

# 2017

## DIGITAL PRODUCTIVITY REPORT





**The Local Government Association of Queensland (LGAQ)**

25 Evelyn Street, Newstead, Queensland

Postal Address

PO Box 2230, Fortitude Valley BC  
Queensland 4006

Phone: (07) 3000 2222

[ask@lgaq.asn.au](mailto:ask@lgaq.asn.au)

[www.lgaq.asn.au](http://www.lgaq.asn.au)

ACN 142783917

ABN 11 010 883 293

Lou Boyle

Innovation Executive

LGAQ

0428 198 598

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## President's foreword



Welcome to the third biennial Queensland Local Government Digital Productivity Report.

At a time when local governments across the country are facing extensive challenges, I'm pleased to report that the Queensland local government sector is increasingly well prepared to provide the services their communities are demanding, while keeping rates, fees and charges as low as possible.

As this report demonstrates, a key part of this success has been the use of the best available tools, including the use of emerging technologies to better engage with communities across Queensland, aid productivity and gather insights which can be acted on.

While there has been a substantial increase over the last two years in the use of these technologies and the benefits flowing from them, there are still several challenges. Chief amongst them is the continuing issue of access to reliable and, most important, affordable digital connectivity at the community level and to some extent at the council level.

This lack of access to connectivity, - or the perception that it's too expensive to achieve, continues to limit the

ability of some councils and their communities to access the benefits of these technologies and the broader digital economy. Using the findings of this report as a basis, we will continue to fight for better, more affordable connectivity across all of Queensland.

At the same time, councils who do not currently have sufficient access but wish to take advantage of digital tools should not be disadvantaged. That's why the LGAQ will provide specialist assistance to these councils on how these councils may access increased connectivity and how they can get the most out the connectivity they have.

The available skills have also been identified as a barrier to success for the sector. To assist in alleviating this pressure, the LGAQ is committing to discussions with higher education providers to ensure that graduates of universities, TAFEs and vocational educational providers can meet the challenges of the Queensland local government sector now, and into the future.

With the increased use of data evident across the Queensland local government sector comes the increased need to ensure that that data and information remains secure. While councils across Queensland report that they

are increasing their security, there is more to be done to meet this threat.

While these issues are not small, they should not overshadow some of the significant good news in this report.

Local governments are now treating data as a core asset. They are engaging with residents and visitors using the platforms the community has chosen, and are starting to ensure that their community has access to valuable data to feed the next generation of businesses and the creation of long term and sustainable jobs.

This valuable report has only been made possible through the Telstra Local Buy Industry Development Fund and GWI (formerly Glentworth) and I acknowledge both for their ongoing support and insights for this report. I look forward to reading future reports in which Queensland's local governments continue to use digital technology to help them grow and prosper.

**Mayor Mark Jamieson**

President, LGAQ

# Executive Summary



The Local Government Association of Queensland (LGAQ) recently completed the third Digital Productivity Report, an in-depth look at the changing digital requirements, maturity and capabilities of local governments across Queensland.

Since its inception in 2013, the Digital Productivity Report has helped guide and track how councils deliver services and boost productivity in an increasingly digital world.

This year's report reflected an increase in maturity shown by councils across Queensland towards the application and management of data and information.

Highlights include:

- 88% of councils report they are not only collecting data, but the information collected is a critical asset to council.
- Close to half of all councils (48%) are actively deploying information and data to help increase productivity and efficiency.
- 82% of councils report that management have either put in place, or will soon establish, an information management plan to ensure that data is being used to help meet current and future business needs.

Despite viewing information and data as an increasingly

critical council asset, there is also a strong awareness across local government of the potential for that same information to be deployed to help transform communities. Accordingly, councils are overwhelmingly in favour of open data programs with 75% of councils surveyed reporting that they are either currently, or actively planning, to share data with the community.

Councils are also assuming new leadership roles by providing new services to better prepare their communities to embrace the digital economy with:

- 84% of surveyed councils undertaking some sort of activity to help foster the digital economy and encourage digital literacy in the community.

