



17th of November 2017

To: The Mayor and Each Member of Limerick City and County Council

Limerick Digital Strategy

A Chomhairleoir, a chara,

Cities and their environs, as the main drivers of world economic growth, are attracting an ever increasing number of people that are seeking new opportunities, prosperity and a better quality of life. While this urbanization trend is contributing to the development of stronger regions, it can be unsustainable if not properly managed. Alongside this urbanisation, the past two decades have seen advances in digital technologies that have changed the world. The Internet, mobile communications, social networks and the “cloud” have turned us into a connected, “always on” society with new expectations on how we seek and find information, how we access services, how we work, how we engage with our peers and how we communicate (for example, the Internet enables a worldwide \$21 trillion global Digital Economy). It is no surprise therefore, that cities across the world are examining how they can increasingly use integrated digital technologies, ICT, data and analytics, to operate in a smarter, more efficient way.

As Limerick's renaissance under the Limerick 2030 plan is building momentum we want to take advantage of digital technologies, transform the way we work at local and regional level, enable better citizen engagement through digital channels, double the number of digital startups in Limerick, double the number of SMEs trading online, double the use of data, create equal opportunities for all citizens and accelerate the development of a Sustainable Smarter Limerick that can grow to become a Tier 2 City Region with strong interdependence on the surrounding regions.

I am pleased to enclose herewith for consideration / adoption the Draft Limerick Digital Strategy which joins up the digital and smart cities agendas for Limerick. It sets the vision for a Sustainable Smart Limerick in 2030 and will guide Limerick to a new level of digital maturity between 2018 and 2020.

Having regard to the local, national and international context, and the challenges faced by Limerick City and County and the wider region a new lens on the vision for Limerick 2030 is presented in this strategy so by 2030 Limerick is:

1. Acknowledged for its ability and confidence to adapt and compete in the global digital economy
2. A place of digital equality where access to information creates opportunities in the knowledge economy for actively engaged communities

and:

3. That Limerick's physical environment, digitally enabled by design and connected by default, facilitates sustainable social and economic growth while improving the quality of life for all
4. The potential of the public services is unlocked by the use of digital technologies, driven by the desire of putting people first, to adapt, transform and support the reality of a digital, social and mobile age

The physical environment “connected by default” means that the technology dimension that enables “connectivity” will be added to any physical infrastructure projects as part of

the planning and design process and not at a later stage when often it is difficult or impossible.

The rapid development of digital technologies and the adoption of digital transformation principles will support the following goals:

1. Enable our diverse communities, through the use of digital technologies, to participate in the development of Limerick
2. Build Limerick's reputation locally, nationally and internationally as digital ecosystem
3. Create an environment for digital innovation and digital transformation
4. Develop world-class digital services and infrastructure for a Smart City Region and Communities
5. Digitally enable and transform key public services in Limerick

The first draft of this document is based on the Digital Strategy Framework developed in 2016. It contains projects and initiatives in the Smart Limerick Roadmap (also included) which have been implemented in parallel with the development of the strategy in order to reach a common language and understanding between local stakeholders of new concepts, approaches and technologies and to demonstrate their manifestation in practice, e.g. the launch in 2017 of the new Limerick.ie as a integrated digital customer experience platform for Limerick. This concurrent top-down (strategic) and bottom-up approach (implementation) enables support for a commonly shared vision and using an agile approach to quickly move from strategic thinking into action.

Is mise le meas,



Dr. Mihai Bilauca
Head of Digital Strategy



Comhairle Cathrach
& Contae **Luimnigh**

Limerick City
& County Council

BUILDING IRELAND'S FIRST DIGITAL CITY

Towards a Sustainable
Smart Limerick City, Region
and Communities



SMART LIMERICK

INFORMED / ENGAGED / TRANSFORMED

Building Ireland's First Digital City

Towards a Sustainable
Smart Limerick
City Region and Communities

INFORMED – ENGAGED – TRANSFORMED

DRAFT STRATEGY

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Note: The latest release of this report is available in digital format at DigitalStrategy.limerick.ie
The document is available in paper format by request at digital.strategy@limerick.ie

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Table of Contents

1 Executive Summary.....	8
1.1 About this report.....	8
1.2 Strategic Direction.....	10
2 Introduction.....	13
2.1 Why a Digital Strategy.....	14
2.2 Smart Limerick and the Digital City.....	16
2.3 Smart Limerick Domains.....	18
2.4 Smart Limerick Challenges.....	19
2.5 Methodology.....	20
3 Vision & Strategic Objectives.....	22
3.1 Smart Limerick 2030 Vision.....	22
3.2 Goals & Strategic Objectives.....	23
3.3 Principles.....	23
4 Achieving our Vision and Goals.....	25
4.1 Focus Point 1: Empower communities.....	26
4.2 Focus Point 2: Building the Digital Economy.....	27
1. Focus Point 3: Digital Infrastructure.....	29
4.3 Focus Point 4: Creating Smart Limerick.....	30
4.4 Optimization through Governance.....	32
4.5 Leadership & Support structures.....	33
4.5.1 Council Digital Champions Forum.....	33
4.5.2 Limerick Digital Leaders Network.....	34
4.6 Digital Edge – Research & Development.....	34
4.7 Accelerating Local Strategies.....	35
4.8 Strategy Outcomes.....	39
5 Digital Strategy Roadmap 2016-2020.....	40
5.1 Roadmap Overview.....	40
5.2 Longer Term Considerations.....	42
6 APPENDIX A – Limerick Digital Capability Maturity Assessment.....	43

6.1 Sustainable Connected Cities Capability Maturity (IVI).....	43
6.2 Smart City Maturity Model (TM Forum).....	44
6.3 Conclusions.....	47
7 APPENDIX B – Indicators.....	48
7.1 Enable our diverse communities, through the use of digital technologies, to participate in the development of Limerick.....	49
7.2 Build Limerick's reputation locally, nationally and internationally as digital ecosystem.....	49
7.3 Create an environment for digital innovation and digital transformation.....	50
7.4 Develop world-class digital services and infrastructure for a Smart City Region and Communities	51
7.5 Digitally enable and transform key public services in Limerick.....	52
8 APPENDIX C – Limerick Digital Strategy Roadmap.....	54
9 APPENDIX D – Digital Champions Forum.....	55
10 APPENDIX E – Limerick Digital Leaders Network.....	57
11 APPENDIX E – Feedback from consultation sessions.....	60
11.1.1 Economy and Innovation.....	60
11.1.2 Community & Citizenship.....	61
11.1.3 Culture & Entertainment.....	62
11.1.4 Movement & Transport.....	62
11.1.5 Urban Places and Spaces.....	62
11.1.6 Environmental Practices.....	63

Table of Figures

Figure 1: Limerick Digital Strategy Roadmap Overview.....	8
Figure 2: Strategic Approach.....	12
Figure 3: Urban Digital Transformation.....	17
Figure 4: Georgian Innovation District and the Digital Quarter.....	18
Figure 5: Smart Limerick Domains.....	19
Figure 6: Limerick Smart City Maturity 2016.....	20
Figure 7: Limerick Digital Strategy Framework.....	26
Figure 8: Smart Limerick.....	30
Figure 9: Smart Limerick Roadmap - A Strategic Approach.....	41
Figure 10: Limerick Digital Maturity Level 2016 (IVI).....	44
Figure 11: Limerick Smart City Maturity 2016.....	45
Figure 12: Levels of Smartness 2016.....	46
Figure 13: Levels of Smartness by Smart Limerick Domain.....	47

Index of Tables

Table 2.1: Key Issues in Smart Limerick Domains.....	19
Table 5.1: Longer term considerations across Smart Limerick Domains.....	41
Table 6.1: Limerick Smart City Maturity Score.....	45
Table 7.1: Indicators for Citizen Engagement.....	48
Table 7.2: Indicators for Internationalization & Digital Ecosystem.....	48
Table 7.3: Indicators for digital innovation & digital transformation.....	49
Table 7.4: Indicators for levels of smartness, digital services & infrastructure.....	50
Table 7.5: Indicators for public services digitally transformed.....	51
Table 9.1: Digital Champions Forum.....	53
Table 10.1: Limerick Digital Leaders Network.....	55

Glossary

Connected by default	In the Smart Limerick Vision 2030, the physical environment “connected by default” means that the technology dimension that enables “connectivity” will be added to any physical infrastructure projects as part of the planning and design process and not at a later stage when often it is difficult or impossible.
DCU	Dublin City University
DLN	Limerick Digital Leaders Network
GLN	Global Limerick Network
ISAX	Irish Smart Ageing Exchange
IVI	Innovation Value Institute Maynooth University Ireland
LDS	Limerick Digital Strategy
LCCC	Limerick City and County Council, Limerick, Ireland
LCETB	Limerick and Clare Education and Training Board, Limerick, Ireland
LCEA	Limerick Clare Energy Agency, Limerick, Ireland
LERO	The Irish Software Research Centre, University of Limerick, Ireland
LIT	Limerick Institute of Technology, Limerick, Ireland
MIC	Mary Immaculate College, Limerick, Ireland
SCC	Smart Cities Council
UL	University of Limerick, Limerick, Ireland

SMART LIMERICK

INFORMED - ENGAGED - TRANSFORMED

80%



OF PUBLIC CONSULTATIONS
USING DIGITAL CHANNELS

2,000

ATTRACTIONS, SERVICES,
COMMUNITY GROUPS &
BUSINESSES

WITH MORE THAN

1,000



EVENTS EACH YEAR IN
A SINGLE INTEGRATED
PLATFORM-LIMERICK.IE

50 NEW
ONLINE



SERVICES, PAYMENTS, LICENCES,
PERMITS AND GRANTS IN 'MY LIMERICK'

40

NEW SMART CCTV
CAMERAS WILL ENABLE
SAFER COMMUNITIES

37,137

PREMISES WILL BE CONNECTED
TO HIGH-SPEED BROADBAND
UNDER THE NATIONAL BROADBAND PLAN



100

SENSORS DEPLOYED
ACROSS CITY & COUNTY - NOISE,
AIR, WATER AND SOIL QUALITY
AND FOOTFALL COUNTING



10

DIGITAL
PUBLIC DISPLAYS



1,000

SMART HOMES

100

SMART
BUILDINGS



1 SMART ENERGY
DEMONSTRATION DISTRICT

1 Executive Summary

1.1 About this report

Cities and their environs, as the main drivers of world economic growth, are attracting an ever increasing number of people that are seeking new opportunities, prosperity and a better quality of life. While this urbanization trend is contributing to the development of stronger regions, it can be unsustainable if not properly managed. Alongside this urbanisation, the past two decades have seen advances in digital technologies that have changed the world. The Internet, mobile communications, social networks and the “cloud” have turned us into a connected, “always on” society with new expectations on how we seek and find information, how we access services, how we work, how we engage with our peers and how we communicate (for example, the Internet enables a worldwide \$21 trillion global Digital Economy). It is no surprise therefore, that cities across the world are examining how they can increasingly use integrated digital technologies, ICT, data and analytics, to operate in a smarter, more efficient way.

As Limerick’s renaissance under the Limerick 2030 plan is building momentum we want to take advantage of digital technologies, transform the way we work at local and regional level, enable better citizen engagement through digital channels, double the number of digital startups in Limerick, double the number of SMEs trading online, double the use of data, create equal opportunities for all citizens and accelerate the development of a Sustainable Smarter Limerick that can grow to become a Tier 2 City Region with strong interdependence on the surrounding regions.

This document presents the Limerick Digital Strategy which joins up the digital and smart cities agendas for Limerick. It sets the vision for a Sustainable Smart Limerick in 2030 and will guide Limerick to a new level of digital maturity between 2018 and 2020.

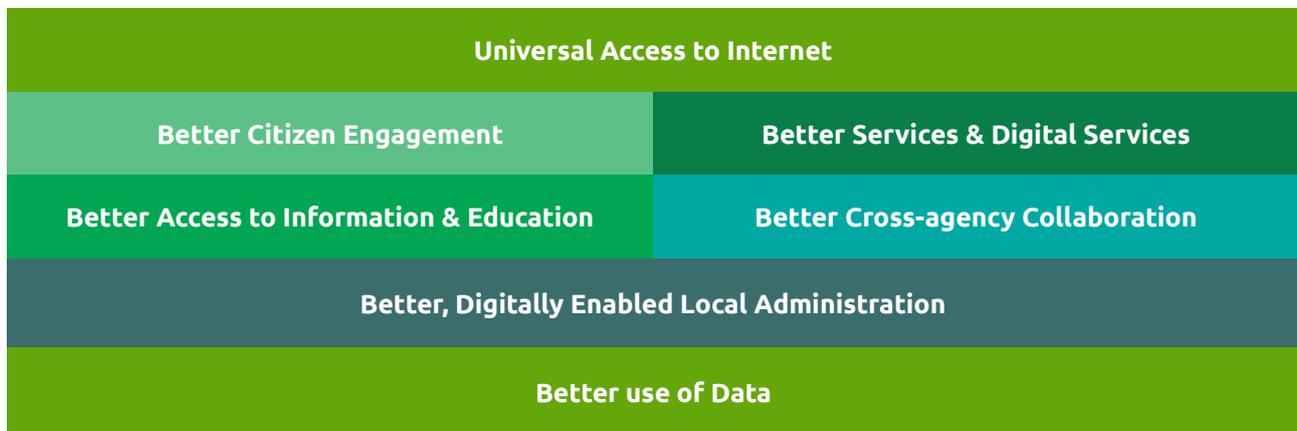


Figure 1: Limerick Digital Strategy Roadmap Overview

The first draft of this document is based on the Digital Strategy Framework developed in 2016. It contains projects and initiatives which have been implemented in parallel with the development of the strategy in

order to reach a common language and understanding between local stakeholders of new concepts, approaches and technologies and to demonstrate their manifestation in practice, e.g. the launch in 2017 of the new Limerick.ie as a integrated digital customer experience platform for Limerick. This concurrent top-down (strategic) and bottom-up approach (implementation) enables support for a commonly shared vision and using an agile approach to quickly move from strategic thinking into action.

