

Offaly Digital Strategy 2020 - 2022

Transformation to Digitisation #DigitalOffaly



CONTENTS

Foreword 4
Introduction and Vision Statement 5
1. Starting Point6
1.1Strategic Statistics61.2Broadband71.3Mobile Telephony Services9
2. The Digital Economy10
2.1 Global Observations102.2 European Agenda102.3 Irish Perspective102.4 Regional Review112.5 Offaly Outlook11
3. ICE Development and Delivery13
3.1 Key Pillars of Offaly's Digital Strategy.133.2 Infrastructure133.3 Community153.4 Enterprise173.5 Digital Council203.6 Conclusion24
Appendix 25
Acronyms25 References25

Foreword

Digitisation is changing the way we live, work and enjoy life and social interaction. Private industry and public services have focused much effort on leveraging digital activities for the benefit of business and citizen services. Digital services do not of course just span the internet but also apply to general telecommunications. There are opportunities for increased deployment and development of digital services to contribute enormously to quality of life, to economic growth, to social fabric and cohesion, to training and education, and to ongoing communication in all its forms in Offaly. These will connect current digital provisions to the needs of the county and plan for a short and medium term future, to establish a framework by which we will navigate our way through the first few years of a 'Digital Offaly' to grow our services and skills in this area.

Supporting this work is a priority in addressing the challenges of Just Transition and the opportunities presented by the move towards a Low Carbon Digital Future and the future of work. Infrastructure installation and community activity to support this Digital Strategy will be central to its delivery. Enterprise activities will continue to work in collaboration with the Midlands network of co-working hubs (an initiative of the Midlands Regional Enterprise Plan) and monitor international trends, specifically in light of Covid-19. Offaly County Council will assist, support and help implement responses to community digital needs.

We want your involvement, your engagement, and your commitment. Offaly wants to capitalise on options and opportunities to assist our citizens, services, businesses and communities to plan our way forward to our digital future.



Cllr. John Carroll Cathaoirleach



Anna Marie Delaney Chief Executive



Introduction and Vision Statement

This Digital Strategy sets the agenda to support the short-term rollout of digital infrastructure and services to citizens in Offaly over an initial two-year timeline. Offaly County Council has four years left in its current term. An immediate short term strategy provides initial digital footsteps to focus efforts on immediate needs; and enable plans for the medium term thereafter. Therefore, it is proposed a first phase of this Digital Strategy will run from 2020 to 2022. A revision and review process will lead to a further second two-year phase from 2022 until 2024, after which a new term will commence for Offaly County Council. The strategy encompasses economic and social perspectives, as per the outline in the Offaly County Council Corporate Plan 2019-2024.

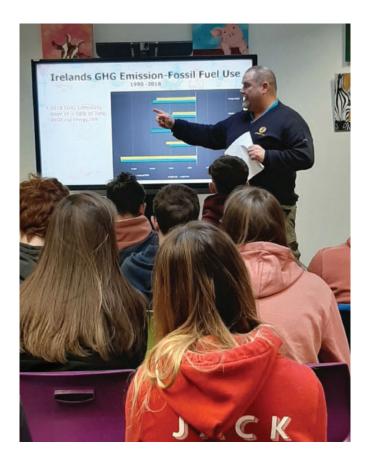
Offaly Corporate Plan 2019-2024

"Offaly's Digital Strategy will provide a vision and associated roadmap for 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. High speed broadband is already bringing benefits to parts of our county but we need to spread these benefits across the entire county. The Strategy prioritises four key themes; Infrastructure, Citizens, Enterprise and Digital Council. The digital sector of the economy is growing fast and creating opportunities and this Digital Strategy seeks to position Offaly to seize the opportunities presented by this digital transition". (OCC, 2019, p 22)

It is incumbent on this strategy to follow through on the above determinations, to maximize the impact of emerging technologies; and to consult with the broad range of interests within our population to ensure their voices are heard, facilities are provided, they benefit as users, they are offered business and learning opportunities and they are led in this by members of Offaly County Council to fulfil a vision of:

"access to improved digital services and skills to support and grow economic and social activity for citizens, business, community and visitors". A five-year digital strategy to run concurrently with the term of that next Council and its Corporate Plan will then be developed to reflect the further needs of the county at that stage. Overall, these timelines are aiming to service digital scenarios up to nearly the end of this decade.

To implement the vision, Section 1 outlines some strategic statistics on internet use and examines broadband use and mobile telephony in the county. Section 2 introduces the digital economy from Global, European, Irish, Regional and Offaly perspectives. Section 3 then outlines Infrastructure, Community, Enterprise and Digital Council activities and their strategic actions. The document concludes with a list of acronyms and references.



1. Starting Point

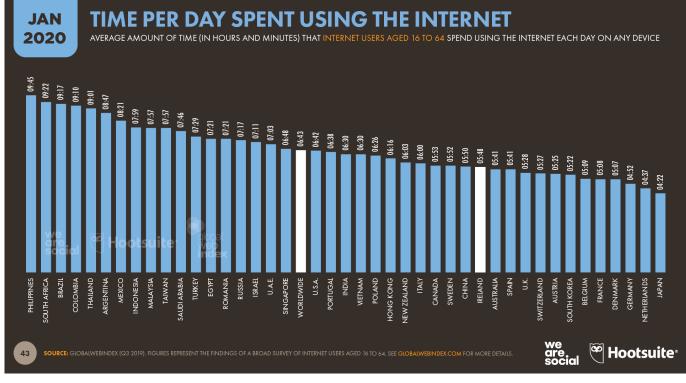
Charting Offaly online users and current and potential infrastructure can help influence where we identify our opportunities.

1.1 Strategic Statistics

The average user worldwide now spends 6 hours and 43 minutes online per day, with Ireland closely tracking this at 5 hours 48 minutes per day, highlighted in white below.

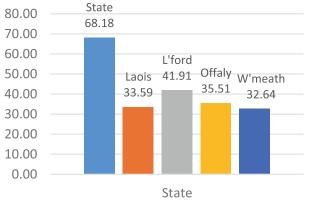
More focused statistics advise just under 85% of the population were internet users by 2018¹ increasing further in Ireland in 2019² outlined below –

- 88% used the internet (in the previous three months), and 79% use it every day,
- 99% of people aged 16-29 years use the internet, compared to 68% of those aged 60-74 years,
- 97% of students use the internet every day, contrasting with 54% of retired people's daily use.



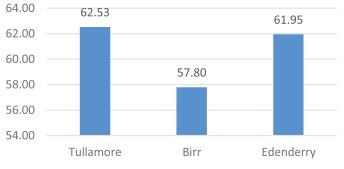
Source: https://datareportal.com/reports/digital-2020-global-digital-overview

Some Offaly internet statistics have been sourced by the Council from CSO Census 2016 results.



