

County Tipperary Digital Strategy 2018 - 2023



Foreword – Chief Executive

Tipperary County Council is focused on enhancing the digital economy within our county. We believe that, by promoting the digital agenda through a dynamic workforce and enhanced infrastructure, County Tipperary can secure sustainable economic growth and prosperity into the future. High-speed broadband is already bringing benefits to parts of our county. We need to spread these benefits across the entire county. Within the context of the National Broadband Plan, it is important to clarify how the local authority, communities and businesses can position ourselves to maximise the benefits from existing and future rollout of high-speed broadband across the county.



Joe MacGrath
Chief Executive

Working with our partners, this five year Digital Strategy for County Tipperary sets out the objectives to enhance the digital economy in Tipperary and the actions necessary to achieve those objectives. The Strategy prioritises four key themes; Infrastructure, Enterprise, our Citizens and Training & Education. Underpinning the development of the strategy was a major programme of survey research and consultation with stakeholders across the county.

The digital sector of the economy is growing fast and the opportunities that it is creating in its dynamic and rapid development is already resulting in a number of changing models of social and business interaction. The pace of change is accelerating and this Digital Strategy seeks to position us to seize the opportunities presented by this digital transition.

Cathaoirleach Address

Digital technologies are fundamentally shifting the economic and societal landscape across Ireland, Europe and the world. Whilst technology has been part of our lives for many decades, recent years have seen a vast increase in the availability of world-leading digital products and services to people everywhere. This has had a big impact on people's lives in their homes and workplaces and opened their eyes to new opportunities in a very real way. Digital technologies provide the means not just to automate mundane, day-to-day tasks but to help us communicate with others more effectively.



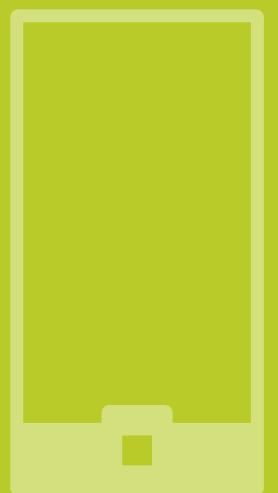
Mattie Ryan
Cathaoirleach

We have a duty to do all in our power to ensure that all of our citizens have access to these technologies so they too can derive benefit from them, not just to enhance their productive capacity but also to improve their lifestyle experience. This strategy and its implementation will deliver new possibilities in how we work, live, learn and enjoy our communities. I extend a thank you to those involved in its development and I am confident that it will provide many new opportunities across our county for all.



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INTRODUCTION TO DIGITAL TECHNOLOGIES

The increasing use of modern technologies is changing people's lives all over the world. Facilitated by a range of network technologies, both wireline and wireless, which provide access to the internet advances in communications witnessed in the last decade are unprecedented. The benefits of this digital revolution have been identified across the world by governments and by organisations such as the OECD which has been very active in promoting the benefits of the digital economy and, indeed, measuring those benefits.

In Europe, the EU recognised the potential of digital technologies at an early stage and has made the promotion of the digital economy a key focus area in recent years. It is keen to see greater use of digital technologies among businesses and citizens and has put in place programmes to speed up the process. Among the initiatives launched by the EU in the recent years have been the following –

- A range of measures to promote the availability of broadband to citizens including the development of a single telecoms market
- Efforts to promote the use of e-commerce across Europe including making cross-border transactions easier
- Measures to improve the ICT skills of citizens across the EU including the promotion of coding to young people

While many of these initiatives have been successful there is a recognition that work is still needed in two key areas. The first is to make broadband connectivity available to more citizens particularly those in rural areas. The second is to further improve the digital skills of citizens across the EU. The European Commission has admitted that "even though more people are going online, almost 50% of the population have insufficient digital skills for today's work environment" (Digital Agenda, 2014).

Key Digital Technologies – Business

In its Digital Transformation Monitor the EU has identified 7 key digital technologies whose adoption it tracks across the EU 28-member states. A full description of each is included in the Appendices to this report.

- Cybersecurity solutions
- Social Media
- Mobile services
- Cloud technologies
- Big data and data analytics
- Robotics and automated machinery
- Internet of Things

Many of these technologies are already having an impact on our businesses and workplaces, others continue to grow in significance while, for some, the full significance will not be seen for a number of years.

Key Applications of Digital Technologies

The following are examples of areas where digital technologies are expected to have a major impact on people's lives in the years to come. These are described in more detail in the Appendices.

- Smart Cities
- Driverless cars
- eHealth
- Smart Homes

Though these may appear futuristic, considerable progress is being made already around the world in the use of digital technology in urban environments as part of 'Smart Cities' initiatives. Driverless cars have been tested and are expected to make our roads safer in the future. Progress in eHealth is slower but is already having considerable impact in the developed world and

will play a very significant role in years to come. 'Smart homes' refers to the control of heating, lighting and household appliances remotely over the internet, something that is already a reality in many Irish homes.

Themes of the Digital Strategy

Building on strategies put together at national level the digital strategy for County Tipperary has been developed around four themes – Infrastructure, Enterprise, Citizens and Training and Education.

Infrastructure

Without the right infrastructure there can be no digital economy, no digital society. The fact that broadband access to the internet is a basic requirement to allow citizens to explore the potential benefits of the digital environment was recognized by the government and in order to address this challenge, the National Broadband Plan was commissioned. Progress has already been made in rolling out high-speed broadband across the country under this plan but much work is still ongoing. This is a major priority for the government and recognition that Ireland cannot optimize the benefits it obtains from the digital world until all citizens are connected.

Enterprise

The National Digital Strategy recognised the importance of the adoption of digital technologies by businesses. Key objectives specified in the plan were to get thousands of businesses online for the first time and to promote online trading, particularly among small businesses. Many businesses in County Tipperary are already trading successfully online but many more could benefit from introducing an online dimension to their sales activities.

Citizens

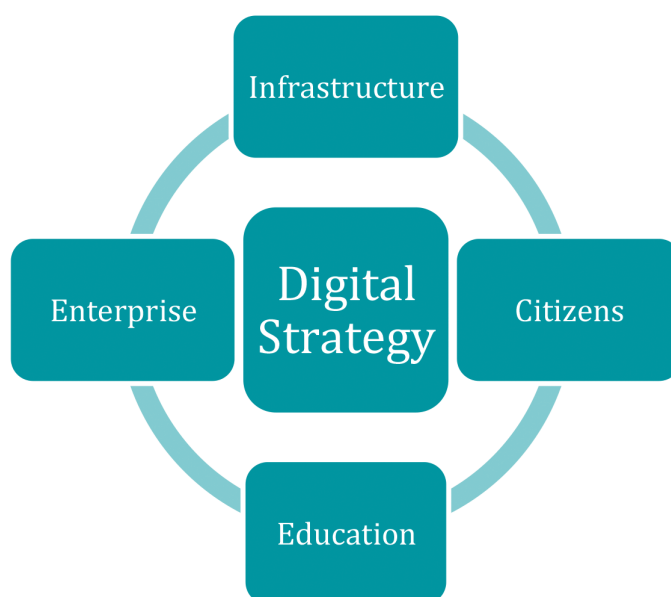
Digital technologies have the potential to offer considerable benefits to all Irish citizens and this fact was also recognised in the National Digital Strategy. Improved "citizen engagement" was

a key pillar of this plan and a stated objective was to reduce the number of people who have not yet engaged with the internet. While efforts are ongoing to connect all citizens to the high-speed broadband they require to access digital technologies, other challenges were also identified such as the need to train people in their use. Work is being done by many organisations to encourage citizens to engage with the digital world and this is the case in County Tipperary just as in other parts of the country.

Training and Education

Our final theme centres on education and this, too, was a core pillar of the National Digital Strategy, a key objective of which was "to utilise ICT to its full potential across the education system including the use of the internet in learning". The potential for digital technologies to be adopted in the education systems was further developed in the government's Digital Strategy for Schools 2015-2020. Much progress has been made across the country in improving access to high-speed broadband for schools and colleges but it is in the primary school sector that provision is most patchy at present.

Figure 1.1
Themes of County Tipperary Digital Strategy



IRELAND

THE DIGITAL CONTEXT

Developments in Ireland have been influenced significantly by what is happening across Europe and the world and a number of policy frameworks have been published by the Irish government to promote the greater use of digital technologies in this country. It is widely recognised that high-quality, high-speed broadband is critically important for schools, businesses and communities across the country and the government has implemented a number of initiatives to increase access.

National Broadband Plan

The Government sought to address greater use of digital technologies with a series of policy initiatives in recent years under the broad heading of 'The National Broadband Plan'. Key among these were 'The National Broadband Plan – Delivering a Connected Society, 2012' and the 'National Digital Strategy for Ireland, 2013'.

"The development of high-speed networks today is having the same impact as the development of electricity and transportation networks a century ago." EU Digital Agenda for Europe, 2014.

There have been a number of updates to each in the interim and they were followed by the 'Digital Strategy for

Schools, 2015- 2020'.

The National Broadband Plan's key aim is to deliver high speed broadband services to all businesses and households in Ireland. This is being achieved through a combination of:

- Commercial investment by the telecommunications sector and
- State Intervention in those areas where it is not commercially viable for private sector providers to provide the service

In December, 2015 Ireland's Broadband Intervention Strategy - Connecting Communities

was published and supports the vision of the National Broadband Plan (NBP) and of State led intervention - to connect all our communities by dealing definitively with the broadband connectivity challenge in rural areas. This will be achieved by delivering high speed broadband to all premises that will not be able to access these services through commercial investment alone.

A major part of the State Intervention Strategy involves the procurement of a company or companies to bring high speed broadband to all households and businesses within the Intervention Area. The Department of Communications, Climate action and Environment is currently looking for a company to build, maintain and operate the State Intervention network for the next 25 years. The key elements of the strategy require the following technical standards to be met by the winning bidder(s) in the procurement process namely

- a minimum of 30Mbps download and
- a minimum of 6Mbps upload or twice the maximum upload speed of existing broadband in the intervention area.

[Please refer to the High-Speed Broadband Map of County Tipperary where the State Intervention Area is shown in amber (Appendix 1)]

Since the publication of the National Broadband Plan in 2012, the commercial telecommunications sector has invested over €2.75bn. This was spent on upgrading and modernising networks which support the provision of high-speed broadband and mobile telecommunications services. In a commitment agreement signed in April 2017 the supplier eir undertook to supply broadband to a further 300,000 rural homes in a reported €200 million investment. The impact on County Tipperary will be addressed in the

following chapter. The remaining premises will be connected as part of the State Intervention component of the National Broadband Plan. The tender procurement process to roll-out high-speed broadband to these premises is not yet completed at time of writing and the government expects to award the contract(s) to the winning bidder(s) in 2018.

In addition, in 2016, the current government made a commitment to measures to assist in the rollout of the National Broadband Plan network once a contract or contracts have been awarded. The Department of Regional and Community Development has been tasked with ensuring there are no local barriers to deployment and also with identifying priority areas for roll-out. The Mobile Phone and Broadband Taskforce was established by the government “to identify immediate issues which have been hindering the delivery of a better connected digital Ireland and to investigate how better services could be provided to consumers prior to full build and roll-out of the network planned under the National Broadband Plan State Intervention (NBP)”. This made a series of recommendations including that each county should have a Broadband Officer appointed to take responsibility for mobile and broadband services and act as a single point of contact within the local authorities for dealing with the telecommunications service providers. The officer will help with preparations for the roll-out of the National Broadband Plan and to create awareness of broadband services in the county.

National Digital Strategy

The National Digital Strategy for Ireland, published in 2013, focused on three target areas –

- Enterprise – a key aim was to get 10,000 businesses online for the first time and 2,000 trading online
 - Citizens – a key aim was “to halve the number of “non-liners” (people who have not yet engaged with the internet) by 2016”
 - Education – among many initiatives the “completion of the rollout of 100mbs to all post primary schools” was a key target
- Since that is the key publication setting out

the government’s plans to promote the digital economy this report will include the same broad headings in its focus on County Tipperary.

The Department of Communications, Climate Change and Environment’s Statement of Strategy 2016-2019 stated that, in 2017, it would “commence work on a cross-Departmental basis, on a new National Digital Strategy working with industry, the public and stakeholders across Government”.

Progress Towards a Digital Economy / Society

To assess what progress has been made towards achieving these aims we can refer to the EU’s DESI Index 2017 (Table 2.1). Particularly noteworthy is the level of progress made on providing access to fast broadband subscriptions. The 2017 figure of 60% is up from 51% in 2016 and recognises the major strides the commercial sector is making

in Ireland in providing citizens with faster broadband technologies, primarily fibre. While this is positive, the fact that just 44% of the population have basic digital skills means that over half of the citizens of the country are unable

“A new generation of applications is starting to emerge such as wearable devices, connected sensors, drones, autonomous vehicles etc. These next generation applications are likely to have a far more transformative impact on people’s lives than those that have gone before”.
Dept. of Communications Strategy 2016-2019.

to benefit fully from the digital revolution. Finally, Ireland’s high ranking for use of eGovernment services suggests that there is considerable scope to attract people to online government services despite the overall low level of digital skills.

Measure	Ireland Score	Ireland Ranking	EU Average Score
Overall Ranking	n/a	8th	n/a
Fixed Broadband Coverage	96%	20th	98%
Fixed Broadband Take-Up	69%	18th	74%
4G coverage	94%	10th	84%
Fast Broadband Subscriptions (>30Mbps)	60%	8th	37%
Internet Users	79%	12th	79%
Citizens with basic Digital Skills	44%	24th	56%
eGovernment Users	58%	5th	34%

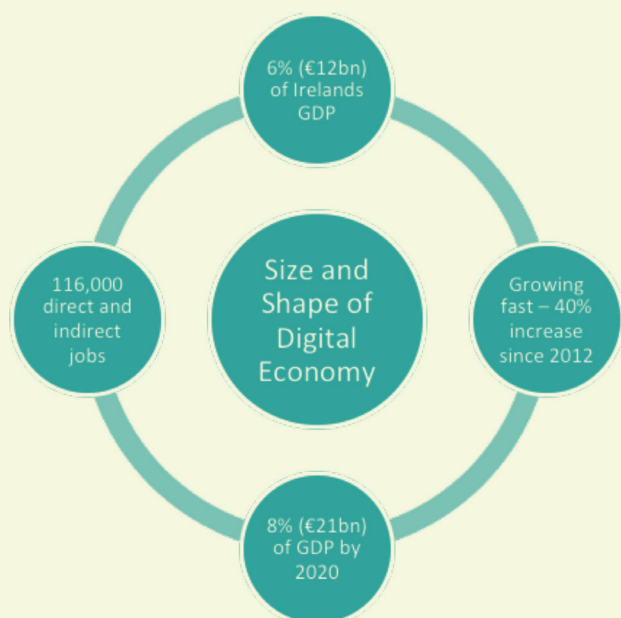
Table 2.1 Digital Economy & Society Index, 2017 – Ireland Comparison

We can perhaps summarise the above by saying that the small majority of people who have fixed broadband are being well-served in Ireland but the (relatively) low take-up of fixed broadband, combined with (and partly as a result of) the low penetration of digital skills has led to an increase in the gap between the digital “haves” and “have-nots” in Ireland.

Ireland’s Digital Economy Quantified

The graphic below provides an overview of the extent to which the digital economy is growing and, as a consequence, its increasing importance to the Irish economy.

Figure 2.1 Ireland’s Digital Economy



Source: Dept. of Communications, Climate Action and Environment, 2017

A major component of the digital economy is online shopping and the following provides some indication of the extent to which this is developing. The following statistics have been reported by the Department of Communications, Climate Action and Environment.

- €850,000 is spent every hour by Irish residents – 70% of this is spent with overseas suppliers
- 1 in 7 Irish people make a supplementary income on the internet
- Consumer activity online is set to grow 25%+ in the coming years

A major issue identified by the government has been the amount of online spending by Irish citizens that is being conducted with overseas suppliers. There is a need for more Irish organisations to engage in selling products and services online. The Trading Online Voucher Scheme was introduced to address this issue and it will be examined in the Enterprise section of this report.

ICT Strategy for Local Government

A further policy announcement which is set to have considerable influence on how local authorities engage with citizens is the Draft Local Government ICT Strategy 2017-2022 which was published in 2017. A key aim for the strategy is to take a “Digital First” approach to the supply of services to citizens.

The strategy document acknowledges that “consumers of government services expect to be able to apply, communicate and pay online. They expect more options for conducting their business than physically visiting a local office, with the expectation that services can be completed via their mobile devices. They expect that these interactions are secure and that we will keep their data safe.”

The objectives of the “Digital First” policy are outlined as follows –

To provide new digital services to citizens, businesses, council employees and council members, that:

- Enable self-service delivery through online channels including www.localgov.ie and Local Authority websites.
- All new services being delivered by Local Authorities should be designed for “Digital First” meaning they are compelling and intuitive to use and those who can use digital services will voluntarily choose to do so.
- Promote the use of social media by Local Authorities to deliver information and as an important communication channel.

The implementation of this strategy in the 2017-2022 timeframe will have a major impact on the ability of citizens to conduct business with local authorities more quickly in a secure and efficient manner. Tipperary County Council will, of course, be part of this initiative and will be rolling out services to citizens in line with the direction of the strategy at national level.

In December 2017 the government published its Our Public Services 2020 document which “establishes the overall strategy for development and innovation in the Public Service to 2020 and beyond.” The strategy is designed so that the focus of reform moves to outcomes. Six outcomes are identified of which one is the “greater use of digital to do business with the public service”. The digitisation of the public service and its engagement with citizens is at the heart of the strategy.

The plan sets out a total of 18 actions to be undertaken under three pillars as outlined below

- Delivering for Our Public
- Innovating for Our Future
- Developing Our People and Organisations

Under the first heading the first action is to “accelerate delivery of digital services” while others seek to “improve services to our customers” and “make services more accessible to all”.

Clearly the greater use of digital services is seen as a key element of such improvements. Under the guidance of the Office of the Government Chief Information Officer (OGCIO) “new and existing services will be moved to digital service provision in line with the eGovernment and Public Service ICT Strategies. These strategies will drive a more integrated, shared and digital environment that will generate more efficiency and effectiveness in service delivery.

Clearly the government has identified the need for reform but also the major role that the greater use of digital technologies will play in delivering the necessary outcomes.

Summary

The government has recognized the potential of digital technologies to make a major difference to people’s lives. It has developed a range of policies to ensure that measures are taken to provide access to these technologies to citizens to benefit them in a number of ways. It is also clear that the adoption of digital technologies by government organisations to improve services to businesses, organisations and citizens is set to increase in the coming years.



COUNTY TIPPERARY DIGITAL PROFILE

In this section we provide a digital profile of County Tipperary with the emphasis on infrastructure as issues pertaining to enterprises, citizens and Training and Education are covered in later sections.

Digital Profile – Infrastructure

Population Density / Topography

Tipperary is the 13th most “rural” county in Ireland with 58.5% of its population living in rural areas compared to the state average of 37.3%. However, the challenge is even greater for network providers in Tipperary as it is also quite sparsely populated (there are just eight counties in the Rep of Ireland with a lower population density than County Tipperary (37.2 p/km²)). In addition, the topography of the county presents difficulties, particularly for mobile network operators.

Broadband Connectivity

Providing broadband connectivity is more of a challenge in rural areas. In common with many other counties the primary wholesale network providers in Tipperary are eir and eNet. According to the Department of Communications, Climate Change and Environment a total of 46% of homes and businesses have access to fibre broadband in the county currently. By the end of 2018 it expects that approximately 15,106 more premises will have access to speeds of up 1000 Mbps.

In the National Broadband Plan (NBP) the government has committed to provide broadband speed of a minimum of 30 Mbps (download) to every premises regardless of where it is located. The proportion of premises that was initially identified as requiring state intervention was set at 49% which meant Tipperary would have the

10th highest level of dependency for broadband provision.

In a subsequent commitment agreement, reached in April 2017, the commercial sector undertook to supply broadband to a further 300,000 rural premises in a reported €200 million investment. This means that the proportion of premises requiring state intervention in County Tipperary has fallen to 36%. The total number of exchanges areas to be upgraded to fibre as part of this recent deal with eir is 56. This will bring a very significant change to the number of premises which will be able to avail of fibre broadband connectivity.

At the end of the first quarter of 2018 a total of premises 48% of premises had been “passed by fibre” with a further 13,422 to be passed by the end of 2018 .