The benefits of reaching a new level of digital maturity are:



This strategy sets the foundation for Smart Limerick, the city region where data, automation and artificial intelligence will fuel the knowledge economy, with a focus on creating by 2025

- 1,000 Smart Homes
- 100 Smart Buildings
- 1 Smart Energy District

that together with the 10 programmes for digital infrastructure and services included in the Smart Limerick Roadmap will promote Limerick as a top international destination for investment, innovation, equal opportunities and a better quality of life for all

To ensure that this strategy is always on track with the fast pace of technology advances this document will be published in a draft format and reviewed on an annual basis.

1.2 Strategic Direction

This strategy has identified 7 areas of development as part of the digital transformation journey towards a Smart Limerick. It aims to develop in a balanced approach not only the necessary digital infrastructure and services but also to support innovation, transformation of services and work practices across local agencies, as a close reflection of the Smart City concept. *[Graphics to be updated]*



1. Engagement & Participation

Engaged

Empower people to participate in the development of their communities through digital channels, support community driven technology and information sharing events



2. Information & Marketing

Open

Enable locals, businesses and visitors to discover more about Limerick. Deliver integrated information that helps promoting Limerick to an international audience



3. Service Integration

Integrated

Develop a unique digital experience by integrating digital services and providing feedback loops for continuous service and experience improvement



4. Digital Infrastructure

Connected

Facilitate the development of new digital capabilities and smart operations by investing and supporting the development of infrastructure: broadband, fibre networks, sensors & Internet of Things, Smart CCTV, Public Wifi



5. Data & Analytics

Informed

Improve the use of data for informed decision making, operational efficiencies, improved openness and transparency, supporting innovation and the development of new products and services



6. Digital Transformation

Transformed

Deliver organisational change, demonstrated first by the local council, supported by reviewed structures and standardised processes, improved ICT capabilities, new customer offerings and the development of staff skills in order to enable new digital first services



7. Service Innovation

Innovative

Support the development of new solutions and services through innovative procurement, research and innovation, connect and improve local and cross-agency services, support for local companies and start-ups to benefit from the digital economy

This strategy will support both national and EU digital programmes, the roll-out of the National

Broadband Plan, and other local plans strategies. It will especially underpin the Limerick 2030 Economic and Spatial Plan.

By 2020 local people, businesses and visitors will:

- Be able to participate in 80% of public consultations using digital channels
- Be able to access more information on some 2,000 attractions, services, community groups and businesses with more than 1,000 events each year in a integrated digital experience platform – Limerick.ie
- Be able to access information about 25 local communities which will have an online presence with integrated content
- Access 6 programmes for digital skills, digital culture & digital inclusion
- Have 10 local networks actively engaged in smart collaboration using digital technologies
- Be able to access 50 new online services, payments, licences, permits and grants in 'My Limerick'
- Be able to browse the Internet in 20 public WiFi zones in 17 town centres

In addition we will have:

- 37,137 premises will be connected to high-speed broadband under the National Broadband Plan [1]
- 12 Strategic Community Access Hubs established to support the National Broadband Plan
- 40 new Smart CCTV cameras will enable safer communities
- Access to 14 Live Cameras from city & town centres for tourists, for Limerick people living abroad and to support and expand the Global Limerick Network
- 6 community centres will be equipped with footfall counters
- 10 Digital Public Displays
- 100 sensors deployed across city & county - Noise, Air, Water and Soil quality and Footfall counting
- A network of 4 digital quarters will be established between Limerick City, Rathkeale, Newcastle West and Kilmallock
- 100 open datasets published in the Insight Limerick Service
- 4 new dashboards for Economy, Tourism, Transport and Community Safety
- 20% reduction in the average response time when accessing council services
- 5% increase in customer satisfaction when accessing council Customer Services
- 20 new smart ageing and mature entrepreneur led start-ups
- 20 local companies digitally enabled in a pilot project for digital retail
- Local representatives participation in 3 major international best practice networks

The progress made on achieving these targets will be published online at DigitalStrategy.limerick.ie

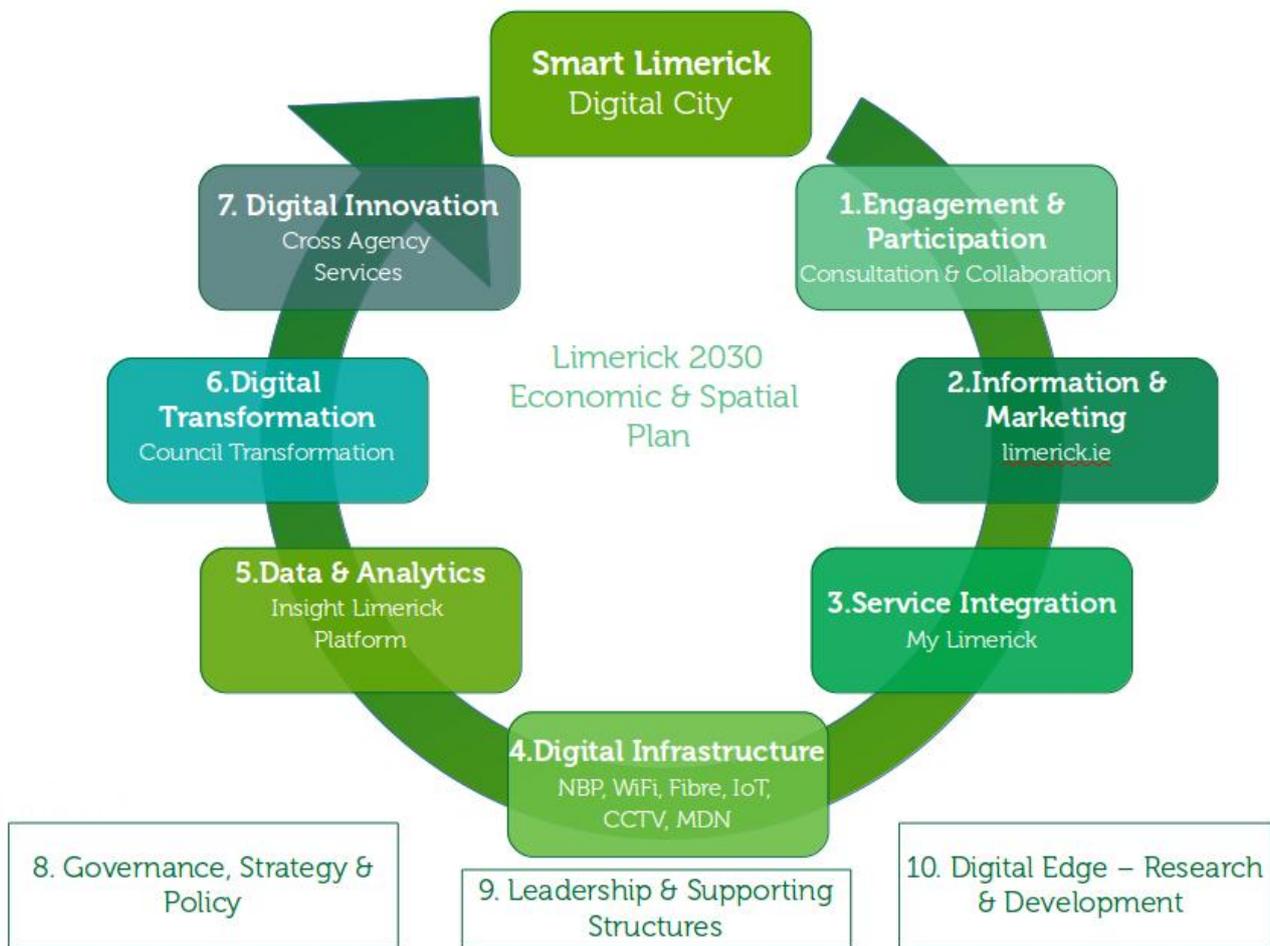


Figure 2: Strategic Approach

So by 2020 and with implementation of the above, Limerick aims to be:

- Acknowledged for its ability and confidence to adapt and compete in the global digital economy
- A place of digital equality where access to information creates opportunities in the knowledge economy for actively engaged communities

and:

- That Limerick's physical environment, digitally enabled by design and connected by default, facilitates sustainable social and economic growth while improving the quality of life for all
- The potential of the public services is unlocked by the use of digital technologies, driven by the desire of putting people first, to adapt, transform and support the reality of a digital, social and mobile age

Limerick City and County Council and its partners under the Charter for Limerick will therefore:

1. Enable our diverse communities, through the use of digital technologies, to participate in the development of Limerick
2. Build Limerick's reputation locally, nationally and internationally as digital ecosystem
3. Create an environment for digital innovation and digital transformation
4. Develop world-class digital services and infrastructure for a Smart City Region and Communities
5. Digitally enable and transform key public services in Limerick

2 Introduction

Cities and their environs, as the main drivers of world economic growth, are attracting an ever increasing number of people that seek new opportunities, prosperity and a better quality of life. It is projected that, by 2040, over 70% of the world population will live in urban areas. It is also estimated that 80% of economic growth will be generated in cities [2]. Some 1.3 million people are moving to cities every week. While this urbanization trend can contribute to the development of stronger regions, it is largely unsustainable. It increases demands on already strained resources such as infrastructure (housing, transportation, physical environment) and also on education, health, policing and financial resources. In this context, cities and regions face many challenges ahead: economically, socially, culturally and environmentally.

For the past two decades advances in ICT and digital technologies have changed the world. The Internet, mobile communications, social networks and the “cloud” have changed us into a connected, “always on” society with new expectations on how we seek and find information, how we access services, how we work, how we engage with our peers and how we communicate.

The Internet enables a \$21 trillion global Digital Economy [3] where new goods and services are traded across countries and continents. It is expected that by 2020 the Internet-of-Things will grow to 26 billion units adding \$1.9 trillion to the economic value-add through sales into diverse end markets [4]. Digital platforms are increasingly matching job seekers and employers and this is having a massive impact in the employment market and the economy. It is expected that by 2025 these digital platforms could increase the global GDP by \$2.7 trillion while filling 72 million full-time-equivalent positions [5].

In Ireland, the value of the digital economy has been estimated to be €12.3b or 6% of GDP and it is expected to grow to €21.4b or 8% by 2020. A recent report [6] has shown that Irish consumers spend €850,000 per hour online while there are over 100,000 people employed in digital economy. This places Ireland in the top 5 countries in Europe in terms of the significance of the digital economy. Phase 1 of the National Digital Strategy [7] sets the foundation step in helping Ireland to reap the full rewards of a digitally enabled society. It focuses on cross – government measures, trading online and entrepreneurship, citizen engagement and education & learning. An important element to drive the demand for digital technology and digital skills is the level of citizen interaction with the government sector which has to provide more online services and information. Thus, the Public Sector ICT Strategy [8] aims to improve the use of technology and in so doing, improve service delivery to customers of Government services. It includes designing eGovernment around customer needs, digitisation of key transactional services and the increased use of ICT to deliver improved efficiency within government organisations and provide new digital services to citizens, businesses and public servants on a "build to share" principle.

It is no surprise therefore, that cities across the world are thinking differently on how they approach these great opportunities and associated difficult challenges of an increasingly digitalised community. Cities and more importantly the people and companies within them are increasingly using integrated digital technologies, ICT, data and analytics, to operate in a smarter, more efficient way [9],[10] [11], [12], [13].

The focus of these smart cities is not on technology alone but on enhancing engagement with citizens and communities in order to provide more effective and integrated services as needed by people and businesses. For Limerick this means having much better collaboration with their stakeholders while the use of data and insights will build relationships that can confront the challenges of transition towards a fully digital community, allowing openness and transparency for our neighbourhoods, villages, towns and the city itself.

2.1 Why a Digital Strategy

Limerick City and County is making giant leaps in its journey to become a community of the future, a city capital to a strong Mid West region, a place that can double its population. However, a number of challenges lay ahead:

- Ensuring a sustainable development of Limerick by avoiding problems in terms of resources, financial or infrastructure for our future generations
- Increasing the use of the city centre and supporting the growth of our rural towns and communities through better city and county planning and management
- Attracting investment, developing a skilled workforce and job creation while preparing for an increase of the knowledge economy
- Ensuring that local businesses take full advantage of the Internet and digital economy
- Creating the conditions where citizens have equal opportunities to access information, education and knowledge so they can benefit fully from the knowledge economy

In this context our new strategy focuses on “smart” development and regeneration through the use of technology and new work practices while supporting the EU Digital Agenda [14] and the Digital Economy.

The Limerick Digital Strategy puts a new lens on Limerick’s strategic development and especially on the ambition to transform our economy and physical space under the Limerick 2030 Economic and Spatial plan [15]. The Strategy defines a framework that supports and enables the use of digital technologies and the adoption of digital transformation principles across the economic, social and physical domains of Limerick City and County.

The Limerick Digital Strategy aims to lay the foundation for the “Sustainable Smart Limerick City Region and Communities”, a Limerick that uses digital technologies and embraces new work practices to empower communities, create better services, accelerate sustainable social and economic growth and to improve the quality of life for all.

This cannot be done in isolation by an individual or a team, not even by a single organisation. It can only be achieved through collaboration across communities and agencies. It requires collaborative leadership and a readiness to challenge the status-quo with a transformational mindset.