When asked why they were investing in the digital economy, councils were unanimous in their belief that the digital economy has the potential to have a beneficial impact on both the community and council. Specifically,

- 85% agreed that the digital economy will help council deliver better services.
- 79% agreed that their investment would help enhance interactions with the community.

Councils are also changing how they engage with residents, with 59% reporting regular (weekly or better) use of social media.

They're also looking towards cloud technology and smart devices to help lift productivity and deliver improved services. Currently:

- 27% of Queensland councils are actively using drones.
- Over 30% are using sensors and smart technology to help reduce carbon emissions and costs from energy and water assets.
- 70% are actively tracking their fleets with smart technologies to monitor the use and impact of vehicles and help drive cost and emissions efficiencies.
- Councils report increased use of cloud software through an 'as a service' model (51%), or for storage (39%), email (39%) and IP Networks (34%) and IP telephony (41%). These numbers are likely to increase with 60% of respondent councils stating that they will look to purchase additional cloud based solutions in the coming years.

However, poor network infrastructure continues to have a major impact on connectivity and productivity across a

significant proportion of Queensland. Only 55% of councils reported their community having access to high quality internet in their local areas; up only 8% (from 47%) when first surveyed in 2013.

A lack of skilled workers is also a growing concern with 75% of councils agreeing that there is a skills shortage for the digital economy in Queensland.

For councils to maintain a healthy digital trajectory they must continue to:

- digitally upskill current employees and their communities
- innovate and collaborate with each other and industry
- lobby for support to resolve connectivity issues
- raise awareness about existing connectivity and technologies.

# 1 Introduction

Since 1896 the Local Government Association of Queensland (LGAQ) has been recognised as the peak advisory and advocacy body for local government in Queensland. 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 changing business and community requirements can be met through the adoption of smarter and more sustainable solutions.

This, the third 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.

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 rise as a key consideration for councils when investing in technology. Over 90% of respondents agreed that their council's investment in innovation and technology was, in part, to realise productivity gains.

Councils have responded to the needs of their community and in the last two years have rapidly adopted the tools and practices they need to meet their challenges. As a consequence of this sector-wide commitment to innovation and enhanced productivity, we have seen the rapid deployment of digitally enabled 'smart cities or smart communities' solutions and devices.

These, typically networked and energy efficient projects, have put local governments in Queensland at the forefront of digital public-sector innovation with an impressive:

- 70% of respondents using smart vehicle and fleet tracking software to improve network efficiency
- 37% of respondents use sensors and smart lighting to make their public spaces more engaging and sustainable
- 27% of respondents utilising drones.

In addition to the need for increased productivity, community expectations have also extended local governments beyond their traditional domain of 'roads, rates and rubbish' as residents begin demanding councils to make:

- services available online
- information open and freely accessible
- staff contactable at will through social media
- spaces (public parks and malls) connected to the internet.

Mindful of this trend, 89% of surveyed councils said they were actively looking to deploy technology and ICT tools to improve the services council provides to the community. To ensure the community is also digitally enabled, councils themselves are assuming new leadership roles in the community with 84% of surveyed councils undertaking some sort of activity to help foster the digital economy and encourage digital literacy in the community. Local councils across Queensland support this investment in community skills and training as they believe that it will be returned to council in the form of more meaningful engagements with their communities (84%).

# 2 Methodology

The survey has been designed to elicit council responses on a range of issues relating to digital productivity including data, data security, information management and staff skills.

The 2017 Digital Productivity Survey was sent to all 77 Queensland councils for response.

Survey data was collected between 13 July 2017 and 8 August 2017, and consisted of 73 questions. 51 councils or 66% responded to the survey.

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-reporting and have not been independently verified. All results have been rounded to the nearest whole number.



66%

Councils responded

73

Questions





### 3 The future of digitally enabled local governments

Queensland councils understand that being digitally enabled and productive through technological advancements allows for enhanced communication and engagement with residents in their communities. Councils are exceptionally optimistic about transitioning towards an increasingly digital way of working with 93% of respondents reporting that they were very (29%) or quite (64%) optimistic about the future.