National household ownership of a PC was 68.18%, Offaly is almost half of that at 35.51%. (2019)

Tullamore Birr Edenderry % of households interviewed, with a personal computer



The three main towns indicate household ownership of a PC hovers around 60% level. (2019)

¹https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=IE

² https://www.cso.ie/en/releasesandpublications/ep/p-isshh/informationsocietystatistics-households2019/frequencyofinternetusage/

Households / Internet access	Laois	Longford	Offaly	Meath
Total Households	29,107	15,122	27,343	31,813
With High Speed Broadband (HSB)	18,960	8,887	16,412	20,514
Access other than HSB	3,209	1,798	3,319	3,458
No Internet Access	5,977	3,952	6,708	6,832
Not Stated	851	455	745	881

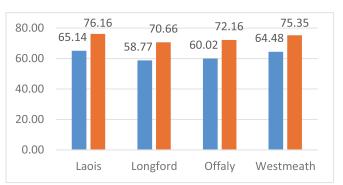
In 2018 Offaly undertook a Digital Readiness Assessment (DRA) (Indecon, 2018). Some observations (among a wide range of others for the county) included the need to increase the input and engagement of resources in the Council and wider stakeholders to support a digital strategy, increasing open data, developing initiatives to attract digital companies to the region, and growing a range of digital services.

Offaly County Council's Land Use, Planning and Economic Development Strategic Policy Committee (SPC) and Council met in June 2020 and reviewed a draft version of this strategy and provided feedback for inclusion.

Offaly County Council also ran an online survey for two weeks concluding 3rd July 2020 in preparation for the strategy. 108 responses were received, 92 from individual/community users and 16 from business users.

- The age range of responders was predominantly across the 25-44 and 45-64 age groups, with slightly more male than female responders in both groups with the Municipal Districts and different business activities well represented.
- Knowledge of the types of internet connections was adequate; with most access at less than 30Mpbs.
- Individual/community users had a spread of user categories across information sourcing for personal use; social media and entertainment; education and community activity; online purchases and other reasons.
- Business users spread was across payment processes; advertising, marketing and communication; compliance; product delivery; and internal business processes.

Some questions on remote working resulted in high interest from both sets of responders with some



% of households with High Speed Broadband (HSB), and % of households with HSB and internet connection other than broadband. Over 60% of households in Offaly had HSB, and 72% had overall internet access including non HSB. (2019)

concerns around broadband connectivity. Both sets of responders provided some examples of digital projects in action, some of which may be followed up in the implementation of this strategy. The survey results indicate responders' interest in online activity, broadband, and mobile telephony services in Offaly and influence the direction of this strategy.

1.2 Broadband

Providing broadband services to Irish households and businesses has been a priority project of the Government for several years, culminating in the signing of the contract for delivery of the National Broadband Plan (NBP) in November 2019.

NBP partners are:

- The Department of the Environment, Climate and Communications (DECC)
- The Department of Rural and Community Development (Rural Development and Innovation Unit (DRCD – RDI))
- National Broadband Ireland (NBI)
- Local Authorities
- Communities

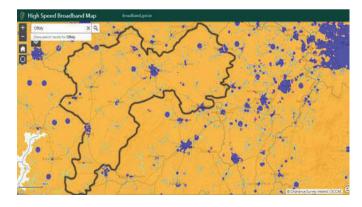
The task is to build a network of infrastructure to all locations in the country not already facilitated by telecommunications providers.

The network will operate as a wholesale network which means that retail providers will then be able to buy 'space' on the network, to sell on to domestic/business customers.

Local authorities and communities will facilitate the rollout of broadband where they can assist at local level.

The DECC broadband rollout map can be used to enter a specific location Eircode to assess NBP service at that area³. Current statistics for Offaly within the National Broadband Plan (NBP) are advised (at the time of writing) as 37,051 premises (domestic and business) of which 12,444 (34%) of these are Amber and will receive a high speed broadband connection via the State led Intervention.

24,607 (66%) are Blue, and are already served by commercial operators. €50 million will be invested in Offaly under the NBP.



Offaly Public Broadband Services

BCPs

The NBP is also developing Broadband Connection Points (BCPs) which are public locations selected to receive high-speed connectivity in the first year of the National Broadband Plan. This will enable broadband access as a community offering in training centres; public buildings and other suitable locations. These sites will be supported to develop for instance remote working, training, education and social development services and courses in their venues. Offaly has eight BCP sites to date, with several schools also to be connected.

Offaly currently has 8 BCP sites:

- 1. Ballycommon Telework and Training Centre
- 2. Coolderry Community Hall
- 3. Kilclonfert Community Hall
- 4. Croghan Community Hall
- 5. Clareen Community Hall
- 6. Shannon Harbour
- 7. Rosfaraghan Business Park, Ferbane
- 8. Killavilla Community Hall

A further BCP or two may be considered for addition to this list if necessary.

Libraries

As key community infrastructure, the county libraries also provide a range of broadband services, some of which are available to the public using MyOpenLibraries (MOL). These venues are significant elements of the public broadband infrastructure available across Offaly in Banagher (MOL), Birr, Clara, Daingean, Edenderry, Ferbane (MOL), Kilcormac and Tullamore (MOL).

Remote Working Hubs

Offaly Local Enterprise Office (LEO) in partnership with Offaly Innovation & Design Centre CLG has established three state of the art remote working hubs in the county – Tullamore (The Junction), Birr (stream BIRR) and Edenderry (e-Hive); each of which provide access to broadband and a range of remote office services.

WiFi4EU

In addition, Offaly County Council has received funding under the EU WiFi4EU project with matching funding from the Department of Rural and Community Development (DRCD) to provide public WiFi at indoor and outdoor venues in towns and villages across the county. We anticipate connecting up to 40 venues under this initiative.

Tourism WiFi

Offaly County Council has already implemented a public WiFi for tourism project supported by funding from the Department of Rural and Community Development and Shannon Broadband Ltd. since 2019. There are 15 sites across Offaly hosting a total of 24 internet Access Points for public use. Next2 Met have approved this project 'Using digital solutions to enhance tourism' as a Good Practice which is now showcased on the Next2Met website⁴.

Metropolitan Area Networks

These are fibre-optic networks in each of four towns across Offaly – Tullamore, Edenderry, Birr and Banagher operated by E-Net on behalf of the Irish state offering virtually unlimited bandwidth and focused to industry and business users.

³ DCCAE High Speed Broadband Map https://www.gov.ie/en/publication/5634d-national-broadband-plan-map/

AMBER areas - are the target areas for the State intervention of the National Broadband Plan.

BLUE areas - where commercial operators are delivering or have indicated plans to deliver high speed broadband services.

⁴ https://ec.europa.eu/digital-single-market/en/news/wifi4eu-stories-interview-offaly-county-council-ireland

Other services

Lastly, there are a range of organisations in the county using the internet in support of their own services. These include some of the Laois Offaly Education and Training Board (LOETB) venues; Offaly Local Development Company operated venues and organisations with which they partner; training centres including Ballycommon Telework and Training Centre and West Offaly Training in Banagher; St. Mary's Youth Centre and the Arden View Family Resource Centre in Tullamore; the Clara Family Resource Centre and the Edenderry Acorn project; along with co-working hubs such as the Ferbane Food Campus. We also have TCube and Creative 65 in Edenderry.

1.3 Mobile Telephony Services

Offaly's mobile users encounter blackspots across the county. Offaly County Council can contribute to expansion of voice telephony services across the county in several areas by working with service providers to increase functionality. The Commission for Communications Regulation (ComReg) licenses the use of the infrastructure in Ireland. A coverage map from ComReg is available at <u>https://www.comreg.ie/outdoormobile-coverage-map/</u>. This provides a drop down menu of service providers, with a base coverage colour graded map showing the type and extent of coverage from each provider and each type of service. Site users can input an Eircode to see services available at their enquiry location.