There are 7 key areas that need immediate attention:

- **Digital Engagement:** Community participation continues to rely on traditional methods of public meetings and submissions because of the limited availability of digital channels and processes for information dissemination, engagement and participation.
- **Digital Awareness:** A digital divide, caused in part by poor or lack of access to the Internet and part by limited levels of technology awareness or skills, has created unequal social and economic opportunities in Limerick. As a result, many of our citizens are at the risk of missing social, education and economic opportunities.
- **Digital Experience** - Limerick has made great progress in the recent years to present online information about its offerings to a wider global audience. However further development is required now to re-think, co-ordinate and consolidate these efforts and create an effective digital experience for promoting Limerick across multiple digital channels and platforms
- **Digital Infrastructure:** While the City and larger county towns benefit from high-speed broadband penetration there is a significant deficit in digital infrastructure at regional level. Poor broadband penetration in rural areas with download speeds of 1 to 2Mbps or even large black-spot areas where the Internet is not available has a negative impact on local communities. Limited public WiFi affects visitors experience and inability for local companies to promote their products, services and offerings. Old, fragmented CCTV infrastructure hinders the effort of creating safer communities
- **Data & Shared Information:** Siloed data sources, lack of data strategies and awareness of the benefits of using shared information leads to untapped potential for improving existing or defining new services. There are limited opportunities for improving operations by using for example artificial intelligence, automation or insights from data or for supporting innovation and job creation
- **Digital Services:** Underdeveloped digital strategies, limited number of online services and channels (including services provided by the Council) leads to reduced self service options for customers and citizens, missed growth opportunities for local companies in the digital economy, low satisfaction with local agencies and underdeveloped citizen and customer experience.
- **Digital Collaboration:** Limited cross-organisation and cross-agency collaboration and disconnected service provision leads to inefficiencies and limited citizen and visitor experience while economies of scale for service provision remain untapped

Addressing these seven areas will help Limerick City and County Council, in collaboration with key stakeholders in Limerick, to develop new initiatives and new cross-organisation services that will see Limerick reaching a new level of digital maturity. We can create a "Smart Limerick" that will be acknowledged for its ability and confidence to adapt and compete in a global digital economy.

2.2 Smart Limerick and the Digital City

Limerick Digital Strategy joins up the digital and smart cities agendas for Limerick [16],[17]. Smart Limerick is a place which is Informed, Engaged and Transformed. A Digital City is a place which will be at the forefront of new technologies and practices that will underpin our long term development of the city, county and region.

These two concepts in Limerick will support each-other in a co-ordinated approach

Smart Limerick: Informed – Engaged – Transformed

“Smart Limerick” is a shorter name for “Sustainable Smart Limerick City Region and Communities”. It covers the region around the City of Limerick, including Limerick County and neighbouring counties, where the sustainable development and the resilience of the region are enhanced by having better engaged communities and society, working across disciplines and systems, connecting other local digital strategies, using data and integrated digital and ICT technologies and infrastructure including support for the National Broadband Plan. This is enabled by collaborative leadership of public, private, academia and community organisations as agreed in the Limerick Charter, in order to deliver better, transformed or new services and to improve the quality of life for all.

This strategy sets the foundation for Smart Limerick, the city region where data, automation and artificial intelligence will fuel the knowledge and digital economies, with a focus on creating by 2025:

- 1,000 Smart Homes
- 100 Smart Buildings
- 1 Smart Energy District

The Smart Homes & Smart Buildings will have high speed connections to the Internet while sensors and data will be used for a better, more sustainable use of energy and increased use of clean renewable energy sources. The Smart Homes will also facilitate people to live longer, more fulfilling and secure lives in their homes, will enable new services, new channels of communications and entertainment while mundane tasks will be automated and decisions will be made using artificial intelligence. Collective data generated by sensors and IoT devices will lead to better energy use in each of the homes and buildings. District heating or energy storage solutions connected with new forms of transport such as e-mobility solutions and electric car sharing will become de-facto in a Smart Energy District.

With this approach we will create a level playing field with increased opportunities for companies to innovate, transform and create new services working together with local agencies, academia and the citizens. It supports our vision as set in the Limerick 2030 Economic and Spatial Plan.

Smart Limerick means a better engaged society, better awareness and education, better services and digital services, better management and operations for the city and county based on insights from better use of shared information and data, equal and better opportunities in the knowledge economy for all. This

approach will result in more and better jobs, sustainable social, economic and physical development of Limerick City, County and Region, better resilience to external shocks (environmental, economical, physical) leading ultimately to a better quality of life for residents and better services for businesses and visitors.

Digital City – Digital Transformation

Limerick is the first city in Ireland that aims to transform our social, cultural, economic and environmental conditions by using digital technologies. Our approach is underpinned by digital transformation methodologies [18] as part of our overall transformation as set out in the Limerick 2030 Economic and Spatial plan. This is not a simple deployment of digital technologies but embracing and enabling working in collaboration with our partners seven categories of transformation as presented below.

Business Model	Structure	People	Processes	IT Capability	Offerings	Engagement
Economic Social & Physical Development - Smart Limerick	Doing the Right Thing - Doing Things Right - New Units	Digitally Aware & Savvy - Digital Inclusion	Processes Standardisation - Project Management	Single Customer View - EA, MDM, CRM, Web, Mobile, ERDMS	Service Catalogue Driven - Digital Customer Experience (online, social)	Participation & Consultation - Multi-channel Customer Experience
↑ Traditional Preoccupations	↑ Traditional Siloed	↑ Public Service Embargo	↑ Multiple Local Processes	↑ Fragmented Systems & Data	↑ Disconnected Offerings	↑ Multiple Counters

Figure 3: Urban Digital Transformation

This “digital transformation” aims to enable a better informed and engaged society. We will do so by better use of data and insights to foster innovation in the knowledge economy, support start-ups and new digital services, deliver investment in digital infrastructure. The Council’s Digital Transformation programme will make use of digital technologies for organisational change, strategic development and city and county management and operations in order to create and enhance the experience of our citizens, visitors and businesses and to create an agile council [19] ready to respond to people’s needs in the digital age . As broadband becomes increasingly available in rural areas this digital transformation will apply to all of Limerick, city and county. Our goal is to facilitate investment and support job creation in the city, county and the wider region.

A “Digital Quarter” will be developed as a demonstration area in the “Georgian Innovation District” a selected area of the Digital City. As digital infrastructure becomes available, a network of connected digital quarters will be developed in the major towns of County Limerick. The successful pilots implemented in the demonstration areas will be replicated in the wider city and county.

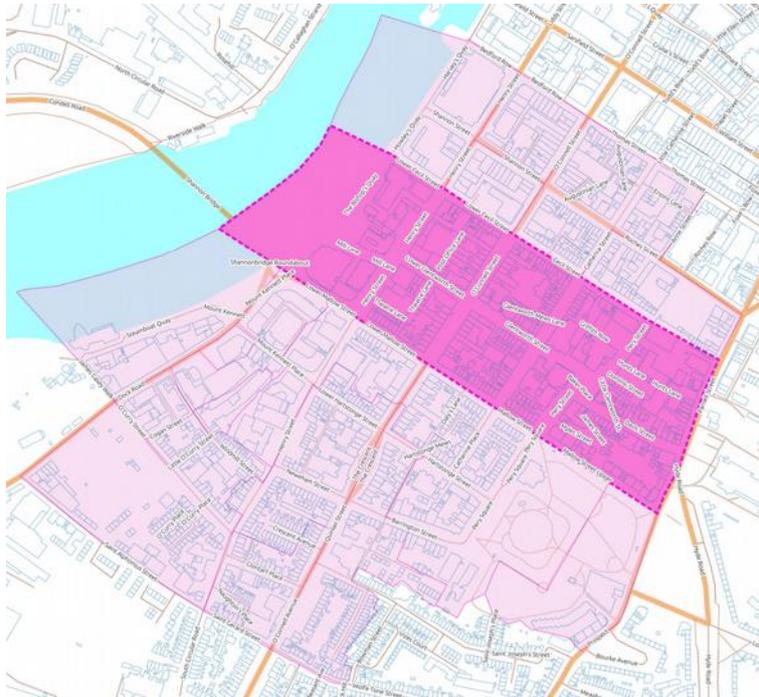


Figure 4: Georgian Innovation District and the Digital Quarter

The connections between the two concepts are evident. The Digital City is the starting point and a key enabler in the development of Smart Limerick City Region and Communities.

2.3 Smart Limerick Domains

Digital technologies are present in all areas of life. New products, services and solutions enable constant progress in all domains, from cutting edge space exploration, engineering and research to health, education and arts. These technologies also increasingly enable innovation and support growth in traditional industries, agriculture and farming.

A smart city is defined as one that "*continuously strives to improve social, economic and environmental sustainability outcomes. It responds to challenges like climate change, rapid population growth and political and economic instability by engaging with society, applying collaborative leadership methods, working across disciplines and city systems, and using data information and modern technologies.*" (working definition in [20]).

This strategy is not about technology but rather about ensuring that Smart Limerick enables a better response to economic, social and physical environment needs through the use of technology. The Digital Strategy takes a comprehensive approach to economic, social and physical environment needs and challenges spanning across 6 Smart Limerick domains [21] as presented in Figure 4 below.



Figure 5: Smart Limerick Domains

2.4 Smart Limerick Challenges

In each of the domains the top challenges are identified and presented in Table 2.1. These challenges have been identified in multiple documents, policies and strategies for Limerick as discussed earlier in Section 2.1.

Table 2.1: Key Issues in Smart Limerick Domains

<p>Economy & Innovation (EI)</p> <ol style="list-style-type: none"> 1. Educate and develop workforce 2. Attract talent 3. Availability of finance & adequate business space 4. Promote local businesses 5. Attract FDI 	<p>Community & Citizenship (CC)</p> <ol style="list-style-type: none"> 1. Public engagement 2. Safer Communities 3. Organisations' Structure, Services & Processes 4. Online services 5. Project information & financing 	<p>Culture & Entertainment (CE)</p> <ol style="list-style-type: none"> 1. Availability of information 2. Quality of tourism facilities
<p>Movement & Transport (MT)</p> <ol style="list-style-type: none"> 1. Access to integrated transport 2. Quality of side-walks and bike ways 	<p>Urban Places & Spaces (UP)</p> <ol style="list-style-type: none"> 1. Regeneration 2. Integrated planning 3. Sustainable building development 4. Adequacy of public realm & spaces 	<p>Environmental Practices (EP)</p> <ol style="list-style-type: none"> 1. Avoid effluents in water 2. Avoid soil contamination 3. Prepare for climate change

The challenges are not unique to Limerick. They have also been identified in other cities in the World

Economic Forum report “Inspiring Future Cities & Urban Services Shaping the Future of Urban Development & Services Initiative” [2]. Increasing the ability of Limerick City, County and Region to deal with these challenges will result in an increase of the competitiveness in the international race between cities and regions to attract investment, financial, social and human capital.

2.5 Methodology

The definition of this strategy started with a deep understanding of challenges faced by Limerick City and County at local level. Following the review of all local plans and strategies that aim to respond to these challenges (see Section 4.7) it has become evident that a Smart City approach where digital technologies and adoption of new work practices will bring numerous advantages in terms of connecting, supporting and accelerating the delivery for these plans in a co-ordinated way.

Following the definition of a common vision, aims and goals for a Smart Limerick 2030, a Digital Strategy Framework was developed. This framework enabled, with the support of Chief Executive and Management Team in the Council, the establishment of a Council Digital Champions Forum (see section 4.5.1) and a Digital Leaders Network (Section 4.5.2) who contributed to the development of the first Smart City Assessment, a strategic tool that is used to plan and guide the transformation journey towards the Smart Limerick and the Digital City. This initial capability assessment was completed in 2016 with the support of researchers from LERO – The Irish Software Research Centre at University of Limerick and IVI – The Innovation Value Institute, at Maynooth University. It enabled the definition of the current status or the “as-is” situation and a common understanding between stakeholders of how this transformation is being tackled. It also enabled the definition of a clear set of goals to be reached in the next 3 to 5 years and the desired “to-be” situation, across the defining factors of Smart Limerick and the Digital City. The results of the assessment are presented in APPENDIX A – Limerick Digital Capability Maturity Assessment.

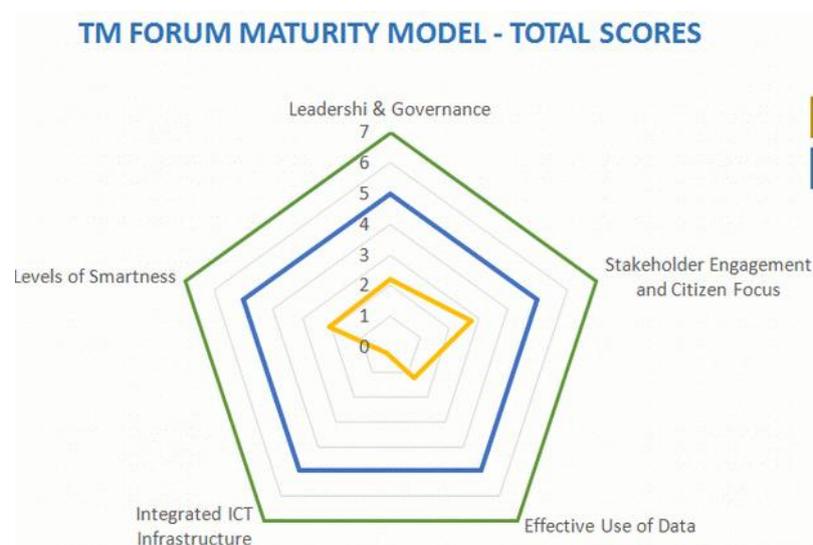


Figure 6: Limerick Smart City Maturity 2016

Based on this assessment a Digital Strategy Framework has been defined as presented in Chapter 4.

A clear set of projects have been identified and grouped in 10 programme in the Digital Strategy Roadmap 2016 - 2020 presented in Chapter 5. A high level overview of the roadmap is presented in Section 5.1 while section 5.2 describes the longer term considerations as captured during 6 consultation sessions with local stakeholders from 28 local public agencies, small and large enterprises, academia, community and voluntary sector.

There are a 6 appendices that provide specific information about the Digital Maturity Assessment, Indicators, Smart Limerick Roadmap and also the composition of the Digital Champions Forum and Digital Leaders Network and the feedback received during consultations. As these appendices will be subject to constant review they will become self contained documents referenced by this strategy document.