Investing in technologies will improve their performance, reduce costs and provide innovative opportunities. Responding to the continually changing needs of their residents, councils have continued to increase their online presence. Because of rapidly evolving technologies and applications, there is a need to ensure that whatever is adopted meets regulatory requirements.

To do so effectively, Queensland councils are overwhelmingly prepared to collaborate, pool and share resources.

With 90% of respondent councils saying that they would be open to pooling resources with other councils to get a better price or service for their local area. When asked about specific opportunities to collaborate 57% nominated data centres, 59% enterprise resource planning systems, 35% ratings systems as examples.

For councils to continue a healthy digital trajectory they must upskill current employees, resolve internet issues and maintain awareness about future technological advancements. As technological and digital advancements continue to grow, Queensland's councils need to better understand the direction they will take and seek information and training to align with that goal.

#### Insights

- To achieve better outcomes for their communities, councils are willing to collaborate, pool and share resources with each other.

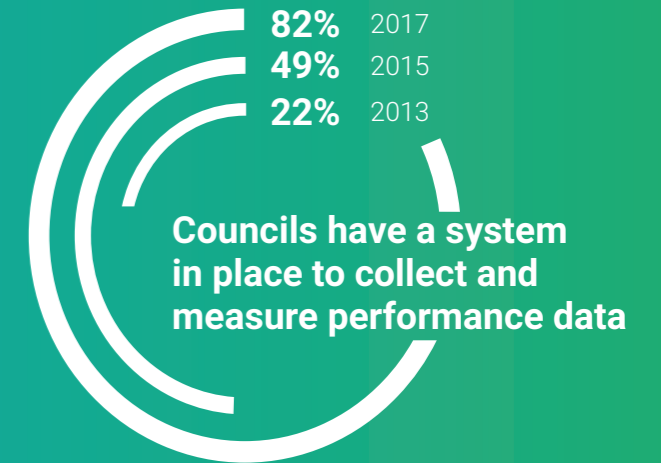
#### Opportunities

- The willingness of councils to collaborate and pool resources opens up a range of new infrastructure and creates the possibility of lowering costs.
- The need to meet with State Government agencies to ensure the regulatory environment supports innovation.

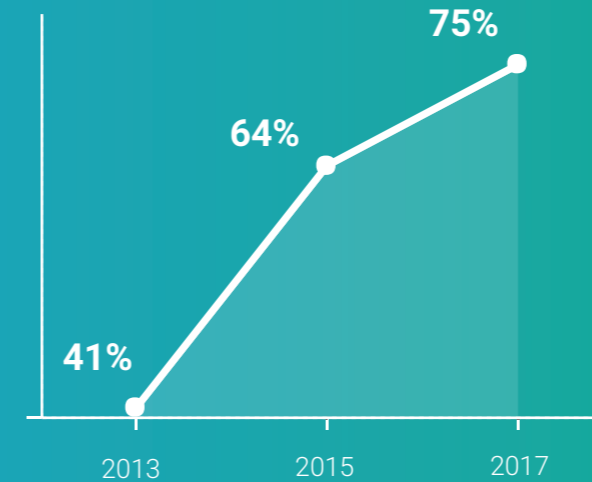
## Digitally enabled government

### Councils are optimistic about transitioning to a digital way of working

2015 & 2017



### Skills are a barrier to technology adoption in councils



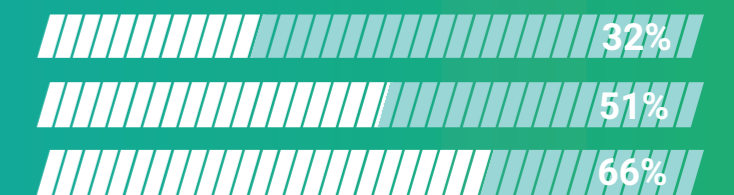
### Councils are willing to pool resources

