QUEENSLAND TOURISM INDUSTRY COUNCIL

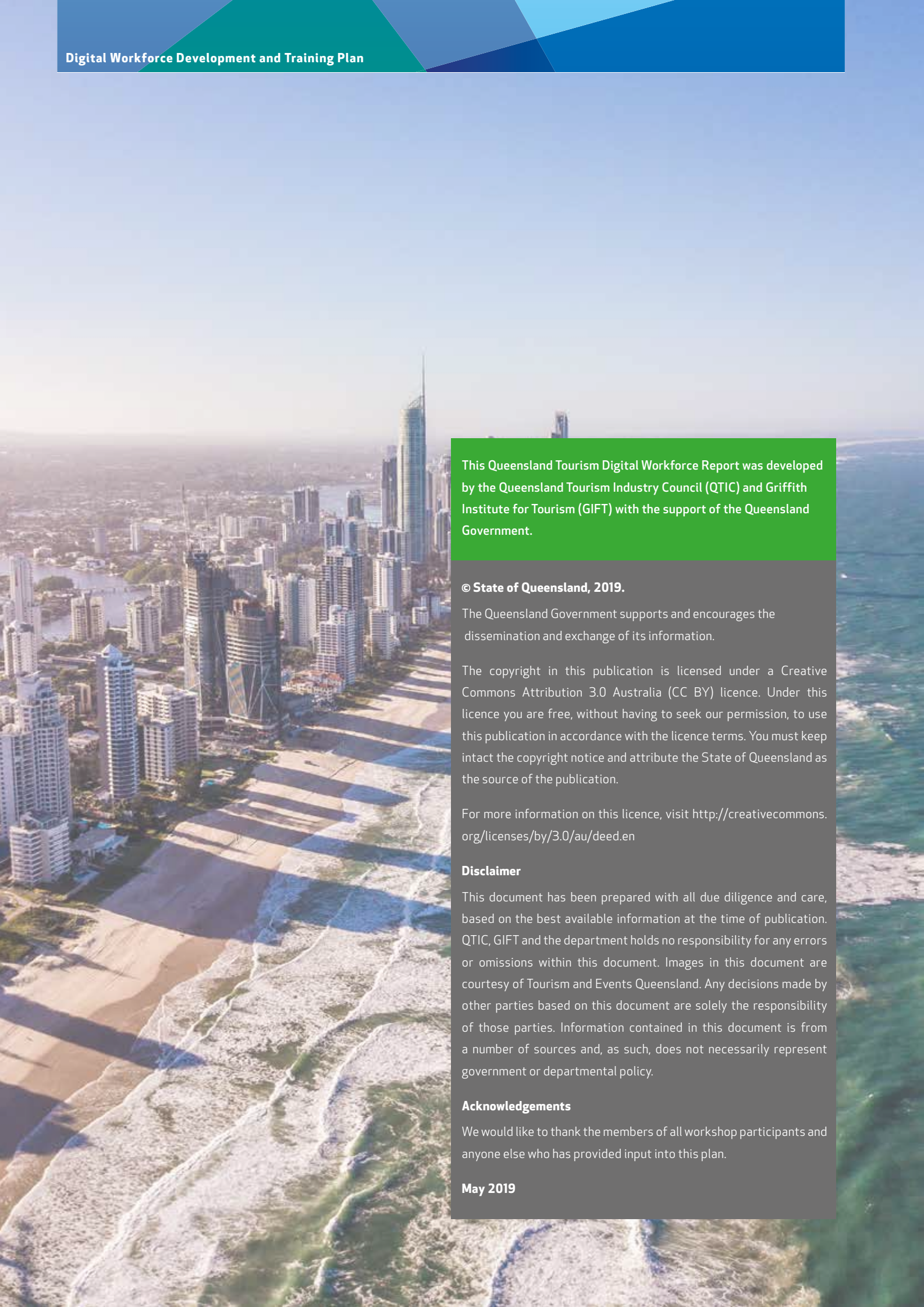
The Voice of Tourism

Queensland Tourism Digital Workforce Development and Training Plan

MAY 2019

Griffith UNIVERSITY

Queensland Government



This Queensland Tourism Digital Workforce Report was developed by the Queensland Tourism Industry Council (QTIC) and Griffith Institute for Tourism (GIFT) with the support of the Queensland Government.

Disclaimer

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Acknowledgements

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A WORD FROM THE CHIEF EXECUTIVE

Constant change is challenging. Almost every day all of us, at home and work, we are confronted with new developments, new technologies and new ways of doing things.

This is also true for businesses who are already busy doing what needs to be done to keep operations going, with little time left to consider what is in store for the future. When it comes to digital disruption the future has well and truly arrived. As an industry and as businesses in the consumer-focused tourism sector we need to be prepared and ready to take up the opportunities that present themselves with these developments. It is one of the frontlines of competition in a tough and fast-moving global market.

With the funding support from the Queensland Department of Employment, Small Business and Training *'Training in Emerging and Innovative Industries Fund'*, we have been able to work with Griffith University to assess the most significant digital disruption impacts on tourism and map out the skill and workforce needs that we need to address. The findings in this report were made possible by the input and participation from QTIC's membership which spans across Queensland.

The challenge to respond appropriately goes to us collaboratively as an industry, to government, to work in partnership with industry and to individual operators. We are proud to make a contribution with this report to our understanding of the digital disruption in tourism and support the development of effective measures to keep our industry ahead of the competition.

Daniel Gschwind
Chief Executive

QUEENSLAND TOURISM INDUSTRY COUNCIL
The Voice of Tourism

INTRODUCTION

Innovations in digital technology are transforming the way in which we work, live and travel.

Queensland's tourism businesses and its workforce must prepare to be digital-technology-ready. Queensland's tourism industry is a leader in technology-augmented visitor experiences and technologies that improve efficiencies and productivity in the workplace. The industry must be an active participant to remain competitive and to enhance this digital transformation.

Tourism is Queensland's largest service exporter and a major contributor to the growth of Queensland's economy, contributing $25 billion to Queensland's economy each year and accounting for 7.8% of the total Queensland Gross State Product (GSP)[1]. Queensland attracts over 22.5 million domestic overnight visitors and 2.7 million international visitors each year, reporting over 4% growth in both domestic and international overnight visitor markets for 2017/18 [2,3]

Tourism employs **one-in-nine** Queenslanders

Overnight visitors spend **$64.4 million every day** in Queensland

Over **25 million people** visit Queensland a year

There are currently 1.3 billion international arrivals worldwide and this number is expected to reach 1.8 billion by 2030 . The rise of the middle class in emerging economies, particularly China and India, and transport improvements will make tourism more accessible, and affordable for more people globally. The United Nations World Tourism Organization (UNWTO) describes tourism as a social and economic phenomenon, stating:

> *"Today, the business volume of tourism equals or even surpasses that of oil exports, food products or automobiles. Tourism has become one of the major players in international commerce.*[4]

1 Tourism and Events Queensland. (2018c). Tourism Satellite Accounts 2016-17. Available from: https://cdn2-teq.queensland.com/~/media/a827fe96a87d4b7eae760f61e2d798d4.ashx?vs=1&d=20180404T095301.

2 Tourism and Events Queensland. (2018a). Domestic visitors to Queensland. Available from: https://cdn1-teq.queensland.com/~/media/0254141917404f9d902bd346fcd1ad1e.ashx?vs=1&d=20181002T161419.

3 Tourism and Events Queensland. (2018b). International visitors to Queensland. Available from: https://cdn1-teq.queensland.com/~/media/6f99394c29404d868ccad766e2ff045d.ashx?vs=1&d=20181102T101028.

4 United National World Tourism Organization. (2018). Why tourism? Available from: http://www2.unwto.org/content/why-tourism.

As the demand for tourism in Queensland increases, opportunities for employment in Queensland's tourism industry also expand. The growth in tourism employment (at 2.2%) exceeds the overall Queensland state employment growth (at 0.6%).

> *Queensland's tourism industry employs more people than the agriculture, forestry and fishing and mining industries combined.*[5]

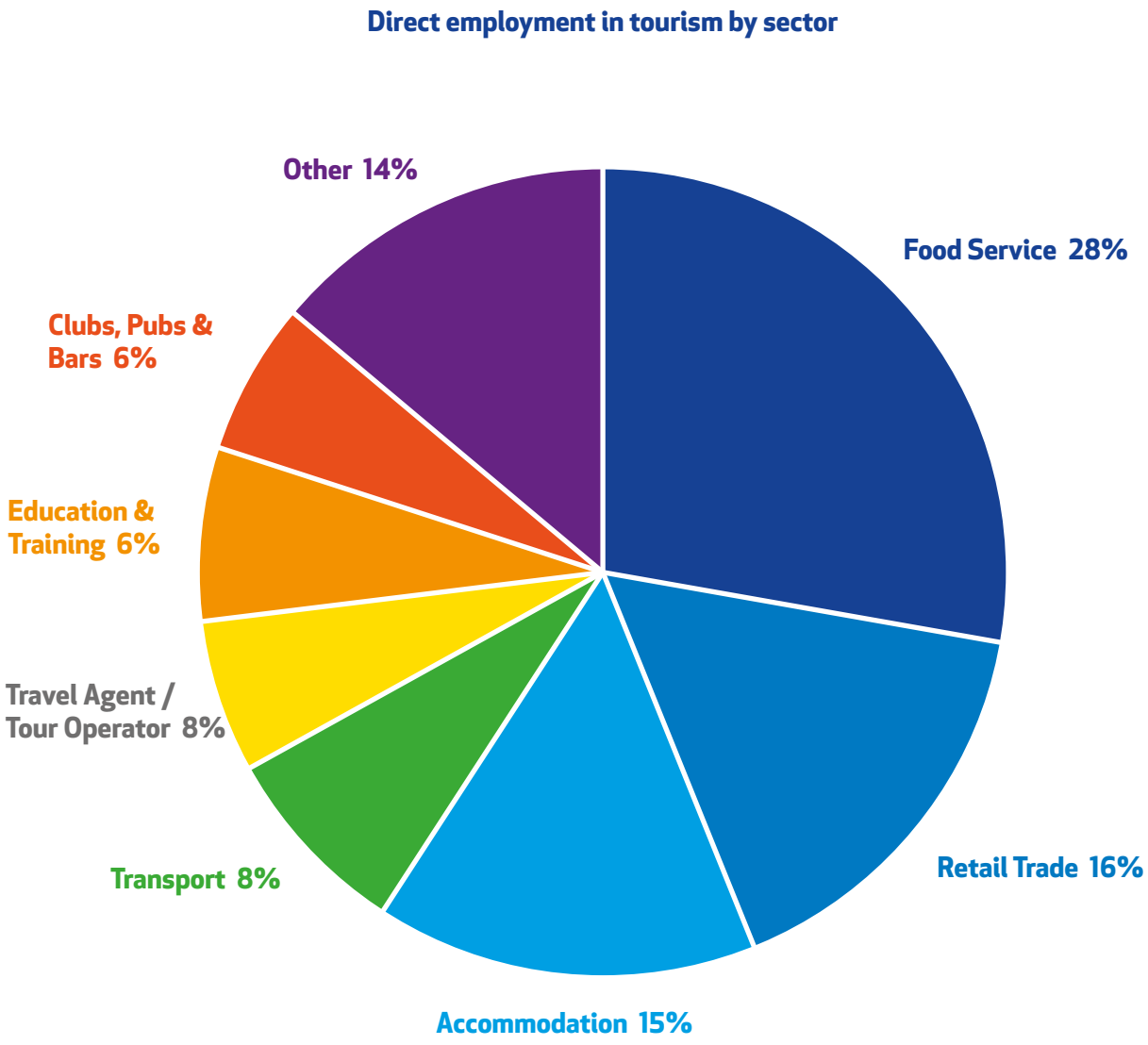


Figure 1 – Direct employment in tourism by sector

5 Australian Bureau of Statistics. 2019. Employed persons by State, Territory and Industry division of main job. www.Abs.gov.au

PURPOSE AND OUTCOMES OF THE PLAN

This is a unique time in history for Queensland to become the global leader in technology innovation in tourism. The purpose of this plan is to provide a pathway to develop a skilled workforce and innovative businesses to achieve this goal.

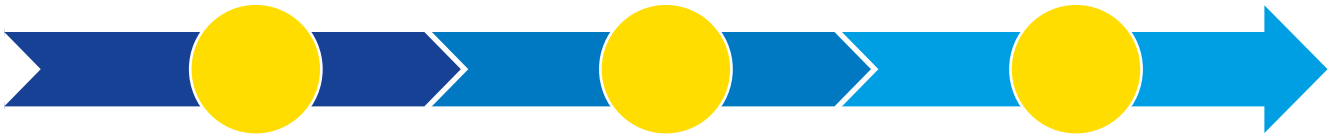
The plan will inform government and industry on key issues and opportunities facing this sector as it strives to embrace new and existing technologies. It will provide a strategic direction with practical solutions to ensure Queensland's tourism industry has the skills and capabilities to embrace existing technologies whilst leveraging new digital technologies. The plan focuses on providing skills for jobs with a particular focus on delivering training and upskilling that assists small businesses to maximise the opportunities that digital technologies offer. The plan also focuses on how Vocational Education and Training (VET) investment can support the skill deficiencies and achieve government objectives for a stronger economy for Queensland.