While the commercial deployment of fibre continues across the country the final tender documents for the State Intervention element are to be published after an intensive round of engagement with the bidders. The contract(s) are expected to be awarded, and work to commence, in 2018.

Table 3.1 below shows how high-speed broadband is being rolled out in County Tipperary and the split between commercial deployment (completed and planned) and the State Intervention component.

High Speed Broadband	%	Number
Total premises	100%	83,889
National Broadband Plan – proportion requiring state intervention	36%	30,200
Commercial deployment	48%	40,266
Commercial planned deployment by end 2018	16%	13,422

Table 3.1 High-Speed Broadband Deployment Distribution, County Tipperary

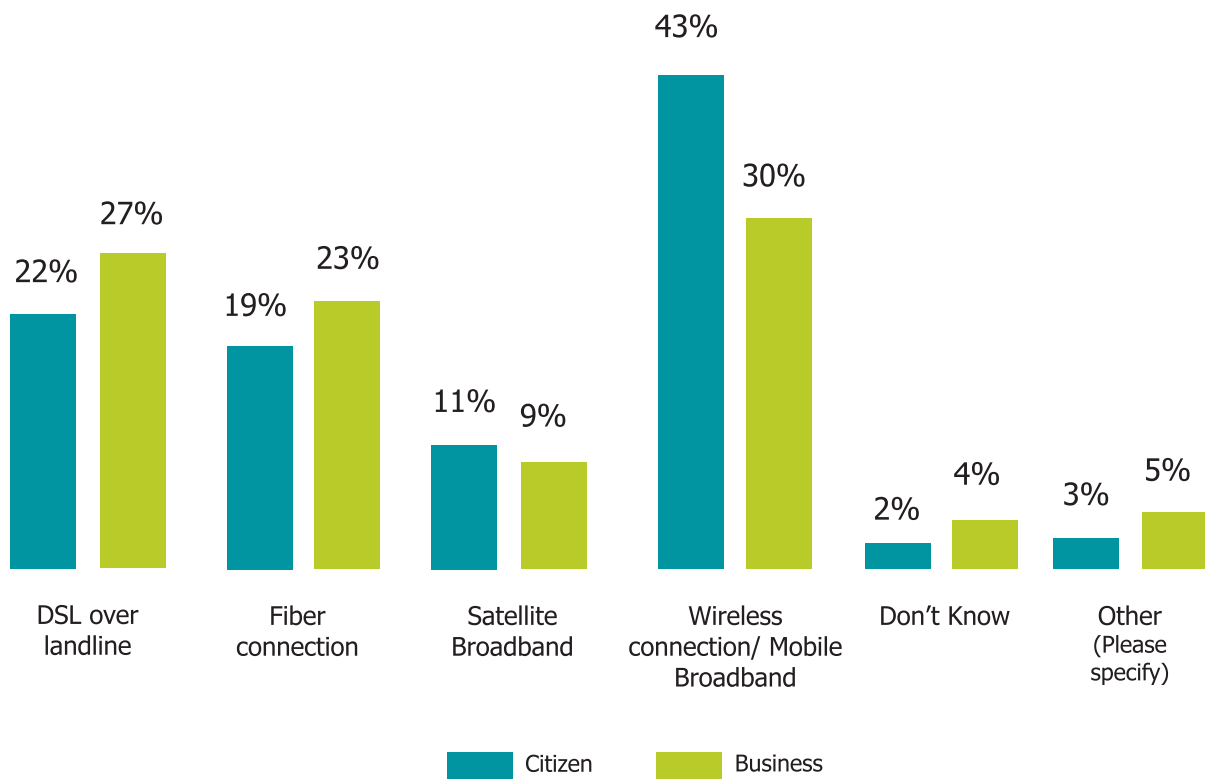
In only 7 counties is the proportion of premises requiring State Intervention higher than that of County Tipperary. On this measure, therefore, it is joint 8th out of 26 counties in terms of the challenge faced in providing high-speed broadband to its citizens.

Internet Access Methods / Broadband Speeds

In the surveys completed as part of this project respondents were asked what method they used primarily to access the internet. Citizens were asked about access from home and businesses were asked with regard to access from their premises. The most interesting finding is the extent to which people in homes and businesses are using wireless technologies/mobile broadband to access the internet. This is the case in rural areas across the country not just in County Tipperary. Despite the ongoing roll-out of fibre technology

and at the same time there has been a decline in the use of landlines across Ireland in recent years. As mobile devices, primarily smartphones, have become more prevalent many householders have decided to dispense with a landline due to the rental cost. The increased availability of 4G technology across the country has helped in this regard as it offers much higher speeds than 3G technology and is better able to cope with today's requirements for video content for example. The use of 4G mobile technology may be part of the reason that the number of people in our surveys experiencing slow download speeds was higher among those using DSL over landline than those using mobile broadband. It should be noted that customers who have dispensed with their landline connections will have to reinstate this "fixed-line" connection to avail of fibre-based services.

Figure 3.1 Internet Connection Methods, County Tipperary



across the county these findings suggest that fibre is being used in just one-fifth of homes and in fewer than a quarter of businesses.

Two linked trends are worth noting. There has been a rise in the use of mobile broadband connections for internet access in recent years

Source: Tipperary Business and Citizen Surveys, 2017 (Business Survey, n=201, Citizen Survey, n=442)

County Tipperary Digital Readiness Assessment Indecon Report

In the first quarter of 2018 Indecon economic consultancy produced its Digital Readiness Assessment (DRA) report for Tipperary County Council. That report measures digital maturity in the county across seven pillars. This compares to four pillars in this Digital Strategy report with the primary reason for the difference being the fact that the terms of reference for Indecon's research included a focus on the digital readiness of Tipperary County Council itself, an area not covered in this report.

The follow is a summary of the findings under each pillar with some additional commentary on areas of overlap with this Digital Strategy document.

- Pillar 1 – Transition to Digital – the assessment noted that Tipperary Council had almost completed its Digital Strategy, that it considers itself 'highly developed' in many areas of its support for the strategy and that it has appointed the Broadband Officer as Digital Champion. The Council has not implemented a paperless office strategy but a significant amount of office based work is paperless.
- Pillar 2 – Digital Economy and Employment – the findings class Tipperary County Council as 'emerging' under this pillar. While it has introduced three of the tabulated digital initiatives (of the seven listed in the survey) it does not collect evidence on digital offers by enterprises.
- Pillar 3 – Digital Skills – Indecon elected to focus on the % of people with computing qualifications (whereas this report we examined other demographic measures including the % with third-level qualifications). While its assessment notes that Tipperary County Council doesn't provide digital training it should also be noted that as a leading member of the Digital Strategy Steering Group the council has been in a

partnership with a number of other organisations throughout the county since early 2017, a number of which do provide such training. While Indecon rates the county as 'formative' with regard to digital skills the detailed survey work done with businesses and citizens in the preparation of this Digital Strategy suggests that 'emerging' would have been a more accurate assessment.

- Pillar 4 – Digital Services – Tipperary was classed as 'highly developed' with regard to the provision of digital services with the level of motor tax payments made online being higher than average. A number of services queried for the assessment are used extensively in the county while others were not available.
- Pillar 5 – Infrastructure – the report notes that Tipperary faces a number of structural challenges regarding digital infrastructure and ranks the county as 'emerging' in terms of digital infrastructure. This tallies with the findings of the research done as a basis for the Digital Strategy.
- Pillar 6 – Innovation and Entrepreneurship – Tipperary is classed by Indecon as 'emerging' in terms of digital innovation and entrepreneurship with just 23 '.ie' domains per 1,000 people and lower uptake of Trading Online vouchers than peer counties as also noted in the Digital Strategy.
- Pillar 7 – Community & Culture – while Indecon accurately reports that Tipperary does not currently have a digital-focused Community Engagement Strategy, it should also be noted that the Digital Strategy Steering Group has put considerable emphasis on community engagement including conducting a survey of community and voluntary organisations. In addition, organisations representing communities and community organisations are enthusiastic members of the Steering Group. The Digital Strategy report, when implemented, will have community engagement at its heart.

Summary of Tipperary Situation – Infrastructure

In this section we summarise the findings of the research that pertain to Infrastructure in County Tipperary. The findings pertaining to Enterprises, Citizens and Education will be included in the following chapters.

Fixed Broadband – a total of 40,266 premises (48%) in County Tipperary are situated within areas where commercial operators have rolled out a high-speed broadband network or have previously committed to delivering high speed broadband (including for SIRO (ESB and VODAFone) who have commenced the deployment of commercial high speed fibre broadband to 10,000 premises in Clonmel, County Tipperary)

The recent commitment agreement with the commercial telecommunications sector will deliver high-speed broadband access to a further 13,422 premises (16%) in County Tipperary by the end of 2018. This commitment is on a fully commercial basis. The remaining 30,200 premises (36%) in County Tipperary will be targeted for State Intervention of the Government's "National Broadband Plan (NBP) – Delivering a Connected Society".

Mobile Broadband – the percentage of premises in Ireland with 4G (outdoor) coverage is 94% with mobile broadband take-up at 96% (based on subscriptions per 100 people). Source: EU Digital Economy and Society Index, 2017 – Ireland.

From the research conducted to inform the development of the digital strategy we can conclude the following

- Tipperary is a rural county with low population density and for this reason a good proportion of households / premises are dependent on roll-out of the National Broadband Plan for fibre connectivity.
- The pace of roll-out of broadband across Tipperary, to rural areas in particular, has not kept pace with demand for high-bandwidth services. In addition, there is

evidence that broadband speeds in some urban areas are not as good as might be expected.

- Nonetheless, significant progress is being made by commercial operators in upgrading a range of wireline and wireless broadband technologies across the county. However, a number of mobile black-spots remain across Tipperary.
- There is quite a reliance on mobile broadband by many customers in both businesses and households across Tipperary with many households having dispensed with landlines in recent years.
- Ireland's average take-up rate for broadband is 69% (60.6% of households in Tipperary County) and the benefits of high-speed fibre broadband, as it becomes more widely available, may need to be promoted across Tipperary.
- The recent appointment of a Broadband Officer in Tipperary can act as a facilitator to speed up the roll-out of the National Broadband plan in the county during the commercial phase and when the State Intervention segment is given the go-ahead. Over 30,000 premises remain to be connected to fibre in County Tipperary during this latter phase of the National Broadband plan and Tipperary County Council will play its part to ensure this is completed as quickly as possible.

Objectives and Actions – Infrastructure

Having conducted extensive research on the situation in the county Tipperary County Council, in conjunction with its partner organisations has produced the following set of objectives and actions to be undertaken to ensure each one is achieved.

Objective i1

- To facilitate the provision of high-quality, high-speed broadband access to as many people (at home, work and leisure) as possible across County Tipperary. To ensure

that any logistical challenges with regard to deployment of broadband technologies across the county are addressed as expeditiously as possible.

Actions

- i1.1 Continue the programme of engagement with telecommunications providers in Tipperary, recommended by the Mobile Phone and Broadband Taskforce Report 2016, already underway, to facilitate commercial providers to increase and improve broadband coverage across the county.
- i1.2 Engage collaboratively with telecommunications providers and others to provide and fund public broadband (WiFi) access to the central shopping area of all towns in Tipperary with a population of 1,500 or more.
- i1.3 Identify sources of funding at both national and EU level to support the provision of public broadband access in these towns and Villages, e.g. WiFi4EU.
- i1.4 Provide public WiFi access in all public offices, libraries and arts centres, leisure and amenity buildings under the control of Tipperary County Council and promote Wifi provision in similar amenity-type buildings under the control of private sector organisations or agencies.
- i1.5 Pending National legislative amendments ensure that all new builds are broadband-enabled as standard including the requirement that ducting is in place to facilitate connection to a high-speed fibre broadband network.
- i1.6 In association with the local community and the mobile phone operators, continue to identify black spots of mobile phone coverage and quality in County Tipperary with a view to the identification of public assets that could potentially be used to improve this coverage.
- i1.7. Continue to engage with eNet, which manages and operates Metropolitan Area Networks on behalf of the State, to improve the take-up of services on these networks in County Tipperary,

to identify locations for new networks and where existing networks might be extended.

- i1.8. Work with Remote rural communities and stakeholders to progress the provision of Strategic Community Access Hubs (SCAH's) in the early part of the National Broadband Plan build which will remain in situ until the network deployment has been completed in the surrounding area. These 12 hubs will be used to facilitate households and business in the more remote regions in the County by giving them early access to the network.

Objective i2

- To promote the benefits of high-speed broadband to ensure that, where it is available, uptake is as high as possible.

Action

- i2.1 Continue to engage with communities (both local and business) on creating awareness of the National Broadband Plan and undertake marketing initiatives to promote the significant benefits of high-speed broadband network services in order to ensure strong demand for these services as they become available in the area.

Enterprise is one of the three pillars of the National Digital Strategy. We have already seen data which demonstrates that the digital economy is growing at many times the rate of the offline economy. If they are to continue to grow and thrive, commercial Irish enterprises and public-sector organisations need to further embrace the potential offering by digital technologies. In this section we provide a summary of the findings of the research conducted in the enterprise sector. A more comprehensive insight can be found in the Appendices.

Information Society Statistics – Ireland

The CSO published statistics at the end of 2016 which provided evidence of Ireland’s leadership

Across all employment size classes, the proportion of enterprises that have made e-Commerce purchases is higher than those enterprises who have made e-Commerce sales. CSO, Information Society Statistics - Enterprises, 2016

role in the digital economy. The 67% of enterprises that used social media in 2016 was up from 60% in 2014. The CSO also pointed out that 52% of large enterprises (> 250 employees) had

engaged in sales via electronic transfer in 2016.

Irish enterprises are well ahead of the EU average with regard to purchase of internet advertising and cloud computing. All are indicators of increased engagement with the digital economy.

Table 4.1
Information Society - Enterprises, 2016 – Ireland vs EU 28

Measure Ireland %	EU 28	Average
Use of Social Media	67%	45%
Use of Social Networks	65%	42%
Purchased cloud computing services	36%	21%
Purchased internet advertising	34%	25%

Source: CSO, 2017

National Digital Strategy – Enterprises (Trading Online)

Enterprise was one of the pillars of the government’s National Digital Strategy and the key aim was to encourage and support micro-enterprises (< 10 employees) to trade online. The two components of this were as follows -

- To develop skills and confidence among owner/managers
- To provide financial support of €2,500 in matched funding (to fund the development of ecommerce capability)

Since 2014 when the scheme was initiated a total of 3,300 businesses have successfully applied for a voucher. A survey of 800 participant businesses was undertaken in 2016 and the following are some of the findings -

- Sales increased by an average of 21%.
- 84% saw an increase in customer enquiries.
- 73% said new business was additional and did not displace existing sales.
- 60% began to export
- 89% said the trading online component of their business will become more important within the next six months.

The level of uptake of the Trading Online Voucher scheme on a county-by-county basis is shown in the chart below.

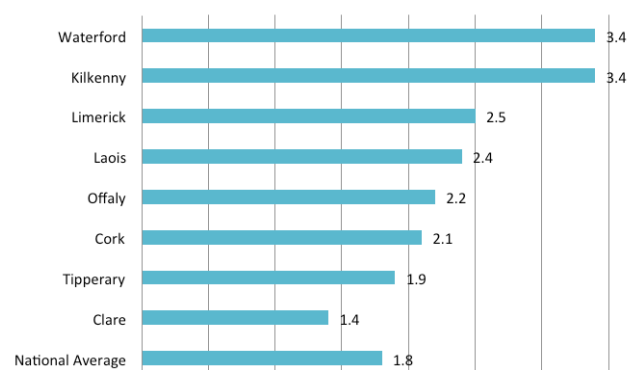


Figure 4.1 - Trading Online Voucher Uptake – Tipperary Compared to Neighbouring Counties (% per 100 Businesses) Source: Dept. Communications, Climate Action and Environment, 2017

Tipperary Business Survey

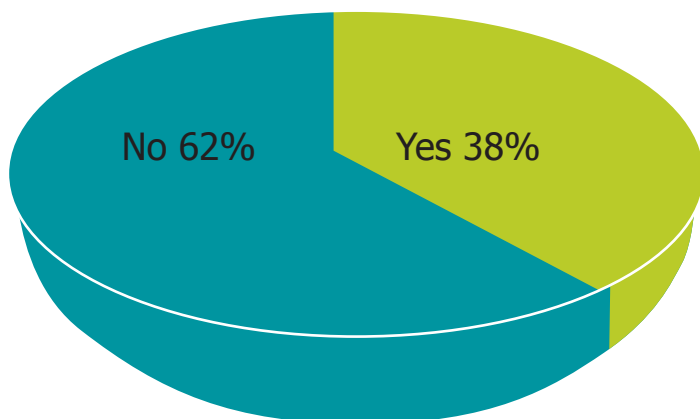
In this section we summarise some of the findings of the survey of Tipperary businesses / organisations conducted as part of the development of the digital strategy.

The distribution includes a significant proportion of SMEs but there is also representation from larger organisations including some of the IDA multinationals present in the county.

Selling Online

From the questionnaire respondents were asked whether they had engaged in selling online. Quite a high proportion have done so. We cannot assume from this that these respondents have full ecommerce capability implemented at their organisations.

Figure 4.2 - Selling Online



Source: Tipperary Business Survey, 2017. n=216

Challenges

Businesses were asked to identify the challenges they are facing in their attempts to benefit more from digital technologies. If the opportunities exist why are more businesses taking advantage? Three key challenges were identified and are listed in Figure 4.3 below. The primary one is technological. Broadband availability was cited as the main challenge by just over half of all businesses. There are two dimensions to this. On the one hand it can prevent a business from having a viable online presence. More importantly,

however, if good connectivity is not available to its customers a business will not be able to fulfil its potential. This is particularly true when a business is focused on a geographical area where its customers don't have access to broadband of sufficient quality to engage with the business via digital means.

However, the fact that half the businesses surveyed admitted they lack the skills to exploit the online world is also very significant.

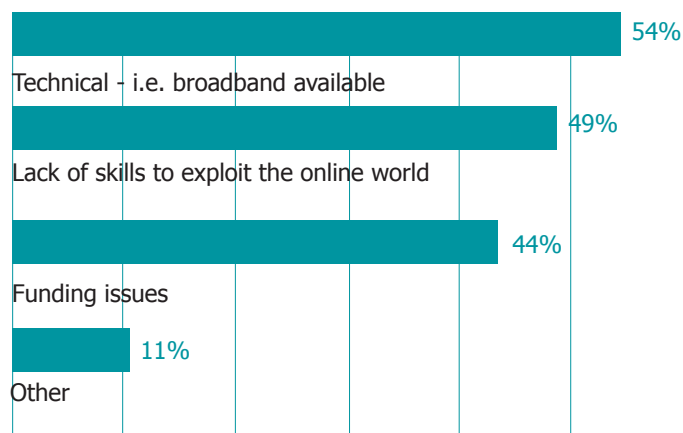
While the issue of broadband availability can only be resolved by government acting at national level, initiatives to upskill businesses can be undertaken at a local level. Furthermore, if businesses don't possess the skills to exploit the online world then improved broadband availability will only go some way to solve the problem.

"As people do more online shopping their need to do bricks and mortar shopping lessens - they tend to come into town just to meet for coffee...this is a big issue for smaller towns." - Business Survey Respondent

A further issue identified, mostly by public sector organisations, was that of funding. This suggests that many organisations don't have the funds available either to invest in digital technologies or the training they require to improve their skills.

Figure 4.3

Benefitting from Digital Technology – Challenges



Source: Tipperary Business Survey, 2017. Multiple responses permitted. n=169

Summary of Tipperary Situation – Enterprises

The business profile of Tipperary is similar to that of other rural counties with a broad mix of traditional and newer industries including a significant agriculture sector. The county hosts a number of global multinationals that are very significant in their scale and influence on the local economy and there are many small businesses in Tipperary who operate in the digital economy. The major focus of the National Digital Strategy, as it pertained to Enterprises, was the promotion of Trading Online Vouchers to small businesses.

From the research we can conclude the following

- Our survey of Tipperary businesses in a broad mix of industries showed that the vast majority accepted or made online payments while over a third had engaged in selling online.
- The majority consider that increased digital technology usage is having an impact on their business and, for 44%, the impact is major. While more see this as an opportunity than a threat, it has increased the number of competitors for around half of all businesses and increased price pressure for many.
- The challenges they face in benefitting from digital technology are two-fold. The first is the issue of broadband availability over which they have little control. The other is the issue of their lack of skills to exploit the online world.