ComReg also provides a range of service information on the actual connectivity issues that can affect any one location. These can include:

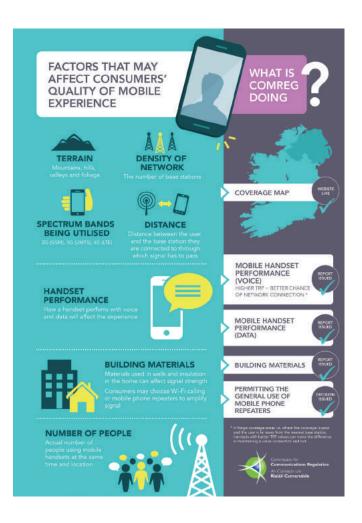
- the specification of the mobile phone handset itself across both voice and data services,
- the number of connections active at any one time,
- the local geography and proximity to towers, and
- what spectrum services are offered in your area.

ComReg also offer their SiteViewer service -<u>http://siteviewer.comreg.ie</u> which maps mast locations in Ireland. Information available includes owners of the mast and/or providers services and system standards available.

This review of some statistics and the opportunities for improvement in broadband and mobile telephony leads to an overview of the Digital Economy in the next section.



"did you know it is nearly 100 years since the first successful mobile telephony service was offered to first class passengers on the Deutsche Reichsbahn on the route beween Berlin and Hamburg in 1926, (https://www. uswitch.com/mobiles/guides/history-of-mobile-phones)"



2.1 Global Observations

Digitisation has been ongoing since the mid to late 1940s with the first foray into transistor radio technology. We've had the television and the telephone, semiconductor circuitry, personal computing, expansion on service attributes of the internet, mobile and personal devices, and wearable I.T. The now recognized 'Digital Development Revolution' (World Bank, 2020)⁵ appropriately describes the speed at which information and communications technology is progressing in terms of functionality and availability particularly in recent years. We live in a world that is constantly looking for the benefits of being 'increasingly digitised and connected' (Dufva & Dufva, 2019) amid the 'socialization of digitisation' (WEF, 2016) and it is important that we embrace opportunities provided by the digital economy.

2.2 European Agenda

The Europe 2020 Strategy includes a Digital Agenda for Europe to maximize the digital economy - promoting digital skills and high performance computing, digitising industry and services, developing artificial intelligence and modernising public services; all under ongoing review within the EU Digital Transformation Monitor (DTM) advising 'the state of play and key trends of digital transformation in Europe'⁶.

The Digital Single Market Three Pillars

- Providing better access for consumers and businesses to digital goods and services across Europe,
- creating the right conditions for digital networks and services to flourish, and
- maximising the growth potential of the digital economy.

Digital Agenda for Europe

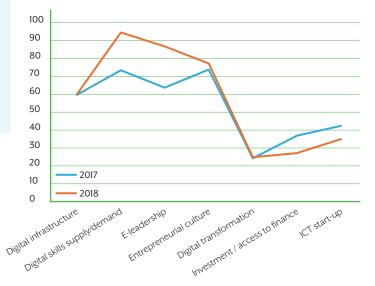
Climate change and the green agenda ensures all EU activities are driven by the European Green Deal in the 2021-27 budgetary period, important in terms of the development of both remote working and co-working facilities, taking people out of cars and reducing Green House Gases.

2.3 Irish Perspective

The National Digital Strategy (NDS) set a phase 1 agenda for 'doing more with digital' (DCCAE, 2013) opening up opportunities for learning by the Department of Education and Skills (DES, 2016); for industry by the Department of Business, Enterprise and Innovation (DBEI, 2019); and for small enterprises (IEDR, 2019). The digital economy was expected to grow by nearly 8% in 2020 (Indecon, 2019) with Ireland as one of the three highest scoring member states in the EU Digital Technology Transformation Index (DTTI, 2018)⁷.

The NDS and the further strategies it influenced strongly contributed to Ireland being highly placed in the Digital Economy and Society Report (ICS, 2019). A more recent industry report places Ireland within the top 10 for 'technology infrastructure' and 'human capital', in two categories in it's Digital Readiness Index (Cisco, 2020). While the National Skills Strategy 2025 (DES, 2016) can support some of these digital activities, the Midlands region can also take a lead locally.

Changes on Ireland's DTII scores between 2017 and 2018 are as follows:	2017	2018
Digital Infrastructure	59.1	60
Digital skills supply/demand	73.3	94
E-leadership	63.4	86
Entrepreneurial culture	72.9	76
Digital Transformation	24.5	24
Investment / access to finance	37	27.2
ICT Start-Ups	41.9	35



⁵ https://www.worldbank.org/en/topic/digitaldevelopment

⁶EU Digital Transformation Monitor - https://ec.europa.eu/growth/tools-databases/dem/monitor/content/welcome

⁷ https://ec.europa.eu/growth/tools-databases/dem/monitor/scoreboard

2.4 Regional Review

Under the Local Government Reform Act 2014 the four midland counties became part of the Eastern and Midland Regional Assembly (EMRA) area. In terms of digitisation, this move reflects both proximity to the capital city; and the benefits of our rural location for instance for remote working.

For research our placement adjacent to the National University of Ireland in nearby Maynooth and to Athlone Institute of Technology in Westmeath may allow us to work within the 'Technology and Innovation Poles' under the National Planning Framework (Ireland 2040). Offaly also has strong links with Trinity College Dublin via the I-LOFAR project and with Cork Institute of Technology (CIT) via our STEM programme in schools.

With Offaly's scientific and industrial history in the region, energy generation years and talent for innovation there is every opportunity to package the county to capitalise on our beneficial location for digital deployment of new services in partnership with industry and the research community.

People are as important as places and within the 'Smart' perspective of the Regional Economic and Spatial Strategy (EMRA, 2019);



Offaly communities can also benefit from digitisation, for instance, a more appropriately sized version of the 'Smart City' such as the Smart Communities Initiative⁸ piloted in Sligo (DCCAE, 2017).

2.5 Offaly Outlook

Overall, the Digital Readiness Assessment (DRA) (Indecon, 2018) indicated county status in a range of pillars measuring progress to transformational digital services compared to a peer network of counties and a national average of 31 local authorities. For instance in Pillar 1 of 'transitioning to digital' - Offaly, its peers and the national average were all within the 'formative' stage while in the second pillar Offaly and it's peers showed they were 'emerging' into the area.

Pillar	Formative	Emerging	Developed	Highly Developed	Transformational
Transitioning to a Digital County	2020 status	aiming for this status by 2022	aiming for this status by 2024		
Digital Economy / Employment		2020	aiming for this status by 2022	aiming for this status by 2024	
Developing Digital Skills	2020	aiming for this status by 2022	aiming for this status by 2024		
Providing Digital Services			2020	aiming for this status by 2022	aiming for this status by 2024
Increasing Digital Infrastructure	2020	aiming for this status by 2022	aiming for this status by 2024		
Innovation and entrepreneurship		2020	aiming for this status by 2022	aiming for this status by 2024	
Community & cultural digital partnerships	2020	aiming for this status by 2022	aiming for this status by 2024		

The Offaly Digital Readiness Assessment 2018 results are applied to each of the pillars as a 2020 status; and the future dates for project development in each of the pillars are identified.

⁸ Explained at https://www.dccae.gov.ie/en-ie/news-and-media/press-releases/Pages/Minister-Canney-launches-the-Smart-Community-Initiative-in-Tubbercurry,-Co--Sligo.aspx as 'a new approach that will bring exposure to digital content and technology out into the community and support people to discover the value of using digital in their daily lives'.