An expanded workforce is required to service the predicted growth in visitation to Queensland over the next decade. Automation and new technologies have the potential to make tourism businesses in Queensland more productive and efficient, enhance the tourism experience and improve the economic contribution of tourism to Queensland. Yet, key challenges include competition for service-based workers and training and development of the tourism workforce. There are also a skills shortages in critical tourism professions on the horizon.

This plan aligns with the Vocational Education and Training (VET) Investment Plan. Priority training pathways for the tourism and hospitality sectors identified in the VET Investment Plan are: apprenticeships in commercial cookery, traineeships in hospitality and travel, VET in school opportunities, entry-level training in hospitality skills, and workforce development aligned to higher level qualifications. This plan will provide advice on the digital training required as part of delivering the VET Investment Plan.

The plan aims to advise on the anticipated skills required in Queensland's tourism industry and the future workforce development and planning required to ensure those skills are developed to respond to this need.

INTENDED OUTCOMES OF THE PLAN



Workforce needs
To determine the state-of-play in digital technology that will impact on tourism and the digital readiness of Queensland's tourism industry to adopt these technologies.

The framework
To determine the skills and underpinning knowledge required to adopt these technologies.

Workforce needs
To provide advice to government on the skill needs of Queensland's tourism industry and an action plan to upskill and innovate to implement digital technology in tourism businesses to promote job creation and economic growth.

Figure 2 – Intended outcomes of the plan

DEVELOPING THE PLAN

To achieve these outcomes, the plan was developed in three phases. The first phase was an environmental scan to identify the technology innovations globally and their implications for Queensland's tourism industry. Skills, training and workforce development issues were also evaluated as part of this analysis. The second phase involved consultation with the industry to understand the current state-of-play in Queensland and ensure the final plan was aligned with industry needs and requirements.

This consultation involved an online survey, which was completed by over 100 tourism stakeholders, as well as, industry consultation workshops in five regions in Queensland, which were attended by 70 tourism stakeholders. The final phase of the plan is to integrate the findings from the first two phases into a workforce and training plan for government and industry.

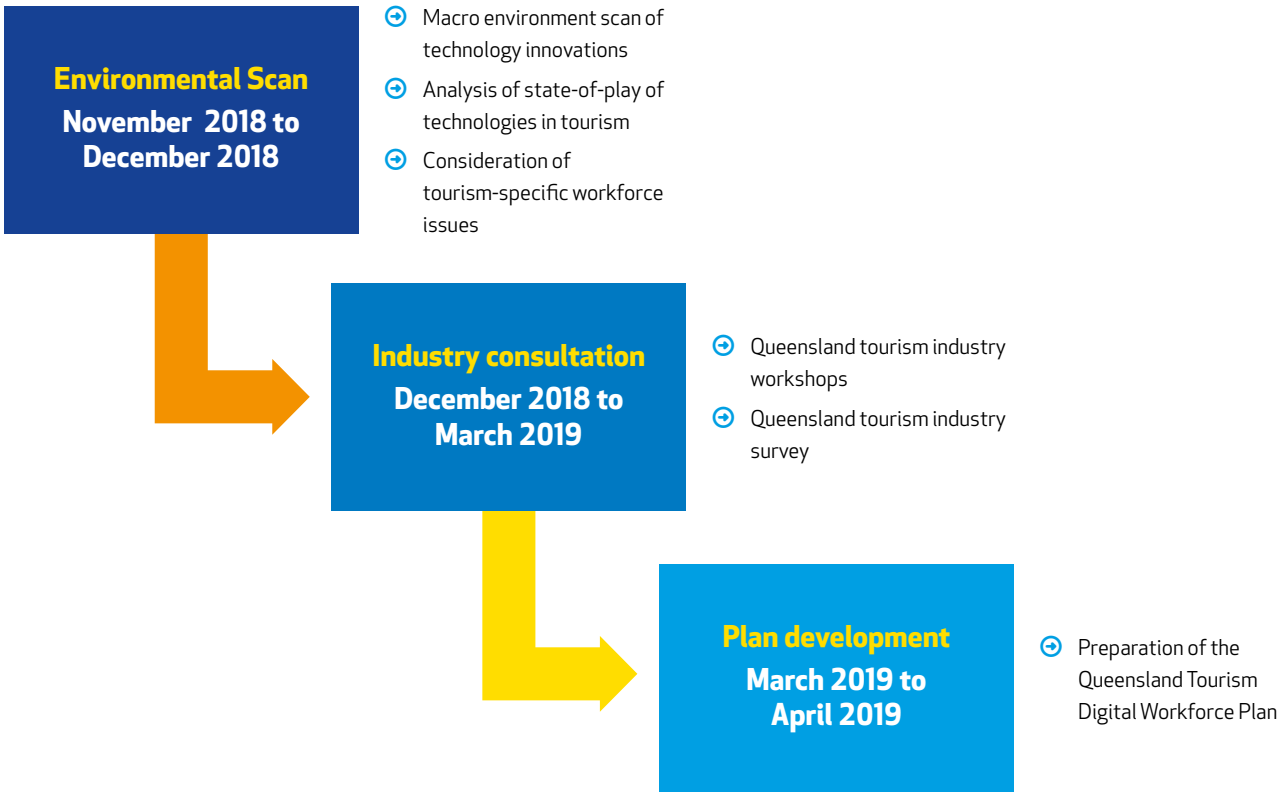


Figure 3 – Plan Development Process

BENEFITS OF TECHNOLOGY INNOVATION FOR QUEENSLAND

For Queensland's tourism industry to remain competitive and for tourism businesses to be productive and efficient, a high level of digital literacy is critical.

Developing employees who have the digital skills and know-how combined with job-specific expertise is important.

Benefits of government investing in technology to Queensland's tourism economy:

- Increases tourism economic activity in Queensland
- Improves competitiveness of Queensland tourism globally
- Addresses tourism industry skills shortage and other workforce access issues
- Facilitates dispersal of visitors to regional areas
- Builds capacity of small businesses to compete with larger businesses
- Promotes digital career opportunities within the tourism industry.

BENEFITS OF TECHNOLOGY ADOPTION BY TOURISM OPERATORS

Why tourism operators should invest in technology

For businesses, the potential return on investment from adopting digital technologies include:

- Increases sales
- Solves business problems
- Increases efficiency and productivity
- Reduces transaction costs
- Gains advantage over competitors
- Improves customer satisfaction through a better-quality experience
- Reduces cost of environmental sustainability
- Builds reputation as an innovator and market leader
- Increases marketability and reach.

Adopting a digital technology solution to a business problem has many benefits. However, at the outset, it is important to recognise that the adoption of technology typically requires an investment of time and money, which is often in limited supply for many tourism businesses. It is therefore vital that operators take a strategic approach to technology adoption through identifying key business problems, then determine the initial and long-term return on investment from technology adoption, immobilise resources and apply for government grants and training support programs. The diagram below presents an overview of this process.

The Queensland Tourism Digital Workforce Plan aims to assist in identifying opportunities for businesses to embrace technology and innovate.

Figure 4 – Strategic process for technology adoption

RYAN MOODY FISHING

Ryan Moody has run fishing charters all his life and Karen Moody is a marine biologist. Together they owned and managed Ryan Moody Fishing. This business has transformed its business model and product offerings using technology.

The impetus to look at new ideas for their business came after the death of one of their friends from skin cancer. At that time, Ryan was running daily fishing charters and spent most days outdoors on the boat. From this tragedy, they realised Ryan needed to get out of the sun and so started to consider other business opportunities using his expert knowledge of fishing. Hence, Ryan Moody's Fish Smarter online fishing courses was created. The online courses focus on the strategy of fishing. Their tagline is **"Fish smarter not harder"**.

"We are shocked by the response that we've had from people", Karen explains. **"The development of the technology is a little bit of trial and error, but we adopt the mindset that everything has a solution, so we always find solutions to problems"** she said.

Digital marketing is central to their business. For example, Karen uses their online customer relationship management system to communicate with customers while she is overseas. Karen states, **"The Internet and social media allows us to sell 24/7. We can even sell our courses internationally while we are sleeping or when travelling overseas."**

Prior to embarking on this journey, the business earnt a maximum of $1,000 per day for a charter; that capped their earn potential each year. They no longer operate the charter business. Instead they focus their efforts on the new business that has unlimited earning potential and is a lot more profitable than the charter business. For example, they can sell a $1,000 course to 1,000 students worldwide.

It has also delivered lifestyle and health benefits as Ryan is no longer out in the sun on the charter each day and it's a fully mobile business that they can operate anywhere in the world. **"Now we run our business from a laptop. This new online business enables us to live a life we always dreamed of."**

TECHNOLOGICAL OPPORTUNITIES

This section provides an overview of the technologies that promote opportunities to improve efficiencies and productivity and enhance the consumer experience in tourism.

DIGITAL COMMUNICATION

Digital communication involves interacting, sharing and communicating using digital devices including; mobile phones, computers, tablets or other internet connected devices.

Communicating online has become a core component of communication and marketing channel for most tourism operators as consumers increasingly search for information and interact with each other and connecting with tourism operators using digital means.

Emails, instant messaging, push notifications, websites, social media, online travel reviews and blogs and, more recently, ChatBots have transformed the way tourism operators communicate.

Having the in-house skills or being able to engage digital service providers to develop digital content in various formats - stories, images and videos – and understanding the mechanics that drive visitation to online platforms, through strategies such as website search engine optimisation, is the cornerstone of most digital communication strategies.

Digital communication can provide a convenient, easy and seamless experience for customers and, at the same time, improve system efficiencies and productivity for tourism operators.

Digital communication capability development is a key priority for tourism operators and destination marketing organisations. Therefore, employing and developing staff with specialist skills in digital communication are essential for all tourism operators.

TRAVELLO

Travello is a social networking travel app and is a community of more than 700,000 travellers in 180 countries. This digital communication platform differs from other social media networks because it focuses on connecting travellers with other like-minded travellers and inspiring them to explore the destination that they visit & then share that experience with a global community of other travellers.

When a traveller arrives at a destination, often they won't have their Facebook and other social network friends with them. Travello offers a safe way for travellers to connect with other travellers in the same destination that are part of the Travello community.

This Brisbane-based start-up launched in 2015. **"The idea behind our travel-tech solution is to help travel businesses reach travellers in-destination through customer touch-points that were previously unattainable due to the nomadic nature of travellers and for these businesses to use Travello as a social extension for their brands,"** said Ryan Hanly, CEO and Founder of Travello. **"Unlike TripAdvisor, which started as a social platform but morphed into a marketplace, our community will always be at the heart of Travello,"** he explains.

Travello is a data rich company and they are using this data to personalise the travel experience. The Travello feed uses algorithms to curate interesting and relevant information for the user based on their location, their interests and where they are going. Through the platform, users can locate and meet up with other travellers visiting the same destination at that time and they can experience the destination together or within a group. Travello also has over 80,000 bookable experiences which can be recommended to users based on their travel profile and purchased directly via the app.

MOBILE SMARTPHONES AND APPS

Consumers are increasingly searching for and booking travel using their mobile smartphones. Approximately nine out of ten Australians own and use a smartphone and are using them more than ever before - people look at their smartphone 52 times per day on average[6].

Given the high consumer use of smartphone devices to access the Internet, having a mobile-friendly website is now essential for tourism operators and destinations and is a key-criteria for many online search engine ranking algorithms, such as the Google search engine.

Smartphones also have specialised software called "apps" which can be download by smartphone users using iOS (operated by Apple) or Android operating systems. These apps are developed specifically to be viewed and operated using a smartphone device. A smartphone is attached to a user and the device knows the exact location of a user using location services, such as Wi-Fi, the cellular network and Global Positioning System (GPS) information. The device can therefore know who the user is, where they are and when they are there. Content in the app can then be personalised to the user based on this information.

The portability of the device, convenience of Internet access and apps on smartphones can improve the visitor experience and is particularly beneficial for personalising content and assisting with navigation. Apps can also be used for visitor information, interpretation, games (gamification of the user experience), augmented reality experiences and social media connectivity, as well as a payment gateway for ticketing, upselling and donations[7].

Destinations have also started using the location-aware functionality in apps to collect visitor statistics, tracking visitor movement around a destination in real-time and linking this to other surveys and powerful profiling data[8]. This data can inform visitor management strategies which aim to increase visitor expenditure and improve the sustainability of tourism in destinations.