2015 & 2017



### Poor telecommunications infrastructure is a barrier to technology adoption in councils

2013 - 2017



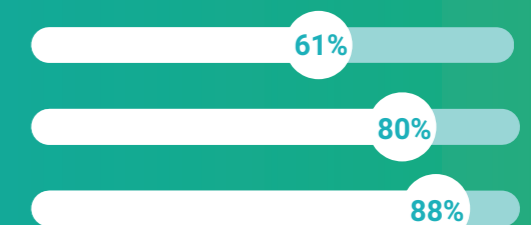
### Councils understand how to use data to inform strategic decisions

2013 - 2017



### Councils agree that data is a critical asset

2013 - 2017



## 4 Significant opportunities

### 4.1 Cloud solutions

Increasingly, councils are considering cloud-based solutions to mitigate cost and achieve increased flexibility with their service offerings. At present, 68% of councils have reported plans to use a cloud service, or are currently using these services. The most commonly used cloud services include software as a service (51%), storage (39%), email (39%), IP Network (34%), and IP telephony (41%).

These numbers are likely to increase with 60% of councils stating that they will look to purchase additional cloud based solutions in the coming years. This will include an ever-increasing amount of software through an 'as a

service' model (34% are exploring this opportunity now), as well as the use of scalable cloud storage to alleviate the costs of storing an exponentially increasing amount of data (32%). 28% of respondents said they are considering shifting emails to a cloud based network and the same number are currently exploring migrating towards a VOIP or similar cloud based voice service.

#### Insights

- Councils are increasingly walking away from a capital expenditure model of procurement that involved the creation of bespoke services and software to an operational expenditure model that leverages cloud based services. The advantage of this shift is that councils are no-longer being tied down to expensive, hard-to-upgrade, software and can deploy the latest available technologies relatively quickly.

#### Challenges

- Remotely located councils experiencing bandwidth issues will have technical issues accessing data in the cloud.
- Cyber security concerns impact councils thinking of adopting a cloud solution.
- Ensuring the protection of personal information.

#### Opportunities

- Security concerns can be mitigated by using security applications, encrypted file systems and data loss software.

### 4.2 Shared resources

There has been a distinct shift with regard to the attitude of local government towards the procurement of digital services. Where once local governments would have insisted on a bespoke system or service, they are now overwhelmingly willing to use enterprise software or collaborate.

Over 90% of councils agreed they would pool resources with neighbouring councils to help achieve a better price or service; up 10% since 2015. This approach to cost efficiencies extends from the earlier discussion on the attractiveness of a cloud and 'on-demand' based services.

It also highlights the fact that councils are willing to revise long-standing procurement practices to help achieve the best value outcome for ratepayers. It could also be seen as tacit agreement that a tactical collaboration will be the only way for councils to afford the cutting-edge technology their constituents, management and approach demand.

Solutions explored by the survey that returned 15 or more interested parties include:

- Unified data centres
- Enterprise Resource Planning systems
- Shared rating systems.

### 4.3 IoT, smart cities & smart communities

Councils are continuing to explore ways that technology can be deployed to service their communities in a smarter and more efficient manner. As digital revolution moves from software to hardware, the frontline service obligations of councils are rapidly transforming their role in the digital ecosystem.

Increasingly, councils are placed at the forefront of digital transformation, often becoming the first practical adopters of smart technology. Currently, over 25% of Queensland councils are actively using drones. Over 30% are using sensors and smart technology to help reduce the emissions and costs from energy and water assets. 70% are actively tracking their fleets with smart technologies to help track the use and impact of their vehicles to help drive cost and emissions efficiencies to generate improved community outcomes.

This rapidly emerging trend towards the adoption of smart technologies has increased exponentially since the previous survey. This transformation from thought, to leadership, to practice, is another example of how local government is leading the public sector charge of employing revolutionary technology to help make their communities safer, smarter, more sustainable and more efficient.



#### Insights

- Queensland councils are enthusiastic and have a positive opinion when it comes to their digital future.
- 60% of councils worry that the digital economy will only increase the current skills shortage, up from 36% in 2015.
- A positive outcome from the survey is the increase in councils who have identified their council as well positioned to take advantage of the digital economy. This is up 8%, from 51% in 2015.
- 37% of respondents agree they will adopt a wait-and-see approach before investing significantly in digital business. This is slightly down from 39% in 2015.