3 Vision & Strategic Objectives

Limerick Digital Strategy aims to address key challenges that Limerick will face in the future, as far as it can reasonably be foreseen. These include: urbanization and urban dependent economic growth, population growth, ageing population, scarce resources, traffic, pollution, increased demand for employment, increased education costs. It starts by imagining the Limerick of 2050 with a population increase (national predictions indicate an increase of 47%, an ageing population (65+) increase by 263% and a 14% increase in labour force by 2046 [22]), then looking back at Limerick 2030. It defines a set of goals to be reached in order to be prepared and ready to respond to the more immediate challenges of Limerick 2020.

As digital technologies create connections that otherwise would be impossible to define, the Limerick Digital Strategy aims to connect people, communities, services, agencies and organizations in order to create better services and equal opportunities for all the people while enabling sustainable social and economic growth.

3.1 Smart Limerick 2030 Vision

Having regard to the local, national and international context, and the challenges faced by Limerick City and County and the wider region, as discussed in the previous sections, a new lens on the vision for Limerick 2030 is presented in this strategy. There are four areas envisaged to change under Smart Limerick 2030 Vision: better economy, better opportunities and community engagement, sustainable development and better public services.

So by 2030 Limerick is:

- 1. Acknowledged for its ability and confidence to adapt and compete in the global digital economy*
- 2. A place of digital equality where access to information creates opportunities in the knowledge economy for actively engaged communities*

and:

- 3. That Limerick's physical environment, digitally enabled by design and connected by default, facilitates sustainable social and economic growth while improving the quality of life for all*
- 4. The potential of the public services is unlocked by the use of digital technologies, driven by the desire of putting people first, to adapt, transform and support the reality of a digital, social and mobile age*

The physical environment "connected by default" means that the technology dimension that enables "connectivity" will be added to any physical infrastructure projects as part of the planning and design process and not at a later stage when often it is difficult or impossible.

3.2 Goals & Strategic Objectives

The rapid development of digital technologies and the adoption of digital transformation principles will support the following goals:

1. *Enable our diverse communities, through the use of digital technologies, to participate in the development of Limerick*
2. *Build Limerick's reputation locally, nationally and internationally as digital ecosystem*
3. *Create an environment for digital innovation and digital transformation*
4. *Develop world-class digital services and infrastructure for a Smart City Region and Communities*
5. *Digitally enable and transform key public services in Limerick*

3.3 Principles

The development of Smart Limerick, and associated actions, plans, governance and policy initiatives, will be underpinned by the following eight guiding principles which have been agreed by the multiple stakeholders involved in the preparation of the Strategy:

1. **Citizen's needs come first.** While support for customers is paramount any initiatives will put the citizen's interest first. Any designs must start with the citizen needs as far as it is practical. Current practices will be changed to suit the citizen and only then can the organisation issues be addressed.
2. **Digital first but inclusive.** All digital services must be inclusive for all the people of Limerick. Alternative channels must be provided while training and assistance must be supplied when needed.
3. **Align to the common vision for Limerick.** All initiatives will support the Limerick 2030 vision and plan. Governance arrangements and policy changes will be developed and adopted in order to lead Limerick towards this common vision.
4. **Open collaborative approach.** Strategy development, plans and policies will be open to our citizens and our communities to participate and influence. Smart Limerick will be built using open architectures, open data and open standards in order to avoid at all costs having entire communities locked in proprietary solutions and standards. This is a fundamental requirement in order to enable unrestricted collaboration, sharing and transparency in a Smart Limerick.
5. **Build once, use multiple times.** In the implementation of Smart Limerick initiatives duplication will be avoided in order to avoid inefficient use of resources, siloed approaches and missed opportunities to improve on current capabilities. Common repositories and taxonomies will be developed and published in open format so that future projects will add value instead of

reinventing the wheel.

6. **Spend smarter rather than more.** We will adopt reusable designs and question the value created against desired outcomes. We will use partnerships to share costs and define projects that create value for all partners involved. We will work with academic institutions in finding new solutions to citizen problems.
7. **Champion for excellence.** We challenge the “status quo” and question current systems and practices. Because it has worked well in the past it does not mean that it cannot be made better for the future. We will challenge assumptions and encourage innovation.
8. **Take the lead.** We will use agile development practices and take informed risks. We will apply the understanding that we can fail fast but must also recover fast. We will learn from failures and continue to lead.

4 Achieving our Vision and Goals

We have four focus points and three supporting platforms to deliver our vision and the underpinning goals for our strategy:

1. Empowering our Communities
2. Building the Digital Economy
3. Providing Digital Infrastructure
4. Creating Smart Limerick

supported by:

1. Optimised Governance – a program of policy development (e.g. in areas of privacy and security)
2. Leadership Structures – Limerick Digital Leaders Network and Council Digital Champions, and
3. Digital Edge – a program of research & development, networking, promotion and marketing;

Each of the four focal points and supporting platforms are described in the following sections. The supporting structures are also explained.

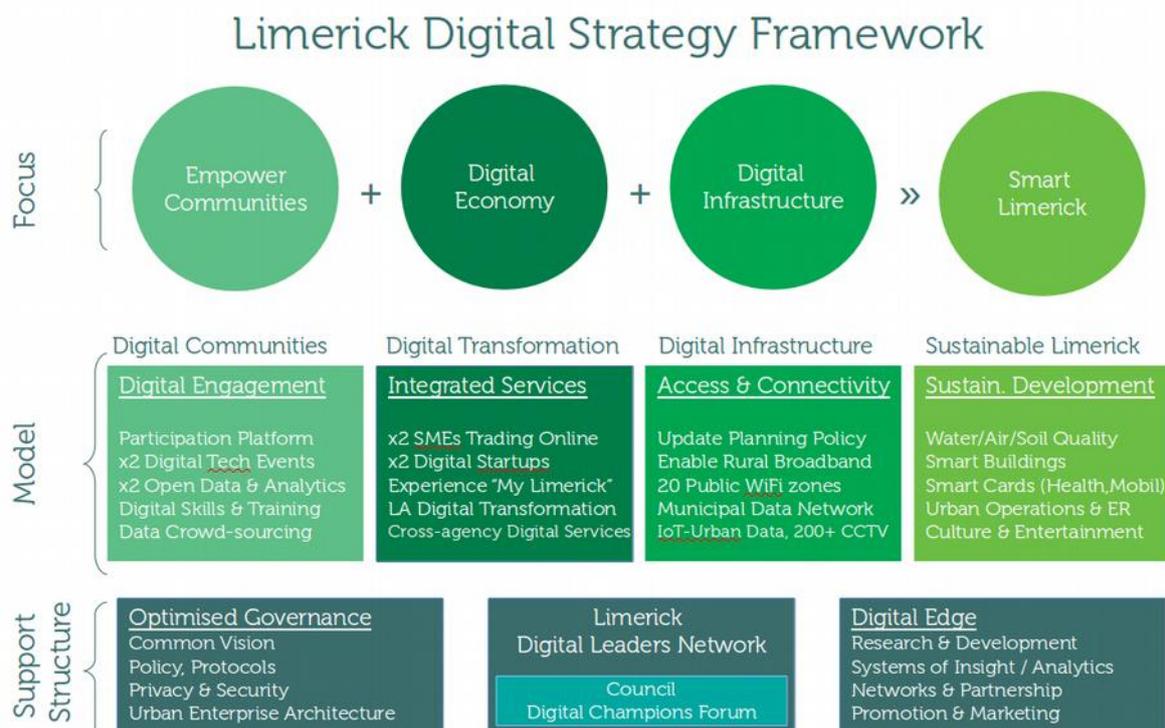


Figure 7: Limerick Digital Strategy Framework

4.1 Focus Point 1: Empower communities

We will use digital technologies to enable people and local communities to participate in the development of Limerick by introducing:

1. **Digital Participation Platform** – *My Point* – supporting the *Citizen Open Innovation* initiative where citizens are engaged in local developments through the *City & Town Engage* programmes. This platform enables people to contribute to the development of strategies and policies that affect them and their community, i.e. public submissions to Limerick Development Plan, local area plans, infrastructure developments (e.g. planning the construction of new roads, the river way, etc.) Connections between participants will also be enabled as well as the ability to respond to surveys on various issues, etc.
2. **Digital Technology Events** and conferences in order to increase the number of attendees that visit Limerick and therefore build Limerick's reputation locally, nationally and internationally. We will develop in partnership with local stakeholders an annual "Digi-Link" conference that will bring international speakers and expertise in the digital technologies and smart cities.
3. **Digital Skills Development Program** especially around community and voluntary organisations will be lead by the Limerick Claire Education and Training Board and delivered with the assistance of Department of Communications through the National Digital Strategy. We will work with the Limerick Regeneration in areas where people are most in need of skills development; Co-ordinate with other public service agencies and training organisations the development of staff skills needed for the provision of digital services; A training portal accessible to Council staff but also open to the public that wants to join the public service was launched in 2016 (training.limerick.ie)
4. **Open Source** principles and methodologies are key to this strategy in enabling local communities to engage without restrictions with the wider European and international communities in the development of open source software and hardware, open data, open science, open government. This will impact positively to infrastructure, education and governance local policies, decision making making and strategies.
5. **Open Data** as a key enabler of innovation and public service reform by facilitating data and information exchange between public agencies in the delivery of new customer centric services. Open Data improves decision making, openness and transparency.
6. **Insight Limerick**: Limerick will use the power of data analytics for better decision making. A new service "Insight Limerick" will be developed as a data as a service concept where citizens, communities and organisations will be able to find, browse, use and share open data, maps, access analytics and reports. We will enable both internal council users and the public to aggregate, visualize, query, analyse and gain valuable insights from data.
7. **Data crowdsourcing** as a method for citizens and communities to participate in the data gathering

process, data that is critical in the delivery of services or for use by other communities. For example, an Invasive Species mobile app was launched in 2016 to enable the public to report locations of Japanese Knotweed, Giant Hogweed, or other invasive species of plants that have not only a negative environmental impact but also a negative economic impact. Conducting a survey of all locations where these species have grown out of control is prohibitively expensive and impracticable while using digital technologies citizens report these locations and therefore enabling the council to build a full understanding of the problem and its possible solutions;

8. **Support for meet-ups, hackatons & mapathons, digital fabrication** and other community led events in co-operation with academic institutions, small and large enterprises to grow a thriving digital community;

4.2 Focus Point 2: Building the Digital Economy

The second focus point is building Limerick's reputation locally, nationally and internationally as a digital ecosystem where innovation and digital transformation are used as key enablers of growing opportunities in the knowledge economy, as envisaged in the Limerick 2030 plan.

1. We will continue to enable local **SMEs to transact online**, reach new markets, sell more and grow using Internet technologies. The Limerick Digital Strategy will support the Local Enterprise Office which plays a key role in this initiative by developing new procurement strategies for products and services that are needed in Limerick. A **Digital Retail** pilot project has been included in the roadmap to 2020;
2. **Tech startups** are already supported to grow in Limerick thorough initiatives such as the Digital Academy of Skills developed by Innovate Limerick. We will work closely with Nexus Innovation Centre and Hartnett Enterprise Acceleration Centre in order to develop, enhance and promote a co-ordinated **digital ecosystem**.
3. We will open competitions for the **design of new services and solutions** for the challenges that Limerick encounters. We will support the development of the these solutions through co-financing platforms like Small Business Innovation Research, Public-Private-Partnerships and other methods of enterprise support;
4. Limerick joined **TechTown**, an European funded network, part of Urbact, that explores how small and medium sized cities can **maximise the job creation potential of the digital economy**. It aims to develop a better understanding the digital economy, growing digital jobs through startups, the digital transformation of traditional industry, and by joining up the smart cities and digital economy agendas. It also develops methods for finding, growing and retaining talent. It looks collaboratively across European cities at new ideas and actions to help support all businesses to access the digital skills and embed the digital innovations they need in order to start, grow and compete. This is an active network embracing the opportunities digital technology affords to collaborate and co-create. It works closely with digital communities in each city through activities such as hack days and meetups. In 2016, a Limerick Urbact Local Group was established with

members from LCCC, UL - LERO, LIT, Innovate Limerick, Mid West Regional Skills community groups such as FabLab, and also SMEs such as Microelectronics Application Centre, Pinpoint Medical;

5. **Digital education and access** will be enabled by our educational institutions members of the Limerick Digital Leader Network including extra-curricular programmes for young people such as CoderDojo, academic programs such as UL Engage and also digital inclusion programmes led by the Limerick and Clare Education Training Board in addition to existing digital skills programmes led by community and voluntary centres.
6. As leader of Limerick's Digital Strategy the Council must enhance its ability to use digital technologies in delivering its services to citizens and local businesses. A **Digital Transformation Programme** commenced in 2015. This aims to develop and enhance the **digital customer experience** by bringing full support for online payments for all Council services, licences, permits, certificates and grants. Substantial investments are being made to redefine how staff operate on a digital by default principle, using electronic records, web technologies, Customer Relationship Management and mobile applications for service operations in an integrated digital platform. This is where local businesses and suppliers will be encouraged to transact online with the Council instead of the traditional paper based systems. This programme will see a major upgrade of the ICT infrastructure: the Council WAN network, switching and storage equipment, a new telephony system that works across 37 locations and council offices, extension of the Municipal Data Network, introduction of Video Conferencing equipment and omni-channel contact centre to support a new way of interaction with citizens.
7. **My Limerick Web** and the **My Limerick App** will be launched as part of new LIMERICK.IE as an integrated digital services platform where people will experience Limerick in their own way. If you are a local, visitor, business or public representative 'My Limerick' aims to provide you with a consistent digital experience of what services Limerick has to offer, from creating a list of favourite things to do in Limerick to submitting service requests to the council, for example, street cleaning, grass cutting or getting permits, licences or grants;
8. We aim to develop **Cross Agency Digital Services** on the 'My Limerick' platform under a single customer profile, a true reflection of digital transformation in the Digital City & Smart Limerick. It is the platform where new services can be enabled, i.e. booking events or a parking spot. The Limerick Digital Leaders Network will play a key role in fostering the collaboration between agencies in order to define new digital services that place customer experience as the main motivation to change and transform.
9. Starting with the principle of "build once use, multiple times" and that no data should be entered twice an integrated **Digital Citizen Experience Platform** will be developed; this platform brings together coordinated content, digital integration of services, data and analytics allowing the citizens to participate in the development of Limerick and also to provide feedback so that services and solutions can be further improved;