AUSTRALIA ZOO

The Australia Zoo on the Sunshine Coast enhances its visitor experience by offering guests a Smartphone visitor information app. The original app was launched in 2015 and had a major update in 2018.

The app provides a welcome video from Robert, the story of the Irwin family, a map of the zoo and visitor information on the animals, exhibits, shows, events, zoo history and how to adopt an animal. Users can access suggested day plans and also create their own schedule to plan their day at the zoo.

6 Deloitte. (2018). Global mobile consumer survey report. Available from: https://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/global-mobile-consumer-survey-us-edition.htmlhttps://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/global-mobile-consumer-survey-us-edition.html

7 Gardiner, S. (2016). Smartphone app design in Tourism: Content analysis of Australian zoo and wildlife attraction apps. Presented at Council for Australian University Tourism and Hospitality Education (CAUTHE) annual conference, Sydney, February 8-11.

8 Tourism Tracer. (2019). Available from: https://tourismtracer.com/

EARTHCHECK CRISISREADY APP

Every four to five years, organisations are likely to face some form of crisis, such as a fire, cyber attack, cyclone, flood or earthquake. App technology is helping tourism operators plan and prepare for a crisis, replacing outdated paper-based plans.

EarthCheck has developed a CrisisReady app that allows tourism operators to identify and evaluate risks, store key contacts, organise a management team, prepare a response plan, identify resources and set alerts to help prepare for and manage a crisis.

"The Crisis Ready technology puts a risk and crisis management plan at your fingertips. Set to go at the push of a button, the app sends information directly to a Content Management System which controls the alerts and provides a more streamlined response process," said Earthcheck Founder and CEO, Stewart Moore.

When a disaster occurs, tourism operators can quickly and easily access their customised crisis response plan on their phone and quickly get the businesses operational again following the crisis. They can record information and log images through the app to assist with the recovery process.

NEXT HOTEL

Next Hotel Brisbane is a 304-room hotel located in the centre of Brisbane city. Technology is central to the Next Hotel brand experience and has provided them with a point of difference in the Brisbane hotel marketplace.

The hotel offers free high-speed WiFi, Tesla airport transfers and uses virtual reality to market the hotel. The hotel also has futuristic sleep pods in the lobby for guests to use if they have checked-out and have to wait for their flight.

One of the unique offers by the Next Hotel Brisbane is their Smartphone app. Guests can download the app for free and use it to adjust their room temperature, room lighting, and Smart television. The app also allows users to lock their room door, order room service, book their next stay, check in and check out, and access other information, such as 2,000 of the world's best newspapers and magazines. If guests arrive without a Smartphone, the hotel then loans them a Samsung Smartphone at no extra charge.

"As a technology-hotel, we need to constantly monitor what is happening overseas and ensure we are at the forefront of new technology innovations", said Tahlia Edwards, Marketing and Communications Executive at Next Hotel Brisbane. **"To develop the app, there was a lot of research, development and testing. We are fortunate that the owner, based in Singapore, comes from an IT background and understands the value and benefit of being a technology leader. We also use a number of third parties that help us build the best app possible and integrate the app with the lighting, television and air-conditioning systems"**, she said.

Staff training on the use of technology is also important for Next Hotel Brisbane. Tahlia asserts, **"You can't expect new staff to instantly know how to use this technology, so training is vital. Staff need to be confident using and explaining the technology to guests. They need to be able to sell the benefits of using it to guests and troubleshoot issues".**

"We are still in the process of research and development and I don't think that will ever stop. Part of being a technology hotel is having to keep up-to-date with what's new and how technology is evolving", she comments. Since launch, Next Hotel Brisbane app has been upgraded three times. For the next upgrade, they are looking at other technology innovations, such as augmented reality, to enhance their guest experience.

VIRTUAL REALITY

Virtual reality (VR) uses computer technology to create an immersive three-dimensional (3D) virtual environment. In tourism, VR is mostly used in marketing to stimulate interest in a tourism experience or destination. For example, previewing a destination precinct, cruise ship experience, hotel room, function space, restaurant, or an attraction, activity or tour. VR provides greater detail and a more immersive and engaging experience than videos or images which are only presented on a website or via social media platforms.

VR can also be used in tourism to manage customer expectations as they are given a more realistic impression of the actual experience. VR is currently considered a new and novel experience for consumers, however as this technology becomes more commonplace, it is predicted that offering a VR experience pre-purchase could become an expectation of consumers, similar to how providing information on a website is today.

WHITSUNDAY AIRPORT

Visitors to the Whitsunday Airport will be entertained while they wait for their bags to arrive from the plane via a new interactive reality experience display. This experience opened in April 2019 as part of the airport redevelopment.

The experience features a large (4m x 8m) screen. Users can select from two experiences: a reef experience or an outback and animal experience. When a person stands in the area in front of the screen, they are projected onto the screen and become part of the experience on-screen.

Mr Tim Rose from the Whitsunday Regional Council who managed the project explains, **"We wanted something out of the box for this project that gave people a taste of what we could offer in the region while they were waiting for their bags. We didn't want to use headsets or glasses because they didn't suit the airport environment and we needed something that could offer an experience for large groups of people. We found this interactive technology, as well as a new aquarium display, met our needs and provided two distractions to showcase tourism opportunities in the region. We are very happy with the outcome and had excellent feedback from people who are engaging with it and kids particularly love it. We often find them screaming at the screen, they are so involved in the experience".** There is also a self-service kiosk where users can email their image from the screen to themselves to share with others.

TOURISM AUSTRALIA - AUSTRALIA360

Tourism Australia developed 18 different virtual reality (VR) videos that provided a 360 degree view of destinations and experiences in Australia.

Lisa Ronson, Chief Marketing Officer at Tourism Australia explains, **"Virtual Reality and 360 videos are important because rather than just showing how beautiful Australia is, it will get to the ultimate customer benefit which is how you feel when you come to Australia. Our purpose is all about inviting the world to live the Australian way of life and we wanted to show that in a really immersive way."**

These videos can be accessed via Australia.com, Australia.cn or downloaded via the Australia in 360 app. The app is available for iOS and Android in English, simplified Chinese and Japanese. Users can experience the VR content via a VR headset or using Google cardboard VR headset and their Smartphone. The VR videos have received over 10.5 million views and people are spending an estimated eight minutes on the Australia.com website when accessing this content.

Tourism Australia reports a 9% increase in visitation to their website and 64% increase in engagement on Australia.com. Americans who viewed the broadcast advertisement on Facebook revealed an increase in the intention to visit which is three times higher than the industry average.

Tourism Australia reports that almost a fifth of consumers in Australia have used VR to select holiday destinations and over 25% of consumers plan to use VR to assist in selecting their holiday destination in the future.

"Australia has always had the advantage of being a highly desirable destination. The challenge is how to create a sense of urgency to visit that counters those perceived barriers such as time, distance and cost."

"This campaign has been designed to be incredibly immersive and capture what it feels like to be in Australia and to experience for yourself being on, in or near the water. By using VR and 360 technology, we hope to inspire prospective travellers considering Australia for their next holiday and get them to take that crucial next step towards making a booking", said Ms Ronson.

AUGMENTED REALITY

Augmented Reality (AR) is where virtual-world meets the real-world. The most common use of AR is using the camera on a user's Smartphone device to overlay digitally-generated images on the real world, that is, the digital images augment the real-world experience.

There are two principle types of AR: recognition-based AR and location-based AR. In recognition-based AR, the device's camera identifies visual markers, such as QR codes, to trigger a display of virtual objects. Location-based AR is where the device's location services identify a user's location to trigger a display of virtual objects. These factors mean that AR is largely used as on-site experience enhancers[9]. Therefore, AR is best suited to sites to navigate and disseminate safe information as it can overlay key information, facts and figures on real-world objects. It is also often used in storytelling and gamification of experiences as users can interact with characters and objects. Unsurprisingly, AR is mostly used in heritage attractions, museums, zoos and wildlife attractions. AR can improve customer service and the guest experience, while at the same time improve efficiency through the automation of guest services and provision of safety information.

ARTIFICIAL INTELLIGENCE AND AUTOMATION

Smart robots, powered by artificial intelligence (AI), are intelligent physical devices that have the capacity to automate front-of-house guest services and back-of-house operations. Smart robots have the mobility and sensory capabilities to perform tasks without human intervention, delivering efficiencies in the production of services and reducing labour costs. Smart robots can perform multiple-tasks at one time, speak multiple languages, answer questions and provide suggestions on travel services. Through machine learning, these smart robots can be self-correcting and learn. For example, through analysing past answers to questions, they can develop better answers when asked similar questions by future guests. In tourism today, smart robots are mostly being used as a novelty factor and to wow guests. Some examples include robots as concierges, room service, airport bag-drop, scan boarding passes, bionic bars with robot bartenders and drone waiters.

Considerations relating to the introduction of smart robotics, AI, machine learning and automation into the workforce may lead to the potential loss of human-staff, re-skilling of jobs to accommodate this technology, change management required to introduce this technology, new safety protocol and operating procedures, social and ethical considerations, and the capital investment required to adopt this technology. Often the introduction of these forms of technology requires specialised expertise. Having the capability to create a brief and articulate the business need, as well as the finances and time to contract external providers to develop and deliver this technology, is a key consideration for future training initiatives.

A particularly transformational technology that will impact on tourism and travel is the introduction of autonomous vehicles. It is anticipated that driverless cars will be operational on public roads in Perth by the end of 2019 and car manufacturers aim to have a fully automated vehicle available by 2030. Autonomous vehicles offer many benefits for tourism. For example, fully automated vehicles eliminate the need of a driving licence for customers of rental cars. They should reduce the probability of accidents which should lower insurance fees and improve profitability. They also do not rely on the physical and mental state of the driver, therefore users can consume alcohol and work on-the-go. It also may remove the need for age restrictions on the operation of a vehicle.

CRYPTOCURRENCY AND BLOCKCHAIN

Cryptocurrency is not tangible like banknotes and coins and is only available in digital or electronic form. There is over 1,000 other cryptocurrencies and this number is increasing as new cryptocurrencies are introduced into the marketplace. One of the most commonly known cryptocurrencies is Bitcoin. As cryptocurrency does not have geographical or political borders, it allows for the borderless transfer-of-ownership of currency and global transactions.

Cryptocurrency is a very broad term and different cryptocurrencies may take different approaches. Essentially, cryptocurrencies are peer-to-peer payment networks. There is no direct transaction of money between two parties. For instance, Bitcoins can be used as a payment network with the payment made as an exchange between Bitcoin wallets. You cannot exchange from one cryptocurrency to another or to fiat (i.e., Australian dollars) without an intermediary, such as TravelbyBit, which allows tourism businesses to accept payment from customers using cryptocurrency, like Bitcoin, and the business is then paid in Australian dollars using a point-of-sale system.

The major benefits of cryptocurrency for travellers is no currency conversion and a tighter security in comparison to monetary exchange. Given the success of this currency, there are many people worldwide who have this currency to spend and the term "crypto-tourism", that is travelling on cryptocurrency, has emerged. Queensland is already at the forefront of this technology with the establishment of cryptocurrency merchants along the east coast and Australia's first digital currency town in Agnes Water-1770.

9 Yung, R., & Khoo-Lattimore, C. (2017). New Realities: A Systematic Literature Review on Virtual Reality and Augmented Reality in Tourism Research. Current Issues in Tourism, 1-26. doi: 10.1080/13683500.2017.1417359.

1770 AND AGNES WATER - AUSTRALIA'S FIRST DIGITAL CURRENCY TOWN

In 2018, Agnes Waters and 1770 became Australia's first digital currency town. This region worked with TravelByBit to implement a digital payment gateway and now have over 40 businesses that accept payment from visitors and customers using digital currency.

Although the number of crypto-tourists are small, the region has received significant publicity from becoming a leader in digital currency tourism. The region has also installed a billboard as an entry statement into the town, advertising that they are Australia's first digital currency town.

President of Discovery Coast Tourism and Commerce, Amber Rodgers, explains, **"We are finding people do travel here, just for that experience. We feel it's been a successful implementation, especially because of the publicity we have received and the positive experience of operators implementing this technology in their business. We used TravelByBit as the digital currency payment platform and the implementation process was simple. Nobody has had any bad or negative experiences, in fact, we feel like we have gained a few new customers because of this new technology and innovation. We will continue to work together to tell more people about it".**

TravelByBit is a Brisbane technology start-up company which has over 150 merchants across Australia. In addition to the Agnes Waters and 1770, they have also worked closely with Brisbane Airport Corporation. Their digital payment gateway is now available by many retailers at the airport. Using TravelbyBit, customers can pay with Bitcoin, Litecoin, Ether, XEM, and BNB cryptocurrencies through the TravelbyBit travel concierge service. TravelbyBit also recently secured a USD2.5 million investment from Binance to launch an online travel booking platform for the blockchain community where users can book flights and accommodation anywhere around the world with digital currency. Being based in Australia, TravelbyBit is actively promoting local destinations in Australia to this global audience. For SMEs, becoming a merchant with TravelbyBit offers the ease of peer-to-peer payments without the risk of credit card fraud or merchant fees. The economic benefits include attracting new customer bases in the form of cryptocurrency enthusiasts.