Objectives and Actions – Enterprises

Having conducted extensive research on the situation in the county Tipperary County Council, in conjunction with its partner organisations has produced the following set of objectives and actions to to be undertaken to ensure each one is achieved.

Objective e1

- To have more business people trained in the specific skills they need to exploit the digital economy in a business context.

Actions

- e1.1 Draw up an action plan to identify the skills that people require and to improve the skills of business people with regard to their engagement with digital technologies.
- e1.2 Undertake an initiative whereby businesses in Tipperary would be continuously informed about developments in digital technologies and their application in the business environment. A specific focus should be on informing businesses in the retail sector about the major changes taking place in retail across the world as a result of the growth in online shopping.
- e1.3 Engage with Teagasc/Dept. of Agriculture and other relevant organisations to see what proportion of the farming community use online services and examine how to engage farmers in the greater use of such services.

Objective e2

- Increase the number of businesses in Tipperary that engage in online selling.

Actions

- e2.1 Undertake a further effort to increase the number of businesses applying for Trading Online Vouchers. Part of this to involve looking at levels of uptake in previous years and seeking to increase the funds being made available to businesses in County Tipperary for this purpose.
- e2.2 Continue the ongoing initiatives in the county to promote the benefits of online shopping to local businesses. Many Tipperary businesses have seen how engagement with customers via social media, blogging and online selling has had a positive impact on trade. Case studies of such businesses could be produced and used as part of this effort.
- e2.3 Undertake a parallel initiative to encourage people to 'shop local online'. Too much online shopping is with sellers from outside Ireland such a promotion will help change this.

Objective e3

- Ensure that business locations are made available for new businesses in the digital technology space to set up in one or more urban centres in Tipperary, whether as start-ups, or relocating to the area.

Action

- e3.1 Encourage the provision of one or more Digital Hubs in the county.
- e3.2 Digital-specific disciplines including Games Design, Animation and Creative Media & Design are major focus areas of LIT's Tipperary-based campuses. Promote the development of start-up firms in the county in. Digital-specific disciplines including Games Design, Animation and Creative Media & Design, the major focus areas of LIT's Tipperary-based campuses. This could involve the existing Questum centre in Clonmel or other sites in the county.

Objective e4

- In light of the new "Digital First" ICT strategy for local authorities and in the knowledge that usage of e-government services in Ireland is high where they are available, an objective for Tipperary County Council is to increase the availability of online services to businesses, other organisations and citizens.

Action

- e4.1 Tipperary County Council to increase the availability of online services to businesses, organisations and citizens
- e4.2 Provide relevant public data in 'open data' format.

Objective e5

- Continue to explore the potential for the 'Tipperary' brand to be used by businesses to market their products (and services) online. One possibility would be to link to the "Tipperary, the place, the time" web portal (www.tipperary.ie) with the aim to facilitate small businesses to sell products online. Part of the exploration would be to identify industries that might benefit from being on such a portal, for example, arts and crafts

businesses and artisan food producers. The site might also have links to tourism products and services.

Action

- e5.1 Stakeholders in the enterprise area to explore the potential for further use of the "Tipperary" brand to help businesses in the county engage with and sell online to customers.

Objective e6

- Promote the concept of home-working itself (primarily to the self-employed) and Tipperary as a location to live and to work from home, as high-speed broadband continues to be rolled-out across the county and the potential for people to engage in home-working increases.

Action

- e6.1 Undertake an initiative to promote Tipperary as a "work-from-home" location when the roll-out of high-speed broadband has progressed to more areas.

Increased digitalisation has had a very significant impact on the lives of people in many parts of the world. The past decade has seen global digital brands such as Facebook, Twitter, Google and Amazon become household names. Behaviours have changed dramatically. How we buy products and services, how we consume news, music and video content have all been revolutionised during this time. There has been major disruption of many industries too.

As we have already seen the EU has sought to create conditions for the digital society to thrive for the benefit of its citizens. The creation of the Digital Single Market has been the primary initiative in this regard. Among the initiatives the EU has championed are smart cities and ehealth.

Digital Skills

The EU's Digital Progress Report 2017 is linked to the DESI index referred to earlier and the section on Human Capital is useful at pointing to some challenges Ireland faces with regard to digital skills availability.

Table 5.1 - Digital Progress Report, 2017 – Human Capital, Ireland / EU Comparison

Measure	Ireland Score	Ireland Ranking	EU Average Score
Overall Ranking	n/a	12th	n/a
Internet Users	79%	12th	79%
Citizens with basic Digital Skills	44%	24th	56%
STEM Graduates (per 1000 people aged 20-29)	25	1st	22
eGovernment Users	58%	5th	34%

Source: EU, DEPR, 2017

In the ICT Skills Action Plan 2014-2018 Ireland set itself the target of making the country the global leader in ICT talent and skills. This included the target of meeting 74% of industry demand for high-level ICT skills from the education

system by 2018 (up from 60% in 2014). When we see that the number of STEM graduates per 1000 individuals being produced in Ireland is the highest in the EU this demonstrates that progress is being made.

While Ireland is making progress in developing specialist skills to support the needs of the ICT industry it has more mixed record at the other end of the scale.

One goal of the National Digital Strategy, 2013 was to halve the number of “non-liners” by 2016, (which would mean reducing it by over quarter of a million). The BenefIT programme, through which the government aimed to do this, provided 140,000 training places in the years to 2015 with further allocations of budget in 2016 and 2017. However, EU statistics clearly show that the proportion of citizens that have never used the

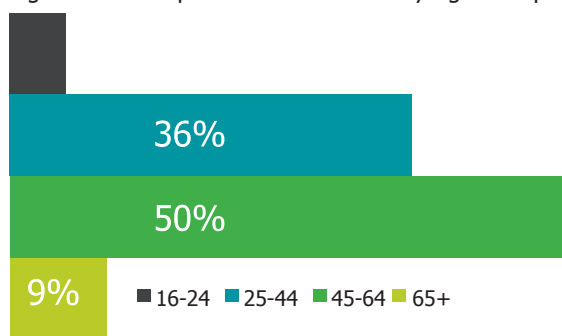
“Whilst Ireland ranks first for STEM (Science, Technology, Engineering, Mathematics) graduates, it ranks very low (24th place) when it comes to basic digital competences of the general population.” EU Digital Progress Report, 2017

internet has fallen slowly, from 18% in 2012 to 15% in 2016. As the table above demonstrates, Ireland now lies in 24th place in the EU with regard to the proportion of its citizens that have basic digital skills, a mere 44%. The CSO reported in its publication Information Society – Households, this year that “of the 11% of households with no internet access, 43% reported that this was due to a lack of skills.” Ireland needs to improve on these figures if its citizens are to benefit from the digital economy. EU research has, however, also demonstrated that Irish people are enthusiastic users of e-government services where they are available (e.g. motor taxation, online passport applications).

Tipperary Citizen Survey

In addition to the business survey we conducted a survey of Tipperary citizens to gain some insight into their digital experiences and practices. A total of 440 respondents completed the citizen survey, the majority via an online survey platform with a minority completing a hard-copy version of the questionnaire. The figure below shows the spread of respondents by age-group with the vast majority in the 25-64 brackets. However, 9% were in the 65+ range, an age-group that we have already seen tends to be least attracted to the digital age. As the survey was "self-selecting" (i.e. people elected to complete it rather than being approached to do so) the findings are not fully representative of the population but provide an excellent insight.

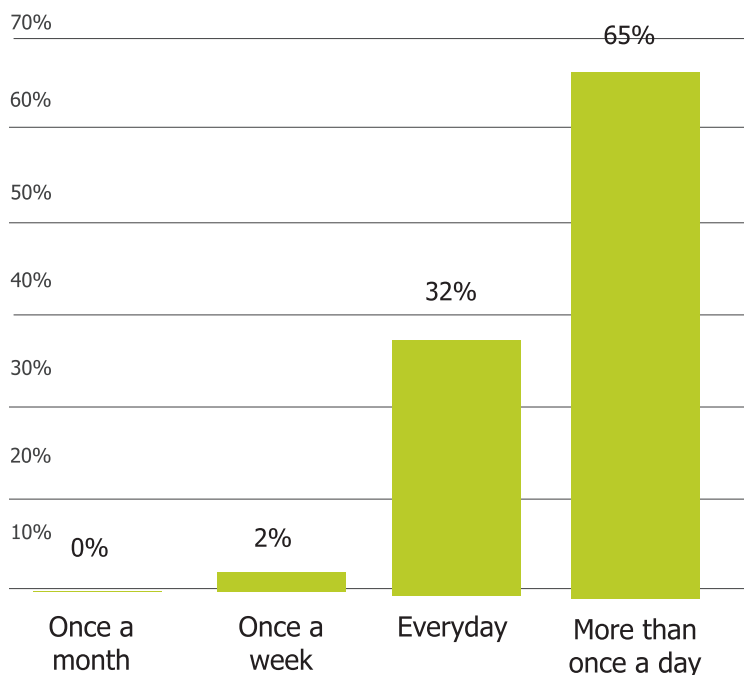
Figure 5.1 - Respondent Distribution by Age-Group



Frequency of Internet Use

Having examined the demographics of the survey sample we now move on to analyse some of the more substantive questions. Respondents to the Citizen survey are very regular internet users, more so than the average among the Irish population as a whole.

Figure 5.2 - Frequency of Internet Use

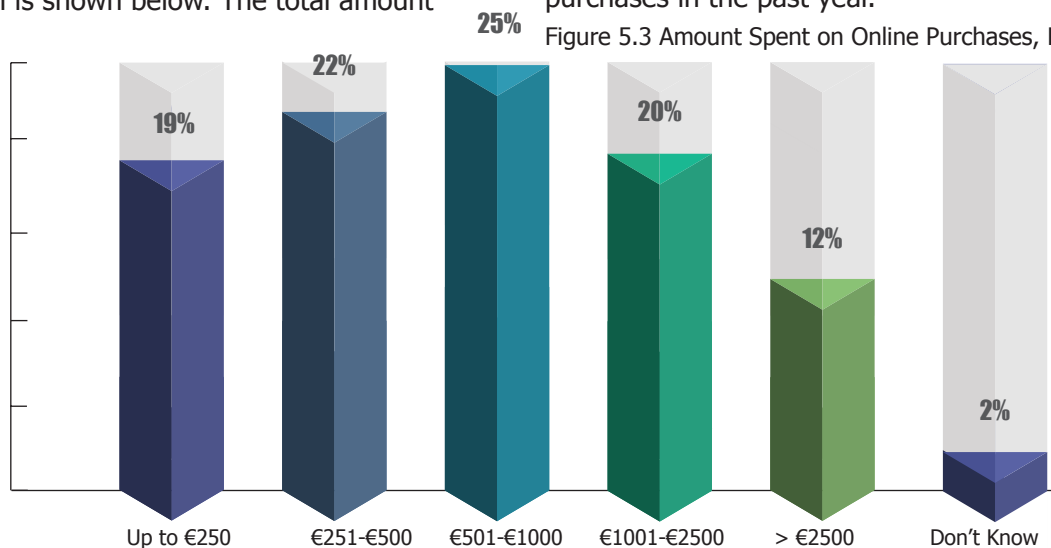


Amount Spent Online

When asked to estimate how much they had spent on online purchasing in the past year the vast majority of those who had made an online purchase were able to offer an estimate. The distribution is shown below. The total amount

spent by the 331 citizens, who made an online purchase in the past year and were able to provide a figure, was €460,000. Around a third of respondents spent over €1,000 each on online purchases in the past year.

Figure 5.3 Amount Spent on Online Purchases, Past Year

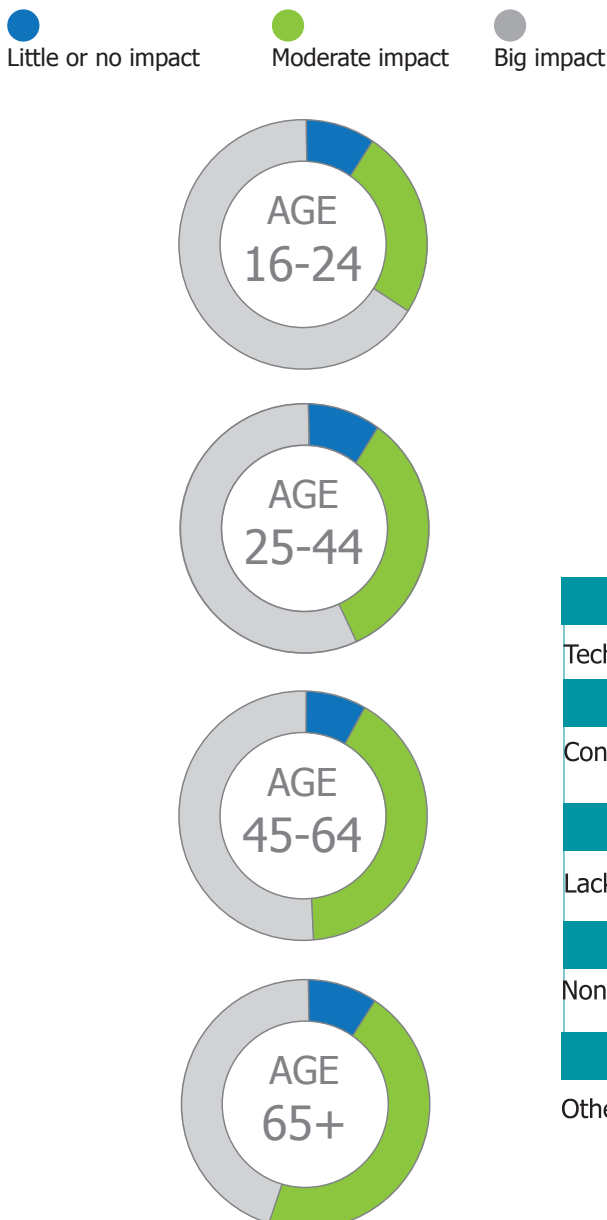


Source: Tipperary Citizen Survey, 2017 n=405

Impact of Digital on Lifestyle

In order to assess the impact of digital technologies respondents were asked to state to what extent they think their use of digital technologies has impacted on their life (e.g. in terms of changed behaviour, greater reliance on the internet). Clearly the majority believe the impact to be considerable and the younger the respondent the bigger the impact that digital technologies have had. However, half the respondents in the two older age-groups were of the opinion that the impact on them had been big also.

Figure 5.4 Life Impact of Digital Technology Usage, By Age-Group



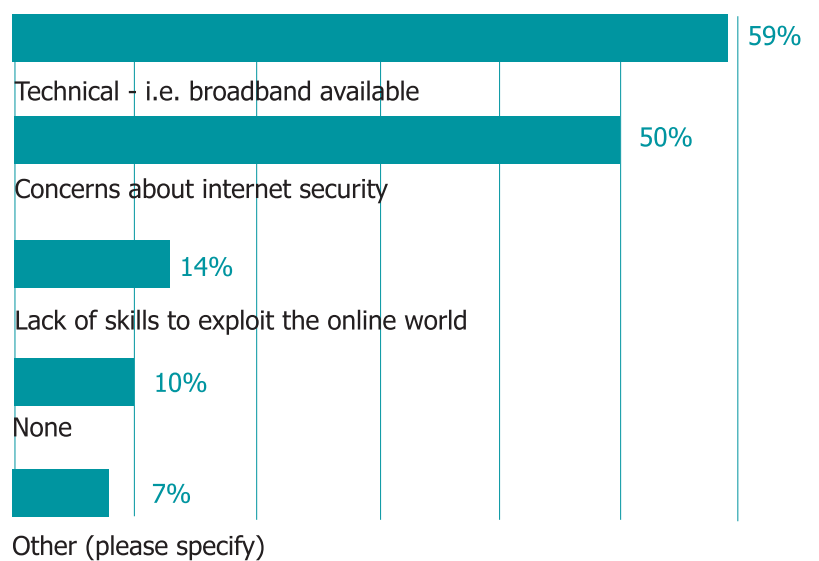
Source: Tipperary Citizen Survey, 2017

Benefitting from Digital Technology – Challenges

Finally, respondents were asked to state what challenges they face in benefiting more from digital technologies. The responses are interesting on their own merits but also in the ways they differ from the challenges faced by businesses and organisations. There is little variation in the proportion who consider the availability of broadband to be the primary issue. However, for citizens, as distinct from businesses the next biggest concern is internet security. This is understandable since businesses and organisations are in a position to invest in IT security and to have someone responsible for it in a structured way. Individual citizens, however, have to take responsibility for their own internet security.

A further finding of interest is the fact that so few respondents consider they lack the skills to exploit the online world. Among businesses, the proportion was 49%. Clearly people who are using the internet at work view the challenges differently than when they are using it for their own personal activities. Interestingly, many are concerned about their lack of skill to optimise the benefits of digital technologies in the workplace while just a small proportion consider it a problem at home or college.

Figure 5.5 Benefitting from Digital Technology – Challenges



Source: Tipperary Citizen Survey, 2017 n=402. Multiple responses allowed.

Summary of Tipperary Situation – Citizens

Data from the EU provides evidence of Ireland's comparative position with respect to the digital skills of its citizens. On the one hand we are producing more STEM (Science, Technology, Engineering and Mathematics) graduates per head of population than any other EU country. On the other hand, just 44% of our citizens are considered to have basic digital skills compared to the EU average of 56%, putting us in 24th place in the list of member states.

The National Digital Strategy set targets for the reduction in the number of "non-liners" (persons who never, or very rarely, use the Internet) and moved to promote the Benefit training programme to improve skills. More work needs to be done, however.

From the research we can conclude the following

- The majority of respondents to the Tipperary Citizen survey are frequent internet users who engage in a wide range of activities online including online shopping. The respondents to the survey spent a total of €460k online in the past year.
- Messaging via Facebook, WhatsApp or Snapchat was found to be the second most popular way that respondents communicate with family and friends after voice calls.
- Research undertaken by the EU has shown that Irish citizens are enthusiastic users of government services and our research shows that people from Tipperary are no different.
- Usage of digital technology by Tipperary citizens has led to change. When asked to what extent their use of digital technologies had impacted their lives (e.g. in terms of \ changed behaviour, greater reliance on the internet) a total of 53% indicated it has had a major impact.
- The biggest challenges citizens believe they face in benefiting more from digital technology are broadband availability and concerns about internet security.

Objectives and Actions – Citizens

Having conducted extensive research on the situation in the county Tipperary County Council, in conjunction with its partner organisations has produced the following set of objectives and actions to be undertaken to ensure each one is achieved.

Objective c1

- To ensure that the number of people who don't engage with digital technologies at all, those known as "non-liners", is reduced.

Actions

- c1.1 Continue to develop collaborative programmes with all stakeholders to provide for digital skills training for citizens who don't use the internet ("non-liners") with a view to removing this key barrier to digital adoption.
- c1.2 Increase the number of people participating in Benefit (and other "Introduction to Computing" training) courses.
- c1.3 Undertake a marketing program to target older people onto digital training courses
- c1.4 Explore the potential for young people to provide information training / mentoring for older people on digital technologies.

Objective c2

- To promote the use of digital technologies to all citizens and to improve their understanding of the benefits of engagement with the digital economy and to further educate people how to do so in a safe and secure way.

Actions

- c2.1 Produce a document specific to Tipperary to promote the benefits of the digital economy and to show people how they can get online.
- c2.2 Undertake a training programme across the county that follows the roll-out so that training events take place in a location soon after high-speed broadband becomes available in the area.
- c2.3 Identify groups of citizens who may need specific training in digital technologies and to provide this where it required and continue existing programmes, e.g. for people with disabilities.

Objective c3

- Increase the availability of online services to businesses, other organisation and citizens.

Action

- c3.1 Tipperary County Council to increase the availability of online services to businesses, organisations and citizens
- c3.2 Explore ways in which the County

Library Service could further its level of digital interaction with citizens and also what role it might play in providing training in digital technologies to those who require it.

- c3.3 Work with communities and stakeholders to progress the provision of digital community hubs in the County. These hubs to be used for digital training, and provide citizens who have little or no digital skills with the confidence, motivation and skills to use and benefit from digital technologies.

Objective c4

- Encourage organisations in the community and voluntary sector have an online presence and, more specifically, that every village in the county would have a website.