1. Focus Point 3: Digital Infrastructure

10. Digital Communities, Services and Economy require substantial investment in digital infrastructure. The Limerick Digital Strategy aims to:
11. Update our **planning policies** in order to ensure that any new commercial or housing developments will include the deployment of high-speed broadband and fibre connectivity. This will be required at the design stage;
12. Support the roll-out of the **National Broadband Plan** [1] by fast-tracking licences or permits processes that are needed for infrastructure development. Working closer with the operators we will co-ordinate broadband roll-out when roads, water or waste water infrastructure is developed in order to accelerate deployment and reduce costs and the disruption to traffic and pedestrians;
13. Increase the number of **Public WiFi zones** in Limerick City and the major towns of the county. The Public WiFi will be used not only to deliver free access to the Internet but also to provide connectivity for smart devices, such as Smart CCTV, footfall counters, pollution sensors, etc. We will use the data generated by the Public WiFi to understand the visitors trends, needs and demands in order to find new opportunities to promote Limerick and attract even more visitors and investment;
14. We will continue the development of the **Municipal Data Network**, a fibre network that acts as a high-capacity, high-speed backbone for data transfers. Over 10 Km of fibre have already been deployed to connect and integrate CCTV systems, traffic controllers, parking guide systems and council offices. This network will be extended to include the next generation of sensors, CCTV, digital displays and the roll-out of the Internet of Things (IoT) in Limerick.
15. The **Internet of Things** generates data from our streets as well as watercourses, soils and air, traffic and pedestrian movement. We will install monitoring devices which will be connected to intelligent systems that make automatic optimal decisions (e.g. intelligent street lighting). Alternatively they will be connected into integrated centres of operations in order to deal with daily activities or to improve emergency response in case of severe weather or natural disasters. For the people, communities and businesses of Limerick to maximize the benefits derived from these new sources of information, the data needs to be connected, shared, analysed and protected in a coherent and consistent way in order for new services to be developed and existing services to be improved. This will also enhance our capacity to open source information into and out of our communities.

4.3 Focus Point 4: Creating Smart Limerick

All this investment in infrastructure, organisational change, and increase use of data aims to lay the foundation for Smart Limerick. This is not about technology solutions. It is about better informed people, better business, better jobs and opportunities, better education, better services and public services, a

better experience for visitors and investors. Smart Limerick ultimately is about a better quality of life for all.

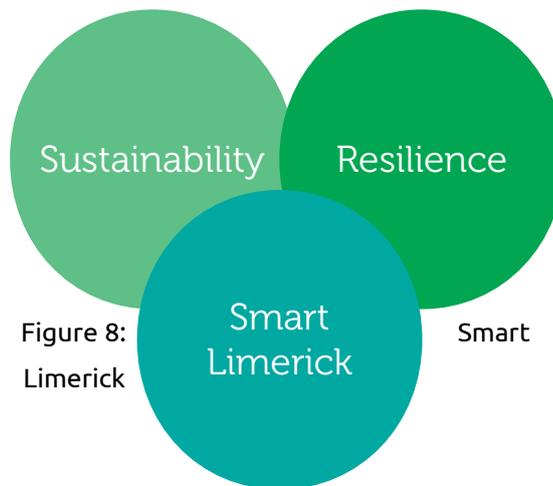


Figure 8:
Limerick

The focus in Smart Limerick is increasing sustainability and resilience for present and future generations. We envisage a city that has twice its current population by 2050, at the centre of a prosperous rural area and a strong region. We aim to achieve this through collaborative leadership, strong co-operation and co-ordination with stakeholders across multiple domains, enabling people to engage in all developments through better use of data and integrated technologies.

Limerick City and County Council together with the Limerick Digital Leaders Network will:

1. **Use agile methodologies** to develop pilot initiatives that have the potential to find smart solutions to urban and rural problems;
2. Increase our capacity to monitor and improve the **Air, Water and Soil Quality** through the use of new sensor and communications technologies such as Wireless Wide Area Networks, SigFox, LoRa.
3. Use the opportunities created under the Limerick Regeneration Programme and Limerick 2030 for the development of **smart homes and smart buildings** where the energy consumption is monitored and controlled leading to a more efficient use, benefiting from cost savings and an reduced carbon footprint;
4. Develop proposals under the **EU Horizon 2020 Smart Cities and Communities** in order to create partnerships and alliances in the development of Smart Limerick with other European lighthouse and follower cities
5. Support the **Age Friendly Strategy** in the development of Smart Ageing Limerick by creating senior friendly web & mobile technologies that combat exclusion; promote the use of wearable technology to monitor and alert care providers in case of an abrupt health change; provide remote

services for seniors thorough tele-service units; use smart CCTV & analytics to alert the Gardaí when abnormal activities (audio or video) are detected, etc. Work closely with ISAX – The Irish Smart Ageing Exchange in developing new concepts and programmes that enhance the health and well being of older citizens through the use of technology

6. We will **record and preserve digital content** from cultural and entertainment events by creating a **digital archive** of location aware multimedia content that can be used by future generations to re-live the Limerick of today through augmented reality applications.
7. Limerick has a long established tradition in **digital preservation** of our cultural heritage. Limerick was the first City and Municipal Museum in Ireland to publish online its full collection with over 50,000 items. Limerick was also the first city in Ireland to digitise and publish online it's City Archives. The first city in Ireland to digitise, map and photograph each headstone in its largest cemetery, Mount Saint Lawrence, connecting people from all over the world with their roots and past generations. This work will continue with the digitization of the Limerick City Gallery of Art collection

4.4 Optimization through Governance

The complexity of developing a Smart City Region and Community cannot be underestimated as it requires progress to be made on multiple domains such as transportation, water, energy infrastructures, waste management, air and soil quality, human capital, knowledge and education, culture and leisure facilities, public spaces and tourism, public administration and health just to name a few. Multiple stakeholders are involved in the planing and development of Limerick, local and national government and public services agencies for the benefit of citizens, enterprises and communities. These stakeholders, restricted by their role and governance rules, traditionally worked in isolation with specific focus on planning, health, transport or education.

In recent years, the stakeholders in Limerick are increasingly working in a collaborative way towards achieving common goals. In 2014 the *Limerick Charter* was signed by Limerick City and County Councils, University of Limerick, Mary Immaculate College, Limerick Institute of Technology, Limerick Enterprise Development Partnership, Shannon Airport Authority, Shannon Foynes Port Company and Limerick Chamber. With this partnership new initiatives have started such as Innovate Limerick to help drive innovation and act as the delivery mechanism for the projects outlined in the Limerick 2030 plan and the Limerick Regeneration implementation plans. Another example is the Limerick Economic Forum, a close collaboration between stakeholders who have come together in a voluntary capacity to offer their expertise in the Economic Development of Limerick in the area of job creation and the delivery of the Limerick 2030 Economic and Spatial Plan.

Likewise, Smart Limerick needs to be developed with the same level of cooperation between stakeholders in order to be successful. Key stakeholders will work together and:

1. Develop a common Smart Limerick Vision 2030 agree on a set of principles and goals to be

reached. This document puts forward a proposal for how Smart Limerick will look like and also an approach for its development and the roadmap for implementation;

2. Agree the evaluation criteria, the metrics and indicators to be used across each domain in order to evaluate the progress made by various initiatives. In the initial release of this strategy any indicators that are known have been used. However more research and data is required to pin down the relevant indicators and establish the data: i.e. the value of the local digital economy, the number of companies that currently transacting online, the number of local services and potential for digitalisation, etc. this will be undertaken in future research and development.
3. Develop new policies for integrated planning, data protection, information security and privacy having regard to international and national legislation and ethical issues including the The General Data Protection Regulation (GDPR) which will come into force on the 25th May 2018.
4. Agree on the communications, data exchange and other standards that must be observed at all time in order to maximize the potential of all initiatives and to avoid vendor lock in of communities and organisations;
5. Develop new types of procurement and public private partnership;
6. Develop new strategies to ensure that Limerick takes full advantage of integrated ICT & Digital technologies. For example, a Data Strategy and a Master Data Management strategy defined and agreed across multiple stakeholders will enable evidence based insights and unlock the full potential of public services. It will enable information sharing between research teams, hospitals and services agencies leading to better decisions and better services;

4.5 Leadership & Support structures

This Digital Strategy cannot be implemented in isolation by an individual or a team, neither by a single organisation. It can only be achieved through collaboration between communities, public service agencies, academia, small and large enterprises and voluntary sector with collaborative leadership.

Therefore two structures have been proposed to lead and support the development of Smart Limerick:

1. The **Digital Champions Forum** is a cross departmental senior team within Limerick City & County Council tasked to lead the Smart Limerick development having regard to organisational vision, objectives and programs. This forum is described in Section 4.5.1
2. The **Limerick Digital Leaders Network**, a group of stakeholders and thought leaders from leading organisations that committed on a voluntary basis to work together and support the development of Smart Limerick. The network is presented in Section 4.5.2

4.5.1 Council Digital Champions Forum

The *Council Digital Champions Forum* is a cross departmental senior team within Limerick City & County Council tasked to lead the Smart Limerick development having regard to organisational vision, objectives and programs. The members of the forum will ensure that:

- any strategies, programs and projects take full advantage of the opportunities and capabilities provided by digital technologies and that
- all technology developments are integrated according to the Smart Limerick Enterprise Architecture.

Elected digital champions will become members of the wider *Digital Leaders Charter* which includes external agencies, academia, commercial, community and voluntary sectors.

Digital Champions have been appointed for each of the Smart Limerick domains. They will support and work closely with the members of the Limerick Digital Leaders charter in each of the domains and across domains in leading the development and implementation of solutions that deal with the challenges identified (See Section 2.4 for details)

Detailed composition of the forum is presented in APPENDIX D – Digital Champions Forum.

4.5.2 Limerick Digital Leaders Network

The *Limerick Digital Leaders Network* is a group of stakeholders and thought leaders from leading organisations that committed on a voluntary basis to work together and support the development of Smart Limerick. The network includes members from public and private organisations, small and large commercial enterprises, academic institutions and research centres community and voluntary organisations and local development companies.

Detailed structure of the network is presented in APPENDIX E – Limerick Digital Leaders Network.

4.6 Digital Edge – Research & Development

While smart applications and solutions have been successfully implemented in large and small cities across the world “smart city” concepts are still experimental. Further research is required to define the value chain offered by smart technologies, sustainable business models, procurement and especially funding models in the context of serious challenges to local government and city budgets. Urban and regional level Enterprise Architectures that ensure free data and information flow and the governance methods are still in their infancy.

In Limerick we will take advantage of international best-practice and methodologies. We will work closely with the academic sector and engage in research, experimentation, agile development of smart solutions

and practices. We aim not only to use the international recognized frameworks and standards but to also contribute to the body of knowledge by documenting, recording and publishing our results. We aim to support the marketing of Limerick City, County and Region as place of community led innovation where companies grow faster by having access to new ideas and experimentation grounds supported by a proactive local government and public services structure:

1. Limerick City and County Council has started a research program with the Smart Cities group in LERO - The Irish Software Research centre, a cross university research centre based at the University of Limerick. Research will continue in other Smart Limerick domains including IoT, sensors and communications for energy efficiency, environmental practices and climate change.
2. For example, a case study has started with the objective to develop the Limerick Enterprise Architecture for smart cities of the future. Successful development of a smart city requires a unified ICT infrastructure to allow sustainable economic growth. The research will support a major Internet of Things (IoT) collaboration between Analog Devices, Dell and Intel which is being finalised and which will be announced later in the 2017. As part of the case study, Lero will develop together with Limerick a new digital service (Insight Limerick), which offers citizens a portal for information sharing, open data and data visualization while analytics will be used to gain insights leading to better services. The unified ICT platform must be suitable to model, measure, optimise, control and monitor complex interdependent systems of urban life.

Limerick has joined a number of international networks and developed partnerships during 2015 and 2017:

1. Limerick hosted on 25th of June 2015 the first meeting of Irish smart cities co-ordinators where Dublin, Cork and Galway city have agreed to establish the **All Ireland Smart Cities Forum** in order to foster collaboration and best practice exchange between cities in the island of Ireland. The forum was joined by Waterford, Belfast City, Derry City and Strabane and a forum coordinator has been appointed in 2016.
2. Limerick joined in 2015 the **Open and Agile Smart Cities initiative** (OASC), a city-driven, non-profit organisation with more than 100 cities from across the globe, with the overall objective to create a Smart City market through four de fact standards for portability and interoperability: a drive-by-implementation approach which implies that communities and developers can co-create their services; an API, a set of data models, and an open data platform. Companies benefit from this initiative through access to a common set of standards that will be required consistently by cities. A common set of standards enables companies to develop products and solutions that work across multiple cities. Therefore companies and cities can take advantage of economies of scale, better more reliable products;
3. Limerick has become a member of the **Connected Cities Advisory Board** (CCAB) of WBA – The Wireless Broadband Alliance. WBA is driving the adoption of wireless broadband and the development of the converged wireless broadband ecosystem through seamless, secure and interoperable unlicensed wireless broadband services. The CCAB develops, shares and promotes thought-leadership and practical framework for the social and economic development and

sustainable operation of the Connected City ecosystem

4. In 2017 Limerick will become part of the **City Protocol**, a collaborative innovation framework that fosters city-centric solutions which benefit citizens and their quality of life. It has been established in November 2012 by over 200 participants, representing 33 cities, 20 major businesses, 14 universities and 20 other organizations. It seeks to define a common systems view for cities of any size or type, and then embraces or develops protocols that will help innovators create – and modern cities deploy – cross-sectorial solutions that can connect and/or break city silos. City Protocol aims to work across diverse cities by interconnecting them and ultimately creating the “Internet of Cities”.