BIG DATA

The sheer volume of information available on the Internet means that increasing businesses' and employees' ability to find, use and disseminate information[10] is central to improve efficiencies and productivity[11]. The ability to capture, organise and analyse this large volume of data and translate it into meaningful information is the central aim of Big Data analytics. Big Data is available from many sources. This may include internal business data, such as customer records, as well as external data sources, such as social media posts, financial transaction data, mobile phone data, etc. Big Data can be used with AI and robotics to assist robots self-learn and provide better answers in real-time. In their assessment of the opportunity and implications of Big Data for the tourism industry, the World Travel and Tourism Council claims that Big Data provides tourism with deeper knowledge, greater insights and potentially risk-free product development[12].

THE TOURISM GROUP

The Tourism Group are program managers for the Visitor Information Centres (VICs) in New South Wales and Queensland.

Across the VICs, The Tourism Group collect multiple data points regarding visitation, demographics, spend and type of interactions. The sheer amount of data collected means that they are able to develop useful reports including heatmaps of VIC usage to identify patterns of use and opportunities and challenges for the networks. Further use of secondary data such as the national and international visitor surveys conducted by Tourism Research Australia means that The Tourism Group can compare patterns of visitor movement around the VIC network with overall visitor trends.

The use of data in this way means that the Tourism Group is able to provide reports to the VICs, Local Government and State Government to justify the value of the work of the VICs both at a local level and to the broader tourism network.

It is not just the data, it is what you do with it!

10 Deakin University. (2018). Available from: http://www.deakin.edu.au/_data/assets/pdf_file/0008/1237742/digital-literacy.pdf

11 Australian Chamber of Commerce and Industry. (2018). Submission to the senate select committee on the Future of Work and Workers.

12 World Travel and Tourism Council. (2019). Available from: https://www.wttc.org/-/media/files/reports/special%20and%20periodic%20reports/wttc_big_data_report_final.pdf

GRIFFITH INSTITUTE FOR TOURISM - MEASURING THE BEAUTY OF THE GREAT BARRIER REEF

The Great Barrier Reef (GBR) is under substantial pressure and better monitoring of change is required. User-generated online data from social media creates Big Data, and using AI this Big Data can be collected and used to monitor environmental change, visitor experiences and deteriorations in the 'aesthetic value' or beauty of the reef.

Funded by the Australian Government through the NESP Tropical Water Quality Hub, this research uses Twitter posts and publicly posted photos (e.g., on Flickr) to map changes in 'sentiment' and 'beauty'. Social media posts are particularly useful when they contain information on the location from where they were posted. Having location-specific information on visitor experiences of the Reef is of great importance to Reef managers, but also useful for the tourism industry. The big benefit of using these 'digital footprints' is that information is provided in real time.

The analysis of the tweets and the photos involves machine learning. For Twitter post machine learning is used to recognise the topic of a tweet, for example a Reef-related experience, other aspects of travel or non-travel comments. Sentiment analysis helps to identify whether the tweet had a positive or negative connotation. For the case of photos, neural networks and AI architectures were built for the automated identification of marine species (up to 50 fish species) and for the rating of image attractiveness. The algorithms used in the analysis were trained with information from real people who ranked the beauty of a large number of under-water GBR images.

This research demonstrated that social media Big Data can be spatially assessed to derive information on visitor movements and activities. Since the completion of this project, the research team has also analysed Chinese Sino Weibo data, finding that about 20% of posts contain geographic information. The data can be used to approximate satisfaction, but also to derive what visitors do once in Australia. Furthermore, the use of AI for reef monitoring could provide a cost-effective vehicle for future large-scale monitoring of the GBR.

SMART TOURISM DESTINATION

Smart tourism is a new catchphrase applied to describe the increasing reliance of tourism destinations, their operators and their visitors on emerging forms of technology. The interconnection, synchronization and concerted use of different technologies that constitute smartness allows for massive amounts of data to be transformed into value propositions[13]. Identified information aggregation, ubiquitous connectedness and real-time synchronisation are the major drivers of such smart tourism experiences[14]. The application of these concepts support travellers by:

- anticipating user needs and making context-specific recommendations;
- enhancing travellers' on-site experiences; and
- enabling travellers to share their travel experiences on social networks.

13 Gretzel, U., Mendes-Filho, L., Lobianco, M., & Alonso-Vazquez, M. (2017). Technology Adoption by Tourism Operators in Australia and Brazil: An Institutional Theory Perspective. e-Review of Tourism Research, 8(1). Retrieved from https://agrilifecdn.tamu.edu/ertr/files/2016/12/RN180.pdf

14 Neuhofer, B., Buhalis, D., & Ladkin, A. (2015). Smart technologies for personalized experiences: a case study in the hospitality domain. Electronic Markets, 25(3), 243-254.

From an industry perspective, benefits include automation, efficiency, forecasting, and crisis management[15].

The Australian Smart Cities Plan outlines a vision for cities that revolves around technology solutions first and leveraging real-time data[16]. A smart destination integrates technology into physical infrastructure. For example, the City of Ipswich has built a 100 square kilometre Internet of Things (IoT) network that supports sensor-based data gathering, video analytics, remote asset management, safety and security.

Sunshine Coast Council's Smart Region Management Platform receives data from sensors, street lights and Wi-Fi access points to manage service delivery in real-time.

The use of this data for tourists can be seen in Singapore, where the Singapore Land Transport Authority's MyTransport.sg Mobile app provides real-time, customisable and end-to-end information on all modes of transport in Singapore such as buses and trains, traffic condition and waiting times.

As the databases become more accessible, businesses can leverage this data to offer more personalised, relevant, convenient, and innovative tourism experiences.

DIGITAL TOURISM ECOSYSTEM

Technology will infiltrate the entire tourism ecosystem, impacting every aspect of the visitor journey. Modern travellers expect a personalised, seamless journey. Digital and physical experiences will be integrated in hyper-customisation, where experiences are easy and quick to book. Providers that offer an end-to-end fully integrated experience will lead the market[17]. Major players, such as Airbnb, have already embarked on this path. Airbnb launched in 2006 with their accommodation platform. They extended their offering with the launch of Airbnb Experiences in 2016 and now offer thousands of local experiences in tourism destinations worldwide. Airbnb are also partnering with many airlines and have become a "one-stop-travel-shop"[18]

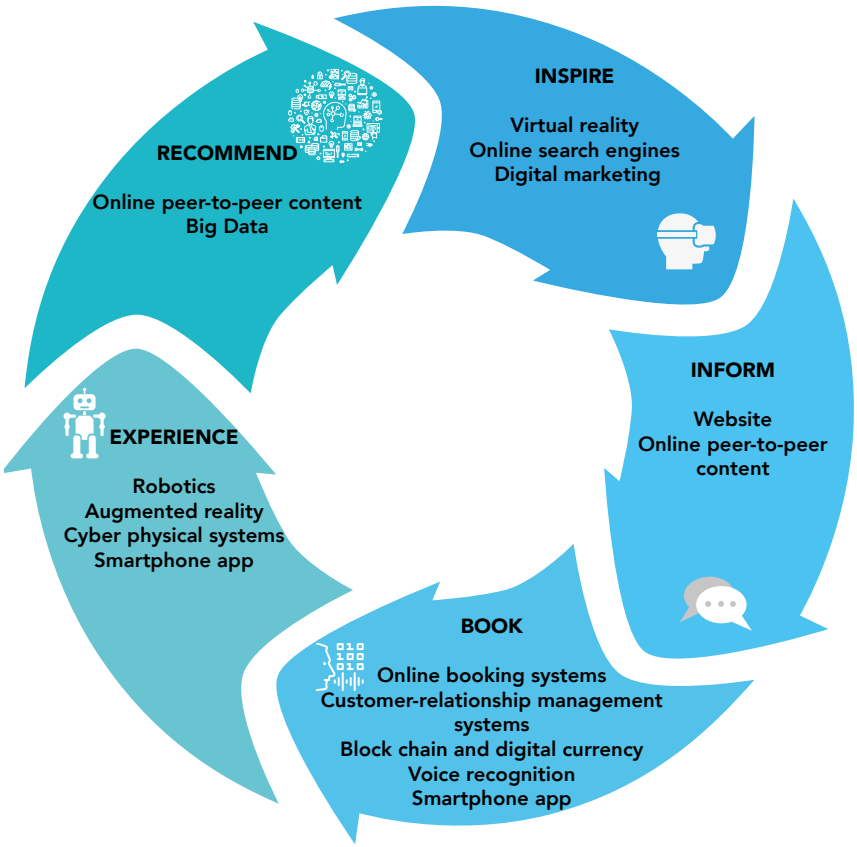


Figure 5 -Digital technologies across the consumer journey.

15 Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: foundations and developments. Electron Markets, 25, 179–188. doi: 10.1007/s12525-015-0196-8.

16 Australian Government. (2018). Available from: https://infrastructure.gov.au/cities/smart-cities/plan/index.aspx

17 World Economic Forum. (2016). Available from: https://www.weforum.org/agenda/2016/05/industry-4-0/

18 Gardiner, S., & Dolnicar, S. (2017). Chapter 7. Peer-to-peer accommodation networks in the way to becoming one stop travel shops. In S. Dolnicar, Peer-to-peer Accommodation Networks – Pushing the Boundaries (pp. 87-97). Goodfellow.

THE INTERNET OF THINGS AND CYBER-PHYSICAL SYSTEMS IN TOURISM

The Internet of Things (IoT) enables physical devices to talk to each other, connecting physical devices to the Internet to collect and share data. Cyber-physical systems use this data in computer-based algorithms to gain an awareness of an individual's personal situation and awareness of their past and intended behaviour. This data is then connected digitally to physical objects. The potential application of cyber-physical systems in tourism is illustrated by the following group tour bus experience example, as shown below.

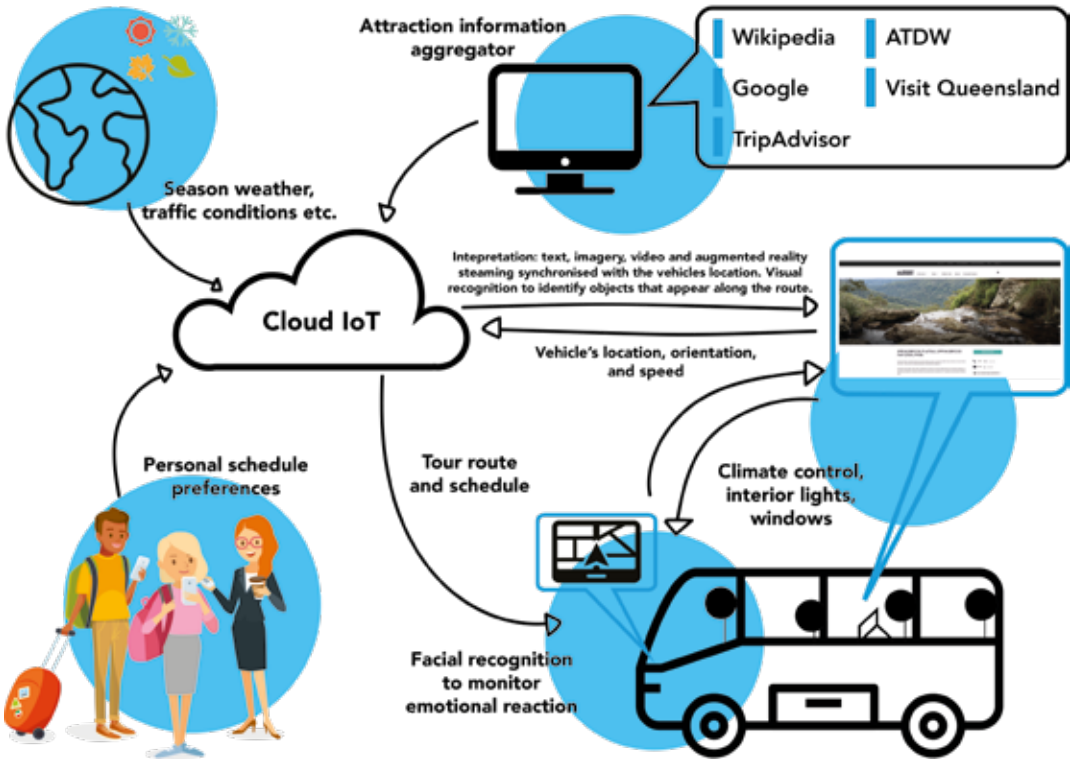


Figure 6 - Group tour bus experience in a cyber-physical system[19].