#### Opportunities

- Councils must maintain a clear vision and understanding on what their digital future looks like and how they will get there. This can be done by understanding customer needs, remaining aware of technological trends and generating ideas for the future state.
- By creating and commercialising intellectual property councils have the opportunity to create additional sources of revenue.
- Councils should be provided with, or seek out, information and training sessions, online resources and access to relevant professionals to better understand their digital economies.

## 5 Findings

### 5.1 Network infrastructure

Access to reliable, affordable connectivity, both for councils and their communities is required to maximise the benefits of many digital tools.

However, poor access to network infrastructure continues to have a major impact on connectivity and productivity across a significant proportion of Queensland. Only 55% of councils reported their community has access to high quality internet in their local areas, up only 8% (from 47%) when first surveyed in 2013.

This figure is particularly significant as poor internet coverage (66%) and speed (62%), alongside high costs (59%), were cited as the leading barriers to success for entrepreneurial and innovative digital businesses.

While the vast majority of councils have the ability to connect, there are growing concerns about the problems facing communities who are suffering from service issues and delays in accessing consumer networks, largely resulting from the roll out of the National Broadband Network (NBN).

As councils move to enterprise cloud-based solutions, communities are being challenged because of the uncertainty as what and when new technologies will be available.

Indigenous councils are amongst the most disadvantaged in terms of core and access infrastructure at both the council and community levels.

While the lack of access to workable network infrastructure remains a concern, there are several ways in which councils can adopt technologies that do not require continuous connectivity, but still significantly advance their adoption of tools to benefit the community.

#### Insights

- While most councils have seen an improvement in internet access, progress has been slow. In 2017, over half of all Queensland councils still report that they do not have access to quality high speed internet services in their area.
- The lack of access to quality high speed internet services negatively impacts business and innovation.

#### Challenges

- Affordable, reliable internet connectivity in some regions remains a key barrier to the adoption of digital tools.
- Councils have little direct control over network infrastructure in their areas.
- An infrastructure gap is adversely affecting Indigenous councils and communities.

#### Opportunities

- Opportunity for LGAQ to coordinate lobbying activity with regards to regions with low connectivity to convert network infrastructure into good connectivity.
- LGAQ to hold a roundtable of disaffected councils to help establish minimum service requirements and identify opportunities for further collaboration between councils.
- LGAQ to develop a specific program that would help indigenous councils take advantage of the digital economy (infrastructure, awareness and skills) and close the existing gap.

### 5.2 Managing information and data

#### Data is now core business

This survey illustrates a subtle but significant shift in the sophistication of how local governments in Queensland use data and information.

When the first Digital Productivity Report was commissioned in 2013:

- 22% of local governments had no systems in place to collect any form of performance data
- 40% of the councils that were collecting data were not interpreting or using the information gathered.

Within four years, data collection has become almost ubiquitous and councils are regularly applying operational information gathered to help increase productivity and inform strategic decisions. In this year's survey, 88% of councils reported that they're not only collecting data, but that the data collected is critical. Close to half of all councils (48%) are actively using information and data to help increase productivity and efficiency.

82% of councils surveyed report that management have either put in place, or will soon establish, an information management plan to ensure that data is being used to help meet current and future business needs. In fact, at present, only 17% of councils report that data and information is making no difference to decision making.

Senior data and ICT related positions appear to be common in Queensland with a majority of councils (78%) reporting that they have a dedicated IT Manager, CIO or Information Services Manager.

#### Insights

- Queensland's councils are approaching their information and data with increasing maturity.
- Over the past six years they have moved away from collecting data as a simple performance measure to a more strategic approach. Councils now view information as a key asset to be leveraged to achieve improved productivity and help better serve the community.