4.7 Accelerating Local Strategies

In Limerick, a set of well co-ordinated initiatives for economic, spatial, social and cultural development, are in place.

1. **Limerick 2030** - sets a framework for public sector action and private sector investment until 2030 [15]. The first element of the 2030 Plan is an Economic Strategy which identifies how Limerick needs to be positioned in order to best take advantage of economic opportunities in order to build a stronger local economy through the creation of employment and the attraction of investment. The second element is a Spatial Plan focussed on revitalising and redeveloping Limerick City Centre and the final element is a Marketing Plan which aims to use Limerick’s unique and positive attributes to change perceptions of how Limerick is viewed
2. **Limerick Regeneration Framework Plan** - sets how one of the largest capital programmes in the State. It is focussed on the three key pillars – Economic, Physical and Social - of the programme that will revitalise the communities over the next ten years by raising standards of living, opportunity and health and wellbeing for all residents of the regeneration areas [23]. The Plan includes a €253m investment on physical development, €30m on social projects and €10m on economic programmes.
3. **Age Friendly Strategy** - the first Age Friendly strategy for Limerick [24], gives commitments to improving key areas of infrastructure, services, information and our overall social response to older people’s issues in Limerick.
4. **Limerick Local Economic and Community Plan 2016-2021** – to promote a vibrant and inclusive network of rural towns and villages across County Limerick [25]
5. **Mid West Area Strategic Plan 2012-2030** - proposes that in order for the region to develop its economic strength, it needs to generate export-led growth in goods and services, promote innovation through research and development and secure long-term sustainability and growth [26]. An objective set in this strategy is to strengthen the role of Limerick City and its Environs (Metropolitan city) as the core economic driver for the Region. The strategy has 5 focus points:

- The revitalisation of Limerick City and its Environs;
 - Measures to deliver population growth, infrastructure and job creation in specific areas targeted in the RPGs;
 - Balanced regional development to promote sustainable urban and rural development;
 - Development of enterprise and employment; and
 - The identification and re-mediation of infrastructural deficits
6. **Limerick Metropolitan District Movement Framework Study** – presents a long term vision in terms of accessibility, mobility and sustainability and also an implementation plan for comprehensive measures to upgrade the existing transportation network over a 5 year period [27]. In the current economic climate provision of additional major infrastructure is no longer a viable solution to urban congestion. Therefore the plan calls for a fundamental shift towards sustainable travel. This new approach must have an emphasis on sustainability-achieving behavioural change with a focus on walking, cycling and public transport as real alternatives for travelling within larger urban centres.
 7. **Limerick Cultural Strategy 2016-2030** - aims to grow Limerick’s cultural capacity by retaining and attracting creative practitioners to live and work in Limerick [28]; to place culture at the heart of the economic growth and regeneration of Limerick; to engage citizens through involvement in culture growth and regeneration of Limerick and to increase and support the role of the creative industries in Limerick.
 8. **Global Limerick Network** – aims to establish a platform that will provide greater communication between the people of Limerick and the estimated 3.5 million people around the world with a connection to the city, county and region. The study report [29] indicates that digital technologies are the preferred choice to support this platform.
 9. **Corporate Plan for Limerick City and County Council 2015-2019** - identifies the local authority as “ambitious” in relation to its strategy and vision for the local authority area, and Limerick’s role in the region [30]. As well as promoting Limerick as a location for investment, business, education and as a place to live, the Corporate Plan places a strong emphasis on” inclusive participation of all citizens in the development of their community” and community empowerment.

The Limerick Digital Strategy supports these initiatives through an co-ordinated set of actions in its 'Roadmap for a Smart Limerick'. Table below shows as an example a high-level of digital initiatives and their support for the existing 9 local plans and strategies.

Digital Strategy Initiative (Extract from Roadmap)	Limerick 2030	Regeneration Framework Plan	Age Friendly Strategy	LECP	Mid-West Strategic Plan	Limerick Cultural Strategy	Movement Framework Study	Global Limerick Network	Corporate Plan
1. Engagement & Participation									
1.1 My Point (Open Consultation Plat.)	•	•	•	-	-	-	-	•	•
1.5 City & Town Engage Program	•	-	•	-	-	-	-	•	•

Digital Strategy Initiative (Extract from Roadmap)	Limerick 2030	Regeneration Framework Plan	Age Friendly Strategy	LECP	Mid-West Strategic Plan	Limerick Cultural Strategy	Movement Framework Study	Global Limerick Network	Corporate Plan
1.6 Citizen Innovation Lab	•	•	•	•	-	•	-	-	•
1.8 Data Crowdsourcing (Invasives App)	•	•	•	•	-	-	-	•	•
2. Information & Marketing									
2.1 Limerick.ie	•	•	•	•	•	•	•	•	•
2.2 Limerick.ie Economic Report	•	•	•	•	•	•	•	•	•
2.5 SMART.Limerick.ie	•	•	•	•	•	•	•	•	•
2.11 Community Websites	-	•	•	•	•	•	-	•	•
3. Service Integration									
3.1 My Limerick.ie	•	•	•	•	-	•	-	•	•
3.4 My Limerick.ie – Cases, Payments,	-	-	•	•	-	•	-	-	•
3.7 MY Limerick.ie – Grants	-	•	•	•	-	•	-	-	•
3.11 Smart Parking	•	•	•	•	-	•	•	-	•
4. Digital Infrastructure									
4.1 Municipal Data Network	•	•	•	-	•	•	•	-	•
4.2 Public WiFi	•	•	•	•	•	•	•	•	•
4.3 Smart CCTV Pilot	•	•	•	•	•	-	•	-	•
4.4 National Broadband Plan roll-out	•	•	•	•	•	•	•	•	•
4.9 Footfall Counters (IoT Pilot)	•	•	-	•	•	•	•	-	•
5. Data & Analytics									
5.1 Insight Limerick (Council)	•	•	•	•	•	•	•	-	•
5.2 Insight Limerick (Public)	•	•	•	•	•	•	•	•	•
5.5 Insight Limerick – Policing Dash.	•	•	-	•	-	-	•	-	•
5.6 ISAX Data Exchange – Limerick	-	•	•	•	-	-	•	-	•
6. Digital Transformation									
6.1 Council Enterprise Architecture	-	•	•	•	-	-	-	-	•
6.2 Customer Services – Digital Srv.	-	•	•	•	-	-	-	-	•
6.4 Staff Training Portal	-	•	•	•	-	-	-	-	•
6.12 Telephony & Comms. System	-	•	•	•	-	-	-	-	•
7. Digital Innovation									
7.1 The Networks Forge	•	•	•	•	•	•	•	•	•
7.5 Digital Skills Academy	•	•	-	•	-	-	-	-	•
7.6 Digital Retail Pilot	•	-	-	•	-	-	-	-	•
7.14 Limerick Living Lab	•	•	-	•	•	-	-	-	•

4.8 Strategy Outcomes

This section presents the expected outcomes from reaching the goals set in this strategy. Table below shows 5 high level impact areas, the expected outcomes and the target value of the indicators used to measure the impact of the strategy.

Impact Area	Outcome	Does Baseline indicator exist?	Target
Better Informed & Engaged Communities	<ul style="list-style-type: none"> Better civic engagement & participation Improved public consultations through digital channels More information online about Limerick City & County More local communities with online presence Improved digital skills and digital inclusion 	Yes	<ul style="list-style-type: none"> 6 annual city & town engagement projects 80% of consultations available online 10 new websites with co-ordinated information 25 local communities & neighbourhoods online 6 programmes for digital skills & inclusion
		No	
		Yes	
		Yes	
		No	
Improved Reputation as Digital Ecosystem. Better Cross-agency Collaboration	<ul style="list-style-type: none"> Increased participation in EU & international networks Increased number of online visitors the Limerick.ie Better Smart Collaboration at local level 	Yes	<ul style="list-style-type: none"> Participate in 3 international networks 1m online visitors to limerick.ie by 2020 Enable 10 active local networks
		Yes	
		No	
Digital Economy, Innovation & Transformation	<ul style="list-style-type: none"> Establish Digital Quarters to foster digital innovation Improved Internet access during National Broadband Plan rollout Grow opportunities in the digital economy New opportunities for senior citizens in the digital economy Better use of data, open data & analytics Better decision making through improved access to information 	Yes	<ul style="list-style-type: none"> 4 digital quarters in City & 3 county towns 12 Strategic Community Access Hubs 20 more local SMEs to transact online (pilot) 20 new smart ageing and mature entrepreneur start-ups 50 open datasets in the Insight Limerick Service 4 new dashboards for Economy, Tourism, etc.
		Yes	
		Yes	
		Yes	
		No	
		No	
Universal Access to Internet	<ul style="list-style-type: none"> Improved access to high-speed broadband Enable Safer Communities through the use of Smart CCTV Better decision making by using sensors and IoT 	Yes	<ul style="list-style-type: none"> 37,137 premises under National Broadband Plan 40 new Smart CCTV cameras in 14 towns 100 sensors deployed across city & county
		Yes	
		Yes	
World-class Digital Services and Infrastructure	<ul style="list-style-type: none"> Improved access to high-speed broadband Enable Safer Communities through the use of Smart CCTV Better decision making by using sensors and IoT 	Yes	<ul style="list-style-type: none"> 37,137 premises under National Broadband Plan 40 new Smart CCTV cameras in 14 towns 100 sensors deployed across city & county
		Yes	
		Yes	
		Yes	
Public Services Digitally Enabled & Transformed	<ul style="list-style-type: none"> New online services provided by the council /other organisations Better public services and customer services Improved customer satisfaction with public services Accelerate the delivery of local strategies & plans 	Yes	<ul style="list-style-type: none"> 50 new online services for permits, grants, etc. 20% reduction in the average response time 5% increase in council's customers satisfaction 9 strategies & plans supported
		Yes	
		Yes	
		Yes	

Detailed outcomes and indicators are discussed in APPENDIX B – Indicators.

5 Digital Strategy Roadmap 2016-2020

5.1 Roadmap Overview

The Digital Strategy Roadmap aims to lay the foundation for the Digital City and Smart Limerick, therefore it really represents the “Smart Limerick” roadmap. It consists of a comprehensive portfolio of 10 programmes developed in consultation with the Limerick Digital Leaders Network and the Council Digital Champions Forum between September 2016 and April 2017. The roadmap has been defined with the aim of increasing Limerick’s level of digital maturity by 2020 and setting the foundation for Smart Limerick City Region and Communities. Full listing of projects for each programme is presented in APPENDIX C – Limerick Digital Strategy Roadmap.

The Digital Strategy Roadmap towards a smart Limerick spans 7 operational programmes as defined in the strategic direction

- **Programme 1: Engagement & Participation** – a programme that will see the development of new models and digital technologies that enables better citizen engagement and participation
- **Programme 2: Information & Marketing** – a programme that aims to promote through increased levels of online information about what the Limerick City Region and local communities have to offer to an international audience
- **Programme 3: Service Integration** – a programme that develops new and integrates existing digital services in an a single digital platform in order to create an ever improving digital customer experience based on the citizen feedback
- **Programme 4: Digital Infrastructure** – a programme of investment in digital and ICT infrastructure that enables all other programmes and initiatives in this strategy
- **Programme 5: Data & Analytics** – a programme that aims to increase through insight the ability to make better decisions, enhance city and county operations, openness and innovation by increasing the availability of reliable data, the skills and practices of generating, aggregating and analysing data
- **Programme 6: Digital Transformation** – a programme of organisational change enabled by digital technologies that will see new practices adopted, process review and standardisation, new customer offerings, supporting staff development and digital skills, new ICT services and offerings in order to develop a better citizen experience of public and other services
- **Programme 7: Digital Innovation** – a programme that enables innovation through digital technologies that will see the creation of new services and solutions to deal with city, county and regional challenges. These new solutions will be developed by existing or new start-up companies that will be supported to scale-up in a maturing digital ecosystem

and 3 supporting programmes:

- **Programme 8: Governance, Strategy & Policy** – a programme that monitors the progress made in the implementation of this strategy, keeps it aligned with the local strategies and plans and defines policies and strategies that supports the strategic direction as set in this document (e.g. a CCTV strategy, a Data Strategy, Master Data Management or updating the local planning policies for digital infrastructure requirements)
- **Programme 9: Leadership & Support** – a programme that will see the development of digital and smart city leadership structures, networks and selection of digital leaders and champions that will take the lead in the development of a Sustainable Smart Limerick City & Region & Communities
- **Programme 10: Digital Edge – Research & Development** - a programme of research undertaken in collaboration with academic institutions and communities will enable the definition of new value chains offered by smart technologies, sustainable business models, procurement and especially funding models in the context of serious challenges to local government and city budgets. e.g. research in Urban Enterprise Architectures will ensure that the new systems deployed in the Smart Limerick will enable free data and information flow, avoids information silos and vendor lock-in.