PRE-DEPARTURE AND PICK-UP

Using this system, a tour bus operator will be advised on their mobile device the type of vehicle required based on the number of reservations that day (standard, minivan, van, etc.) and the vehicle could be automatically allocated to the driver. The vehicle details (location in garage, petrol gauge, etc.) and guest list and profiles will be automatically communicated to the driver. The guest pick-up time and route are determined by the computer and loaded in the vehicle's navigation system for the driver. Guests will know the location of the vehicle and the estimated time to pick-up. Facial recognition and location-sensors could identify the guest at the pick-up location. Interpretative content is delivered to the guests using a mobile device and synchronised with the vehicle's location and speed.

PERSONALISING THE EXPERIENCE

Guests use their mobile devices to personalise their experience. They can adjust interpretative content and language, car environment (such as adjust climate control, interior lights, etc.) and the tour route based on their personal p-s. They can ask questions and communicate with the driver or other guests in their own language, which could then be automatically and immediately translated into the language spoken by the driver or other guests. Visual recognition could recognise objects along the route, for example, there is a kangaroo on the hill as the vehicle passes and the system notifies the guests of the kangaroo. The tour route could also be changed based upon situational changes, such as season, weather and traffic jams, to maximise the experience of the guest. Facial recognition installed on the devices and in the vehicle could monitor the guest response to the experience in real-time and the experience could be adjusted to heighten enjoyment, thus, resulting in a more satisfying experience.

19 Adapted from: Smirnov, N., Shilvo, O. Gusikhin. (2017). Cyber-physical-human system for connected car-based e-tourism : Approach and case study scenario. Available from: https://www.semanticscholar.org/paper/Cyber-physical-human-system-for-connected-car-based-Smirnov-Shilov/215e55d79693654d5539f3a552cc00f41e46a3b1

CURRENT ENGAGEMENT WITH DIGITAL TECHNOLOGY

A survey of Queensland's tourism industry was conducted (from December 2018 to March 2019) to evaluate the industry's current engagement with digital technologies. The results informed the development of this plan.

RESPONSES

Over 100 responses were received, with 27% of respondents from accommodation, 19% from tour operators, 13% from coordinating and supporting organisations (such as regional tourism organisations, industry associations, etc.), 11% from education, 4% from attractions, 4% from events and 22% from other tourism-related organisations. There was a good mixture of business types in the responses, with 10% from non-employing businesses, 30% from micro businesses (1-4 full-time equivalent (FTE) employees), 31% from small businesses (5-19 FTE employees), 22% from medium-sized businesses (20-199 FTE employees) and 7% from large businesses (over 200 FTE employees).

On average, tourism organisations felt that technology could give their organisation a competitive advantage (average score: 5.86 out of 7) and that Queensland should aim to be recognised as a world leader in technology innovation in tourism (average score: 5.72 out of 7). The respondents also tended to often think about how technology could improve the customer experience (average score: 5.72 out of 7) and that technology will improve efficiencies in the workplace (average score: 5.71 out of 7). However, respondents tended not to consider the impacts on automation in their workplace (average score: 3.92 out of 7 when asked if they have considered automation).

Industry self-rating

Use of technology in the workplace	✪ ✪ ✪ ○ ○
Digital literacy in their workplace	✪ ✪ ✪ ○ ○
Their own level of digital literacy	✪ ✪ ✪ ○ ○

(Out of five stars)

CURRENT TECHNOLOGY ADOPTION

Three-in-four tourism organisations have a website and a similar proportion are using Facebook in their workplace. Of those businesses that have a website, 94% have a website that is mobile friendly. For those businesses that have a bookable product, 82% offer direct bookings on their website and 71% show live availability. Most tourism organisations frequently use their website and email to communicate with their customers, but only occasionally post stories and videos on social media and online review websites. Generally, the survey findings indicated that tourism organisations rarely engage in paid social media advertising or post blogs. They also rarely use mobile text messaging and mobile apps to communicate with their customers. Beyond digital communication, technology adoption rates are very low among tourism organisations with only 12% using Big Data and less than 10% adoption rates with other technologies surveyed.

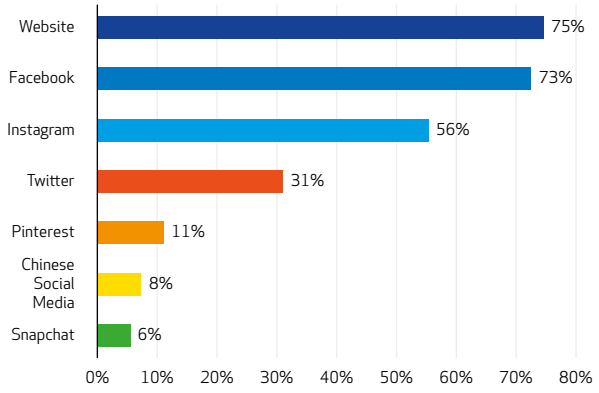


Figure 7 – Adoption of Technology in Queensland

Use of Technology to Market their Business

Tool	Frequency of use
Website	Very frequently
Email	Very frequently
Posting stories on social media	Occasionally
Responding to online reviews	Occasionally
Posting videos	Occasionally
Paid social media advertising	Rarely
Posting blogs	Rarely
Mobile text messaging	Rarely
Mobile app	Rarely

Table 1 – Use of Technology to market their business

Technology Adoption Rates

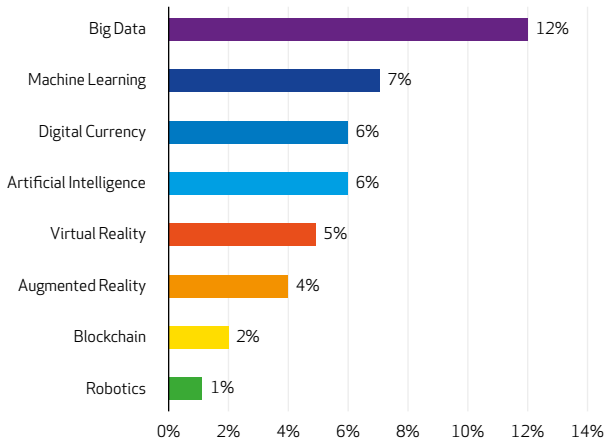


Figure 8 – Technology adoption rates

TOURISM WORKFORCE SKILLS NEEDS

Based on the environmental scan and industry consultation, the plan identifies a 'Top 10' calls for action to the tourism industry to build workforce digital technology skills:

TOP 10 CALLS FOR ACTION

1. Training to improve the industry-wide level of digital literacy.
2. Skills training to develop project plans and evaluate technology solutions to solve business problems and create competitive advantage.
3. Strategic evaluation and planning skills to mitigate the risks associated with technology adoption.
4. Develop strategies for Queensland's tourism industry to effectively compete for workers in this digital focused era.
5. Develop job-specific competencies of employees with existing digital skills.
6. Tourism operators need strategies to mobilise resources (time and money) to innovate and adopt new technologies.
7. Build the organisational and industry culture to facilitate technology adoption.
8. Build digital capability, and competitiveness of tourism businesses to develop interactive and personalised digital communications and visitor experiences.
9. Develop tourism business capability to offer online bookings and digital transactions.
10. Introduce digital skills in the high school curriculum, VET Training packages and university courses to ensure digital capabilities of the future tourism workforce.

OTHER OPPORTUNITIES

Other opportunities that were identified through industry consultation that are outside the scope of this plan, yet important for tourism to embrace this digital transformation:

- Opportunities to develop business clusters that enable tourism operators to work together on technology solutions to meet their needs.
- Methodology to advise tourism enterprises on the likely return on investment at varying stages of embracing digital technology.
- Economic modelling to determine the impact of digital technology uptake on the Gross State Product (GSP).

Tourism operators should consider how their workforce may be impacted by technology in the short term (1-3 years) and longer term (5-10 years) and what skills they need to build in their organisation's digital capabilities.

KEY CONSIDERATIONS

Key considerations for Queensland tourism workforce and training needs today.

	24/7 global industry	Consumers and workers are not confined to single jurisdictions or time zones and, accordingly, more flexible ways of working are needed to service the global consumer and the tourism workforce.
	Part-time/casual employees	Delivery of digital workforce development programs and training programs for varying work profiles.
	High labour mobility	Transferability of digital skills and training across positions and organisations.
	High proportion of small and micro businesses	Resourcing of digital skills training (time and cost) and capacity to learn and invest in digital technologies is important. Medium and large businesses should be encouraged to develop technologies that can be transferred to smaller businesses.
	Decentralised industry	Delivering workforce development and training to regional and remote areas. Boost digital connectivity and literacy in regional areas.
	Female-dominated workforce	Increased work flexibility (hours, location of work, etc.). Leadership and management training and opportunities – incorporate a gendered curriculum. Consider assumptions about roles, who should be "in charge of" technology - who can and who should.
	Age demographics of tourism workforce	Non-traditional work opportunities and arrangements. Employment strategies for younger and older workers. Increasingly educated workforce, but job seeking difficult for young and/or low skilled people.
	Seasonality	Timing of training with consideration of busy/slow periods, transferability of skills, and training of temporary workforces should be considered.

CURRENT QUEENSLAND TOURISM BUSINESSES DIGITAL CAPABILITY

Tourism enterprises, on average, rated themselves as having below average knowledge on all technologies tested. They were most knowledgeable about virtual reality and understanding the impact of automation on their workplace, however these ratings were still below average.

Technologies, such as Blockchain, robotics, cyber physical systems and Big Data, are particularly unknown in the tourism industry. Further general technology education to make tourism organisations aware of these technologies, and to understand the technology potential and implications to their business is needed. Given the high proportion of small businesses in tourism, training and upskilling this sector of this industry on digital technology is particularly vital to promote technology adoption and innovation.

Knowledge about various technologies (rating out of 5)

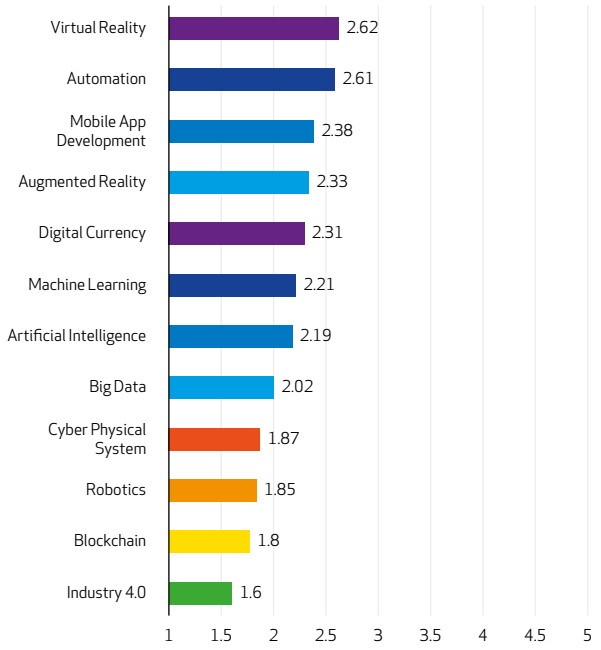


Figure 9 – Knowledge of various technologies (rating out of 5)

INCREASE DIGITAL TECHNOLOGY ADOPTION

Participants in the industry consultation workshop indicated they wanted annual workshops and webinars, as well as, a central portal that provided digital technology training and examples of cutting-edge technologies specific to the tourism industry. Industry is very aware that these skills and training are required, however, it must be in the right format, therefore wanted the flexibility of face-to-face training and mentoring, as well as, online training options that they could access at a time suitable to them.

Based upon the results from the online survey and the consultation workshops, the tourism industry recommended that the skills and training that would be most beneficial to their workplace included:

- Digital technology strategic planning
- Strategic planning for automation
- Up-and-coming technologies and availability of existing technologies
- App development
- Virtual reality
- Social media and digital marketing
- Software training
- Digital currency and blockchain implementation
- Machine learning and artificial intelligence and what it means for tourism businesses
- Cross-promotion and linking digital platforms
- Use of Big Data to improve marketing
- Cloud computing
- Cyber security
- Online system for volunteers and staff rostering

IDENTIFIED TECHNOLOGY TRAINING PRIORITIES

(in order of importance)

1. Operate software	Skills to operate software and technology-enabled devices.
2. Digital marketing	Skills to create and manage the online presence of the business (e.g., website, electronic direct marketing, social media, online reputation management, etc.).
3. IT problem solving	Problem solving and critical thinking skills that enable discovery of technology that enables innovative solutions to improve and create new tourism and hospitality products and services and guest experience processes.
4. Technical skills	Skills to oversee the assembly and dismantling of technology infrastructure.
5. Software development	Skills to identify and articulate the needs of the business to enable procurement, development or modification of software (computer programs) for business-specific requirements.
6. Hardware development	Skills to identify and articulate the needs of the business to enable procurement, development or modification of hardware (the physical components of a computer or electronic system) for business-specific requirements.

