide data analytic capabilities

The LGAQ developed the LG Sherlock data storage and analysis tool to help Queensland councils convert their data to insights they can use to make the best-possible decisions.

LG Sherlock takes information held by Queensland councils in spreadsheets, files and folders, archived boxes and shelved reports, along with data from other tiers of government and relevant organisations, and turns it into information and enhanced insights to support better decision making that will inform improved financial sustainability, enhance sector reputation and reduce exposure to risk.

All Queensland councils have something to benefit from LG Sherlock, no matter their size, resources or current data-analysing capacity. Councils get to make a choice about how much data they input to the system and who they want to share it with, and all council data held by the LGAQ is covered by all necessary security, privacy, ethics and governance requirements.

7. Unlocking the potential of council data

Showcase 6

Douglas Shire Council: increasing disaster preparedness through real-time dashboards

In its efforts to create a rigorous disaster response plan and infrastructure upgrades, Douglas Shire Council has created an online disaster dashboard to provide timely information and updates to the community. Infrastructure upgrades also include flood cameras that live-stream videos from creeks and bridges directly to the Council's website. This has increased the region's resilience to unprecedented levels.

7. Unlocking the potential of council data

Insights

- Councils are increasingly looking for opportunities to collect, manage, analyse and use data to improve the delivery of services and respond to the community within a timely manner.
- Accurate interpretation of their data analysis will enable the council to understand where services could be improved and to set the councils strategic goals for the next period.
- Less than 10% of Queensland councils are taking advantage of opportunities to derive greater business value from their data through predictive and prescriptive data analytics.

Challenges

- Availability of skilled data professionals, understanding of what data needs to be collected and an overall culture change for collecting and reusing data remains a major concern.
- Deciding what data to collect and how to analyse it to maximise business value

Opportunities

- Councils who are ahead of the curve in terms of data analytics capabilities can provide a fee-based Platform-as-a-Service (PaaS) offering to other councils who want to run a pilot.

8.0

Improvement areas

8. Improvement areas

As councils progress toward a digitally mature state, there are number of impediments along the way. Many customer groups within the community and the business are adopting technology at unprecedented rates. Only 32% of respondents agree that their council has the ICT capabilities to quickly launch customer-facing application or upgrades, while less than 50% of respondents say that their council collects maintenance and improvement metrics such as incident data, code defects and help desk enquiries.

Cyber security is another area of concern for councils. While two out of three respondents have said that their council is prepared for managing cyber security risks, nearly 32% of respondents have witnessed some kind of cyber security incident in their council, such as phishing and unwarranted access.

Access to reliable, affordable connectivity is required to maximise the benefits of any digital solution and is the foundation of digital transformation. However, only 58% respondents feel that their council has access to reliable, secure and affordable high-speed internet, which is nearly the same as that in 2013.

The improvement areas highlighted here can prove to be a make-or-break for any council's digital transformation journey. Improved user-experience, speed-to-market and good governance are important factors that cannot be ignored to ensure success of any digital initiative. LGAQ plays a pivotal role by having partner organisations like Jadu on board and provide support to the councils which can ensure that they have a smooth and successful transition towards a digital future.

Councils have an opportunity to leverage LG Sherlock and digital transformation initiatives around smart sensors for data collection, i.e. Internet of Things (IoT), to establish Queensland-wide data and analytics available to councils at a much lower cost than if they were to establish a similar initiative independently.

The divide: Internet for all

Different councils are at different levels of digital maturity. The survey highlighted that access to secure and reliable internet was not uniform across councils. In fact, 48% respondents from small-sized councils disagreed when asked if their councils have access to broadband. This proportion was only 17% for respondents from medium or large-sized councils. Nonetheless, small-sized councils are working towards effective and robust solutions to provide connectivity to all

8. Improvement areas

Showcase 7

Wujal Wujal Aboriginal Shire Council: Creating an uninterrupted and secure wireless network for emergencies

What happens if there is network outage during an emergency event? Wujal Wujal has come up with a solution by creating a managed private and secure network – Wujal Wujal Emergency Management Network. Its principal purpose is to provide emergency management communication between the users of the network including council, community, police, health and emergency services prior, during and immediately following an emergency event. The network operates independently from the Telstra and 3G mobile system and connection to the network can be completed using a variety of Wi-Fi equipped devices. The network essentially turns the valley into a 'hot spot' enabling community members (and visitors) to communicate on the network. The system automatically adjusts to allow continued operation and is supported by uninterrupted power supplies through batteries and solar power in the event of prolonged power outage

LGAQ

LOCAL GOVERNMENT ASSOCIATION
OF QUEENSLAND