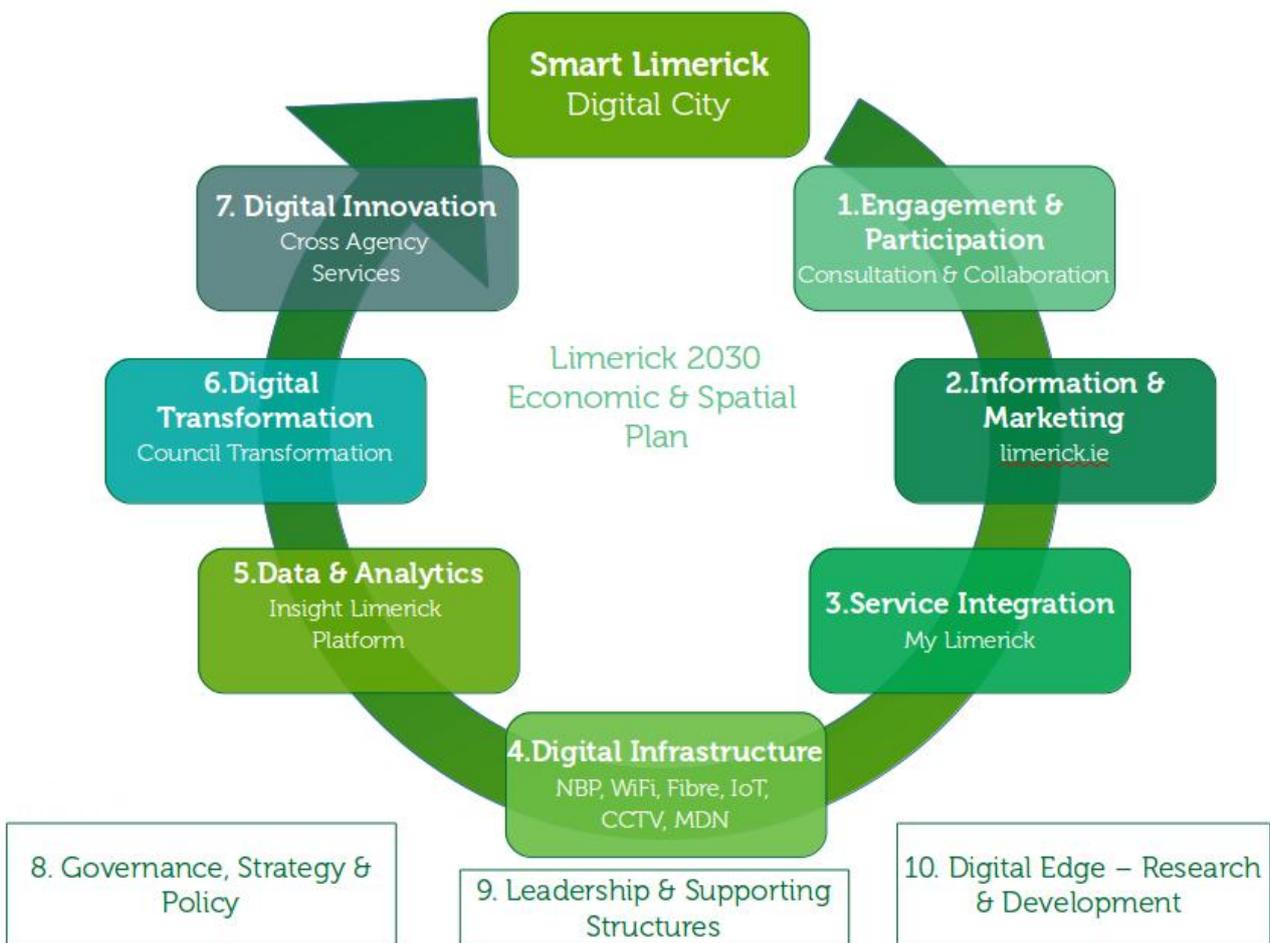


Figure 9: Smart Limerick Roadmap - A Strategic Approach

5.2 Longer Term Considerations

During the 6 consultations sessions held between December 2016 and April 2017 a number of longer term considerations have been suggested by the stakeholders involved as presented below. Detailed considerations are presented in APPENDIX E – Feedback from consultation sessions

There have been a number of general comments and observations:

- Need to communicate and collaborate on the digital strategy and digital initiatives in the wider community.
- Need to secure the support of larger private companies to make Limerick more attractive.
- Build trust between organisations – collaboration not competition
- Collaboration at local level to be mirrored at national level

Table 5.1: Longer term considerations across Smart Limerick Domains

Economy & Innovation (EI)	Community & Citizenship (CC)	Culture & Entertainment (CE)
<ol style="list-style-type: none"> 1. Improve communication and collaboration 2. Support retailers to trade online 3. Challenge of broadband and mobile signals in rural areas 4. Innovation and teaching in rural communities to be enabled in former Garda stations, schools, churches, etc. by local communities 5. Healthcare: digital health card and prescription 	<ol style="list-style-type: none"> 1. Connect people, organisation and networks through digital 2. Integration of technologies and initiatives is key 3. Security & privacy: Data Protection – GDPR 4. Garda mobility programme in development 5. Develop digital skills in collaboration with universities and research centres 6. Pervasive digital inclusion 	<ol style="list-style-type: none"> 1. Develop social history for Limerick City & County 2. Reache out to Limerick Diaspora 3. Support and involve younger generations for fresh ideas and opinions 4. Develop communications for different persona’s to make the strategy relevant to people 5. Genealogy and History are the focus of community
Movement & Transport (MT)	Urban Places & Spaces (UP)	Environmental Practices (EP)
<ol style="list-style-type: none"> 1. Live information of movement of cars, buses and people will lead to less pollution and better use of transport and public space 2. Develop Smart Integrated Transport including rural areas 3. Consider car sharing schemes in Limerick 4. Better use of cars – 70% of the time cars are parked 5. Prepare for autonomous cars 	<ol style="list-style-type: none"> 1. Facilitate better citizen engagement in the urban and rural space development 2. Urban design via co-creation & collaboration 3. Smart Walkways – use sensors on Walkways 	<ol style="list-style-type: none"> 1. Develop a heat map of the City for better energy usage 2. Smart Homes – clever use of technology at home 3. Data Centre Cooling – Shannon River 4. Consider the use of micro turbines

6 APPENDIX A – Limerick Digital Capability Maturity Assessment

To plan and guide the transformation journey towards the Smart Limerick and the Digital City, an initial capability assessment has been completed in 2016 with the support of researchers from LERO – The Irish Software Research Centre and IVI – The Innovation Value Institute Maynooth. This assessment enables the definition of the current status or the “as-is” situation and a common understanding between stakeholders of how this transformation is being tackled. It also enabled the definition of a clear set of goals to be reached in the next 3 to 5 years and the desired “to-be” situation, across the defining factors of Smart Limerick and the Digital City.

There are many models that can be used to undergo maturity assessments, each model having various levels of maturity and capabilities associated with these levels. As research in this area is still ongoing and different models claim various adoption rates, a hybrid approach has been used for Limerick’s digital capabilities assessment. This hybrid approach ensures that cross examination of key insights about Limerick’s digital capabilities provide a clear understanding of the current position from where Limerick can start its transformation journey.

While there are many assessment models in this strategy the following models are used:

- The *Sustainable Connected Cities Capability Maturity Framework* developed by the Innovation Value Institute in Maynooth, Ireland [21]
- The *Smart City Maturity Model* developed by TM Forum, a non-profit international industry association that carries out industry research and develops benchmarks, technology road-maps, best-practice guidebooks, software standards and interfaces [31];

The findings of these assessments are presented in the following sections.

6.1 Sustainable Connected Cities Capability Maturity (IVI)

The *Sustainable Connected Cities Capability Maturity Framework* developed by the Innovation Value Institute in Maynooth University defines 5 levels of maturity across 6 domains, as presented in Figure 10.

A recent assessment of Limerick’s digital capability placed Limerick at “Level 2. Basic” as presented in Figure 10.

Maturity Levels	Digital Access & Skills Proficiency	Building Ubiquitous City Network	Leveraging Urban Data	Fostering Digital Services Capability	City Impact Realisation	Digital City Governance
5. Optimising (Transformative Digital City Platform)	Digital savvy pervasiveness & creativeness	Ubiquitous high-speed, secure & intelligent networks	Industry, Academia, Municipalities/Gov & Citizens sharing trusted data	Bottom-up entrepreneurship & open-innovation digital city services	Carbon negative city, automation of city operations, triple bottom line value	Shared governance across municipalities & citizens
4. Advanced (Proactive Digital City Platform)	Personalised & integrated digital access, digital skills proficiency > 90%	Autonomous network QoS and QoE self-healing intelligence	Mega data-pattern processing, crowd-sourcing initiatives	Pockets of citizen prosumerism driving service innovation	Carbon neutral City, predictive city operations management	Pervasive citizen participation, cross-department digital city management positions
2020						
3. Intermediate (Progressive Digital City Platform)	Quadruple-helix initiatives for integrated digital education & access	Near real-time network sense & respond management	City data platform, data mash-ups from diverse sources	Integrated city-wide digital services platform, citizen feedback loops present	Managed use of city resources, informed city operations management	Centralised digital city vision, policies & resourcing
2018						
2. Basic (Developing Digital City Platform)	Discrete digital skills & access initiatives	Varying levels of instrumentation, connectivity & field data capture	Data policies for regulatory, privacy, security & sharing, small scale data integration	Pockets of digital city services innovation, limited citizen engagement	Carbon-rich behaviours changing, partial monitor & control city operations	Decentralised city involvement, some cross-department collaboration
1. Ad Hoc (Unmanaged Digital City Platform)	Limited expertise and access	Manual detection, response & recovery across network(s)	Proprietary, no data integration	Independent city service strategies	Unfettered city operations driving carbon-rich use	Little engagement, no interest in digital city

Figure 10: Limerick Digital Maturity Level 2016 (IVI)

The Digital Strategy Roadmap aims to increase Limerick’s Digital Capability Maturity to “Level 3 Intermediate” by 2018 and “Level 4 Advanced” by 2020 through a suite of co-ordinated initiatives under the leadership of local council and stakeholders.

For Limerick to reach an “Intermediate” level by 2018 the following capabilities need to be present

1. Multi-sector collaboration targeting digital education & access;
2. Near real-time network sense & respond management;
3. City data platform, data mash-ups from diverse sources;
4. Integrated city-wide digital services platform, citizen feedback loops present;
5. Managed use of city resources, informed city operations management;
6. Collective Digital City vision, policies & resourcing;

As a result of this assessment the Digital Strategy Roadmap includes a number of initiatives that develop these new capabilities for Limerick. For example the new Limerick.ie digital platform delivers in one location integrated content such as tourism, business and council while providing citizens and visitors with integrated digital services and multiple feedback features in My Limerick.

6.2 Smart City Maturity Model (TM Forum)

The Smart City Maturity Model developed by TM Forum, uses the ‘smart city framework’ ISO 37106 at its core, and is well aligned with industry standards such as BSI. It has seen wide adoption across multiple cities such as Atlanta, Mexico City just to name a few. The Smart Cities Council, The World e-Governments Organization of Cities and Local Governments (WeGO) have signed in 2016 a memorandum of understanding to promote the adoption of the TM Forum’s Smart City Maturity & Benchmark Model to

over 300 cities worldwide while the White House announced a challenge grant by the Smart Cities Council to help five American cities (Austin, Indianapolis, Miami, Orlando and Philadelphia) apply smart technologies to improve urban livability, workability, and sustainability. TM Forum is a non-profit international industry association that carries out research and develops benchmarks, technology road-maps, best-practice guidebooks and software standards.

The Smart City Maturity Model evaluates the city on 7 levels (0 – not started, 7 – maximum impact) and across 5 domains as presented in Figure 11.

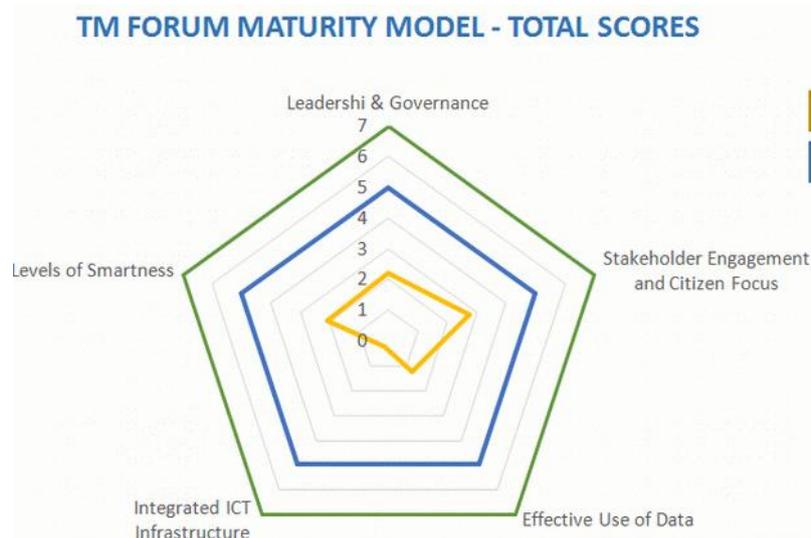


Figure 11: Limerick Smart City Maturity 2016

The assessment carried out in 2016 placed Limerick at various levels of maturity across the 5 dimensions with a score ranging from 0.2 in the Integrated ICT Infrastructure to 2.8 in Stakeholder Engagement and Citizen Focus. The overall score of 1.72 suggests that Limerick is approaching *Point 2 – Documented*. The assessment indicates a current position similar to the findings using the IVI model described above which informally brings further validation to these finding.

While it is desired that Limerick reaches a state where the city & county implement solutions that have *Maximum impact* or Point 7 across all five dimensions, the Limerick Digital Strategy sets in its 2020 road map a more achievable and realistic target of Point 5: "*Some impact*", a state where there is measurable impact and value generated by solutions in a balanced way across all the five dimensions. The level of investment required to reach this level in terms of time, funding and effort cannot be underestimated.

Table 6.1: Limerick Smart City Maturity Score

Domain	Score
Leadership and Governance	2.2
Stakeholder Engagement and Citizen Focus	2.8
Effective Use of Data	1.3
Integrated ICT Infrastructure	0.2
Levels of Smartness	2.1

The levels of smartness determined following this assessment are presented in Figure 12 below. It can be observed that Smart Waste Management, Health, Social Care and Wellness domains while being prepared to respond to natural disasters feature well. Smart Transport, Passenger transport Systems and Smart ICT are domains that require further investment and support.