Some improvements on these pillars have taken place since the original survey. Offaly was a lead in the MyOpenLibraries initiative; has won a national award for its STEM VEX Robotics programme and has been a lead local authority in establishing remote working hubs and a significant support to the I-LOFAR project. However, there are opportunities to increase activity and scores in each of the pillars of the DRA criteria at the next evaluation particularly within the framework of the Just Transition⁹, which includes digitisation as a huge opportunity within that overall process.

Ray Bell, Head of Information Technology & Broadband/Digital with Offaly County Council speaking about the STEM VEX IQ initiative said:

"Offaly County Council believes that this STEM project with schools is needed to ensure today's students are qualified for the jobs of tomorrow. The new global economy requires a robust workforce, flush with knowhow in STEM subjects. Few factors are more important to Ireland's future competitiveness and innovation than education. This programme is an ideal introduction to students who we hope will drive Offaly's economic ambitions, support innovation and provide the foundations for future prosperity in the county."



An initial SWOT analysis indicates Offaly's Strengths, Weaknesses, Opportunities and Threats:

Strengths	Weaknesses
Committed stakeholders e.g. OCC, LOETB, LEO, OLDC, EMRA; Innovation; Central location; Metropolitan Area Networks, I-LOFAR; remote working / co-working hubs.	Infrastructure (Broadband); No third level institution within the county; no overall view of the county's digital strengths to date; possible urban/rural digital divide.
Opportunities	Threats
Athlone IT; NUI Maynooth; Trinity College Dublin, Big Data; Offaly access to Greater Dublin Area R&D via Eastern Midland & Regional Assembly; power grid connectivity; Just Transition.	Urban/rural divide across county; digital skills; access to equipment e.g. home PC's, cost; computer and technological literacy; internet safety and security.
Working with attributes of the SWOT analysis and areas for improvement and perspectives of the Digital Economy	development of relevant policies for actions outlined in the next section across the key areas of Infrastructure,

all indicate the opportunities and actions Offaly can take to move into a more digitally focused future with the

Community, Enterprise and a Digital Council.

⁹ 'Just Transition can be defined as a vision which sets out a series of economic and social interventions needed to secure and shift economic and social activity in an area dependent on an extractive economy to jobs and activities relating to a regenerative economy' (DCCAE, 2020, p4).

3. ICE Development and Delivery

In the Corporate Plan, the Offaly digital strategy focus is on three pillars of Infrastructure, Citizens, & Enterprise .		Readiness Assessm Offaly which indicat	nat has a direct relations nent (Indecon, 2018) rep ed results can be deliver out, and a result of digita	ort conclusions for red in three stages of
Strategies	Pillars	1 Digital Inputs (Q1 2018 baseline onwards)	2. Digital Outputs (2020-2024)	3. Transformation
Offaly County Council Corporate Strategy and Digital Strategy Pillars and Council Services to develop-Offaly	Infrastructure	Infrastructure	Digital Services	
	Citizens	Digital Skills	Community & Culture ¹⁰	Digital Transition
	Enterprise	Innovation & Entrepreneurship	Digital Economy & Employment	

3.1 Key Pillars of Offaly's Digital Strategy



The three areas of Infrastructure, Community and Enterprise are interlinked with key performance indicators outlined for each sector. A Digital Strategy committee will meet quarterly to assess ongoing progress, which will be further reviewed at Strategic Policy Committee (SPC) level twice yearly, reporting alternatively between the Land Use, Planning and Economic Development SPC and the Community, Culture, Heritage and Emergency Services SPC.

We will be bringing to them ideas of our own, of best practice and of policy standards. For instance EMRA have strong links with Lower Austria who in their recent Digitalisation Strategy for their region include 'Improve Life Quality' indicators for quicker use of data to improve e.g. local services, tourism, health etc; and we assess how to integrate the Digital Economy and Society Index (DESI) for evaluating and further developing the strategy into the next few years.

3.2 Infrastructure

Infrastructure is a key enabler in moving us towards digital transformation. It assists in our communication and connectivity; and positions the county as a provider of services. As well as the infrastructure connectivity opportunities we have, Offaly can use its advantages of a central location, mostly flat landscape and low interference terrain for developing further ICT services

¹⁰ Not to be confused with the Council section of the same name; in this scenario the Indecon term indicates the impact the outputs will have on behavioural change and benefits these changes will bring to the county.

for both ourselves and external interests such as the business and academic community. These include the communications infrastructure benefits for mobile phone and broadband coverage, and for county infrastructure such as Public WiFi, Broadband Connection Points, remote and co-working facilities, business parks and individual business enterprises and homes and the rollout of the National Broadband Plan. Community and business needs are the drivers behind what Offaly needs to do in terms of infrastructure deployment.

Infrastructure Actions	Lead	Support	2020 - 2022 Activities
 Facilitate development of high speed broadband and digital infrastructure including roll-out of the National Broadband Plan. 	National Broadband Ireland	DRCD & DECC Offaly County Council	Increase broadband services across the county.
2. Continue to engage with Telecommunications (Telco) operators, Community & Business Groups to identify mobile blackspots / improve coverage.	Telecommunications Industry Ireland	Offaly County Council Telco Companies National Broadband Plan	Extend mobile phone coverage across the county focusing on blackspots in particular.
 Identify and seek funding at both National and EU level to support the provision of public access to high speed broadband and digital technology e.g. BCPs, and WiFi4EU. 	Offaly County Council	DRCD EMRA	Application for and drawdown of specific funding to support broadband and digital services objectives.
4. Identify and progress projects supporting a Low Carbon, Digital Future.	Offaly County Council LEO	Agencies	Work within the Just Transition agenda to support its activities.
5. Develop strategies and digital-proof future capital and development projects to enhance infrastructure at key locations to attract and sustain ICT, data centres, & big data sectors.	LEO Offaly County Council External stakeholders	Private Sector, Enterprise Agencies	Cross reference and link digital strategy activities with the actions of other relevant plans in the county and region.
6. Survey county underground duct infrastructure and digitise to enhance awareness and use by Telecoms Industry.	Offaly County Council	Industry & Agency Partners	Map and manage the ducting infrastructure in the county for the use of digital infrastructure/fibre.
7. Pending planning guidelines (or legislative amendments) ensure new builds have sufficient installations of shared telco infrastructure (ducting) to future proof service.	National planning guidelines	Offaly County Council	Develop local policies to future proof digital services needs at new build and other locations.
8. Establish Smart services Internet of Things pilot - Introduce town Smart zones in Tullamore", Birr ¹² , Edenderry ¹³ .	Offaly County Council	Community & Business Sector EMRA	Assess and source relevant partners for community and business activity in this regard.

¹¹ Tullamore Town & Environs Development Plan see https://www.offaly.ie/eng/Services/Planning/Development-Plans/Tullamore-Town-Environs-Dev-Plan-Extended-until-2020/

¹² Birr Town & Environs Development Plan see https://www.offaly.ie/eng/Services/Planning/Development-Plans/Birr-Town-Environs-Development-Plan-Extended-until-2020/

¹³ Edenderry Town & Environs Development Plan and the County Development Plan 2021 – 2027 see https://www.offaly.ie/eng/Services/Planning/ Development-Plans/Local-Area-Plans/Edenderry-LAP-2017-2023/Edenderry-LAP-Final-Version.pdf

Catriona Hilliard, Broadband/Digital Officer says:

"We are looking forward to working with all the telecommunication operators to deliver high speed broadband to enable Offaly become a smarter and more connected county. This will allow us to expand our digital services projects across a range of platforms."