Figure 10 – Technology priorities

BARRIERS TO IMPLEMENTATION

BARRIERS TO IMPLEMENTATION

The word map below shows the main barrier to implementing technology in the workplace identified from the industry consultation.

Figure 11 – Barriers to technology implementation

> *As a small business this survey has very much highlighted what we have been battling with for some time. We know we need to improve on our technologies, we are hungry for it, we have started and improved in some areas but things are still a little disjointed. We have limited knowledge, we are learning as we go, we have limited funds, we are investing what we can. It will take time. But unfortunately technology moves faster than we are. We feel in three to five years we will have reached where we want to be now...but by then we will need to be somewhere else. To sum up, we are struggling a bit to keep up due to resources, knowledge, time, money and access to quality suppliers.*
>
> *Owner, Tourism Operator*

BARRIERS

The four principle barriers to implementation are:

KNOWING THE COST-BENEFIT

Tourism organisations commented that they were unsure about the cost and benefits of introducing new technology, therefore perceived the investment in technology as somewhat risky. Some industry operators were unsure that new technologies would necessarily result in cutting-edge advantages or savings. For example, one participant commented, "Everything costs money. Without seeing a direct benefit of using new technologies, it would be hard to introduce." Another participant commented, "[We are] unclear about benefits we would receive by introducing new technology - cost versus benefit."

Although most operators were keen to introduce new technology into their business, they felt their workplace lacked financial resources to do so. The ability to finance the introduction of new technology is a major stress for industry and, if not planned, they suggested their budgets will not allow for new technology adoption, especially among SME tourism businesses.

Training and workforce development to enhance business capability to plan for the future and confidentially adopt digital technology is essential for Queensland to become world leaders in tourism digital transformation.

HAVING THE TIME

The tourism industry recognised that the introduction of new technology would involve a significant time investment to learn about the technology and manage its development and introduction into the workplace. Thus, time was seen as a major barrier to the adoption of new technology, particularly for small businesses. The time required to train staff to use the new technology also factored into decision-making.

> *A good operator has the required attitude to continually learn, which is essential in a technology-driven marketplace, but they often cannot pull themselves away from the operations and give adequate attention to learning about the opportunities and business gains they can make from new technology.*
>
> *Tourism Consultant*

POSSESSING THE KNOW-HOW

A lack of knowledge and confidence to introduce new technology was a barrier to technology adoption as they did not want to get "ripped off" and invest in poor performing technology solutions and it "not working" were key considerations. Understanding what technologies were available was mentioned by several operators in the consultation as a way to overcome this barrier.

> *"Larger operators are okay, they have the resources. Smaller operators quite often can't afford consultants and rely on word of mouth as they don't have experience in sourcing software or technology solutions. Sometimes the setup can be daunting to small operators.*
>
> *Hotel General Manager*

STAFFING ISSUES

The "push-back" from staff from the introduction of new technologies was noted by several consultation participants with some feeling their staff would be resistant to change. One participant commented that there is a "comfort in how we do things." The age of the majority of current employees was also a consideration when introducing new technology. Others commented that their workplace was fairly conservative and, therefore, embracing new technology would challenge the organisational culture. For tourism business owners and manager, upskilling themselves so they are knowledgeable on the latest technology within the tourism industry from around the worldwide is critical. However, they also need training for their staff, particularly with tourism specific content and examples. This two-pronged approach to technology adoption is needed to ensure digital technology becomes a central part to their business operations and customer experience.

OTHER BARRIERS

Internet connectivity, service availability, training opportunities and shifting organisational priorities were also identified as barriers.

KEY INITIATIVES

The plan identifies four priority areas and 14 key initiatives.

1. FINDING AND DEVELOPING DIGITAL TECHNOLOGY

- **a.** Accredited training to investigate and design e-business solutions
- **b.** Tourism Digital Technology Gateway
- **c.** QODE Tourism Day
- **d.** Website development and technological innovations
- **e.** Funding and commercialising digital technology

2. BUILDING DIGITAL LITERACY

- **a.** Accredited digital literacy skills-sets and units of competency
- **b.** (I) Non-accredited digital technology training workshops
- **b.** (II) Digital communications
- **c.** Recognition of non-accredited digital technology skills and training
- **d.** Cyber security and online payment gateway training and upskilling

3. DIGITAL TECHNOLOGY CHAMPIONS

- **a.** Case study success stories
- **b.** Awards and recognition
- **c.** Educators as champions

4. WORKFORCE PLANNING FOR AUTOMATION

- **a.** Automation strategy

Appendix 1 – Subsidies available for accredited training, provides a table that demonstrates whether subsidies are available under the Queensland's VET Investment Priorities List.

1. FINDING AND DEVELOPING DIGITAL TECHNOLOGY

Skill need:

Tourism business owners and managers need skills training to develop project plans and evaluate technology solutions to solve business problems and create a competitive advantage.

Initiative 1A: Accredited training to investigate and design e-business solutions

QTIC to promote accredited skills sets and competencies available that provide businesses the skills and knowledge to develop strategies and evaluate business problems. Refer to Table 2 - Accredited training to investigate and design e-business solutions.

Competency/ Skills Set	Application
BSBEBU511 Develop and implement an e-business strategy	This unit describes the skills and knowledge required to evaluate e-business models and strategies for use in a business context. This includes the ability to incorporate the results of these evaluations into the design of an e-business strategy, including marketing, buying and selling goods and services online.

Competency/ Skills Set	Application
BSBSS00079 Digital Applications Skill Set BSBEBU511 Develop and implement an e-business strategy BSBMKG528-Mine data to identify industry directions BSBMKG534 Design effective digital user experiences BSBMKG535 Devise a search engine optimisation strategy BSBMKG536 Develop strategies to monetise digital engagement BSBMKG537 Develop a social media engagement plan	This skill set addresses the skills, knowledge and performance requirements to develop and design digital content in the marketing and communication industry.
BSBSS00071 Digitisation Skill Set BSBLIB506 Maintain digital repositories ICPDMT321- Capture a digital image ICPDMT322 Edit a digital image ICPPRP322 Digitise images for reproduction ICPPRP397 Transfer digital files ICPPRP422 Digitise complex images for reproduction	This skill set addresses the skills, knowledge and performance requirements for digitising information resources.
BSBSS00080 Media Engagement Skill Set BSBADV507 Develop a media plan BSBMKG510 Plan e-marketing communications BSBMKG529 Manage client account	This skill set addresses the skills, knowledge and performance requirements to carry out media engagement in the marketing and communication industry.
SITSS00062 Online Engagement for Small Business Skills Set SITXEBS001 Use social media in a business SITXEBS002 Develop, implement and monitor the use of social media in a business SITXEBS003 Build and launch a small business website	A set of skills relating to social media management and website development and maintenance that equip individuals for work in a small business in the tourism, travel and hospitality industry.
SIRSS00016 Ecommerce Management SIRXCEG007 Develop online customer service standards SIRXECM003 Design an ecommerce site SIRXMKT006 Develop a social media strategy SIRXMKT007 Develop a digital marketing plan SIRXSTR001 Develop an ecommerce strategy	A set of skills in Ecommerce Management.
SIRXCEG006 Provide online customer service	This unit describes the performance outcomes, skills and knowledge required to interact with customers using online communication tools. It requires the ability to provide information to customers, handle customer difficulties, and provide customer service and support in an online environment.
SIRXECM001 Monitor and interpret online data analytics	This unit describes the performance outcomes, skills and knowledge required to monitor and interpret online data related to the performance of an ecommerce site. It requires the ability to access and review data, determine effectiveness of ecommerce activity and make recommendations for future improvements.

Competency/ Skills Set	Application
BSBMKG412 Conduct e-marketing communications	This unit describes the skills and knowledge required to prepare electronic advertisements for use in internet, email or facsimile marketing communications, and to evaluate their effectiveness in achieving marketing objectives.
ICTICT508 - Evaluate vendor products and equipment	This unit describes the skills and knowledge required to evaluate and test a range of vendor products and equipment against a client's business requirements.
ICTPRG502 Manage a project using software management tools	This unit describes the skills and knowledge required to use software management tools, to manage a project from initiation to completion.

Table 2 - Accredited training to investigate and design e-business solutions

Initiative 1B: Tourism Digital Technology Gateway

The consultation highlighted that the Queensland tourism industry are keen to embrace new technologies but are often unsure where to find high-quality, reliable and cost-effective technology developers and service providers. Industry felt that having a central online space to share information on training opportunities, digital service providers and case studies of digital innovation success stories would be helpful.

QTIC will further scope the need for a central online portal that may include the following;

- Pre-qualified list of digital service providers
- Promotion of learning opportunities related to software commonly used including but not limited to:
  - MailChimp,
  - Adobe,
  - MS Office
- Technology "cheat sheets" and "design brief templates" to assist business owners to develop;
  - Smartphone app,
  - Virtual or augmented reality experience,
  - Smart robotics,
  - Big Data capture
  - Analysis

Calculator templates that calculate the cost/benefit and return on investment in technology

For example: http://www.marketingmo.com/campaigns-execution/how-to-calculate-roi-return-on-investment/

The resources aim to assist in developing digital competency for technology development and customisation.

Initiative 1C: QODE Tourism Tech Day

QODE brings together innovators and tech gurus from around the world to listen, speak, think and connect with each other. This two-day event is held at the Brisbane Convention and Exhibition Centre in March/April each year and is sponsored by the Queensland Government and Brisbane City Council. The program includes keynote presentations, as well as, break-out sessions on the latest thinking in technology, including topics such as Artificial Intelligence (AI), smart robotics, and virtual reality. Presenters are senior executives, futurists, start-ups, and entrepreneurs. There is also an exhibition space where participants can find out about technologies and meet the developers.

The plan intends to:

- Promote the event to the broader tourism industry, encouraging participation in and attendance of the event;
- Leverage this event to create a tourism-specific day add-on to the event or tourism-specific program stream as part of the event. This would attract tourism organisations to this event to learn about the latest technologies and connect with technology providers.

Initiative 1D: Website development and technological innovations

It was evident from the consultation workshops that some tourism operators had ideas on technology innovations in their business or customer 'experience' but were unsure of how to go about communicating their idea to a technology developer and preparing a technology design brief.

Information on the design thinking, technology development process and key technology terminology is required to build operator technology knowledge and confidence in their ability to commission technology development.

The Business Queensland website provides information on IT and the internet for start-up businesses. The information includes following topics:

- Doing Business Online
  - Benefits of doing business online
  - Providing services online
  - Buying online
  - Selling online
  - Creating a website
  - Promoting your business online
  - Legal obligations for an online business
  - Online security and fraud

Initiative 1E: Funding and commercialising digital technology

This initiative recommends a four-pronged approach:

1. Accredited training: There are two potential units of competencies that could assist in delivering workforce and business development to understand funding and commercialising a digital technology and a skill set that addresses the skills and knowledge required to monetise digital engagement through focus on customer engagement, content relevance and real-time digital payment systems. Please refer to Table 3 - Funding and commercialising digital technology competency and skills sets.

Competency/ Skills Sets	Application
BSBSMB423 - Create a digital technology plan for small business.	Create a digital technology plan for small business. This unit describes the skills and knowledge required to develop a plan for identifying and implementing new and emerging digital technologies to achieve small business goals. It involves undertaking a basic review of business digital readiness, identifying opportunities to improve business effectiveness and efficiency, and developing an action plan for implementing digital technologies in a small business.
CHCMGT004 - Secure and manage funding.	This unit describes the skills and knowledge required to secure and manage funding for an organisation, program or project. Workers may be responsible for determining the amount of funding required, identifying funding sources, developing funding proposals and managing ongoing compliance with funding agreements.
BSBSS00079 Digital Applications Skill Set BSBEBU511 Develop and implement an e-business strategy BSBMKG528-Mine data to identify industry directions BSBMKG534 Design effective digital user experiences BSBMKG535 Devise a search engine optimisation strategy BSBMKG536 Develop strategies to monetise digital engagement BSBMKG537 Develop a social media engagement plan	This skill set addresses the skills, knowledge and performance requirements to develop and design digital content in the marketing and communication industry. The skills set provides the skills and knowledge required to monetise digital engagement through focus on customer engagement, content relevance and real-time digital payment systems.

Table 3 - Funding and commercialising digital technology competency and skills sets

2. Business clustering: Small and owner-operator businesses are the backbone of the Queensland tourism industry and represent the largest proportion of the industry's workforce. However, funding investment in technology is often difficult for small businesses with limited resources. In tourism, most of the technology innovations are being driven by technology companies or large tourism businesses, such as international hotel brands and airlines. To enable the development and adoption of technology in small-to-medium sized enterprises (SMEs) in Queensland's tourism industry, an industry clustering approach is suggested. This approach involves a group of industry operators working together on a collective business program to find a technology solution that can be shared among group members and potentially throughout

the industry. This joint investment in technology research and development reduces the cost for individual businesses and promotes collaboration.