Action

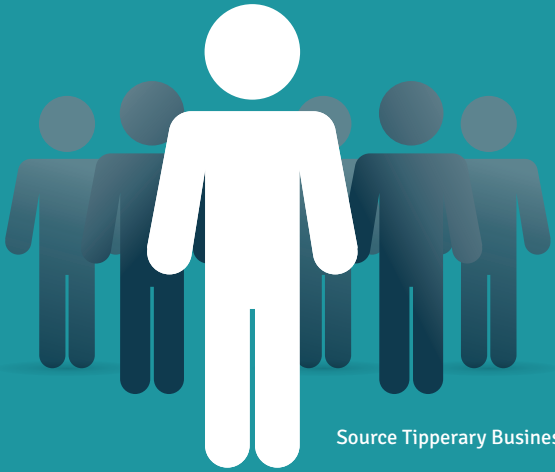
- c4.1 Undertake a training program for volunteers to set up a social media presence for their community or voluntary organisation.
- c4.2 Set up a portal to provide links to all village and parish websites in the county.
- c4.3 Promote the use of <http://events.whatsonintipp.ie> as a portal for all events across the county, organised by community, voluntary and state agencies to enhance communication and awareness of activities for all in Tipperary.



52%

More Competitors

Proportion of business surveyed who claimed that increased digital usage has led to increased in the number of competitors in the markets they operate in



Source Tipperary Business Survey

over

€10000

spent by a third of citizens



A third spent over €1k online in the past year



44%

Major Impact



Proportion indicating that use of digital technologies by consumers has had a major impact on their business.

65%

More than once a day

Opportunity

52%

Proportion indicating the increased use of digital technologies by consumers is more of an opportunity than a threat to their business



53%

Proportion indicating that using digital technologies has had a big impact on their lives.

TRAINING AND EDUCATION

A further pillar of the government's National Digital Strategy, 2013 related to education. A stated focus of this policy was to promote elearning, the use of ICT in education. Among many actions identified at this stage was one which promised to provide 100 Mbps broadband connectivity to all post-primary schools by the end of 2014. This initiative is led by HEANet which provides an ultra-fast 100Gbps optical network connecting Ireland's education and research network. This network is already connecting more than a million students and nearly 89,000 researchers, teachers and support staff across primary, secondary and third level Institutions nationwide.

Digital Strategy for Schools

Prior to publishing the Digital Strategy for Schools in 2015 the Department of Education and Skills conducted a baseline analysis to establish

"Meaningful ICT integration is the responsibility of all and is a key component of a high-quality 21st century education system." Digital Strategy for Schools, 2015

the extent to which teachers and schools were using ICT to assist with teaching. The findings were published in the Census Report which reported that

"many people currently view ICT as something peripheral and not core to teaching, learning and assessment." The Strategy Report of 2015 highlighted the need for improvements. The Strategy was developed and presented around four key themes identified in the Census Report.

These were as follows –

- Theme 1
Teaching, Learning and Assessment Using ICT
- Theme 2
Teacher Professional Learning
- Theme 3
Leadership, Research and Policy

- Theme 4
ICT Infrastructure

Teaching, Learning and Assessment Using ICT

The key aim of this part of the strategy was to "further embed ICT into our education system at all levels." With this aim in mind it was decided to adopt the UNESCO ICT Competency Framework for Teachers so that "schools will have greater clarity around the concept of ICT integration."

Teacher Professional Learning

This component of the strategy sought to ensure that "all teachers are equipped with the knowledge, skills and confidence to integrate ICT into their practice." To facilitate this, it was recognised that there was a need to integrate ICT for teaching, learning and assessment at each stage of teacher training and development.

Leadership, Research and Policy

The importance of leadership, not just from government but from schools' management and other stakeholders, was also recognized and of the importance of monitoring implementation of the strategy.

ICT Infrastructure

Finally, reference was made to the roll-out of 100 Mbps broadband to secondary schools and to the fact that roll-out of improved connectivity to the primary sector would be ongoing during the 2015-2018 timeframe. The important role that cloud computing could play in schools was also noted and the requirement for schools to be able

to access support and advice on new trends as well as access to technical support.

An Advisory Group was put together to review progress half-way through the Strategy's timeframe in 2016. Arising from this an updated list of actions was published which were to be carried out in each quarter of the 2017. A key initiative was announced – "a Digital Learning Framework is under development which will allow schools evaluate their progress and measure how they stand against benchmarks of effective and highly effective practice using digital technologies in teaching and learning". Other initiatives include an online portal for the sharing of content and examples of good practice, a capital investment programme and a continuation of investment in the roll-out of broadband connectivity to primary schools.

"Realise the potential of digital technologies to enhance teaching, learning and assessment so that Ireland's young people become engaged thinkers, active learners, knowledge constructors and global citizens to participate fully in society and the economy." Vision for ICT Integration, Digital Strategy for Schools, 2015

Summary of Tipperary Situation – Training and Education

A number of sources were used to obtain insight into the current situation with regard to digital technology usage in the Education sector in Tipperary. There are 160 primary schools, 31 post-primary schools, 4 specialist schools in the county,

two campuses of LIT, in Clonmel and Thurles and a Mary Immaculate College campus in Thurles. A number of schools completed the Business / Public Sector survey and a number of Key Informant

"We struggle with very poor and intermittent broadband service as well as very poor funding from Dept. of Education to fully commit to digital learning." School Principal, Business Survey, 2017

interviews were also completed by senior people in the education sector.

While high-speed broadband has been connected to all secondary schools the situation in the

primary sector needs improvement and work is ongoing at national level to improve the situation in the coming years as part of the Digital Strategy for Schools 2015-2020.

From the research we can conclude the following

- The ETB reported that since many people in Tipperary lack adequate broadband at home it reduces their potential to undertake adult learning courses which are based on a "blended learning" approach (where the course combines an online component delivered in conjunction with traditional classroom methods).
- There is a mix of technologies used to provide connectivity to schools with DSL line, mobile broadband and satellite broadband all mentioned by survey respondents.
- Since schools are using different suppliers and technologies for broadband they are getting a range of speeds. Most reported speeds of less than the government's target of 30 Mbps, while others claimed the speed is inconsistent. Some respondents did not know what speeds they were achieving.
- There is evidence from a number of sources that poor broadband is hampering the ability of primary schools in Tipperary to adopt modern cloud-based ICT solutions designed specifically for this sector and that this problem is not confined to rural schools.
- The presence of LIT campuses in both Clonmel and Thurles is considered an advantage in relation to the development of a digital economy. The range of related courses are as follows:

LIT Thurles	LIT Clonmel
Computing	Creative Media & Design
Games Design & Development	Digital Animation Production
	Game Art & Design

- In the third-level sector there are many opportunities for students to pursue courses that are digital-specific in LIT's two Tipperary-based campuses. It is also possible to engage in some courses via online/remote learning.

Objectives and Actions – Training and Education

Having conducted extensive research on the situation in the county Tipperary County Council, in conjunction with its partner organisations has produced the following set of objectives and actions to to be undertaken to ensure each one is achieved.

Objective t1

- The overall objective is to ensure that students at all educational institutions in Tipperary are provided with the means to embrace digital technologies to fulfil their learning potential.

Action

- t1.1 As part of the Broadband Officer's engagement with Telecoms companies any steps that are possible to take to facilitate the provision of improved high-speed broadband to primary schools should be acted upon.
- t1.2 The Broadband Officer to explore the potential for the implementation of a dedicated broadband communications connection between the LIT campuses at Thurles and Clonmel.

Objective t2

- The county to benefit as much as possible from the presence within the county of third-level institutions, primarily in the form of the LIT Tipperary campuses.

Action

- t2.1 Continue to engage with relevant personnel at the LIT Tipperary-based campuses and those at similar colleges in neighbouring counties, e.g. University of Limerick, LIT Limerick, Carlow IT, Waterford IT, Mary Immaculate College, and other organisations in the education sector, to seek ways to progress the development of a digital economy in the county.

Objective t3

- To promote the importance of software coding among young people since there a large and growing requirement for software engineers and, in addition, there is evidence that involvement in activities such as programming and gaming can be beneficial to some young people who find regular educational curricula challenging.

Actions

- t3.1 Identify and support organisations or initiatives that aim to increase young people's awareness of, and engagement in, coding, e.g. CoderDoJo clubs.
- t3.2 Support to be provided for initiatives such as the "Games to Inspire" project (an initiative of Youth Work Ireland in conjunction with LIT) which seeks to explore the potential of games to inspire, to motivate and to positively impact on the lives of young people.

Objective t4

- To promote greater awareness of the risks to children in the digital environment and how the children can be protected from harm.

Actions

- t4.1 Continue to work to promote healthy online activity by young people and to provide information for parents on internet use
- t4.2 Continue to work with schools and school boards to improve their knowledge and awareness of issues around child safety online, including the promotion of National Internet Safety day in all primary and secondary schools in Tipperary.

STRENGTHS, WEAKNESSES, THREATS AND OPPORTUNITIES ANALYSIS (SWOT)

For the analysis of the strengths, weaknesses, opportunities and threats (SWOT) we are able to draw on over 500 inputs from respondents to the Key Informant, Business and Voluntary surveys conducted as part of the project. The following is a summary of the input. A more comprehensive analysis is included in the Appendices.

Table 7.1 SWOT Analysis – County Tipperary

Strengths	Weakness
<ul style="list-style-type: none"> • Location – from many points of view including ease of access, proximity to cities, airports, tourism potential, attractiveness to families • ‘Tipperary’ brand name – well-known across the world and a county with much to offer and sell • Growing awareness of the potential benefits of the digital economy in the county • Presence of a mix of businesses from family businesses to global multinational companies - with many already making good use of digital technology • Good educational / training infrastructure to provide the skills necessary to fulfil the potential 	<ul style="list-style-type: none"> • Inadequate broadband available to many in the county including primary schools • Rural county with low population density • Lack of key infrastructure, e.g. University. • Younger workers attracted away to large cities while older people lack digital skills • Lack of critical mass of digital businesses in county • Awareness of digital potential, while growing, not yet adequate • Lack of funding, training and support in general to improve digital skills to required level
Opportunities	Threats
<ul style="list-style-type: none"> • Great potential for businesses to grow revenue, access new markets via digital platforms • Improve productivity for businesses and public-sector organisations • Great access to better quality services for citizens and communities • Tipperary can be marketed as an attractive location for home-working • Digital offers a great opportunity for the development of rural enterprises • Great opportunity for digital to enhance education and training, especially to those in rural locations • Potential for businesses to group together and to market bundled products, e.g. tourism - accommodation and activities 	<ul style="list-style-type: none"> • Competition from other locations especially large cities resulting in existing businesses moving away • Businesses and citizens being disadvantaged by inadequate broadband provision • Further migration of young people to other locations • Further loss of market share to online businesses; further reduced footfall • Reduced access to services and supports in general • Lack of private and public investment and over-dependency on current industries

Source: Tipperary Citizen, Business and Key Informant Surveys, 2017

CONCLUSION

The digital revolution is happening today and is impacting all of us. Digital technologies are changing how we work, how we do business, how we spend our leisure time, how we learn, how we communicate, how we live in fact. In recognition of this, Tipperary County Council, came together in partnership with a number of other organisations in 2017 to set up the Digital Strategy Steering Group to assess the potential for the county to benefit from digital technologies and to identify what challenges need to be overcome if the people of Tipperary are to optimise these benefits in their working and personal lives.

This Digital Strategy report is the result of a comprehensive programme of research and consultation with close to a thousand individuals who provided valuable input on their digital experiences as business people, educators, community representatives and as citizens. The findings demonstrate clearly that many people are already making use of digital technologies and that this usage has had impact on daily lives. Others are not and the research has allowed us to identify the key challenges that need to be addressed if everyone is to have the same opportunity. A structure to co-ordinate the roll-out of the NBP and to provide a framework to measure the delivery on the findings of this County Tipperary Digital Strategy has been established (Appendix 8).

Access to high-speed broadband is a necessity for all citizens to optimise their use of digital technologies and work is ongoing under the National Broadband Plan to deliver this across the country. We have seen that citizens in many parts of County Tipperary are dependent on the State Intervention component of the plan being fulfilled in order to gain access.

However, other challenges exist. The research demonstrated that many people who use these technologies for work purposes believe they lack the expertise to fully exploit the value they might derive from them in a business context. This Digital Strategy report highlights actions to be taken to address this training need.

Furthermore, County Tipperary, like other parts of Ireland, has a significant proportion of citizens who don't use digital technologies at all, or rarely. While there is a pressing need to provide such people with training there is an even tougher challenge of persuading them to undertake the training in the first place. Once again there are a number of actions earmarked to engage with those who have not yet embraced the digital world.

There is a clear signal coming from many citizens surveyed who have gained great benefit from their engagement in the digital economy. Online purchasing by citizens is widespread but online selling by businesses in the county is not keeping pace. More businesses need to get the message their customers are giving them. Failure to engage in the digital world won't just inhibit progress for businesses but could threaten the survival of some.

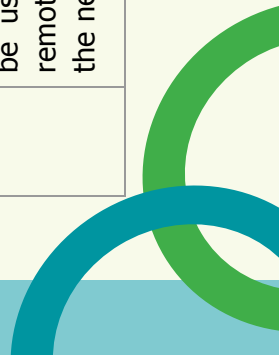
A key finding of the research is that this is not just an issue of broadband infrastructure. Access to high-speed broadband is essential but if people at home and at work are not made aware of the potential and provided with the training they require to optimise the gains they derive from it the county as a whole will lose out. The actions contained in this Digital Strategy need, therefore, to be implemented in their entirety. When this work is complete and the digital playing field has been made level for all citizens of County Tipperary then, and only then, will we witness how digital technologies can help unleash the creativity of people of all ages, all levels of education, rural and urban and from all walks of life, to enhance their lives.



OBJECTIVES & ACTIONS

Actions	Lead/Partners	KPI	When
Infrastructure			
Objective To facilitate the provision of high-quality, high-speed broadband access to as many people (at home, work and leisure) as possible across County Tipperary. To ensure that any logistical challenges with regard to deployment of broadband technologies across the county are addressed as expeditiously as possible.			
Actions	Lead/Partners	KPI	When
i1.1 Continue the programme of engagement with telecommunications providers in Tipperary, recommended by the Mobile Phone and Broadband Taskforce Report, already underway, to facilitate commercial providers to increase and improve broadband coverage across the county.	Tipperary County Council BPMG	National Broadband Plan Timeframe	2020
i1.2 Engage collaboratively with telecommunications providers and others to provide and fund public broadband (WiFi) access to the central shopping area of all towns in Tipperary with a population of 1,500 or more.	Tipperary County Council BPMG, Telecommunications Providers	8 Towns availing	2023
i1.3 Identify sources of funding at both national and EU level to support the provision of public broadband access in towns and villages, e.g. WiFi4EU.	Tipperary County Council BPMG, STDC, NTLP	4 Towns availing	2023
i1.4 Provide public WiFi access in all public offices, libraries and arts centres, leisure and amenity buildings under the control of Tipperary County Council and promote Wifi provision in similar amenity-type buildings under the control of private sector organisations or agencies.	Tipperary County Council BPMG	Public WiFi in all locations under Council Control.	2023

i1.5	Pending National legislative amendments ensure that all new builds are broadband-enabled as standard including the requirement that ducting is in place to facilitate connection to a high-speed fibre broadband network. Implement National Policy as/when directed.	Tipperary County Council Planning Dept	Practice implemented	Q4 2018
i1.6	In association with the local community and the mobile phone operators, continue to identify black spots of mobile phone coverage and quality in County Tipperary with a view to the identification of public assets that could potentially be used to improve this coverage.	Tipperary County Council BPMG & Mobile Phone Operators, STDC, NTLP	Table of Black-spots identified and 5 locations prioritised per annum	2018- 2023
i1.7	Continue to engage with eNet, which manages and operates Metropolitan Area Networks on behalf of the State, to improve the take-up of services on these networks in County Tipperary, to identify locations for new networks and where existing networks might be extended.	Tipperary County Council BPMG, eNet	Annual report on uptake of 1). Number of new Networks identified and under construction and 2). Number of existing networks to be extended to be sent by eNet to BPMG	2018/19/20
i1.8	Work with Remote rural communities and stakeholders to progress the provision of Strategic Community Access Hubs (SCAH's) in the early part of the National Broadband Plan build which will remain in situ until the network deployment has been completed in the surrounding area. These 12 hubs will be used to facilitate households and business in the more remote regions in the County by giving them early access to the network.	Tipperary County Council BPMG, STDC, NTLP	12 hubs in situ	2020



i2	Objective: To promote the benefits of high-speed broadband to ensure that, where it is available, uptake is as high as possible.			
	Actions	Lead/Partners	KPI	When
i2.1	Continue to engage with communities (both local and business) on creating awareness of the National Broadband Plan and undertake marketing initiatives to promote the significant benefits of high-speed broadband network services in order to ensure strong demand for these services as they become available in the area.	TCC BPMG, STDC, NTLP, TPPN,	Annual programme in place	2018, 2019, 2020
Enterprise				
	Actions	Lead/Partners	KPI	When
e1	Objective: To have more business people trained in the specific skills they need to exploit the digital economy in a business context.			
e1.1	Draw up and roll out an action plan to identify the skills that people require and to improve the skills of business people with regard to their engagement with digital technologies.	Local Enterprise Office, ETB, Chambers of Commerce, IBEC & Trade Unions	Action plan with timeframe	2018-2019
e1.2	Undertake an initiative whereby businesses in Tipperary would be continuously informed about developments in digital technologies and their application in the business environment. Initial focus on Retail.	Local Enterprise Office, ETB, Retail Sub-group of SPCEED	Marketing Plan in place	2019-2019
e1.3	Engage with Teagasc/Dept. of Agriculture and other relevant organisations to see what proportion of the farming community use online services and examine how to engage farmers in the greater use of such services.	Teagasc, Dept. of Agriculture, STDC, NTLP (Rural Social Scheme)	5% Increase in number of farmers using online services	2018-2020
e2	Objective: Increase the number of businesses in Tipperary that engage in online selling.			