The forthcoming business and community landscape is a work in progress and Offaly will work to future proof our capital and community projects to attract further ICT and other business investment for the ongoing development of the county. This strategy views IT and communication infrastructural supports as providers of services which can benefit economic and community activity across a range of functions for the advantage of the county. To facilitate further growth in the county ICT infrastructure, this strategy will –

- Work with the telecommunications industry for upgrade of communications infrastructure,
- Manage ICT assets to focus on growing digitisation across the county,
- Work with broadband, Smart Technology and IoT services to enable deployment of integrated systems in appropriate locations across the county,
- Enable as many public spaces and buildings as possible with High Speed Broadband and public WiFi to enhance towns and villages and public realm spaces and enterprise development.

3.3 Community

Infrastructure supports our citizens who in turn are the bedrock of Offaly. Over seventy eight thousand people in Offaly (CSO, Census 2016) is a lot to serve; but also a lot from whom to draw inspiration and innovation. Many of our citizens indicate they are users of computers at home, and statistics indicate high levels of mobile telephone use for data and telephony services. Training and education is key to developing citizen engagement and inclusion in digital activity. Libraries are key locations around Offaly operating as community hubs providing wide access to a breadth of digital technology, learning and training systems and services; and Offaly is also forging strong relationships with schools through our STEM programme in schools. We also continue to work with the Department of Education and Skills to prioritise Offaly primary schools for high speed broadband and we plan to have this available in all Offaly schools by the end of 2020.

Eimear McGinn, Offaly County Librarian notes:

"our libraries in Offaly help to bridge the digital divide by developing digital learning spaces that support creative library STEAM (Science, Technology, Engineering, Arts and Maths) programmes to the benefit of our communities. Libraries play an increasingly important role, showcasing new and emerging technologies and providing free access to interactive digital technology and learning opportunities. These quality of life services inspire users to create, experiment and innovate."

Strategy in Action

Remote working, co-working and business workspaces Offaly has remote working, co-working and business workspaces in Tullamore, Birr and Edenderry. These provide office space and business support services to companies via Offaly Local Enterprise Office. It also provides digital learning and training opportunities to the local community. These spaces are designed to suit residents, entrepreneurs and visitors alike.

Offaly's co-working hubs are ideal for remote workers (working one or more days away from the main office), and for those setting up or growing their own business. Offaly has Digital Hub / Co-Working Facilities offering affordable hot desks, meeting rooms and high speed internet access.



Individuals as members of their local neighbourhood are also instrumental in guiding community actions. This strategy will also support and facilitate input from voluntary groups working in all sectors in the county, to develop projects responding to the needs across all age groups and interests. This commitment can be aided by the appointment of a Digital Champion and the establishment of community indicators to measure input and progress in the Offaly digital journey. Citizen orientated aims in this Strategy will ensure we

- set up a representational Digital Offaly committee to deliver the Digital Strategy,
- ask for ideas as to how a digital strategy can serve them and implement these ideas where possible,
- service all strands of the community across demographic, location and socio-economic profiles,
- develop services that will provide training, education and employment opportunities.

Community Actions	Lead	Support	2020 - 2022 Acivities
1. Collaborate with the Education and Learning providers to support Digital Education & Training to ensure greater citizen engagement and inclusion.	Offaly Libraries	Offaly Local Development Company Training Providers Education Services	Increase courseware and providers; and work with community venues around Offaly to facilitate local training.
2. Support improved access and use of libraries as a community hub with access to digital technology equipment, in line with our Public Library Strategy "Inspiring, Connecting and Empowering Communities".	Offaly Libraries	Offaly County Council	Increase users of both remote and library location based services.
3 . Support the development of Smart Communities to enable communities to fully engage with the digital society.	Offaly County Council	Communities Industry Research	Increase information and knowledge at community level to assist understanding and use of relevant technology.
4. Support the delivery of digital initiatives in communities, health and education settings, with the aim of improving the digital society for older and younger people.	Offaly Public Participation Network	Community Funding	Develop and deploy projects in partnership with community groups.
5. Appoint a County Digital Champion.	Offaly County Council	Digital Strategy Committee	Appointment arranged and approved.
6. Establish Community Indicators to measure how communities are working to improve their engagement with the digital economy.	Offaly County Council PPN	OLDC	Work with groups and agencies to agree terms of reference and measurement.
7. Assess and measure changes in digital engagement by activity relevant to Offaly CSO results for 2021 compared to 2016.	Offaly County Council	CSO	Analyse future CSO figures as available.
8. Utilise digital technology to promote Tourism, Heritage Community & Cultural Services as both socio & economic supports to county development.	Offaly County Council Offaly Tourism Offaly Heritage Forum	Funding channels Communities	Develop a range of projects to support these activities.

Strategy in Action

Digital Education & Training - STREAM (Science, Technology, Research, Engineering, Arts and Mathematics)

Offaly County Council in partnership with the Department of Rural and Community Development and Cork Institute of Technology has rolled out a digital STEM programme to 30 primary schools in the county. Jobs and employment opportunities are changing, and primary school students are at the perfect age to begin their STEM education. Offaly County Council believes that STEM is key to unlocking a better, smarter future for Offaly.

The success of the primary schools programme has now extended to post primary schools with Offaly Local Development Company (OLDC) getting involved. This partnership has allowed Offaly County Council to roll out the more advanced VEX Robotics programme to all post primary schools in Offaly where students from 12-18 are able to get involved. This allows students to continue their STEM education as they move from primary to post primary schools.



3.4 Enterprise

The digital economy is continuing to grow and is seen as one of the most important areas for future sustainability and regional development, especially for new enterprise and as a key driver in the promotion of employment. The Midland Regional Enterprise Plan (DBE, 2019) identifies digital access as a key driver in the promotion of employment; which also has a foundation in education for use of digital facilities and functionality. Offaly's central location, good connectivity and quality of life make it a great place to live and work. Opportunities may also exist in industry areas such as artificial intelligence or more local activities working for instance with Midlands Regional Hospital Tullamore as a university status hospital. Local land use digital mapping of different types of projects across a range of activities in the county could also be of use for evaluation of community, education, enterprise and funding activities in Offaly and impact assessment of those activities.

Orla Martin, Head of Enterprise, Offaly County Council tell us:

"The primary focus of the Local Enterprise Office is to encourage entrepreneurship and start-ups. Managed coworking hubs are a valuable addition to the ecosystem of enterprise supports. They provide much more than a physical centre for start-ups and expanding enterprises. The interaction between early stage entrepreneurs, remote workers, more experienced business owners and Local Enterprise staff and supports contributes strongly to the enterprise culture of a town or village. The inclusion of Remote Working and Co-Working Hubs as Strategic Objectives or supporting Actions in a number of the Regional Enterprise Plans demonstrates the importance of the concept, and commitment to further development".

Enterprise actions also include orienting our opportunities towards current county needs and building facilities to address emerging trends. The Government's recent statement on The Role of Data Centres in Ireland's Enterprise Strategy highlights the requirement for a plan led approach to promote regional options for data centre investment. The Midlands is well placed to be a lead region in this sector given its history of energy production, grid infrastructure and the availability of large areas of land such as cutaway peatlands.