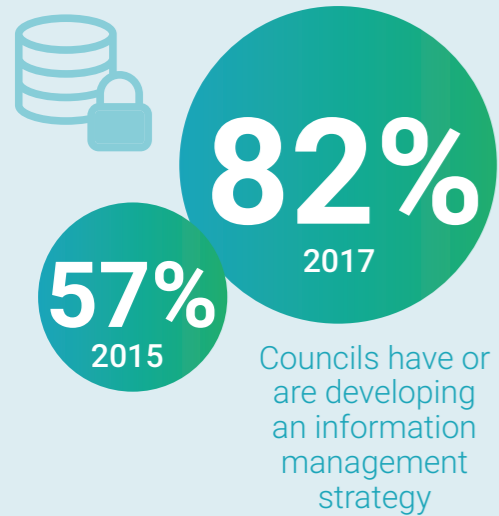
#### Opportunities

- There is still room for significant improvement with less than half of all councils making the shift to actively using information gathered as part of their strategic decision making processes.
- Collaboration between councils and case studies of successful uses of data might encourage more councils to integrate operational information in to the planning process.
- As councils continue to collect a greater array of data about their communities and operations, there will be even more opportunities for councils to improve their processes and deliver better community outcomes.

#### Challenges

- For some councils, increasing the use of data (or changing how data is used) will require significant cultural change.
- As councils collect larger volumes of data, without clear systems and a way of garnering insights, they run the risk of being overloaded with information.
- The limited availability of data management, science and analytic skills will limit the ability to access benefits.





**12%**  
Councils have come under cyber attack in the past 2 years

**15%**  
Councils align with **ASO/ISO 27000 Industry Standard**

**79%**  
Councils were confident or very confident they could repel a cyber attack

**26%**  
Councils align with **Queensland Govt IS18 Information Security Standard**

### Information security

However, as councils begin to gather and share even more detailed data about its operations and customers, information security is becoming an increasingly critical concern.

Currently, 74% of councils do not align with the Queensland Government's IS18 Information Security standard and 85% do not align with the ASO/ISO 27000 industry standard. While 79% of councils reported they

were either 'confident' or 'very confident' that they could repel a cyber-attack, it is noteworthy that no council reported that it was 'extremely confident' it could detect and respond to an attack. This is a growing concern as nine councils reported they had come under cyber-attack in the past two years.

#### Insights

- Councils may not be doing enough to protect valuable customer data and billing information. While the majority of councils surveyed indicated that they were ready and confident to detect and defeat cyber-attacks, few had aligned their processes with industry best practice or government standards.

#### Challenges

- Asset protection appears to have a low priority within councils, obtaining executive level endorsement to ensure relevant information security protocols are drawn up and implemented may, in some cases, be difficult.
- A skills shortage may contribute to councils' inability to comply with, or know if they are complying with, information security standards and privacy legislation.
- Cyber attacks are on the increase. With many councils not conforming to information security standards there is an increased chance of sophisticated attacks causing business interruption or information security breaches.

#### Opportunities

- Key staff should receive training, and continual professional education, related to key information security standards and privacy legislation.
- Councils should consider hiring white-hat security firms to conduct regular audits to identify and treat security vulnerabilities.

### Information management

As data and information services become increasingly critical to council business, developing and implementing information management strategies has become a key strategic activity. Currently, 82% of councils have, or intend on developing, some form of information management strategy.

This suggests that Queensland councils are currently undergoing a period of rapid transformation and strategic planning as they pivot toward a more deliberate approach to the management of information and data.

#### Insights

- 100% of respondents agreed that there is more that could be done to improve their information management processes. This appears to indicate a strong appreciation of the value to be gained from a formal information management strategy.

#### Opportunities

- Local Governments would benefit from regular audits of current information and data management practices.

### Open data

While councils are fully aware of the power and potential of data to improve their core businesses and services, they also understand the potential for it to stimulate growth and innovation in the community.

75% of councils surveyed are either currently, or are planning to, share data with the community.



#### Insights

- Councils have rejected a proprietary approach to their information and data, instead preferring to freely share their information to help deliver improved community outcomes.
- Most councils (75%) are open to sharing their data with their community, compared to 68% in 2015.
- Some councils release data sets to make information available to programmers, who then develop apps which are beneficial to the council and/or their residents.