	Actions	Lead/Partners	KPI	When
e2.1	Undertake a further effort to increase the number of businesses applying for Trading Online Vouchers. Part of this to involve looking at levels of uptake in previous years and seeking to increase the funds being made available to businesses in County Tipperary for this purpose.	Local Enterprise Office	10% increase year on year	2018, 2019, 2020
e2.2	Continue the ongoing initiatives in the county to promote the benefits of online shopping to local businesses. Develop case studies of businesses engagement with customers via social media, blogging and online selling could be produced for campaign	Local Enterprise Office	4 Seminars 4 case studies	2018, 2019, 2020
e2.3	Sustain the initiative 'common tipp shop local' to encourage people to 'shop local online'.	Local Enterprise Office	Year 1 - 50% increase in followers	2019-2023
e3	Objective: Ensure that business locations are made available for new businesses in the digital technology space to set up in one or more urban centres in Tipperary, whether as start-ups, or relocating to the area.			
	Actions	Lead/Partners	KPI	When
e3.1	Encourage the provision of one or more Digital Hubs in the county.	Local Enterprise Office, BPMG	3 Digital Hub in place	2019/20/21
e3.2	Digital-specific disciplines including Games Design, Animation and Creative Media & Design are major focus areas of LIT's Tipperary-based campuses. Promote the development of start-up firms in the county in Digital-specific disciplines including Games Design, Animation and Creative Media & Design, the major focus areas of LIT's Tipperary-based campuses . This could involve the existing Questum centre in Clonmel or other sites in the county.	Local Enterprise Office, LIT, Enterprise Ireland	Evaluation of the Buzzquarter Pilot	2019

e4	Objective: In light of the new "Digital First" ICT strategy for local authorities and in the knowledge that usage of e government services in Ireland is high where they are available, an objective for Tipperary County Council is to increase the availability of online services to businesses, other organisations and citizens.			
	Actions	Lead/Partners	KPI	When
e4.1	Tipperary County Council to increase the availability of online services to businesses, organisations and citizens	Tipperary County Council BPMG	I new services per annum - Online planning in place by Q4 2018	2019/2020/2021
e4.2	Provide relevant public data in 'open data' format.	Tipperary County Council BPMG	5 Datasets published every year	Annual to 2023
e5	Objective : Continue to explore the potential for the 'Tipperary' brand to be used by businesses to market their products (and services) online.			
	Actions	Lead/Partners	KPI	When
e5.1	Stakeholders in the enterprise area to explore the potential for further use of the "Tipperary" brand to help businesses in the county engage with and sell online to customers.	LEO/TCCBPMG	Tipperary brand Portal established	2020
e6	Objective : Promote the concept of home-working itself (primarily to the self-employed) and Tipperary as a location to live and to work from home, as high-speed broadband continues to be rolled-out across the county and the potential for people to engage in home-working increases.			
	Actions	Lead/Partners	KPI	When
e6.1	Undertake an initiative to promote Tipperary as a "work-from-home" location when the roll-out of high-speed broadband has progressed to more areas	LEO, Tipperary County Council BPMG	% Increase in people working from home	2020/21/22

Citizens				
c1	Objective: To ensure that the number of people who don't engage with digital technologies at all, those known as "non-liners", is reduced.			
	Actions	Lead/Partners	KPI	When
c1.1	Continue to develop collaborative programmes with all stakeholders to provide for digital skills training for citizens who don't use the internet ("non-liners") with a view to removing this key barrier to digital adoption.	ETB, LEO, NTLP, STDC, TPPN, Irish Rural Link	10% Increase courses uptake	2018-2020
c1.2	Increase the number of people participating in BenefitIT (and other "Introduction to Computing" training) courses.	ETB, NTLP, STDC, TPPN, (Dev Cos to lead)	10% Increase numbers taking courses	2018-2020
c1.3	Undertake a marketing program to target older people onto digital training courses	NTLP & STDC, Tipperary Co Co, ETB, TPPN	Marketing Plan developed. 1 phase launched.	2018-2020
c1.4	Explore the potential for young people to provide information training / mentoring for older people on digital technologies.	Youthwork Ireland, Youth Service Providers	1 programme developed	2020-23
c2	Objective: To promote the use of digital technologies to all citizens and to improve their understanding of the benefits of engagement with the digital economy and to further educate people how to do so in a safe and secure way.			
	Actions	Lead/Partners	KPI	When
c2.1	Circulate a document specific to Tipperary to promote the benefits of the digital economy and to show people how they can get online.	STDC/NTLP, TPPN, Tipperary Libraries	1 issue distributed	2019 -2023

c2.2	Subject to funding undertake a training programme across the county that follows the roll-out so that training events take place in a location soon after high-speed broadband becomes available in the area	ETB, BPMG	1 training event in per district roll out (5)	2018-2023
c2.3	Identify groups of citizens who may need specific training in digital technologies and to provide this where it required and continue existing programmes, e.g. for people with disabilities.	ETB, STDC, NTLP	1 training courses to a target group per annum	2018-2023
c3	Objective: Increase the availability of online services to businesses, other organisation and citizens.			
	Actions	Lead/Partners	KPI	When
c3.1	Tipperary County Council to increase the availability of online services to businesses, organisations and citizens	Tipperary County Council BPMG	Review Indecon findings and set targets to improve	2018-2023
c3.2	Explore ways in which the County Library Service could further its level of digital interaction with citizens and also what role it might play in providing training in digital technologies to those who require it.	BPMG Tipperary County Council, Libraries.	2 collaborations annually	2018-2023
c3.3	Work with communities and stakeholders to progress the provision of digital community hubs in the County. These hubs to be used for digital training, and provide citizens who have little or no digital skills with the confidence, motivation and skills to use and benefit from digital technologies.	BPMG Tipperary County Council,	12 Hubs to be in place initially. Review progress and impact	2019-20
c4	Objective: Encourage organisations in the community and voluntary sector to have an online presence and, more specifically, that every village in the county would have a website.			

	Actions	Lead/Partners	KPI	When
c4.1	Undertake a training program for volunteers to set up a social media presence for their community or voluntary organisation.	TPPN, STDC, NTLT, ETB, TVC	5 new social media presences for community or voluntary organisations	2019-2023
c4.2	Set up a portal to provide links to all village and parish websites in the county.	BPMG Tipperary Co. Co.	Community/Parish Portal on TCC website	2020-23
c4.3	Promote the use of http://events.whatsonintipp.ie as a portal for all events across the county, organised by community, voluntary and state agencies to enhance communication and awareness of activities for all in Tipperary	Tipperary Co Co, LCDC, TPPN, STDC, NTLT, TSP	10% increase in postings from community groups	2018-2023
Training and Education				
t1	Objective: The overall objective is to ensure that student's at all educational institutions in Tipperary are provided with the means to embrace digital technologies to fulfil their learning potential.			
	Actions	Lead/Partners	KPI	When
t1.1	Facilitate the provision of improved high-speed broadband to primary schools should be acted on.	BPMG Tipperary County Council	All primary schools connected to high speed broadband	2020
t1.2	Explore the potential for the implementation of a dedicated broadband communications connection between the LIT campuses at Thurles and Clonmel.	LIT, BPMG Tipperary County Council	Report on value of same to BPMG	2018-2019
t2	Objective: The county to benefit as much as possible from the presence within the county of third-level institutions, primarily in the form of the LIT Tipperary campuses.			

	Actions	Lead/Partners	KPI	When
t2.1	Continue to engage with relevant personnel at the LIT Tipperary-based campuses and those at similar colleges in neighbouring counties, e.g. University of Limerick, LIT Limerick, Carlow IT, Waterford IT, and other organisations in the education sector to seek ways to progress the development of a digital economy in the county.	BPMG Tipperary County Council, ETB, All colleges.	1 Symposium hosted	2019
t3	Objective: To promote the importance of software coding among young people since there a large and growing requirement for software engineers and, in addition, there is evidence that involvement in activities such as programming and gaming can be beneficial to some young people who find regular educational curricula challenging.			
	Actions	Lead/Partners	KPI	When
t3.1	Identify and support organisations or initiatives that aim to increase young people's awareness of, and engagement in, coding, e.g. CoderDoJo clubs.	Youth Work Ireland, Youth Service Providers,	1 coding classes or events per annum	2020
t3.2	Support to be provided for initiatives such as the "Virtual Youth (Games to Inspire)" project (an initiative of Youth Work Ireland in conjunction with LIT) which seeks to explore the potential of games to inspire, to motivate and to positively impact on the lives of young people.	Youth Work Ireland, Tipperary County Council, LIT	Digital Strategy Presentation at any such event held in County	2018-2023
t4	Objective: To promote greater awareness of the risks to children in the digital environment and how the children can be protected from harm.			
	Actions	Lead/Partners	KPI	When
t4.1	Continue to work to promote healthy online activity by young people and to provide information for parents on internet use. Existing guidelines reviewed for parents on safe and healthy Internet use.	Tipperary CYPSC, ETB, Youth Service Providers, TPPN, NTLT, STDC	Disseminate of new guidelines through appropriate network. 1 Promotion of webwise.ie and other resources for parents per annum	2018-2023
t4.2	Continue to work with schools and school boards to improve their knowledge and awareness of issues around child safety online including the promotion of National Internet Safety Day in all primary and secondary schools in Tipperary.	Tipperary CYPSC,NTLP, STDC, Youth Service Providers, TPPN	Participation in National Internet Safety Day per annum	2019-2023

APPENDICES



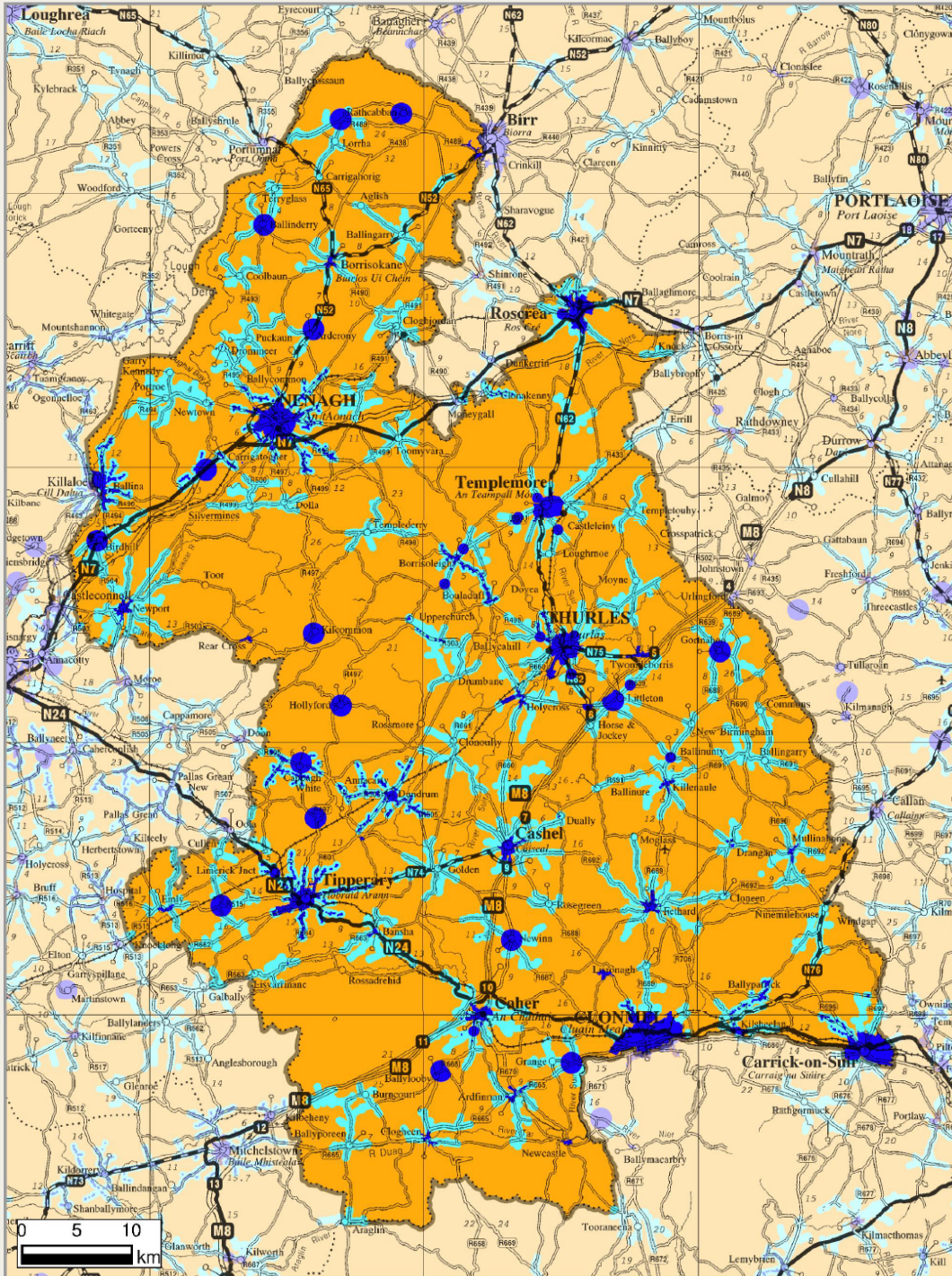
High Speed Broadband Map – Q1 2018



Roinn Cumarsáide, Gnómhaithe ar son na hAeráide & Comhshaoil
 Department of Communications, Climate Action & Environment

High Speed Broadband Map
Tipperary
 Q1 2018

National
 Broadband Plan
County



Produced by the Department of Communications, Climate Action and Environment, 2018. Ordnance Survey Licence No. EM 0047218 © Ordnance Survey Ireland/Government of Ireland. Published May 2018

Total Number of Premises in Tipperary	83,889
State Intervention Area	36%
Commercial Deployment	48%
Commercial Planned Deployment	16%

www.broadband.gov.ie



European Union
 European Regional
 Development Fund

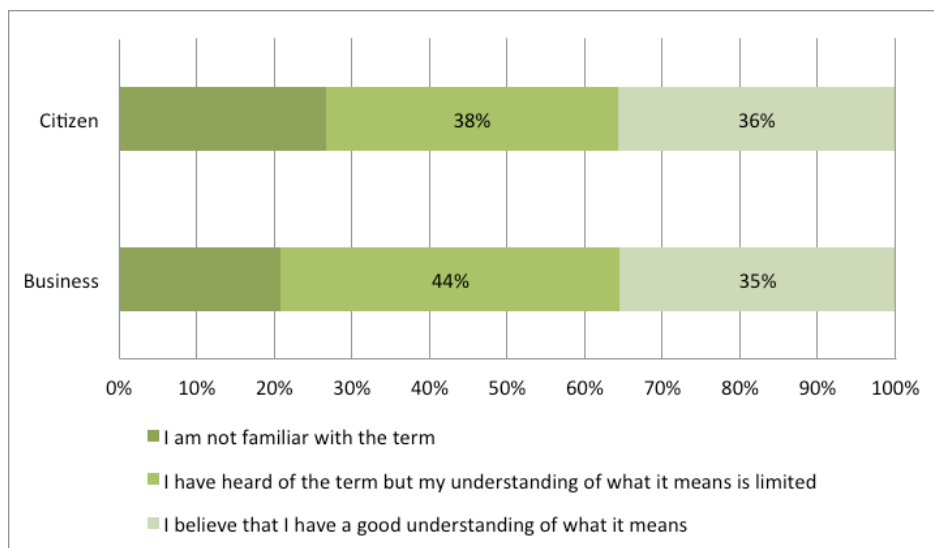
A2.1 Introduction

In order that the Digital Strategy for Tipperary would be based on robust evidence a number of online surveys were conducted by Market Dynamics during the course of the research. The main report makes reference to many of the survey findings in the various sections. However, space did not allow for a more comprehensive analysis of the data. This is provided in this section for those who wish to explore the survey findings in more detail. The first section provides an introductory context to the research looking first at the level of digital awareness among citizens and businesses and then examining levels of broadband connectivity.

Awareness of the Digital Economy

Respondents in each of the surveys carried out as part of this research were asked about their level of understanding of the term “digital economy”. The level of awareness of the business respondents is better than that of citizens in general. Overall, just over a third of respondents in the business and citizen category claim to have a good understanding of the digital economy. In Ireland, and across Europe, authorities have identified that there is work to be done to educate citizens on the potential for the digital economy to benefit them. Clearly, Tipperary is no different to other places in this regard.

Figure A2.1
Awareness of Term “Digital Economy”



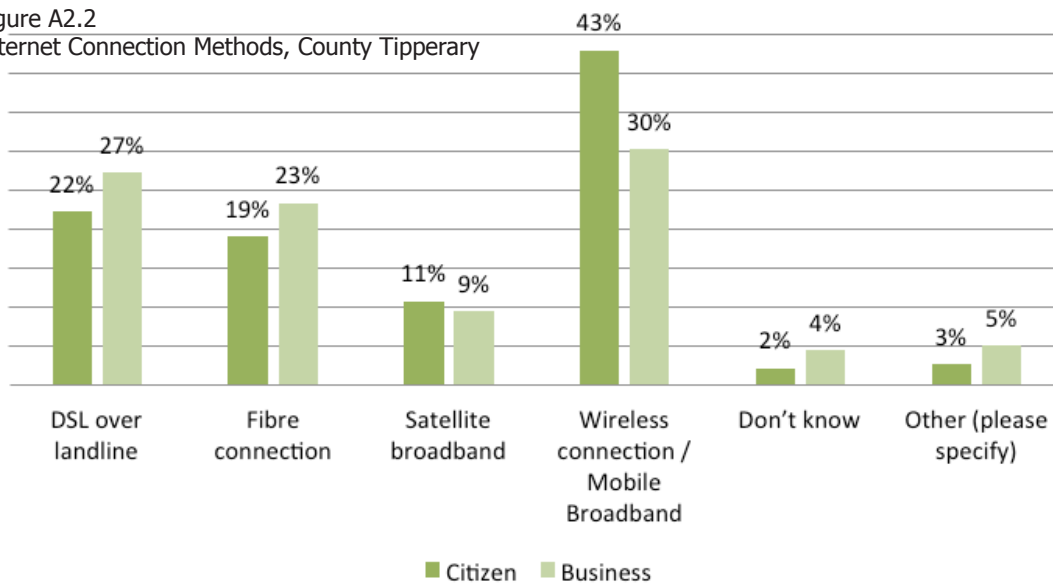
Broadband Connectivity

Internet Access Methods / Broadband Speeds

In each of the surveys completed as part of this project we asked the target respondents what method they used primarily to access the internet. Citizens were asked about access from home, businesses with regard to access from their premises. Perhaps the most interesting finding is the large extent to which people in homes and businesses are using wireless technologies/mobile broadband to access the internet. Despite the ongoing roll-out of fibre technology across the county these findings suggest it is the primary means of connectivity in just one-fifth of homes and fewer than a quarter of businesses.

Two linked trends are worth noting. There has been a rise in the use of mobile broadband connections for internet access in recent years and at the same time there has been a decline in the use of landlines across Ireland. As mobile devices, primarily smartphones, have become more prevalent many householders have decided to dispense with a landline due to the high rental cost. The increased availability of 4G technology across the country has helped in this regard as it offers much higher speeds than 3G technology and is better able to cope with today’s requirements for video content for example. The use of 4G mobile technology may be part of the reason that the number of people in our surveys experiencing slow download speeds was higher among those using DSL over landline than those using mobile broadband.

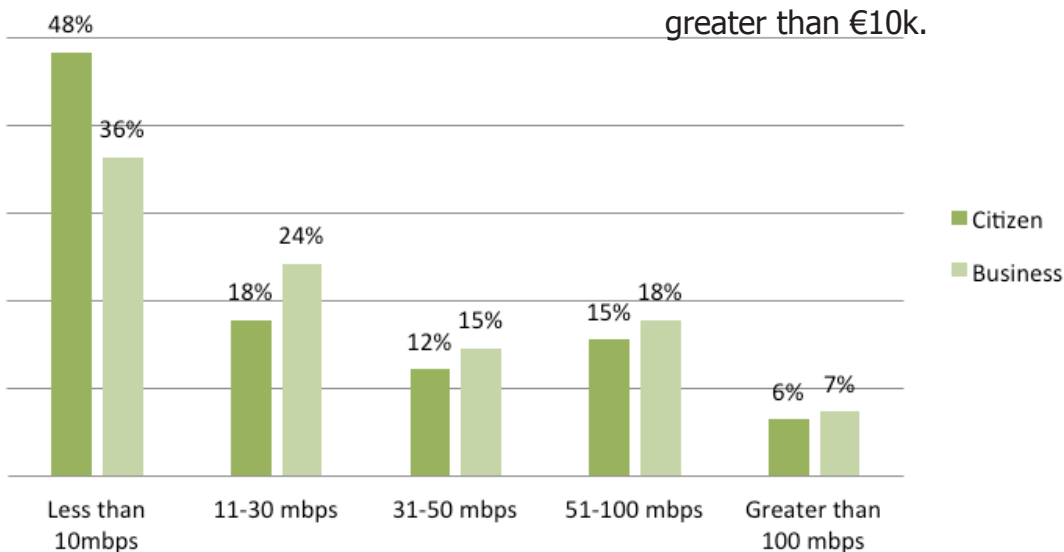
Figure A2.2
Internet Connection Methods, County Tipperary



Source: Tipperary Business and Citizen Surveys, 2017
(Business Survey, n=201, Citizen Survey, n=442)

In addition, respondents were asked to say what download speed they have on their home or business internet connection. Of the 'citizen' respondents that were able to answer the question nearly half are experiencing speeds of less than 10 Mbps while two-thirds (66%) have speeds lower than 30 Mbps. Among the businesses a total of 60% claim to be in this category. The situation for businesses is better but not by much. 30Mbps is the speed that the government promised to deliver to all citizens under the National Broadband Plan. Clearly, for the majority of citizens and businesses surveyed the quality of their internet access is less than ideal to gain maximum benefit from their online experience.

Figure A2.3
Broadband Access Speeds, Citizen & Business



Source: Tipperary Business and Citizen Surveys, 2017
(Business Survey, n=124, Citizen Survey, n=267)

Broadband Cost

Respondents in both the citizen and business surveys were asked to estimate the annual cost of their business or home broadband connection (excluding line rental and call costs). These are presented on separate graphs below for clarity.

Broadband Cost – Business

Of the total number of businesses interviewed 129 were able to provide an estimate. The clear majority are paying between €250 and €750 per annum. However, among the larger organisations there were three for whom the cost is greater than €10k.

Figure A2.4
Annual Broadband Connection Cost, Business



Source: Tipperary Business Survey, (n=129)

Broadband Cost – Home

The majority of people are paying less than €500 annually for broadband connectivity in their home. While respondents were asked to exclude line rental costs, some indicated that other services are included as part of a bundle, e.g. TV services. There seems to be a good level of awareness about the cost of home broadband in the county with the vast majority of respondents to the citizen survey able to provide an exact figure.