Even before Covid-19 intervened, remote working is fast becoming an alternative to the traditional 9 to 5 office based employment and according to CSO Labour Force Survey over 200,000 people in Ireland did some form of Remote Working. In 2019, Offaly hosted a Remote Working Conference entitled "Remote Working – Practical Insights and Approaches". The purpose of the conference was to highlight practical ways to make it a success for employers, employees and communities to facilitate remote working. The recent establishment of



the Midland Network of Co-Working Facilities (MNCF) and a directory of Midlands facilities, and how these contribute to the overall attractiveness of the region as a place to invest and enable commuters to work closer to their homes is also a specific action in the Midland Regional Enterprise Plan. The establishment of the MNCF is also delivering on the 'Powering the Regions Report' (Enterprise Ireland, 2019) and contributing to objectives of the Remote Work in Ireland report (DBEI, 2019) - for instance LOETB in partnership with SOLAS, GoRemote and the IDA are rolling out two remote working courses.

I-LOFAR, at Birr Castle is part of the International LOFAR (LOw Frequency ARray) Telescope - a €150 million network of radio telescopes distributed across Europe. I-LOFAR is allowing exciting, world-class scientific research and Ireland's world-leading capability in big data and data analytics. Skills in software and big data that young researchers will acquire from participation in I-LOFAR are in high demand in business and will open diverse and high quality career opportunities for them. Through the harnessing of big data and data analytics opportunities afforded by the presence of I-LOFAR in Birr, STREAM Creative Suite and Birr will be recognised globally as a best practice model to develop innovation and advances in STREAM fields. Big data and data analytics provide immense potential for research, development, education and innovation in Science,



Where research and education meet business... to create jobs

Technology, Research, Engineering, Arts and Maths (STREAM) to foster best practice learning and crosssectoral collaboration, including film & image processing, and will enable companies in the Midlands compete at an international level.

Professor Gallagher, Head of the I-LOFAR Collaboration and Associate Dean of Research at Trinity, said:

"The huge volumes of data that the radio telescope will produce will require us to develop new software and data analytics techniques to process and understand the data. I-LOFAR really is a test-bed for big data in Ireland."



Encouraging the greater adoption of digital technologies and broadband usage by enterprises of all sizes and from all sectors is a critical component of the Offaly Digital Strategy. Although there are ongoing efforts both locally and nationally to encourage firms to increase their online presence, there remains a pressing need for an integrated Digital Enterprise Support Programme to build on existing supports (e.g. Online Voucher Scheme) but also address gaps in company awareness, digital strategies development, accessing relevant supports as well as monitoring and tracking progress at both an individual and macro level.

Also, tourism is a vital part of the economy of County Offaly and the digital strategy aims to support this through more effective digital marketing and enhanced content creation, to reach a wider online market and support key tourism initiatives from a digital context. The strategy aims to develop a new smart platform application to support existing and future content and promotion of tourism related trade and activities in County Offaly, further enhance visitoffaly.ie and also support an increase in content creation.

Key areas for Enterprise are

 to build on success of the three co-working hubs - the Junction Business Innovation Centre in Tullamore, STREAM BIRR, and E-Hive in Edenderry – and provide business support services to companies via Offaly Local Enterprise Office and to connect with privately run hubs and Community Centres offering hot-desk facilities,

- an overall strategy to move towards a Low Carbon, Digital Future,
- provision of training and support to enterprises and individuals seeking to improve remote working and its efficiencies,
- to ensure Offaly has the required infrastructure to

attract and sustain ICT sector, data centres, and users of big data by developing strategies to enhance infrastructure (broadband, gas etc.) at key locations and engagement with internal OCC stakeholders (IT, Roads) and external stakeholders,

• support initiatives to improve broadband in towns and villages throughout Offaly, enabling existing business owners embrace online trading and marketing.

Enterprise Actions	Lead	Support	2020 - 2022 Acivities
1. Support the development of sustainable remote working, co-working and business workspaces including opportunities at Broadband Connection Points & WiFi4EU locations.	LEO Offaly County Council	Communities LCDC DRCD Offaly County Council ICT	Increase these activities and services around the county.
2. Continue to promote remote-working, and provide training and support to enterprises and individuals seeking to improve remote working efficiencies.	LEO	Grow Remote	Increase promotion of the venues and user group.
3. Identify, Support and Promote Digitally Focussed Projects of scale throughout the county.	LEO Offaly County Council	Various agencies	Establish these projects to address county needs across a range of areas.
4. Facilitate training of business people in the specific skills required to enhance the use of advanced manufacturing, robotics and data analytics in industry and enterprise.	LEO	Business community Schools, Post Primary, Primary Industry	Develop further professional support in digital activities to support business.
5. Support small Irish businesses to trade more online, boost sales and reach new markets, through Digital Marketing and the Trading Online Voucher Scheme.	LEO	Business applicants	Further promote and support relevant schemes.
6. To support I-LOFAR and further enhance Ireland's world-leading scientific research capability in big data and data analytics.	LEO	Offaly County Council Trinity College Dublin	Increase Offaly's exposure as a cutting edge location in this regard.
7. Continue to develop STREAM (Science, Technology, Research, Engineering, Arts and Mathematics) initiatives throughout the county.	LEO Offaly County Council IT	Education sector in Offaly Cork Institute of Technology	Utilise digital infrastructure and community support to engage people further in these areas.
8. Work with Film Offaly and other public and private stakeholders to identify the best model to deliver a sustainable Film Studio/ Post Production Facility in Offaly.	Offaly County Council OCC LEO Offaly Arts Office	Funding channels Communities	Develop a service to support and enhance Offaly's dynamic vibrant film and creative industries sector.

Strategy in Action

I-LOFAR in Birr Castle - The International LOFAR (LOw Frequency ARray) Telescope



The International LOFAR (LOw Frequency ARray) Telescope is a €150 million network of radio telescopes distributed across Europe. Irish Government and agency investment in research has propelled Ireland to the forefront of radio astronomy. I-LOFAR will allow exciting, world-class scientific research and in addition the data intensive nature of radio astronomy will enhance Ireland's world-leading capability in big data and data analytics. I-LOFAR provides a central location and space, where academics and researchers affiliated with the international LOFAR network can work collaboratively with software developers and data analysts from companies operating in the Midlands Region.

3.5 Digital Council

Offaly County Council is developing this digital strategy to ensure that all citizens, businesses, community stakeholders and partner agencies are engaged and afforded the opportunity to influence how digital can deliver for Offaly. Digital is becoming a critical enabler of competitiveness, productivity, inclusiveness and sustainability for all organisations and regions. This strategy will help transform the way we do business, interact and communicate to become more productive and creative through the use of digital. The strategy will create awareness and connections to training and supports for businesses and citizens to reduce the skills gap and encourage more young people into digital careers.

Infrastructure does not just include connection points and how individuals and groups access them. It also includes the orientation of all our services in the council towards opportunities a digital economy and society can provide. In this regard we will adhere strongly to the principles of the Public Service ICT Strategy.

Offaly is a constituent county in the Local Government ICT Strategy 2017-2022

This ICT strategy is aligned with the Public Service ICT strategy with five strategic themes that define the business, data and technology areas that local government will use to achieve their corporate plans. The themes are – build to share; digital first; data as an enabler; improve governance and increase capability.

Based on the principles of the Public Service ICT Strategy (DPER, 2015)

Offaly County Council already provide a suite of digital services to elected members. Each member is provided with a tablet device and meetings are managed online for all Council, Municipal District and LCDC meetings. Offaly County Council also continues to invest in technology to support Digital Transformation in the workplace in areas such as document and records management, online services, collaboration, CRM and cloud adoption.