#### Opportunities

- Councils should consider collaborating to identify common datasets that would be of value to developers and their communities.
- Establishing a curated portal of state-wide local government datasets may be a more efficient way of sharing local government information.

#### Challenges

- Defining agreed principles and standards for open data sets.
- Ensuring that open data programs have adequate resources and executive sponsorship to be successful.
- Perceived quality of data and the ability to automatically publish data.

### 5.3 Community engagement

#### Customer data

Technology and data allow councils to engage with their communities in more strategic and meaningful ways. Currently 47% of councils have implemented a Customer Relationship Management tool to improve the management of customer data, a figure that has increased 23% since 2015. This increased capability allows councils to access insights from their customers and pinpoint issues of local concerns. It also means that residents have fewer frustrations interacting with council if they do not have to explain a longstanding issue multiple times.



#### Social media

Councils are also increasingly aware of the need to have a presence in the spaces where their customers operate. Where once a static website was a sufficient online repository of council information and services, now residents are expecting virtual and almost 24-hour availability. Councils are accommodating and shifting to meet this trend, with 57% regularly using social media.

Social media is giving local councils the ability to engage in real-time with customers, which has significant advantages, particularly in emergency situations where councils can quickly communicate an early warning or provide updates to local residents.

It is also a cost efficient and meaningful way for councils to engage with and receive feedback from their constituents. However, this additional service comes with a cost and is increasingly seen as the domain of specialists, with 51% of councils also reporting that they have hired a dedicated specialist to manage their digital presence. There are also increased reporting burdens on councils as they strive to meet the responsiveness required of engagement on social media.

#### Insights

- In comparison to the 2015 report, councils use fewer social media platforms and have concentrated their efforts on Facebook.
- Councils have a reduced presence on third-party blogs, Instagram, YouTube, LinkedIn and Twitter than in 2015.
- Councils are increasingly turning towards specialists to help manage their brand and community engagement online.

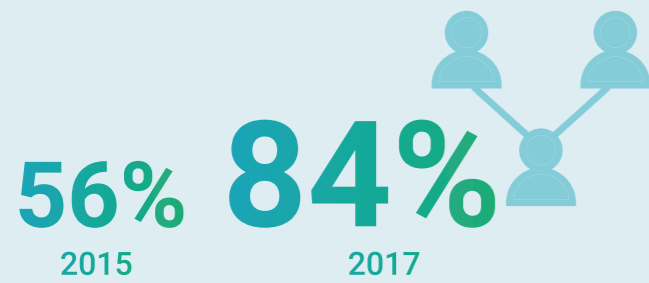
#### Challenges

- Maintaining visibility across multiple social media platforms.
- The return on investment for social media use is not known.
- Consumers are over saturated with content and it becomes more difficult to make your business stand out.

#### Opportunities

- Social media remains a cost-effective way of promoting council's messages and services to the community.
- The use of social media as a means of instantly updating residents in times of disaster is uneven across Queensland, with some Councils actively embracing this capability and others not yet using social media during disasters.





Agree that councils have a responsibility to foster and support local businesses and residents transition towards active participation in the digital economy



Councils are likely to share data with the community or third party organisations

#### 5.4 Digital economy

Not only are councils leveraging information, technology and data to enhance their own services, they're also increasingly aware of the potential the broader digital economy has for local businesses and communities.

While not a traditional area of responsibility for local government, 84% of respondents agreed that councils have a role to play in fostering and supporting local business and residents transition towards active participation within the digital economy.

Activities that councils currently undertake in Queensland to encourage this include:

- community workshops
- seminars
- smart city blueprints and plans

- networking functions
- economic development strategies
- social media advertisement
- incubators
- investing in telecommunication infrastructure (core and access)
- investing in technology trials and POC
- digital development/digital literacy courses.

Councils were unanimous in their agreement that the digital economy has the potential to have a beneficial impact on both the community and council. With 85% agreeing that the digital economy will help council deliver better services and 79% agreeing that it will help enhance interactions with the community.

##### Insights

- This shift towards active participation and leadership in the digital economy is a vast departure from councils 'traditional' responsibilities and shows a growing depth of maturity and understanding of the disruptive power and potential of digital at the local government level.