3. Mentoring: Operators that have developed new bespoke technologies could access mentoring and training on technology commercialisation to enable them to disseminate their technology solution to other operators in the industry. The development of a business model that supports this commercialisation is central to the success of this initiative.
4. Government grants and funding: Further promote awareness of government assistance programs and grants to introduce technologies, such as AR and robotics to tourism organisations. Promotion of existing strategies, notably Advance Queensland Innovation Strategy (Draft), and Jobs Queensland Tourism Workforce Plan should be central to implementation of this initiative.

QTIC will continue to promote grant opportunities through the QTIC Grants Gateway and monthly newsletters.

Further training is available to businesses in regards to grant writing skills and contract management. Tourism and Events Queensland developed the Queensland Tourism and Events Grants Guide 2018, to provide tourism business owners, associations or local councils the know-how in sourcing relevant grants and writing competitive applications.

The accredited competency CHCMGT004 - Secure and manage funding is also available to develop skills and knowledge to secure funding and contract management. Refer to Table 4 – Secure and manage funding competency.

Competency/ Skills Sets	Application
CHCMGT004 - Secure and manage funding.	This unit describes the skills and knowledge required to secure and manage funding for an organisation, program or project. Workers may be responsible for determining the amount of funding required, identifying funding sources, developing funding proposals and managing ongoing compliance with funding agreements.

Table 4 – Secure and manage funding competency

2. BUILDING DIGITAL LITERACY

Skill need:

Building knowledge and understanding of digital technologies and workforce digital literacy is critical to promote technology adoption.

Initiative 2A: Accredited digital literacy skill sets and units of competency

Accredited digital literacy skill sets and competencies that should be central to tourism and hospitality qualifications include. Refer to Table 5 – Accredited digital literacy skills sets and competencies.

Competency/ Skills Set	Application
BSBEBU511 Develop and implement an e-business strategy	This unit describes the skills and knowledge required to evaluate e-business models and strategies for use in a business context. This includes the ability to incorporate the results of these evaluations into the design of an e-business strategy, including marketing, buying and selling goods and services online.
BSBSS00079 Digital Applications Skill Set BSBEBU511 Develop and implement an e-business strategy BSBMKG528-Mine data to identify industry directions BSBMKG534 Design effective digital user experiences BSBMKG535 Devise a search engine optimisation strategy BSBMKG536 Develop strategies to monetise digital engagement BSBMKG537 Develop a social media engagement plan	This skill set addresses the skills, knowledge and performance requirements to develop and design digital content in the marketing and communication industry.

Competency/ Skills Set	Application
BSBSS00071 Digitisation Skill Set BSBLIB506 Maintain digital repositories ICPDMT321 Capture a digital image ICPDMT322 Edit a digital image ICPPRP322 Digitise images for reproduction ICPPRP397 Transfer digital files ICPPRP422 Digitise complex images for reproduction	This skill set addresses the skills, knowledge and performance requirements for digitising information resources.
BSBSS00080 Media Engagement Skill Set BSBADV507 Develop a media plan BSBMKG510 Plan e-marketing communications BSBMKG529 Manage client account	This skill set addresses the skills, knowledge and performance requirements to carry out media engagement in the marketing and communication industry.
SITSS00062 Online Engagement for Small Business Skills Set SITXEBS001 Use social media in a business SITXEBS002 Develop, implement and monitor the use of social media in a business SITXEBS003 Build and launch a small business website	A set of skills relating to social media management and website development and maintenance that equip individuals for work in a small business in the tourism, travel and hospitality industry.
SIRSS00016 Ecommerce Management Skills Set SIRXCEG007 Develop online customer service standards SIRXECM003 Design an ecommerce site SIRXMKT006 Develop a social media strategy SIRXMKT007 Develop a digital marketing plan SIRXSTR001 Develop an ecommerce strategy	A set of skills in Ecommerce Management.
SIRXCEG006 Provide online customer service	This unit describes the performance outcomes, skills and knowledge required to interact with customers using online communication tools. It requires the ability to provide information to customers, handle customer difficulties, and provide customer service and support in an online environment.
SIRXECM001 Monitor and interpret online data analytics	This unit describes the performance outcomes, skills and knowledge required to monitor and interpret online data related to the performance of an ecommerce site. It requires the ability to access and review data, determine effectiveness of ecommerce activity and make recommendations for future improvements.
BSBMKG412 Conduct e-marketing communications	This unit describes the skills and knowledge required to prepare electronic advertisements for use in internet, email or facsimile marketing communications, and to evaluate their effectiveness in achieving marketing objectives.
ICTICT508 - Evaluate vendor products and equipment	This unit describes the skills and knowledge required to evaluate and test a range of vendor products and equipment against a client's business requirements.

Competency/ Skills Set	Application
ICTPRG502 Manage a project using software management tools	This unit describes the skills and knowledge required to use software management tools, to manage a project from initiation to completion.
BSBITU211 Produce simple word processed documents	This unit describes the skills and knowledge required to digitally produce word documents in a workplace context.
BSBITU212 Create and use spreadsheets	This unit describes the skills and knowledge required to correctly create and use spreadsheets and charts using both cloud-based and non-cloud based spreadsheet applications.
BSBITU311 Create and use databases	This unit describes the skills and knowledge required to use simple two-table relational databases with reports and queries, for storage and retrieval of information.
BSBITU312 Create electronic presentations	This unit describes the skills and knowledge required to design and produce electronic slide presentations using various applications and platforms.
BSBITU402 Develop and use complex spreadsheets	This unit describes the skills and knowledge required to use spreadsheet software to complete business tasks and produce complex documents.

Table 5 – Accredited digital literacy skills sets and competencies

Through the QTIC Associations Council and QTIC newsletter, QTIC will promote the following sector-specific competencies related to digital technology. Refer to the table below:

Competency/ Skills Set	Application
BSBLIB504 Develop exhibition concepts	This unit describes the skills and knowledge required to explore potential themes and storylines to inform the overall development of exhibition concepts.
CUALGT301 Operate basic lighting	This unit describes the performance outcomes, skills and knowledge required to plot, record, modify and operate standard lighting cues on lighting consoles typically used in small-scale productions and events.
SISOSCB308A Guide a SCUBA dive	This unit describes the performance outcomes, skills and knowledge required to guide a SCUBA dive. This unit focuses on the application of planning skills to make suitable arrangements to guide groups safely on SCUBA diving activities.
SITTPPD002 Develop interpretive activities	This unit describes the performance outcomes, skills and knowledge required to develop interpretive activities for different customer groups. It requires the ability to establish educational, interpretive and commercial objectives for an activity; develop operational aspects; and evaluate the success of the activity.

Competency/ Skills Set	Application
SITTPPD005 Develop host community awareness of tourism	This unit describes the performance outcomes, skills and knowledge required to educate and consult local communities about tourism issues, including their costs and benefits.
SITEEVT001 Source and use information on the events industry	This unit describes the performance outcomes, skills and knowledge required to access and interpret current and emerging information on the events industry to enhance the quality of event coordination. This includes industry structure, technology, laws and ethical issues specifically relevant to event coordination.
SITEEVT002 Process and monitor event registrations	This unit describes the performance outcomes, skills and knowledge required to process attendee registrations for events, and administer them through to finalisation. It requires the ability to record customer information, monitor attendance numbers, generate sales and operational reports, and issue customer documents for event attendance.
SITEEVT008 Manage event staging components	This unit describes the performance outcomes, skills and knowledge required to analyse event staging requirements and organise and monitor different staging services and products. It requires the ability to use advanced planning, organisation and communication skills combined with detailed knowledge of the event management process and broad understanding of specialist component services.
SITHACS008 Provide accommodation reception services	This unit describes the performance outcomes, skills and knowledge required to check guests in and out of commercial accommodation establishments. It requires the ability to check daily arrivals, allocate rooms and complete relevant documentation.
CUADES501 - Design events	This unit describes the performance outcomes, skills and knowledge required to design events that are held indoors in established venues, as well as those staged outdoors in locations with little or no infrastructure and amenities.
CUASOU501 - Manage audio operations for outdoor events	This unit describes the performance outcomes, skills and knowledge required to plan, install and manage the operation of audio systems at outdoor events where factors such as weather conditions can significantly affect operations.
SITXFSA004 - Develop and implement a food safety program	This unit describes the performance outcomes, skills and knowledge required to develop, implement and evaluate a food safety program for all stages in the food production process, including receipt, storage, preparation, service and disposal of food. It requires the ability to determine program requirements and prepare policies and procedures for other personnel to follow.
MSARVS301A - Develop and update caravan industry knowledge	This unit of competency covers the skills and knowledge required to develop, update and utilise general knowledge of the caravan industry, including recreational vehicle manufacturing, servicing, retail and caravan parks.

Table 6 - Sector-specific competencies

Initiative 2B(I): Non-accredited digital technology training

The consultation to develop this plan suggests that the industry perceives itself as having a low to intermediate level of digital literacy and understanding of key technologies.

Industry has requested a combination of face-to-face and on-demand online workshops to upskill the Queensland tourism workforce on the latest developments in technology and technology business solutions was favoured by the industry.

Suggested skills development activities may include:

- Online quiz to test key learnings to monitor the success of this training.
- Annual regional workshops on new technology developments

The 2018-19 QTIC Tourism Capability Program learning resources, videos, and presentations will be made available on the QTIC website.

Initiative 2B(II): Digital communications

Industry demonstrated a demand for the continuation of the QTIC Tourism Capability – Digital Ready introductory digital workshops as well as advanced digital workshops for businesses with high-levels of digital literacy seeking to advance their existing knowledge.

Initiative 2C: Recognition of non-accredited digital technology skills and training

Based on feedback provided by the consultations industry, participation at the QTIC Tourism Capability, Digital Ready workshops should be formally recognized.

Providing a certificate of participation for digital workshops including the topics covered will help justify the time investment, and recognition of skills. This recognition would also assist in the transferability of skills across positions and organisations, which is important, given the mobility of the tourism workforce in Queensland.

The QTIC Tourism Capability, Digital Ready program's purpose is to increase Queensland Tourism operators digital presence and increase the number of businesses successfully become Best of Queensland operators.

The Best of Queensland Experiences are assessed on an annual basis. All operators in the program receive a personalised bench-marking report.

Initiative 2D: Cyber security and online payment gateway training and upskilling

Online tourism consumption has become a dominant pathway used by tourism businesses demanding a need to store personal and confidential information about their guests online. Tourism businesses must understand and mitigate the risks associated with cyber-attacks, data fraud and theft.

Training to improve the understanding of this threat and ways to minimise tourism organisation's exposure to it is required. Training on the legal aspects of this topic – that is, international and domestic privacy laws and the collection, storage and disposal of data - is vital. The table below demonstrates units of competency that address cyber security and security of personal information.

Competency/ Skills Sets	Application
ICTICT424 - Address cyber security requirements	This unit describes the skills and knowledge required to determine the cyber security requirements of an organisation and uses a range of resources to protect valuable assets.
ICTICT610 - Manage copyright, ethics and privacy in an ICT environment	This unit describes the skills and knowledge required to manage the issues of copyright and professional and ethical conduct in a team, as well as to ensure that personal information of stakeholders is handled in a confidential and professional manner.
ICTICT418 - Contribute to copyright, ethics and privacy in an ICT environment	This unit describes the skills and knowledge required to maintain professional and ethical conduct, as well as to ensure that personal information of stakeholders is handled in a confidential and professional manner when dealing with stakeholders in an information and communications technology (ICT) environment.

Table 7 – Cyber and personal information security accredited training

The Business Queensland website provides information on IT and the internet for start-up businesses, including information related to IT Risk management. The information includes following topics:

- Information Technology Risk Management
  - What is information technology risk?
  - Managing information technology risks
  - Reducing information technology risks
  - Responding to an information technology incident
  - Information technology risk management checklist

3. DIGITAL TECHNOLOGY CHAMPIONS

Skill need:

Understanding the opportunity that digital technologies offer, and their application to encourage uptake of technology among tourism organisations.

Initiative 3A: Case study success stories

One of the key motivators identified for considering the adoption of new technology was to stay ahead of the competition or at least on-par with the competition.

As part of the consultation, several appropriate case studies were identified and profiled within this report. A combination of Queensland-based case studies, as well as, national and international leading examples are recommended. The champions could be profiled at:

- Digital technology training upskilling workshops
- Tourism Digital Technology Gateway
- Queensland-based champion featured in every QTIC e-newsletter.
- QTIC Online Careers Guide

Where possible, video as well as text and images should be used to communicate these stories.

Initiative 3B: Awards and recognition

The possibilities of embedding digital technology training and innovation in key tourism awards and accreditation programs is recommended. Working with Queensland Tourism Awards entrants to improve their ability to demonstrate technology innovations in their submission would boost awareness amongst entrants of the importance of introducing new technologies to their business or organisation to demonstrate excellence.