Municipal Districts

Towns and areas across Offaly are also key administrative structures in the delivery of Council services. Councillors and staff can be instrumental in digitisation within the geographical spread of their relevant area in Offaly to support objectives for digital development such as

- Councillors supporting the digital service agenda in the locality,
- · Observation and operation of digital council systems,
- Representation and providing understanding to communities on services,
- Staff support to the rollout of technological town and area management systems,
- Understanding of a regional agenda and partnerships for economic and social enhancement.

Regional Perspective

Offaly's recent incorporation into the Eastern and Midland Regional Assembly area places it adjacent to the greater Dublin area (GDA). Additionally, recognised within a sub-set of midland counties in this overall region provides it with a further advantage in terms of opportunities for regional development. The county can benefit from proximity to the city; and capitalise on its rural location and for collaboration with our peer counties to address regional issues. Working with other counties and regional agencies the objectives include –

- Recognition of the regional scale and how projects in one county can benefit another;
- Identification and draw down of funding for collective projects;
- Combining expertise from different skillsets in the councils that can lead to regional cohesion;
- Co-operative competition between councils to drive a regional digital service agenda;
- Partnerships with adjacent local authorities to roll out joint projects.

Partnering for Progress

While partnerships with neighbouring counties can assist collective efforts; there are also a wide range of organisations and agencies with which Offaly County Council work. These include local community organisations such as some of those already mentioned and more collective representational groups such as the Offaly Public Participation Network, the Offaly Local Development Company, Midland Science, and Irish Rural Link.

We also include agencies for instance, National Transport Authority, Transport Infrastructure Ireland, EMRA, the Environmental Protection Agency, Irish Water, Waterways Ireland, Failte Ireland, Enterprise Ireland and Bord na Mona. We also work with educational institutions in the Greater Dublin Area and locally with Athlone Institute of Technology and further afield with Cork Institute of Technology, the Heritage and Arts Councils, and various government departments.

We also have an aim to capitalise on our diaspora and will work towards including their technological expertise where it is available, to benefit the county.

Industry wide activities in digitisation also provide significant opportunities for partnership. These can include research and development opportunities, Offaly orientating itself towards being a pilot location for rollout of next generation internet activities, and sponsorship of technical installations for testing.

Working with education, business, social and government groups is crucial in terms of county digitisation opportunities to:

- Create synergies in digitisation that will provide 'winwin' outcomes for all involved,
- Develop and implement public relations activities to highlight and inform all parties on our digital services activities,
- Incorporate a general digital growth agenda across the county and region,
- Enhance resource management by combining community efforts with those of organisations and agencies,
- Support 'joined up thinking' to work for the benefit of the county and region.



Digital Council Actions	Lead	Support	2020 - 2022 Activities
1. Create Cathaoirleach Community Digital Prize as part of Offaly community awards.	Offaly County Council IT & Finance sections	Community Sector Business Sector Academic Sector	Establish prize and grow its entry numbers over two years.
2. Organise and host an inaugural Offaly Digital Summit across Offaly's 4 Digital Pillars with some focus on diaspora input.	Offaly County Council	Community Partners Diaspora Business Agencies LEO	Deliver by end of Strategy.
3. Continuing to enhance the Council website and online service delivery including new structures as per National Service Catalogue of local authorities services.	Offaly County Council	LGMA	Ongoing work with input from Offaly County Council sections and community and business users.
4. Invest in technology to support Digital Transformation / Workplace in areas such as document and records management, collaboration, CRM and cloud adoption.	Offaly County Council	Industry Partners	Ongoing needs assessment and upgrade of equipment as needed.
5. Governance - Establish Digital Strategy committee from representational groups to meet quarterly and identify digital projects in Offaly.	Offaly County Council	Offaly Local Community Development Committee Community sector Business sector Agency sector Academic sector	Establishment and operation of a Digital Strategy Committee further reporting to two Council Strategic Policy Committees.
6. Commission Independent Offaly Digital Readiness Assessment (DRA) Review.	Offaly County Council Corporate Services	All sections Community & Business	Implement same by end of 2022, and again in mid 2024.
7. Encourage diaspora input and support for county digitisation agenda.	Offaly County Council LEO	Offaly County Council IT Business Community	Generate and create links to appropriate members of the diaspora.
8. Evaluate all ongoing and new strategies and plans in Offaly County Council.	Offaly County Council	All sections	Ensure to include digital services perspectives, and to develop offline and online promotional activities.

Strategy in Action

Offaly Library Service

Offaly Library Service offer a number of digital upskilling courses with our numerous community partners including Age Action, Digitise the Nation and Irish Rural Link supporting the actively ageing and farmers, focused on the digital needs of these client groups and tailored accordingly. Coding workshops and programming for adults and kids are provided through our partnership with Ballycommon Teleworkers Training Centre (BTTC). There is also programming for rehab care clients with BTTC. Offaly Local Development Company (OLDC) use library ICT resources including public access computers, printing and



scanning facilities and Wifi as part of their job club programmes and there are links with West Offaly Training.

My Open Library Services offer fully automated out-of-hours library access and operate in 3 library locations throughout the County with another location planned for implementation in the future.

Offaly Digital Library Service includes a vast suite of resources for user download including eBooks, eAudiobooks, eMagazines, eNewspapers, eComics for Adults and Children, and free online courses via Universal Class and Transparent Languages.

With a range of activities and opportunities outlined in this document, the timeline and delivery of an adopted digital strategy and the strategic actions will provide:

- improvements in our internet user statistics, mobile telephony and broadband services through an increasing focus on infrastructure,
- development and growth of community communications focused towards the digital society agenda,
- encouragement to enterprise backed up by education for capitalising on our open, inclusive and facilitating approach to our digital future to fulfil this Digital Strategy vision of:

"access to improved digital services and skills to support and grow economic and social activity for citizens, business, community and visitors".

All the elements of proposed progress are outlined in the four areas of Infrastructure, Community, Enterprise and Digital Council.

We look forward to your participation in these activities.





3.6 Conclusion

Offaly's Digital Strategy provides a structured framework on how we move forward with our digital agenda. Digitisation is changing the way we live, work and enjoy life and social interaction. There are opportunities for increased deployment and development of digital services which will contribute enormously to the quality of life, to economic growth, to social fabric and cohesion, to training and education, and to ongoing telecommunications in all its forms in Offaly. Offaly County Council will continue to work will all partnership agencies to deliver on these Digital opportunities for Offaly.

Offaly County Council has reviewed what is happening from a global, European and national perspectives to ascertain their impact on our region and how they can impact on what we want to do for Offaly. Private industry and public services have focused much effort on leveraging digital activities for the benefit of business and citizen services and we have presented the relevant statistics and user scenarios in this strategy. We will use a range of business models to help our projects – including local authority services delivery, business partnerships, and community collaboration. Mark Connolly, Head of Finance & ICT commented on the strategic opportunities that have been identified in this digital strategy for Offaly and said

"Offaly County Council continues to drive and foster a digital culture for Offaly. Digital systems and services are the way of the future; and Offaly County Council wants to assist, support and capitalise on the opportunities to assist our citizens, services, businesses and communities as we plan our way forward to our digital future."