Figure A2.5
Annual Broadband Connection Cost, Home



Source: Tipperary Citizen Survey, 2017 (n=339)

A2.2 Enterprise

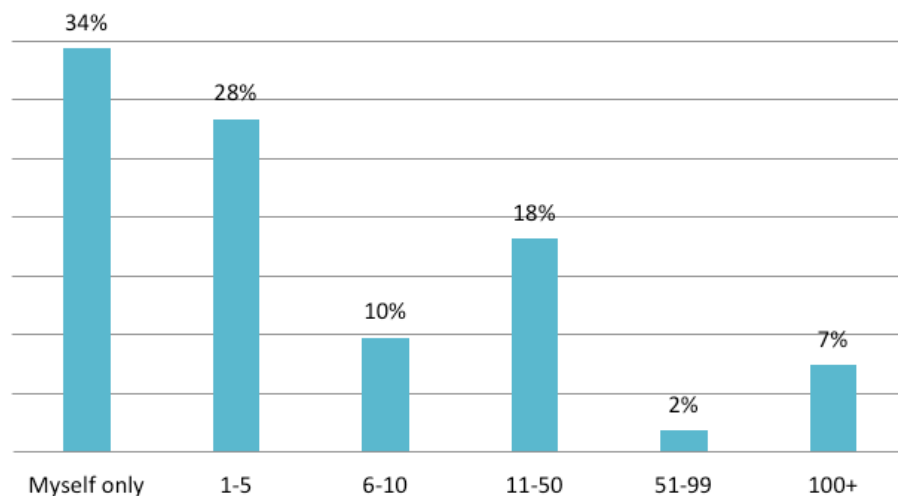
In this section we will take a more detailed look at the findings of the survey of businesses / organizations. A total of 216 organisations participated in the survey.

Demographics

The distribution shown below demonstrates that the survey includes a significant proportion of SMEs while there is also representation from larger organisations including some of the IDA multinationals present in the county.

Figure A2.6

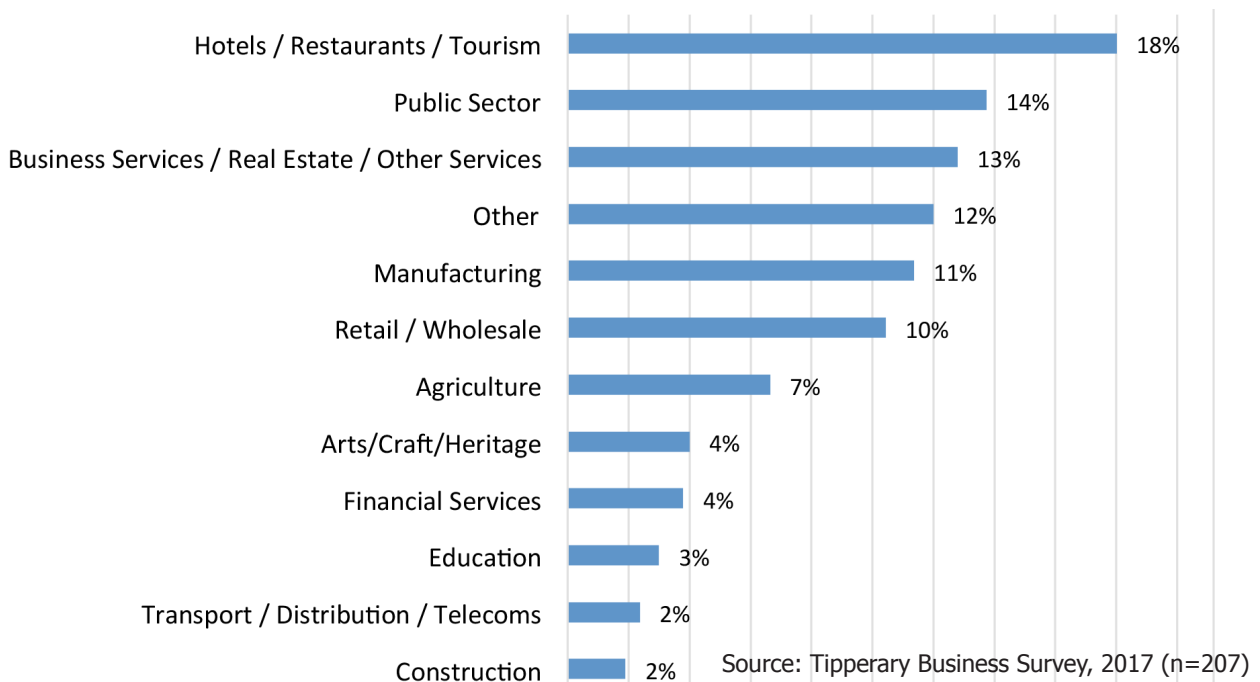
EmployeeNumbers,
Businesses Surveyed



Source: Tipperary Business Survey, 2017 (n=215)

This chart shows how the survey participants were distributed by industry sector with all the major groupings represented. Among those who classified themselves in the "other" category include small businesses who provide personal services which would not be classified as "business services".

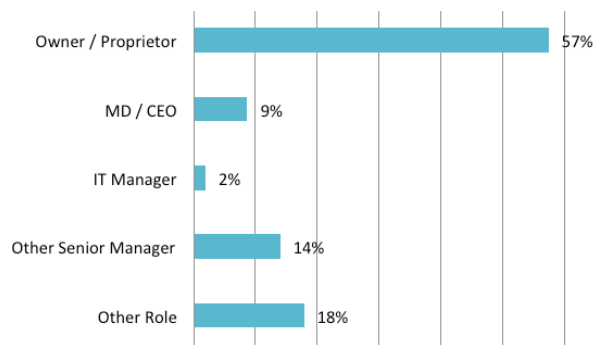
Figure A2.7 Industry Sector Distribution, Businesses Surveyed



Source: Tipperary Business Survey, 2017 (n=207)

In the majority of cases the survey respondent was either the owner of the business or a senior manager and, therefore, in a position to reply in an authoritative way about the organisation.

Figure A2.8 - Respondent Job Role



Source: Tipperary Business Survey, 2017 (n=207)

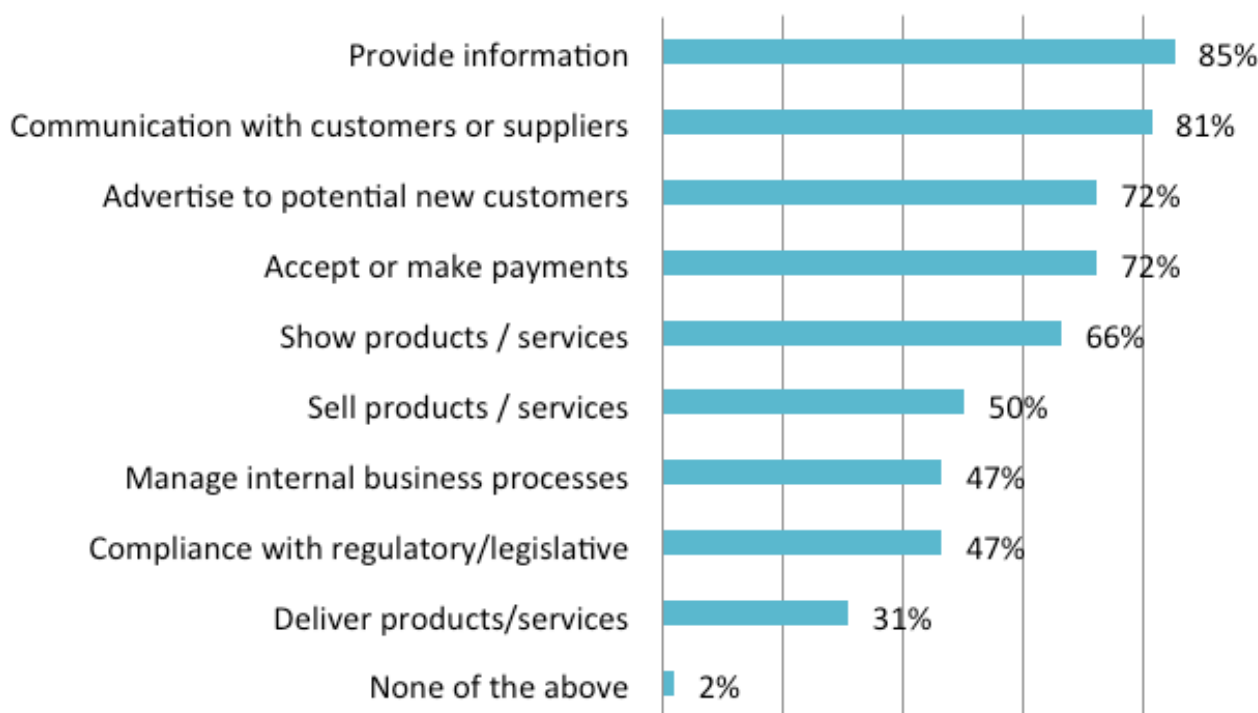
Digital Profile

In this section we examine some indicators of the usage of digital technologies by businesses and organisations in Tipperary.

Business Activities Where Digital Technologies Deployed

The first substantive survey question required respondents to list the business activities for which they had already deployed digital technologies. Information provision and communication with customers through digital means are very prevalent among Tipperary businesses. It is also interesting to see how many accept or make digital payments though this doesn't necessarily mean they have payment capability built into their websites for the purposes of online shopping.

Figure A2.9
Business Activities for which Digital Technologies Deployed

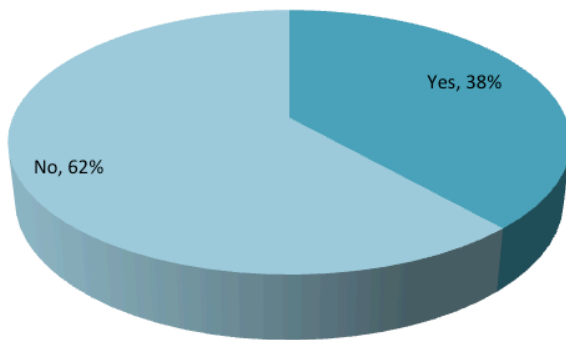


Source: Tipperary Business Survey, 2017 (n=187)

Selling Online

More specifically, respondents were then asked whether they had engaged in selling online. Quite a high proportion have done so. However, we can't assume from this that these respondents have full ecommerce capability implemented at their organisations.

Figure A2.10 - Selling Online

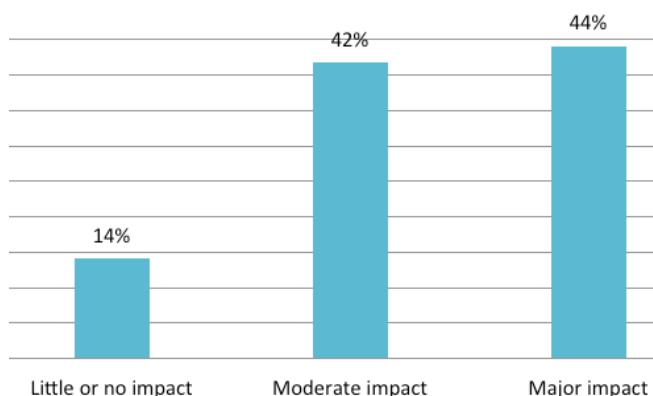


Source: Tipperary Business Survey, 2017 (n=216)

Impact of Digital

Other research tells us that many Irish businesses don't have an online presence with many indicating they don't see the need to do so. It is, therefore, interesting to examine to what extent the increased use of digital technology by consumers is impacting organisations in Tipperary. Clearly, as we can see from the chart below, the issue is a real one with 44% of respondents indicating it is having a major impact. The responses indicate that level of impact is the same for older businesses (> 10 years) than the overall average which suggests it is not confined to newer businesses.

Figure A2.11
Impact of Increased Digital Technology Usage by Consumers

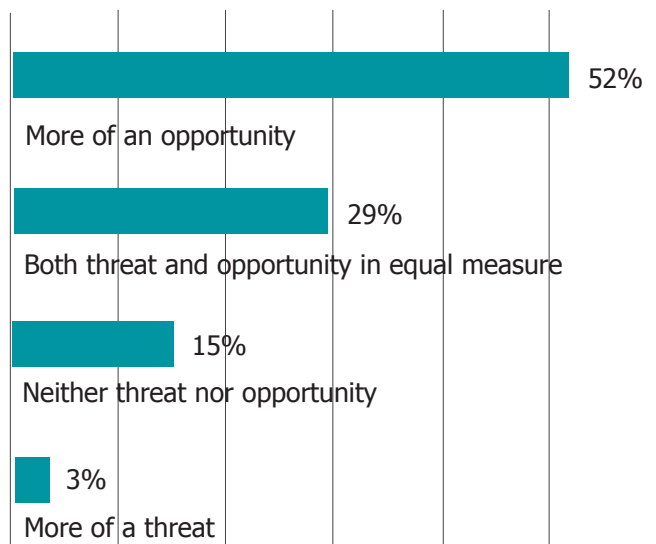


Source: Tipperary Business Survey, 2017 (n=177)

Is the impact positive or negative though? Respondents were further asked to what extent they thought the impact of greater digital use by consumers presented them with an opportunity or a threat. Businesses who consider the impact to be more positive than negative are in the majority. Older businesses tended to see less opportunity than newer ones but the difference was minimal. Overall there is a high level of positivity about the impact of digital usage by consumers.

"Selling art/craft in galleries in Tipperary is not viable, I need an online presence to reach outside of Ireland."
Business Survey Respondent

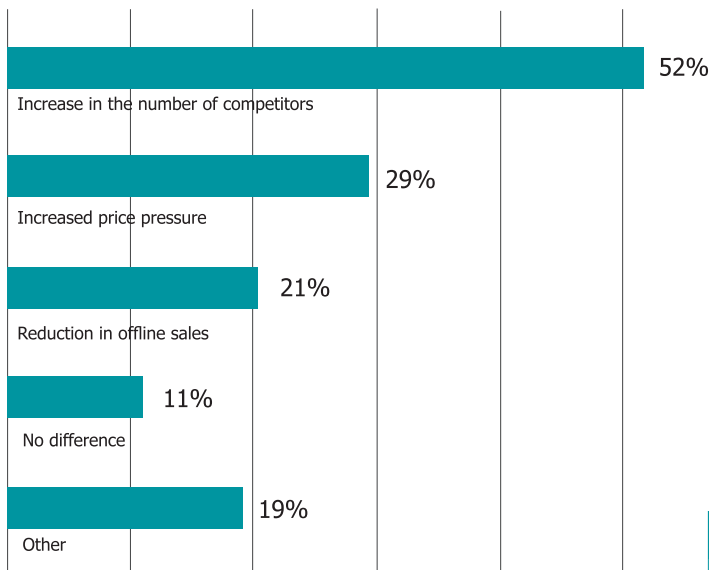
Figure A2.12
Digital Technology – Threat or Opportunity



Source: Tipperary Business Survey, 2017 (n=173)

Despite this level of positivity, in our analysis of the next question we can see evidence of outcomes that might be considered negative for businesses. Over half the businesses surveyed claimed that increased digital usage has led to an increase in the number of competitors in the markets they operate in. Many have seen increased price pressure and reductions in offline sales. Just 11% claim it has made no difference. It is likely that many organisations who see the use of digital technologies as having great potential for them in future are finding that, in the meantime, they are having to deal with some challenges.

Figure A2.13
Digital Technology – Impact on Market



Source: Tipperary Business Survey, 2017 (n=161)

Finally, businesses were asked to identify the challenges they are facing in their attempts to benefit more from digital technologies. If the opportunities exist why are more businesses not taking advantage?

Three key challenges were identified. The primary one is technological. Broadband availability was

“As people do more online shopping their need to do bricks and mortar shopping lessens - they tend to come into town just to meet for coffee...this is a big issue for smaller towns.” - Business Survey Respondent

cited as the main challenge by just over half of all businesses. There are two dimensions to this. On the one hand it can prevent a business from having a viable online presence.

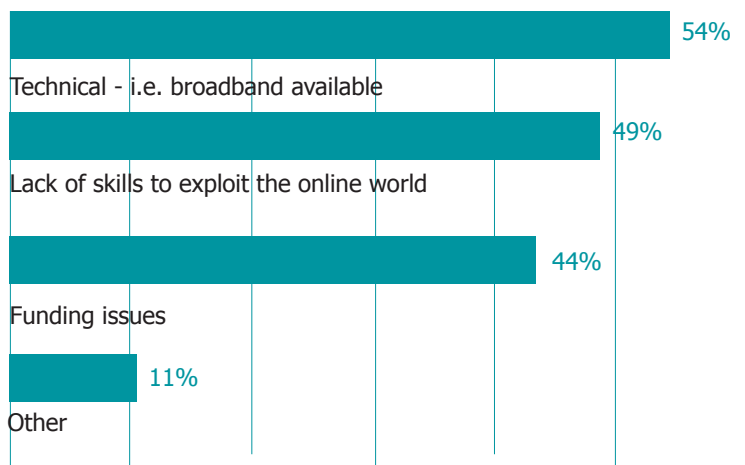
More importantly, however, if good connectivity is not available to its customers a business will not be able to fulfill its online potential. This is particularly true when a business is focused on a geographical area where its customers don't have access to broadband of sufficient quality to engage with the business via digital means.

However, the fact that half the businesses surveyed admitted they lack the skills to exploit the online world is also very significant. While

the issue of broadband availability can only be resolved by government acting at national level, initiatives to upskill businesses can be undertaken at a local level. Furthermore, if businesses don't possess the skills to exploit the online world then improved broadband availability will only go some way to solve the problem.

A further issue identified, mostly by public sector organisations, was that of funding. This suggests that many organisations don't have the funds available either to invest in digital technologies or the training they require to improve their skills.

Figure A2.14
Benefitting from Digital Technology – Challenges



Source: Tipperary Business Survey, 2017 (n=169)

A2.3 Community and Voluntary Survey

In addition to the business and citizen surveys a separate questionnaire was prepared for individuals and organisations in the community and voluntary sector. Since many of the findings of that survey resonate with those of the other two we don't propose to include a question by question analysis of this survey. In sections of this report on Strengths and Weaknesses, Opportunities and Threats and Conclusions and Recommendations sections we do include input from the Community and Voluntary survey in addition to the information obtained in the Business and Citizen surveys.

In this section we highlight the key points and interesting variances with the other two surveys.

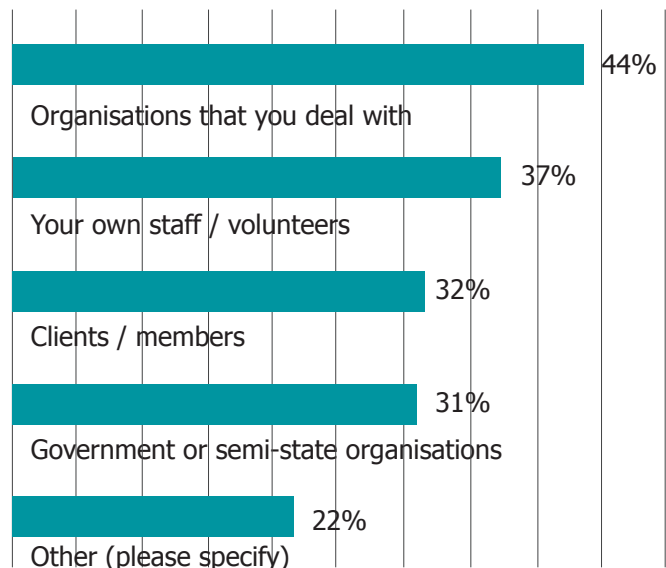
- In the case of 71% of organisations there are no staff employed
- Two-thirds have been established for 10 years or more
- One in six (17%) of the organisations don't have connections to the internet in their own right for a variety of reasons including the fact that many don't have their own premises. In most cases members use their own internet accounts to conduct business on behalf of the organisation.
- The most commonly used type of connection used by respondents is wireless/mobile broadband at 42% while more than half the respondents don't know what their connection speed is.
- Just 24% of respondents believe they have a good understanding of the term "digital economy", fewer than the proportion of respondents to the business and citizen surveys.
- The primary purposes for which respondents use digital technologies are to "provide information" (80%) and to "communicate with clients/members" (78%).
- More respondents consider that the greater use of digital technologies will have a "moderate impact (45%) than a major impact

(35%). However, 62% consider that it presents their organisation with "more of an opportunity than a threat".

- When asked what challenges prevented their organisations from benefiting more from the use of digital technologies respondents identified similar issues to those named by businesses, namely "broadband availability" (50%), "lack of skills" (47%) and "funding \ issues" (42%).