Overtly advertising for technology innovations as part of the Queensland Tourism Industry Council's, Prize for Innovation may also encourage technology innovation and recognition of technology innovators. Categories including; the Prize for Innovation, Up-and-Comer, Industry Collaborator and Climate Hero all offer strong potential for technology innovations.

There is also the opportunity to nominate Queensland tourism businesses that have a focus on technology to mainstream awards including Telstra Business Awards and the Lord Mayor's business award.

Partnering with major sustainability certifiers to include sustainability technology to their certification assessment and training academy courses could also facilitate technology adoption. These success stories could then be shared online via the Tourism Digital Technology Gateway.

Initiative 3C: Educators as champions

Embedding digital technology skills and knowledge into the curriculum of tourism-related courses in the VET and high education sectors is important to ensure our emerging tourism workforce has the capacity to embrace digital transformation.

QTIC will work with training package developers and industry to promote the development of units of competency around:

- Software Training
- Developing Technology Briefs
- Working with Technology Providers

Please note: this is not an exhaustive list.

Furthermore, QTIC will look at opportunities to work with schools, VET and Higher Education providers to embed technology across curriculum and to inspire and upskill educators in the provision of relevant and meaningful content. This may be best achieved in line with other forums including:

- Schools:
  - Gateway Schools Network
  - Independent Schools Conference
  - Catholic Education Conference
  - Education Queensland
  - Queensland Curriculum and Assessment Authority
- VET:
  - DESBT Regional Forums
  - SkillsIQ Consultations
  - Australian Council of Private Education and Training

- Higher Education:
  - Universities Australia Higher Education Conference
  - The Council for Australasian Tourism and Hospitality Education

Recognition of innovative and proactive education programs and institutions who are leaders in digital technology training could aid participation in this initiative.

4. WORKFORCE PLANNING FOR AUTOMATION

Skill need:

Understanding the impacts and implications for automation on the tourism workforce and business operations.

Initiative 4A: Automation strategy

A key point of discussion in the workshops was the impact of automation on the Queensland workplace and the implications for tourism operators.

A state-wide Automation Potentials Plan for small-to-medium-sized businesses should be developed. This templated plan should highlight the strategic direction and financing needs for businesses as a transition toward automation occurs.

Further education to develop an understanding of automation should be undertaken. Strategic planning for investment in automation (e.g., autonomous vehicles in the next decade), re-design of the workforce and jobs, and the ability of automation to address workforce and skills shortage should be key aspects of this training. The training program should be targeted at business owners and senior managers and the intended outcome should be an implementation and financing plan that looks at the investment, human resource management and operational planning for automation.

It is recommended a new program of workshops is developed and introduced that provides the skills and knowledge for tourism business owners and Chief Executive Officers/General Managers to develop a strategic plan to consider and address automation in their workplace. The suggested format in two one-day workshops. The first workshop should overview key considerations and participants should analyse their workplace and begin developing their plan. A second workshop should be organised about one month after the first workshop. Participants should present their plan and expert advice should be provided to refine their plan.

Appendix 1 – Subsidies available for accredited training

Funding Available	Competency	Application	Target Group
No	**BSBSS00079** Digital Applications Skill Set **BSBEBU511** Develop and implement an e-business strategy **BSBMKG528** Mine data to identify industry directions **BSBMKG534** Design effective digital user experiences **BSBMKG535** Devise a search engine optimisation strategy **BSBMKG536** Develop strategies to monetise digital engagement **BSBMKG537** Develop a social media engagement plan	This skill set addresses the skills, knowledge and performance requirements to develop and design digital content in the marketing and communication industry.	Marketing Managers
No	**BSBSS00071** Digitisation Skill Set **BSBLIB506** Maintain digital repositories **ICPDMT321** Capture a digital image **ICPDMT322** Edit a digital image **ICPPRP322** Digitise images for reproduction **ICPPRP397** Transfer digital files **ICPPRP422** Digitise complex images for reproduction	This skill set addresses the skills, knowledge and performance requirements for digitising information resources.	Office Managers
No	**BSBSS00080** Media Engagement Skill Set **BSBADV507** Develop a media plan **BSBMKG510** Plan e-marketing communications **BSBMKG529** Manage client account	This skill set addresses the skills, knowledge and performance requirements to carry out media engagement in the marketing and communication industry.	Marketing and Advertising Managers
No	**SITSS00062** Online Engagement for Small Business **SITXEBS001** Use social media in a business **SITXEBS002** Develop, implement and monitor the use of social media in a business **SITXEBS003** Build and launch a small business website	A set of skills relating to social media management and website development and maintenance that equip individuals for work in a small business in the tourism, travel and hospitality industry.	Social Media Managers Marketing Managers

Funding Available	Competency	Application	Target Group
No	**SIRSS00016** Ecommerce Management **SIRXCEG007** Develop online customer service standards **SIRXECM003** Design an ecommerce site **SIRXMKT006** Develop a social media strategy **SIRXMKT007** Develop a digital marketing plan **SIRXSTR001** Develop an ecommerce strategy	A set of skills in Ecommerce Management.	Social Media Managers Marketing Managers
No	**BSBEBU511** Develop and implement an e-business strategy	This unit describes the skills and knowledge required to evaluate e-business models and strategies for use in a business context. This includes the ability to incorporate the results of these evaluations into the design of an e-business strategy, including marketing, buying and selling goods and services online.	Manager
Yes **SIR30216** Certificate III in Retail	**SIRXCEG006** Provide online customer service	This unit describes the performance outcomes, skills and knowledge required to interact with customers using online communication tools. It requires the ability to provide information to customers, handle customer difficulties, and provide customer service and support in an online environment.	Online Manager
Yes **SIR40316** Certificate IV in Retail Management	**SIRXECM001** Monitor and interpret online data analytics	This unit describes the performance outcomes, skills and knowledge required to monitor and interpret online data related to the performance of an ecommerce site. It requires the ability to access and review data, determine effectiveness of ecommerce activity and make recommendations for future improvements.	Online Manager
Yes **CUA51115** Diploma of Visual Arts	**BSBLIB504** Develop exhibition concepts	This unit describes the skills and knowledge required to explore potential themes and storylines to inform the overall development of exhibition concepts.	Tourism operators, Museum personnel
No	**BSBMKG412** Conduct e-marketing communications	This unit describes the skills and knowledge required to prepare electronic advertisements for use in internet, email or facsimile marketing communications, and to evaluate their effectiveness in achieving marketing objectives.	Marketing Managers

Funding Available	Competency	Application	Target Group
Yes **BSB20115** Certificate II in Business	**BSBITU211** Produce simple word-processed documents	This unit describes the skills and knowledge required to digitally produce word documents in a workplace context.	Tourism Operators
Yes **BSB20115** Certificate II in Business	**BSBITU212** Create and use spreadsheets	This unit describes the skills and knowledge required to correctly create and use spreadsheets and charts using both cloud-based and non-cloud based spreadsheet applications.	Tourism Operators
Yes **BSB30115** Certificate III in Business	**BSBITU311** Create and use databases	This unit describes the skills and knowledge required to use simple two-table relational databases with reports and queries, for storage and retrieval of information.	Tourism Operators
Yes **BSB30115** Certificate III in Business	**BSBITU312** Create electronic presentations	This unit describes the skills and knowledge required to design and produce electronic slide presentations using various applications and platforms.	Tourism Operators
Yes **SIT50416** Diploma of Hospitality Management	**BSBITU402** Develop and use complex spreadsheets	This unit describes the skills and knowledge required to use spreadsheet software to complete business tasks and produce complex documents.	Tourism Operators
Yes **SIT30516** Certificate III in Events	**CUALGT301** Operate basic lighting	This unit describes the performance outcomes, skills and knowledge required to plot, record, modify and operate standard lighting cues on lighting consoles typically used in small-scale productions and events.	Lighting personnel
Yes **SIT30116** Certificate III in Tourism	**SISOSCB308A** Guide a SCUBA dive	This unit describes the performance outcomes, skills and knowledge required to guide a SCUBA dive. This unit focuses on the application of planning skills to make suitable arrangements to guide groups safely on SCUBA diving activities.	Scuba Guides
Yes **SIT40216** Certificate IV in Guiding	**SITTPPD002** Develop interpretive activities	This unit describes the performance outcomes, skills and knowledge required to develop interpretive activities for different customer groups. It requires the ability to establish educational, interpretive and commercial objectives for an activity; develop operational aspects; and evaluate the success of the activity.	Guides

Funding Available	Competency	Application	Target Group
Yes **SIT50116** Diploma of Travel and Tourism Management	**SITTPPD005** Develop host community awareness of tourism	This unit describes the performance outcomes, skills and knowledge required to educate and consult local communities about tourism issues, including their costs and benefits.	Regional Tourism Organisations, Local Councils
Yes **SIT50416** Diploma of Hospitality Management	**SITEEVT001** Source and use information on the events industry	This unit describes the performance outcomes, skills and knowledge required to access and interpret current and emerging information on the events industry to enhance the quality of event coordination. This includes industry structure, technology, laws and ethical issues specifically relevant to event coordination.	Tourism and Event Managers
Yes **SIT50416** Diploma of Hospitality Management	**SITEEVT002** Process and monitor event registrations	This unit describes the performance outcomes, skills and knowledge required to process attendee registrations for events, and administer them through to finalisation. It requires the ability to record customer information, monitor attendance numbers, generate sales and operational reports, and issue customer documents for event attendance.	Event Managers
Yes **SIT50416** Diploma of Hospitality Management	**SITEEVT008** Manage event staging components	This unit describes the performance outcomes, skills and knowledge required to analyse event staging requirements and organise and monitor different staging services and products. It requires the ability to use advanced planning, organisation and communication skills combined with detailed knowledge of the event management process and broad understanding of specialist component services.	Event Managers
Yes **SIT30616** Certificate III in Hospitality	**SITHACS008** Provide accommodation reception services	This unit describes the performance outcomes, skills and knowledge required to check guests in and out of commercial accommodation establishments. It requires the ability to check daily arrivals, allocate rooms and complete relevant documentation.	Front Office Personnel
No	**ICTICT508** Evaluate vendor products and equipment	This unit describes the skills and knowledge required to evaluate and test a range of vendor products and equipment against a client's business requirements.	ICT Manager

Funding Available	Competency	Application	Target Group
No	**ICTPRG502** Manage a project using software management tools	This unit describes the skills and knowledge required to use software management tools, to manage a project from initiation to completion.	Project Managers
No	**CHCMGT004** Secure and manage funding.	This unit describes the skills and knowledge required to secure and manage funding for an organisation, program or project. Workers may be responsible for determining the amount of funding required, identifying funding sources, developing funding proposals and managing ongoing compliance with funding agreements.	Project Managers
No	**ICTICT424** - Address cyber security requirements	ICTICT424 - Address cyber security requirements	IT Manager
No	**ICTICT610** - Manage copyright, ethics and privacy in an ICT environment	This unit describes the skills and knowledge required to manage the issues of copyright and professional and ethical conduct in a team, as well as to ensure that personal information of stakeholders is handled in a confidential and professional manner.	IT Manager
No	**ICTICT418** Contribute to copyright, ethics and privacy in an ICT environment	This unit describes the skills and knowledge required to maintain professional and ethical conduct, as well as to ensure that personal information of stakeholders is handled in a confidential and professional manner when dealing with stakeholders in an information and communications technology (ICT) environment.	IT Manager
Yes **BSB42518** Certificate IV in Small Business Management	**BSBSMB423** Create a digital technology plan for small business.	Create a digital technology plan for small business. This unit describes the skills and knowledge required to develop a plan for identifying and implementing new and emerging digital technologies to achieve small business goals. It involves undertaking a basic review of business digital readiness, identifying opportunities to improve business effectiveness and efficiency, and developing an action plan for implementing digital technologies in a small business.	Business Operators

Funding Available	Competency	Application	Target Group
Yes **SIR40316** Certificate IV in Retail Management	**SIRXECM001** Monitor and interpret online data analytics	This unit describes the performance outcomes, skills and knowledge required to monitor and interpret online data related to the performance of an ecommerce site. It requires the ability to access and review data, determine effectiveness of ecommerce activity and make recommendations for future improvements.	Manager
No	**BSBMKG412** Conduct e-marketing communications	This unit describes the skills and knowledge required to prepare electronic advertisements for use in internet, email marketing communications, and to evaluate their effectiveness in achieving marketing objectives.	Marketing Officer
No	**ICTICT508** Evaluate vendor products and equipment	This unit describes the skills and knowledge required to evaluate and test a range of vendor products and equipment against a client's business requirements.	IT Manager
No	**ICTPRG502** Manage a project using software management tools	This unit describes the skills and knowledge required to use software management tools, to manage a project from initiation to completion.	IT Manager

Table 8 – Accredited training and QLD priorities subsidy availability

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