The 4 key pillars outlined in this document have a range of objectives/actions under Infrastructure, Community, Enterprise, and Digital Council that can be achieved out to 2022. These will enhance the digital economy in Offaly and the necessary actions to achieve those objectives are outlined in this strategy. We want your involvement, your engagement, and your commitment. Offaly wants to capitalise on opportunities to assist our citizens, services, businesses, and communities as we navigate our way through the first few years of a 'Digital Offaly'. Supporting this work is a priority in addressing the challenges of Just Transition, Climate Change, Remote Working and the opportunities presented by the move towards a Low Carbon Digital Future.

Notes:

Appendix

Acronyms

DRCD	Department of Rural and Community
	Development
DES	Department of Education and Skills
DCCAE	Department of Communications, Climate
	Action and Energy
DPER	Department of Public Expenditure & Reform
DBEI	Department of Business, Enterprise and
	Industry
MOL	MyOpenLibrary
WEF	World Economic Forum
OECD	Organisation for Economic Co-operation and
	Development
IEDR	IE Domain Registry
SME	Small or Medium Sized Enterprise (fewer than
	250 employees)
CCL	Centre for Creative Leadership
OLDC	Offaly Local Development Company
HSE	Health Service Executive
STEM	Science, Technology, Engineering and Maths
STEAM	Science, Technology, Engineering, Art and
	Maths
STREAM	Science, Technology, Research, Engineering,
	Art and Maths

References

A Europe fit for the Digital Age <u>https://ec.europa.eu/info/</u> strategy/priorities-2019-2024/europe-fit-digital-age_en

CCL Centre for Creative Leadership (2018) Digital Transformation Readiness Survey Summary [Online] Available at: <u>https://www.ccl.org/wp-content/</u> <u>uploads/2018/04/Digital-Transformation-Survey-Report.pdf</u>

Cisco, (2020) Digital Readiness Index [Online] Available at: <u>https://www.cisco.com/c/en/us/about/csr/research-</u> resources/digital-readiness.html

DBEI Department of Business, Enterprise and Innovation (2019) Midland Regional Enterprise Plan 2020 [Online] Available at: https://dbei.gov.ie/en/Publications/ Publication-files/Midlands-Regional-Enterprise-Planto-2020.pdf DBEI Department of Business, Enterprise and Innovation (2019) Ireland's Industry 4.0 Strategy 2020-2025 Supporting the digital transformation of the manufacturing sector and its supply chain [Online] Available at: <u>https://dbei.gov.ie/en/Publications/</u> <u>Publication-files/Irelands-Industry-4-Strategy-2020-2025.</u> <u>pdf</u>

DBEI (2019) Department of Business, Enterprise and Innovate Remote Work in Ireland Future Jobs 2019 [Online] Available at <u>https://dbei.gov.ie/en/Publications/</u> <u>Publication-files/Remote-Work-in-Ireland.pdf</u>

DCCAE Department of Communications, Climate Action and Energy, (2013) Doing More With Digital National Digital Strategy for Ireland Phase 1 Digital Engagement [Online] Available at: <u>https://www.gov.ie/en/publication/</u> <u>f4a16b-national-digital-strategy</u>

DCCAE (2020) Department of Communications, Climate Action and Energy Just Transition Progress Report [Online] Available at <u>https://www.dccae.gov.ie/</u> <u>documents/Just_Transition_Progress_Report.pdf</u>

DCCAE Department of Climate Action, Communication and Energy (2015) National Broadband Plan Connecting Communities Ireland's Broadband Intervention Strategy [Online] Available at <u>https://www.dccae.gov.ie/en-</u> ie/communications/publications/Documents/62/ Updated%20Strategy%20December%202015.pdf

DCCAE (2019) Delivery the National Broadband Plan [Online] Available at:

https://www.dccae.gov.ie/documents/Delivering%20 the%20National%20Broadband%20Plan.pdf

DECC Department of the Environment, Climate and Communications

DES Department of Education and Science (2016) National Skills Strategy [Online] Available at: <u>https://</u> <u>www.education.ie/en/Schools-Colleges/Services/</u> <u>National-Skills-Strategy/</u>

DES Department of Education and Science (2018) Action Plan for Education [Online] Available at: <u>https://</u> <u>www.education.ie/en/Publications/Corporate-Reports/</u> <u>Strategy-Statement/action-plan-for-education-2018.pdf</u> DPER Department of Public Expenditure and Reform (2015) Public Service ICT Strategy – "Delivering better outcomes and efficiency through innovation and excellence in ICT." [Online] Available at: <u>https://</u> ictstrategy.per.gov.ie/ictstrategy/download.html

DRCD (2018) Department of Rural and Community Development, OUR PUBLIC LIBRARIES 2022: Inspiring, Connecting and Empowering Communities. [Online] Available at: https://www.librariesireland.ie/

Deloitte (2019) A Government Perspective : Human Capital Trends 2019, [Online] Available at:<u>https://www2.</u> <u>deloitte.com/us/en/pages/public-sector/articles/humancapital-trends-government-perspective.html</u> Dufva, T., & Dufva, M (2019) Grasping the future of the digital society, Futures, Volume 107, pp 17-28

EMRA Eastern & Midland Regional Assembly (2019) Regional Economic and Spatial Strategy [Online] Available at: <u>https://emra.ie/final-rses/</u>

Enterprise Ireland (2019) Powering the Regions Enterprise Ireland Regional Plan <u>https://www.enterprise-ireland.</u> <u>com/en/Publications/Reports-Published-Strategies/</u> <u>Enterprise-Ireland-Regional-Plan.pdf</u>

Government of Ireland (2018) Project Ireland 2040 National Planning Framework [online] Available at: <u>http://</u> npf.ie/wp-content/uploads/Project-Ireland-2040-NPF.pdf

IEDR IE Domain Registry (2019) SME Digital Health Index 2019 [Online] Available at: <u>https://www.iedr.ie/smedigital-health-index/</u>

Indecon (2018) Digital Readiness Assessment commissioned for Offaly County Council.

Indecon (2019) Assessment of the macro-economic impact of the internet and digital on the Irish economy Department of Communications, Energy and Natural Resources [Online] Available at: <u>www.dcenr.gov.ie</u>

ICS Irish Computer Society (2019) Index Ireland making progress in Digital Economy & Society Index 2019, Digital Economy & Society Index 2019 [Online] Available at: https://www.ics.ie/news/Ireland_DESI_2019 OECD (2015) Just Transition A Report for the OECD [Online] Available at: <u>http://www.oecd.org/environment/</u> cc/g20-climate/collapsecontents/Just-Transition-Centrereport-just-transition.pdf

Taylor, C (2017) Irish Companies Risk losing out on technology boom, The Irish Times [Online] Available at <u>https://www.irishtimes.com/business/technology/</u> irish-companies-risk-losing-out-on-digital-economyboom-1.3071339

The European Digital Strategy <u>https://ec.europa.eu/</u> digital-single-market/en/content/european-digitalstrategy_

WEF World Economic Forum (2016) Digital Media and Society Implications in a Hyper-Connected Era [Online] Available at: <u>http://www3.weforum.org/docs/WEFUSA_DigitalMediaAndSociety_Report2016.pdf</u>



Offaly County Council

Aras an Chontae Charleville Road Tullamore Co. Offaly

Comhairle Chontae Uíbh Fhailí

Aras an Chontae Bóthar Charleville An Tulach Mhór Chontae Uíbh Fhailí T: 0579346800 E: broadband@offalycoco.id W: www.offaly.ie