Finally, in this section we can see evidence that pressure is being brought to bear on the community and voluntary to make greater use of digital technologies. This is coming from a range of sources including organisations and individuals. It is interesting that "government or semi-state organisations" are prominent. It is certain that pressure from organisations such as the Revenue Commissioners has resulted in many businesses using e-government services who mightn't have done so otherwise so there is clearly potential for the same to apply in the case of community and voluntary organisations.

Figure A2.15
Source of Pressure to Use Digital Technologies



Source: Tipperary Community & Voluntary Survey, 2017 (n=190)

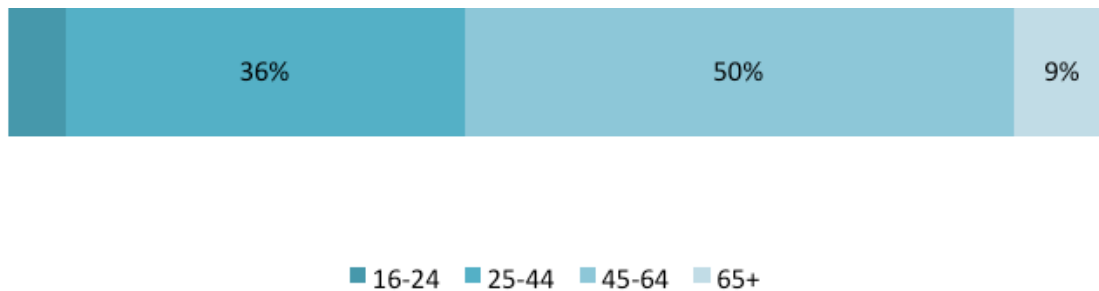
A2.4 Citizens

In addition to the business survey we conducted a survey of Tipperary citizens to gain some insight into their digital experiences and practices. A total of 442 respondents participated in the citizen survey, the majority via an online survey platform with a minority completing a hard-copy version of the questionnaire.

Demographics

The figure below shows spread of respondents by age-group with the vast majority in the 25-64 brackets. However, 9% were in the 65+ range, an age-group that we have already seen tends to be least engaged in the digital age. As the survey was “self-selecting” (i.e. people elected to complete it rather than being approached to do so) the findings are not fully representative of the population but provide an excellent insight.

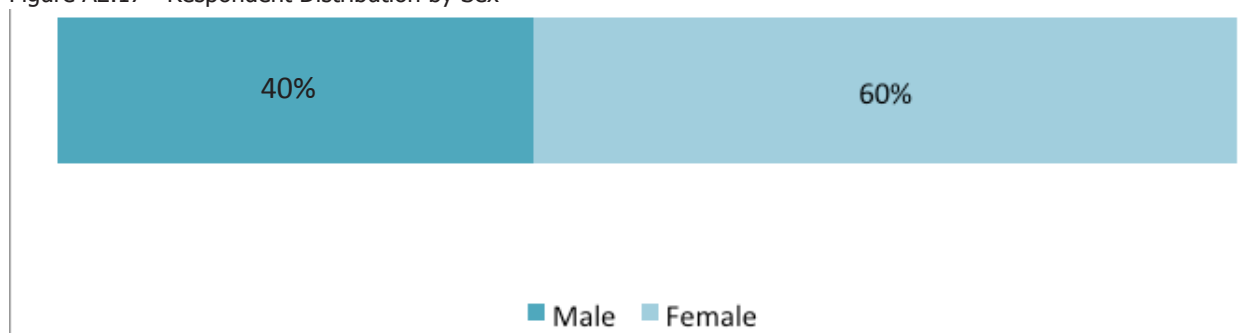
Figure A2.16
Respondent Distribution by Age-Group



Source: Tipperary Citizen Survey, 2017 (n=440)

Below we can see the male / female distribution of respondents.

Figure A2.17 - Respondent Distribution by Sex



Source: Tipperary Citizen Survey, 2017 (n=436)

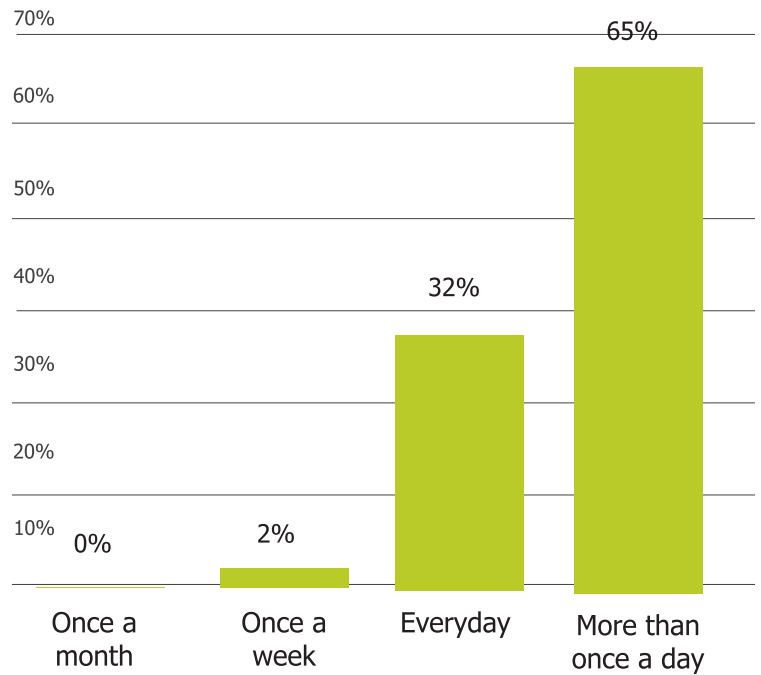
Digital Profile

Frequency of Internet Use

Having examined the demographics of the survey sample we now move on to analyse some of the more substantive questions. Respondents to the Citizen survey are very regular internet users, more so than the average among the Irish population as a whole.

Figure A2.18 Frequency of Internet Use

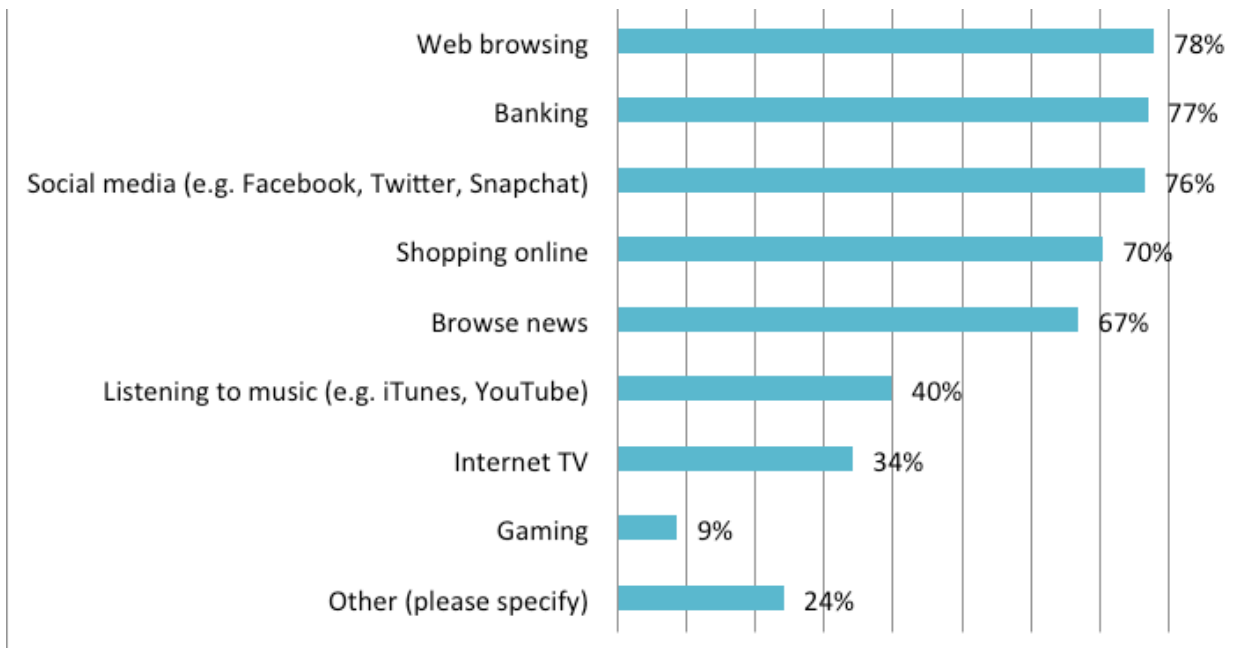
Source: Tipperary Citizen Survey, 2017 (n=416)



Internet Activities

Respondents were further asked to say what activities they engaged in on the internet. It is interesting that banking is so high on the list, even ahead of social media. This is an internet activity that Irish people have embraced enthusiastically in recent years driven largely by the major Irish banks who were early movers at urging their customers to bank online.

Figure A2.19 Respondents' Activities on Web/Internet

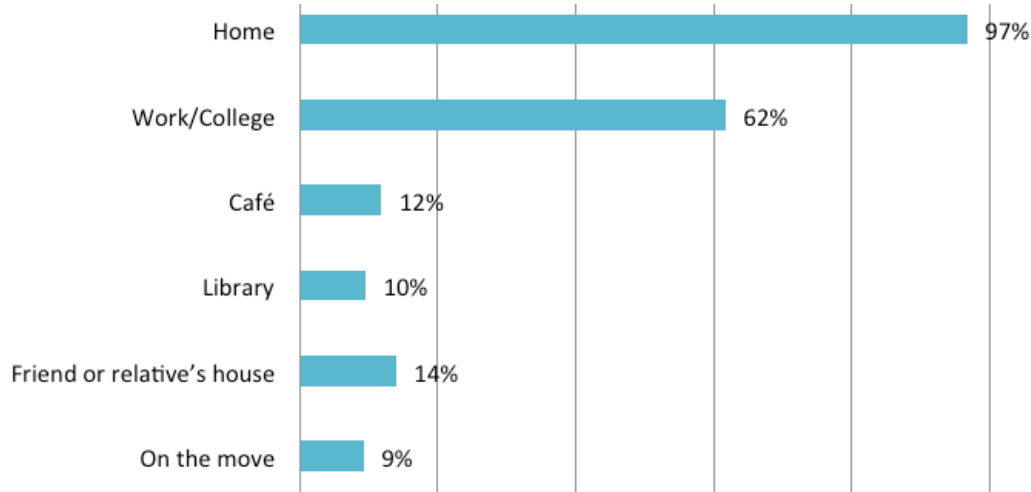


Source: Tipperary Citizen Survey, 2017 (n=429)

Locations of Internet Use

Home is the most popular location for internet use among those included in the survey, followed by work. Though it wasn't included as a specific option in the question, a total of 9% of respondents gave the answer "other" and then specified that they accessed the internet in a variety of locations, many outdoors, using their mobile phone, in many cases via a 4G connection. The extent to which participants use library facilities to access the internet is noteworthy too. Availability of internet access while "out and about" will be increasingly demanded by citizens in the coming years and such demand will not be addressed by the implementation of the National Broadband Plan. It will depend largely on mobile operators rolling out 4G (and, in time, 5G) services.

Figure A2.20 - Locations of Internet Use

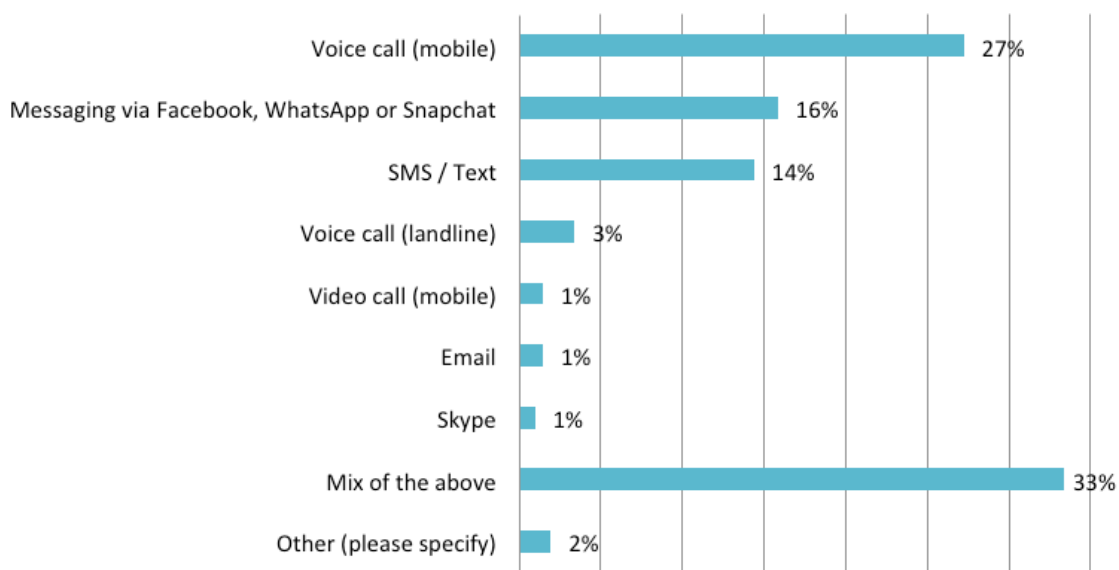


Source: Tipperary Citizen Survey, 2017 (n=429)

Primary Means of Communication

Voice calls via a mobile phone remain the most popular means of communication for the majority of respondents. However, the extent of the threat to the mobile operators from "over-the-top" (OTT) messaging providers such as Facebook, WhatsApp and Snapchat can be seen in the figure below. It can safely be assumed that if more young people were included in the survey that this option would have been chosen by more respondents.

Figure A2.21 - Primary Means of Communication with Family / Friends

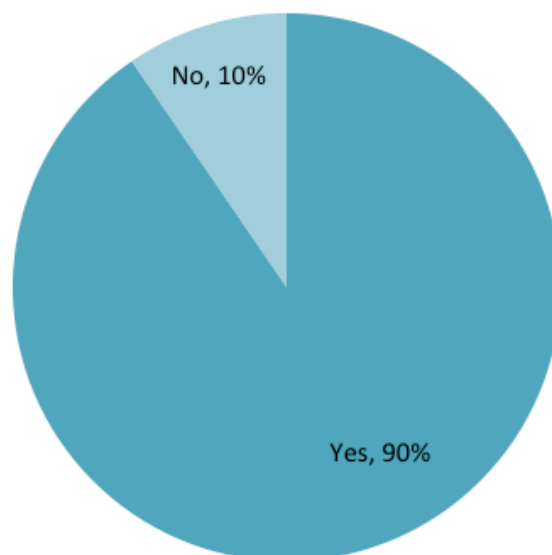


Source: Tipperary Citizen Survey, 2017 (n=416)

Online Shopping

A total of 90% of the Tipperary citizens surveyed have made an online purchase at some stage in their lives.

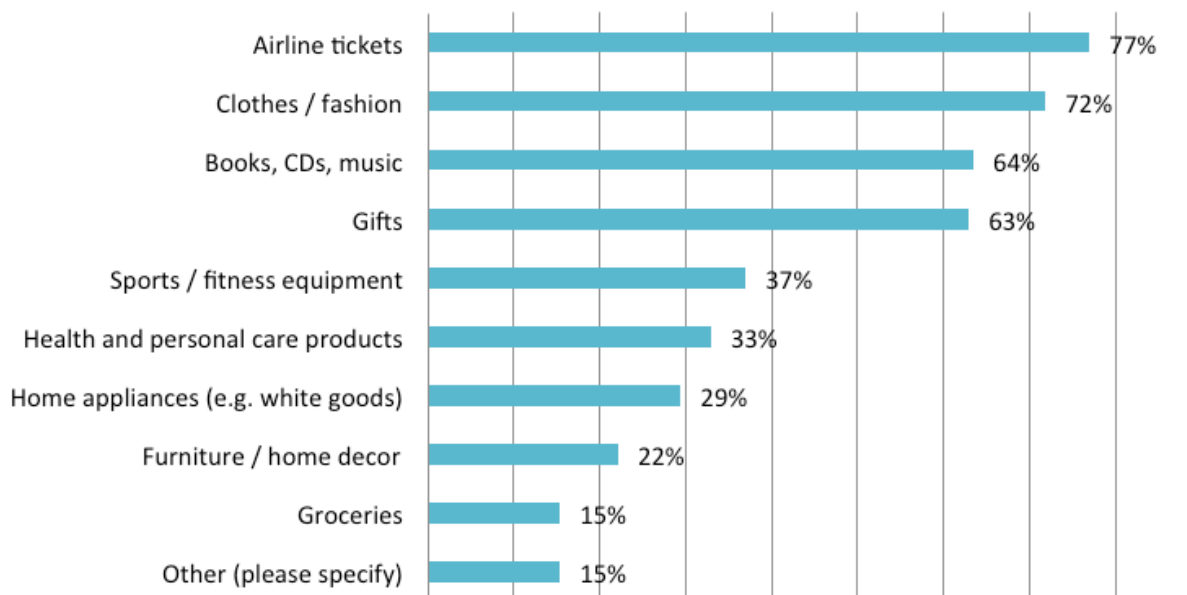
Figure A2.22 - Online Purchasers



The figure below shows the distribution of products and services that respondents purchased in the past year. Among the things listed under "other" were accommodation, concert tickets, electronic equipment, car parts and construction equipment.

Figure A2.23 - Purchased Online in Past Year

Source: Tipperary Citizen Survey, 2017 (n=408)

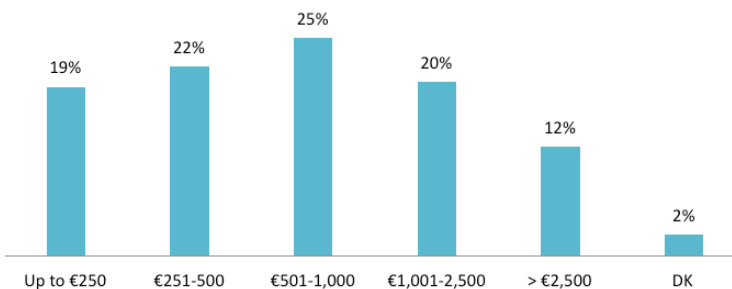


Source: Tipperary Citizen Survey, 2017 (n=370)

Figure A2.24 - Amount Spent on Online Purchases, Past Year

Amount Spent Online

When asked to estimate how much they had spent on online purchasing in the past year the vast majority of those who had made online purchasing were able to offer an estimate. The distribution is shown below. The total amount spent by the 331 citizens who made an online purchase in the past year and were able to provide a figure was €460,000. Around a third of respondents spent over €1,000 each online in the past year.

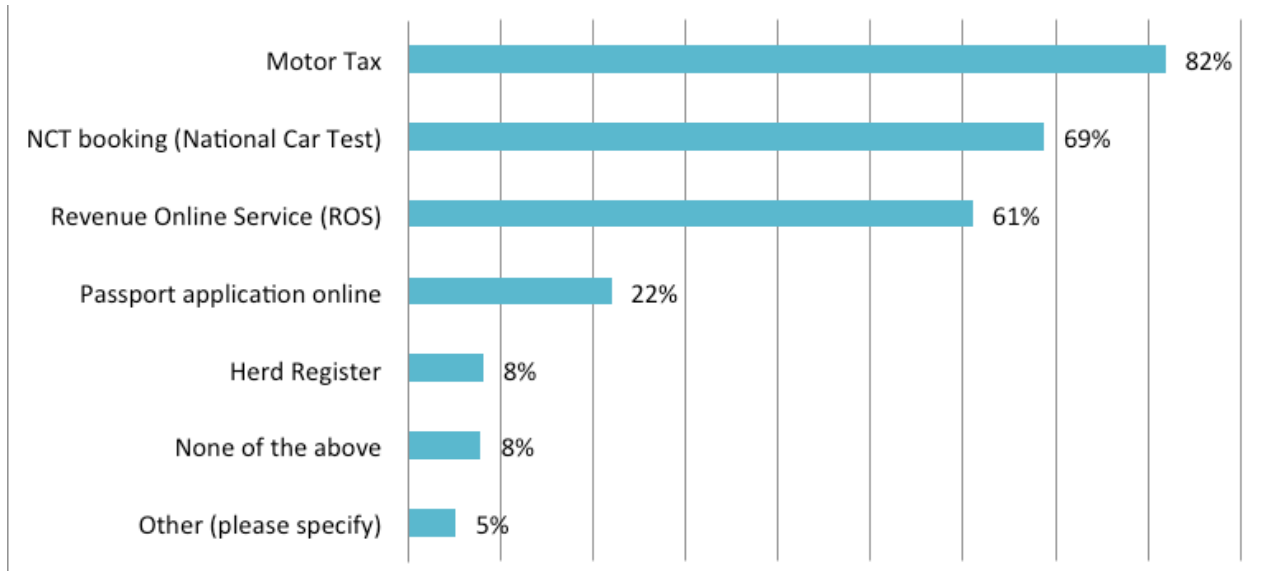


Source: Tipperary Citizen Survey, 2017 (n=331)

eGovernment Services

Research undertaken by the EU shows that Irish citizens are enthusiastic users of e-government services and the people of Tipperary are no different. Our survey shows the majority have used popular online services such as motor tax, NCT and the Revenue Online Service (ROS). It is interesting that a healthy proportion of respondents have used the Passport Online service which was introduced just recently in March 2017.