##### Challenges

- A shortage of skills and talent to support the transition remains a key concern for many councils. As is the shortage of available state and federal government funding to help councils support other vital community activities that lie beyond their traditional sphere of influence.

##### Opportunities

- According to Deloitte, the digital economy in Australia is estimated to grow to around \$139 billion by 2020, this is larger than many traditional industry sectors including agriculture, retail and transport. By moving early to improve their community's skills, local governments are opening up their local economies to new opportunities and growth.

## 6 Impediments to progress

The largest single impediment towards fully embracing and taking advantage of digital technology is a lack of available skills and expertise. Currently, 75% of councils agree there is a skills shortage for the digital economy in Queensland. Approximately 43% of councils in Queensland are committed to overcoming this shortfall by recruiting or training of existing staff.

Other impediments identified include high technology costs (66%) and the need for internal process reform (42%). Surprisingly, only 23% of councils reported difficulties in obtaining technology that meets their specific requirements, suggesting that internal budgets and processes are still slowing down the digital revolution of council services.

##### Insights

- A clear majority of councils are looking to fill a skills gap by pursuing talent from outside of the local government sector.

##### Challenges

- A lack of technical knowledge and understanding amongst employees hinder council's ability to grow their digital platforms.
- The digital skills shortage is predicted to increase in Australia. Organisations are securing future employees while they are still studying at university.
- While technology often exists to meet a council's requirements, cost remains the most significant barrier to adoption although the costs of additional broadband are continuing to decrease.

##### Opportunities

- Local governments can utilise external specialist resources to supplement and train their current workforce to help overcome the skills shortage.
- Increased resources for training and development will provide new career pathways and development opportunities for staff.



## 7 Case Studies

### 1. Whitsunday Regional Council

Whitsunday Regional Council's administration office was destroyed during TC Debbie. They are taking the opportunity to rebuild their network services in the cloud with Amazon Web Services (AWS). This will provide resilience for future disasters and reduce the time vital council services are unavailable in the aftermath of a disaster.

### 2. Flinders Shire Council – optimistic about the NBN

For a long time, Flinders Shire Council has been restricted by a lack of choice and competition in their region, with only one internet provider in the area. The council is both excited and apprehensive about the arrival of the NBN which will expose them to a number of new providers. Despite struggling with network coverage in the past, rural ratepayers will soon have sufficient coverage to meet their needs.

In 2015 Council moved to a cloud based environment, and had a number of challenges with the implementation. One of the reasons for moving to a cloud based environment was to counteract the difficulties in recruiting skills in the local area. The migration brought many challenges, particularly because of the slow internet speed in the region at the time. Over the past two years, speeds have been enhanced and council is expecting further improvements in the near future.

### 3. Sunshine Coast Regional Council

Over the past 7 years the council has been on a consistent, forward leaning journey to improve the

services it provides to the community and business, as well as addressing the pressures created by limited resources to meet community expectations, digital transformation opportunities/challenges, and growing demands from population and visitor growth. This has included dealing with amalgamations and de-amalgamations. The initial emphasis was on improved mobility, online services, and clarity in alignment between business and technology plans.

In addition, seeking to educate staff and management on the possibilities of the digital age was also a focus. We also began the digital cities journey, which subsequently morphed in to the Smart City framework and ongoing related implementation. The council has to move with good speed on this, recognising that business priorities, investment, and some management/staff reluctance have had a governing effect of the speed of adoption.

Council's development is now moving to a new level of maturity in terms of digital transformation of its services, workforce training and transition, and improvements in online, analytics, and mobile services. We have also begun trialing artificial intelligence services, and have had good progress in analytics, big data, and algorithm developments. Over time the council has continued to develop its ambitions in this area, recognising that this is not just about council operations, but also the region's development. Increased investment will be needed over time, and of significant gain will be improved digital infrastructure in the region, including ready and trained future employees, more affordable high speed broadband, submarine cable, and closely working relationships between business, community, government, education and tertiary institutions.