Figure A2.25 - eGovernment Services Accessed, Past Year



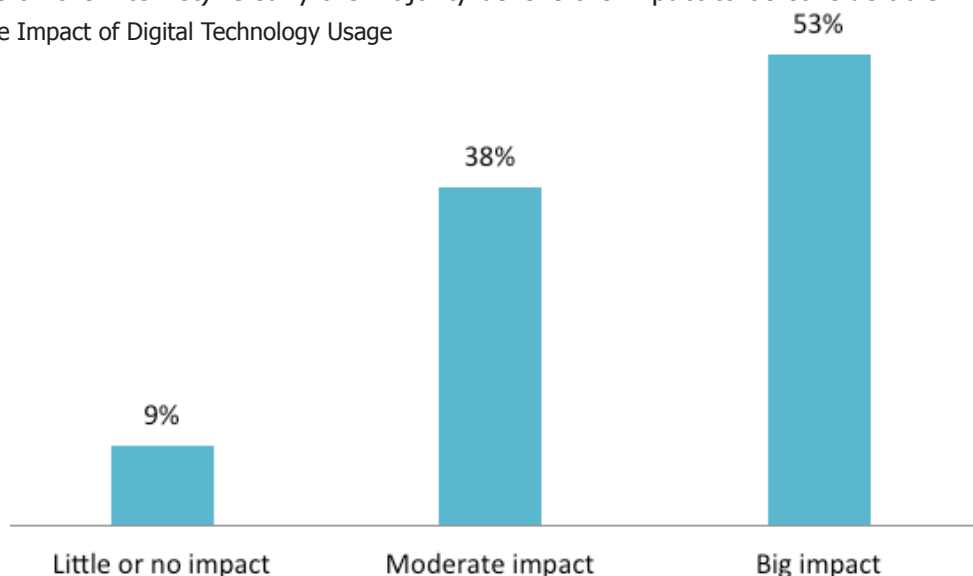
Source: Tipperary Citizen Survey, 2017 (n=404)

Digital Impact

Impact of Digital on Lifestyle

In order to assess the impact of digital technologies respondents were asked to say to what extent they think their use of digital technologies has impacted on their life (e.g. in terms of changed behaviour, greater reliance on the internet). Clearly the majority believe the impact to be considerable.

Figure A2.26 - Life Impact of Digital Technology Usage



Source: Tipperary Citizen Survey, 2017 (n=405)

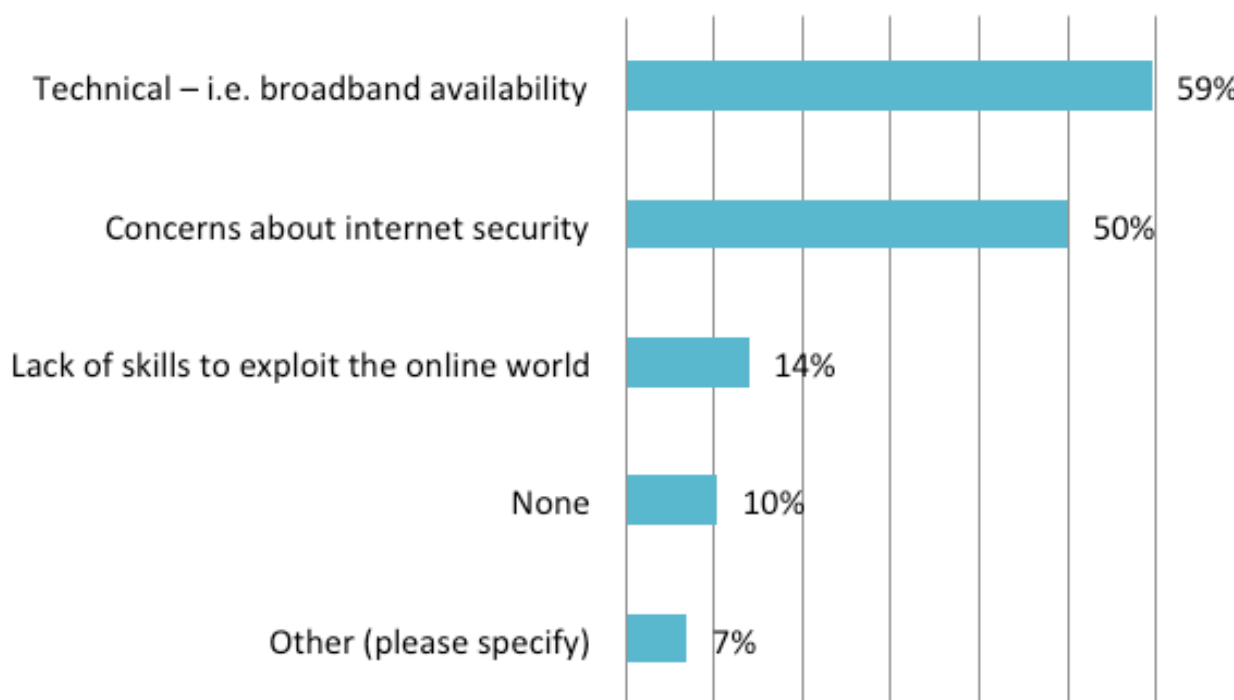
Challenges

Benefitting from Digital Technology – Challenges
Finally, respondents were asked to say what challenges they face in benefiting more from digital technologies. The responses are interesting on their own merits but also in the ways they differ from the challenges faced by businesses and organisations. There is little variation in the proportion who consider the availability of broadband to be the primary issue. However, for citizens, as distinct from businesses the next biggest concern is internet security. This is understandable since businesses and organisations are in a position to invest in IT security and to have someone responsible for it in a structured way. Individual citizens, however, have to take responsibility for their own internet security.

A further finding of interest is the fact that so few respondents consider they lack the skills to exploit the online world. Among businesses, the proportion was 49%. Clearly people who are

using the internet at work view the challenges differently than when they are using it for their own personal activities. Many are concerned about their lack of skill to optimise the benefits of digital technologies in the workplace while just a small proportion consider it a problem at home or college.

Figure A2.27 - Benefitting from Digital Technology – Challenges



Source: Tipperary Citizen Survey, 2017 (n=402)

Detailed Responses

For the analysis of the strengths, weaknesses, opportunities and threats (SWOT) we are able to draw on over 500 inputs from respondents to the Key Informant, Business and Voluntary surveys conducted as part of the project. The following is a summary of the input.

Strengths

- Low-cost location; less expensive to do business; lower cost of land and housing
- Attractive location to families; quality of life; scenic; slower pace; potential for digital economy to facilitate home-working; reduction in commuting
- Well-educated workforce; digital skills available
- Good broadband access in the principal towns at reasonable cost; most places can get some level of internet connectivity
- Central, accessible location close to major cities; access to high-quality transport networks; motorways, mainline rail; buses
- Attractive tourism location; further potential for development with good digital economy
- Potential for partnerships between governmental organisations to promote digital economy; support structures available to support businesses and communities; good networks in place
- Great potential for many aspects of life in the county to be enhanced by a successful digital economy; economic, industrial, social
- Well known location / brand – 'Tipperary'; potential to build online presence of brand
- Excellent educational infrastructure with capacity to supply a skilled workforce; third-level presence in Clonmel and Thurles are key advantages; also, proximity to LIT, Limerick and WIT
- Generally, a reasonable understanding of the benefits of digital economy; awareness improving continuously
- Good business presence; multinationals;
- family businesses; self-starters
- Good network of organizations with capability to provide training in digital skills / technologies; ETB; LDC's
- Tipperary's young people are already embracing the digital economy
- Agricultural and equestrian county; lots to sell to the world
- Great potential to develop heritage product; relatively untapped
- Many businesses already making good use of digital technologies; high profile; e-commerce; social media

Weaknesses

- Rural county with low-density population; terrain and rural nature requires much better infrastructure than currently in place
- Poor broadband connectivity; not only in rural areas; many businesses lack access to fibre broadband; poor mobile connectivity in many areas
- Lack of broadband availability to customers; negative impact on online sales
- Lack of third-level University; lack of South East University
- Lack of key infrastructure, e.g. major hospital
- Lack of computing skills in small businesses
- Lack of young skilled workers who often prefer to work in cities or abroad; hard to attract skilled workers for the same reason
- Older population unwilling to use digital tools
- Educational supports for digital use only available in larger centres and less so in village/rural areas
- Many workers commute from other counties and don't live in Tipperary
- Lack of critical mass of digital businesses and employment opportunities; especially large-scale firms
- Lack of understanding of potential of digital economy/society
- Fear of using internet; data protection

concerns around sharing personal information online

- Poor, inconsistent broadband to primary schools inhibits potential for elearning
- Poor branding of the county; poorly integrated approach to marketing it
- Lack of funding for support and training
- Lack of a city and population numbers
- Less diverse business community as other locations
- Tipperary less known as a tourism destination internationally
- Lack of availability of advice to assist businesses with digital technologies

Opportunities

- New ways for businesses to grow revenue and employment; access to new markets via digital platforms; sell beyond Tipperary and Ireland; from local to global
- Greater exposure for local products and services
- Improve the economy and broaden the economic base in the county
- Improved internal processes and productivity for businesses and public-sector organisations; operational efficiency and savings
- Major potential growth for individual sectors of the local economy through the adoption of digital technologies, e.g. agri-tech, tourism, retail
- Greater accessibility to services (public and other) for citizens; easier dissemination of important information to citizens; greater connectivity for communities
- Faster transfer of information leading to better quality of service
- Opportunities to attract people to Tipperary who will benefit from the good quality of life and low cost of living in the county;
- Great opportunity for Tipperary to be an attractive location for home-working
- Opportunity for the development of rural enterprises
- Improved communication and depth of connection with customers, clients
- Opportunity to integrate digital in education

and training; enhance learning experience

- Provide flexible and online learning to students in remote or off-site locations
- Digital methods will speed up invoicing and speed of payments
- Successful digital economy would attract new businesses to the area
- Reduce software and hardware expenditure by utilising cloud facilities
- Potential for businesses and citizens to source more products and services locally
- Increased demand and price for products produced in the county resulting in a better price for the raw materials
- Opportunity for bundled online tourism offers, e.g. accommodation and activities
- Potential for businesses to group together

Threats

- Competition from other locations
- Businesses continue to migrate to larger, urban areas
- Reduced opportunity for home-working
- Fewer opportunities for creation of jobs; loss of young people from the area
- Weaker access to services/supports
- In the continued absence of adequate rural broadband children would be disadvantaged
- More of current trend for young people to leave and put down roots elsewhere
- Loss of further market share to online & digital operators; weakening of local economy; loss of footfall
- Potential advances in communications would be threatened
- Lose the ability to economically support the IT functions of the business; loss of opportunity to innovate.
- Currently, low-speed connectivity is causing us to miss out on tenders for Ireland and NI – could be a major component of our business
- Lack of investment, both private and public, over-dependency on current industry
- Reduced sales opportunities
- Businesses will relocate out of the area

Appendix 4 Methodology Statement

This Digital Strategy for Tipperary was produced based on evidence obtained from a comprehensive programme of research conducted with stakeholders across the county.

Online Surveys

A key component of this was online surveys conducted with different target groups as shown below.

Workshop

In addition to the various surveys a workshop was held in the Bru Boru Centre, Cashel in December 2017. A number of organisations were represented

at the workshop including the following –

- Tipperary County Council
- South Tipperary Development Company
- North Tipperary Leader Partnership
- Tusla
- ETB
- Youth Work Tipperary
- Representatives of individual businesses

The purpose of the workshop was for the attendees to review the research findings, participate in a 'Digital' SWOT analysis of the county and to provide valuable input that would aid the development of objectives and actions for the Digital Strategy.

Survey Name	Target Audience	Number of Participants	Comments
Enterprise	Businesses / Organisations	216	Distributed with the assistance of LEO, IDA, Chambers of Commerce, representative organisations and others
Citizen	Citizens	442	Distributed by means of a promotional campaign in print, radio, social media and via the Tipperary County Library service and others
Key Informant	Selected targeted individuals	37	Distributed to a list of people in range of roles selected by Tipperary County Council Digital Strategy Committee – included all elected representatives
Voluntary	Community & Voluntary organisations	290	Distributed to organisations with the assistance of the STDC, NTLP and the TPPN
Total		985	Almost 1000 people participated in the survey research

NB: In the case of the Citizen survey, hard-copies of the questionnaire were distributed to libraries and other public areas across Co. Tipperary so that people without internet access could also participate.

In its Digital Transformation Monitor the EU has identified 7 key digital technologies whose adoption it tracks across the EU28 member states. The following is a description of the key digital technologies referred to in section.

- Cybersecurity solutions – essential for the protection of digital assets which are now worth more than ever before. The increased use of mobile devices has increased the demands on corporate IT functions to manage security. High profile cybersecurity lapses have served to raise awareness of the problem.
- Social Media – this allows organisations to gain greater insight into customer behaviour and to improve internal productivity. Greater use of real-time instant messaging has led to a fall in email usage.
- Mobile services – technologically-advanced mobile devices such as smartphones and tablet computers are transforming traditional businesses.
- Cloud technologies – cloud is facilitating the growth of central applications that can be accessed by any device at any location, thus making business more efficient and dynamic.
- Big data and data analytics – another technology which allow businesses to gain insights. It simplifies complex analysis to allow faster and more robust decision-making with better outcomes for the organisation.
- Robotics and automated machinery – robotics and automation are being adopted by industries to improve product quality and reduce costs. This is causing a major fall in the demand for workers in traditional industries.
- Internet of Things – this takes mobility to another level. As mobile devices have become more widely used there is now a demand for a range of things including consumer electronic devices to be connected to the internet.

The following are examples of areas where digital technologies are expected to have a major impact on people's lives in the years to come.

Smart Cities

A 'smart city' is the term used to describe any urban area that has embraced the use of electronic data collection devices to supply information to a central function so that resources can be managed efficiently. Examples would be information about traffic flows, public transport, waste management and water supply. In effect, it is the application of the technologies associated with the Internet of Things in an urban environment. The European Commission "made available approximately €200 million for smart cities and communities in the 2014–15 budgets of the Horizon 2020 research and innovation programme, to accelerate progress and enlarge the scale of roll-out of smart cities solutions." (Digital Agenda, 2014). The development of smart cities will have significant implications for citizens in the years to come.

Driverless Cars

Another futuristic application of ICT in the lives of citizens will come about when driverless cars are introduced on our roads in the coming years. A key requirement for driverless cars will be the existence of a network, generally referred to as 5G (fifth generation). This network will have to have (close to) 100% availability everywhere and at all times if the driverless car idea is to work safely and effectively. Such 5G networks are considered the Holy Grail for telecoms suppliers. Though we are currently at the stage where 4G networks are being rolled out across the world it is predicted that all-pervasive 5G network will be available by the mid-2020s.

eHealth

Another area identified by the EU which digital technologies could benefit citizens is that of eHealth. It recognises that as people live longer the cost of caring for them will rise. The use of ICT in healthcare offers the potential for major efficiency improvements as well as providing individuals with the ability to monitor their own health. The Digital Agenda of 2015 stated that home telemonitoring of heart patients can improve survival rates by 15%, reduce hospital days by 26% and save 10% in nursing costs. Furthermore, e-prescriptions can reduce errors in drug dosage by 15%. Clearly this is another area that will have big significance for EU citizens in the years to come.

Smart Homes

'Smart homes' are homes where the heating, lighting and/or household appliances can be controlled remotely over the internet using a mobile or networked device. This capability is already a reality in many Irish homes. However, it is still the early days of the roll-out of this technology. In the coming years, Internet of Things technology will allow homes to become smarter as more and more devices get connected to the internet.

The following is list of acronyms and terms used in the report.

BPMG	Broadband Programme Management Group, of Tipperary County Council
CYPSC	Children and Young People’s Services Committee
DSL	Digital Subscriber Line – technology commonly used to provide internet access over phone lines
ETB	Education & Training Board
HEAnet	network providing internet access and ICT services to schools and colleges across Ireland
IBEC	Irish Business and Employers Confederation – representative body for businesses
ICT	Information and Communications Technology
IEDR	IE Domain Registry – body which registers Irish websites
IRL	Irish Rural Link (13 organisations who provide digital skills training)
LIT	Limerick Institute of Technology
MANs	Metropolitan Area Networks – state-owned telecoms networks in major Irish towns
NTLP	North Tipperary Leader Partnership
TPPN	Public Participation Network
SICAP	Social Inclusion and Community Activation Programme
STDC	South Tipperary Development Company
STEM	Science, Technology, Engineering and Mathematics
TCC	Tipperary County Council
WiFi4EU	an EU program of financial support for the provision of free WiFi to citizens in urban locations

Structure to deliver the Broadband Agenda in County Tipperary

**1.0 Oversight Programme Management Group**

- Pat Slattery TCC Director of Services Community & Enterprise (Chairman)
- Ger Lynch TCC IT Department
- Brian Beck TCC Planning Department
- Kathleen Prendergast TCC Economic
- Simon Howe TCC Broadband Officer

1.1 Role & Responsibility include:

- To oversee and manage the broadband and digital strategy programme
- To oversee progress in the two sub groups and ensure co-ordination/co-operation
- To assist in addressing difficulties
- To oversee communications with internal and external stakeholders and the media with regard to the programme

2.0 Infrastructural Broadband Steering-Group

- Brian Beck TCC Planning (Chairman)
- John Nolan TCC Roads Department
- Ger Lynch TCC IT Department
- Denis Holland Water Department
- Simon Howe Broadband Officer

2.1 Role & Responsibility include:

- Examine, assess and respond to the Department's and the NBPCo requirements in relation to roads, environment, planning and infrastructure in general.
- Deliver on the relevant areas of the infrastructural requirements of the broadband roll out
- To assist the Broadband officer in the infrastructural area of their work
- To develop and implement consistent approaches across the county in relation to planning/ roads and other infrastructural issues
- Be cognisant of national approaches and solutions, and facilitate implementation where appropriate
- Identify barriers to broadband rollout and facilitate the implementation of solutions to overcome these barriers

3.0 Digital Strategy Steering Group

- Kathleen Prendergast TCC Economic Development (Chairman)
- Sonja Reidy TCC Planning Section
- Ger Lynch TCC IT Section
- Claire Ryan NTLP
- Mark Ryland STDC
- Fiona Crotty LCDC
- Simon Howe TCC Broadband Officer
- ETB To Be Advised

3.1 Role & Responsibility

- Develop an all county digital strategy for the county, which will assist in maximising the use of the broadband infrastructure. Strategy to cover economic social and community use; training; marketing; promotion etc. Should also include how we propose to develop on the digital advantages that we have in Tipperary in the context of LIT and digital related employment opportunities.
- Be cognisant of national digital strategies, and accommodate same.
- Oversee and manage the implementation of the digital strategy.

The Broadband Officer

The role of the Broadband officer includes acting as the single point of contact for engagement between the Telecommunications Companies and the Local Authority along with the management of internal and external interactions on the roll-out of the National Broadband Plan.

Produced by the Digital Strategy Steering Group, in conjunction with Market Dynamics.

Published: July 2018

County Tipperary Digital Strategy Steering Group Membership

- Kathleen Prendergast TCC Economic Development (Chairman)
 - Sonja Reidy TCC Planning Section
 - Ger Lynch TCC IT Section
 - Claire Ryan NTL
 - Mark Ryland STDC
 - Fiona Crotty LCDC
 - Simon Howe TCC Broadband Officer
 - John Gilsenan, Managing Director, Market Dynamics
- Part funded by Shannon Broadband Ltd



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