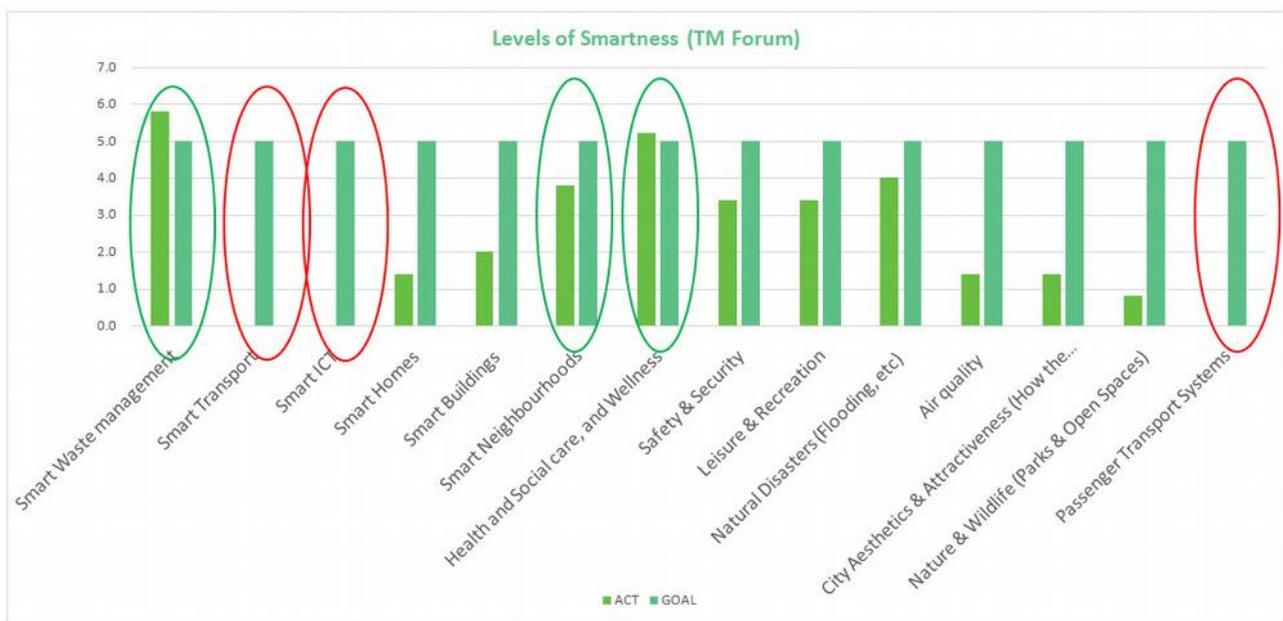


Figure 12: Levels of Smartness 2016

When the levels of smartness are projected across the six Smart Limerick Domains the results indicate that while Limerick is well developed in relation to “Community & Citizenship” and “Economy & Innovation” the “Movement and Transport” domain is lagging behind as it can be seen in Figure 13.

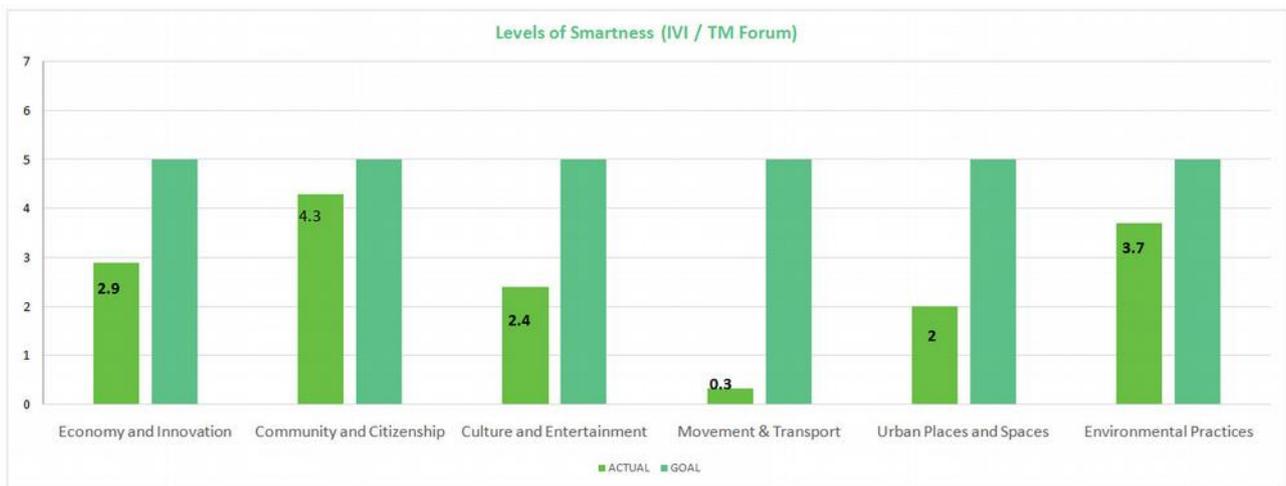


Figure 13: Levels of Smartness by Smart Limerick Domain

6.3 Conclusions

Following an initial assessment in September 2016 of Limerick’s digital capabilities it can be observed that Limerick was placed at “Level 2 Basic” in the IVI model, well above “Level 1 Ad-hoc” in some factors, close to an Advanced level while in other factors it is only now starting to develop its capabilities. An extrapolation based on the TM Forum assessment across the six Smart Limerick domains indicates that Limerick scored well in the “Economy & Innovation”, “Community & Citizenship” and especially in “Environmental Practices”. However more work is required in the “Movement & Transport” and “Urban Places and Spaces” domains.

The assessment using the Smart City Maturity Model developed by TM Forum indicates Limerick has yet to develop its digital capabilities especially around the “Effective use of Data”, “Integrated ICT Infrastructure”. It has to accelerate its efforts in order to have a higher level of impact in “Citizen Focus & Stakeholder Engagement” and “Leadership & Governance”.

The two assessments paint a clear picture as of the current state: like many other cities Limerick is at the beginning of its transformation journey to become a smart city region and like other cities, a co-ordinated strategic approach is required to develop new digital capabilities, reach the goals set in this strategy and maximize the impact of its initiatives.

This cross referencing of measurements therefore bringing additional support for the set of goals

7 APPENDIX B – Indicators

This chapter presents the list of proposed indicators that will be used to measure the performance of the various initiatives in achieving the goals as set in this strategy:

1. Enable our diverse communities, through the use of digital technologies, to participate in the development of Limerick (Section 7.1)
2. Build Limerick's reputation locally, nationally and internationally as digital ecosystem (Section 7.2)
3. Create an environment for digital innovation and digital transformation (Section 7.3)
4. Develop world-class digital services and infrastructure for a Smart City Region and Communities (Section 7.4)
5. Digitally enable and transform key public services in Limerick (Section 7.5)

Smart cities indicators are still under development at this time with various working standards being proposed by international standards organisations including ISO, Smart Cities Council, EU, etc. The indicators included in this chapter are based on the ISO 37120 Sustainable development of communities -- Indicators for city services and quality of life and the Smart Cities Council indicators.

Where indicators have not yet been identified specific research will be undertaken in cooperation with the relevant stakeholders to define and agree the indicators using international best practice methodologies and to establish the baseline. For example:

- Limerick Digital Economy assessment
- Social impact of digital technologies in regeneration areas
- Technology usage and digital skills needs in urban and rural communities
- Smart Limerick Enterprise Architecture

The new indicators will be included in the subsequent version of the strategy and published on digitalstrategy.limerick.ie

7.1 Enable our diverse communities, through the use of digital technologies, to participate in the development of Limerick

This proposed set of indicators aim to measure the levels on community and stakeholders engagement in Limerick

Table 7.1: Indicators for Citizen Engagement

Domain	Improved Capability	Indicator	Does Baseline indicator exist?	Target or Source Indicator Development
Community & Citizenship	Citizen Focus	% of public consultations available thorough digital channels	Yes	80% of consultations available online
Community & Citizenship	Citizen Focus	# of civic engagement activities offered by the council	Yes	Yes • LCCC
Community & Citizenship	Citizen Focus	# of local communities with online presence	Yes	25 local communities and neighbourhoods
Community & Citizenship	Citizen Focus	# number of digital skills, culture & inclusion programmes	No	6 programmes for digital skills, culture & inclusion

7.2 Build Limerick's reputation locally, nationally and internationally as digital ecosystem

This is a proposed set of indicators that aim to measure the levels of internationalization (engagement in international networks, events and conferences), and as a digital ecosystem.

Table 7.2: Indicators for Internationalization & Digital Ecosystem

Domain	Improved Capability	Indicator	Does Baseline indicator exist?	Target or Source Indicator Development
Economy & Innovation	Leadership & Governance	# of international congresses and fairs attendees	No	No • Shannon Region Conference & Sports Bureau

Domain	Improved Capability	Indicator	Does Baseline indicator exist?	Target or Source Indicator Development
Economy & Innovation	Leadership & Governance	# of international knowledge networks, congresses attended	Yes	5 Networks 5 Conferences
Economy & Innovation	Citizen Focus	# of annual website visitors to Limerick.ie	Yes	Yes, 1million • LCCC Communications & Marketing
Economy & Innovation	Leadership & Governance	Disposable Income per capita	Yes €20,395	No • LCCC Economic Development
Economy & Innovation	Leadership & Governance	% of persons in full-time employment	94% (Mid-West)	No • LCCC Economic Development

7.3 Create an environment for digital innovation and digital transformation

Table 7.3: Indicators for digital innovation & digital transformation

Domain	Improved Capability	Indicator	Does Baseline indicator exist?	Target or Source Indicator Development
Economy & Innovation	Citizen Focus	# of officially registered ENOLL living labs	Yes	Yes
Economy & Innovation	Citizen Focus	# digital community events (hackatons,..)	Yes	No
Economy & Innovation	Effective Use of Data	# Open Data datasets	Yes	• 50 open datasets in the Insight Limerick Service
Economy & Innovation	Leadership & Governance	# of new opportunity-based start-ups/year	Yes	No • Limerick Enterprise Office • LCCC Economic Development • Limerick Chamber
Economy & Innovation	Leadership & Governance	# of small enterprises transacting online	Yes	20 more SMEs (Pilot) • Limerick Enterprise Office • LCCC Economic Development • Limerick Chamber

7.4 Develop world-class digital services and infrastructure for a Smart City Region and Communities

Table 7.4: Indicators for levels of smartness, digital services & infrastructure

Domain	Improved Capability	Indicator	Does Baseline indicator exist?	Target or Source Indicator Development
Community & Citizenship	Citizen Focus	% of High speed internet-connected premises	Yes 62% (60,247)	100% - 97,173 premises • National Broadband Plan
Community & Citizenship	Citizen Focus	% of residents with smart phone access	No	No • CSO
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	# of annual cultural events with online presence	Yes	No • LCCC Arts Office
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	# of festivals	Yes	No • LCCC Arts Office
Urban Places & Spaces	Levels of Smartness (Smart Buildings)	# of LEED/BREAM certified buildings	No	No • LCCC Economic Development • Limerick Clare Energy Agency
Urban Places & Spaces	Levels of Smartness (Smart Buildings)	% of commercial and industrial buildings with smart meters	No	No • LCCC Economic Development • Limerick Clare Energy Agency
Urban Places & Spaces	Levels of Smartness (Smart Homes)	% of homes with smart meters	No	No • LCCC Economic Development • Limerick Clare Energy Agency
Movement & Transport	Levels of Smartness (Smart Transport)	% of traffic lights connected to real-time traffic management system	Yes	No • LCCC Physical Development • Smarter Travel Limerick
Movement & Transport	Levels of Smartness	# of EV charging stations within the city	Yes	No • LCCC Physical Development • Limerick Clare Energy Agency • ESB Networks

Domain	Improved Capability	Indicator	Does Baseline indicator exist?	Target or Source Indicator Development
Movement & Transport	Levels of Smartness	# of shared bicycles per capita	Yes	No <ul style="list-style-type: none"> LCCC Physical Development Smarter Travel Limerick
Movement & Transport	Levels of Smartness	# of public transit services that offer real time information to the public	Yes	No <ul style="list-style-type: none"> LCCC Physical Development Smarter Travel Limerick
Economy & Innovation	Levels of Smartness	# of WiFi hotspots per km2	Yes	No <ul style="list-style-type: none"> LCCC Economic Development LCCC ICT Department
Environmental Practices	Levels of Smartness	# of infrastructure components with installed sensors	No	No <ul style="list-style-type: none"> LCCC Economic Development LCCC Physical Development LCC Social Development

7.5 Digitally enable and transform key public services in Limerick

Table 7.5: Indicators for public services digitally transformed

Domain	Improved Capability	Indicator	Does Baseline indicator exist?	Target or Source Indicator Development
Community & Citizenship	Citizen Focus	% of local government services available over web or mobile phone	Yes	80% (50 new online services, payments, licences, permits and grants)
Community & Citizenship	Stakeholder Engagement	# of local networks actively engaged in smart collaboration	Yes	10 local networks
Community & Citizenship	Citizen Focus	# of cross agency services integrated thorough digital channels	Yes	No <ul style="list-style-type: none"> Limerick Digital Leaders Network
Community & Citizenship	Citizen Focus	Better public services and customer services	Yes	5% increase in council's customers satisfaction
Community & Citizenship	Stakeholder Engagement	# of strategies and plans connected & supported by digital technologies	Yes	9 strategies & plans supported

8 APPENDIX C – Limerick Digital Strategy Roadmap

The Limerick Digital Strategy roadmap is presented in Smart Limerick Roadmap (P06-001LDSDEV-SLR) and published at smart.limerick.ie

9 APPENDIX D – Digital Champions Forum

This network of senior Council staff support the development of the Digital City & Smart Limerick initiatives. The table below lists by Smart Limerick Domains, the digital champions that contributed to the development of this document.

Table 9.1: Digital Champions Forum

Domain	Department	Champion
All	Digital Strategy	Fergal Grace
All	Digital Strategy	James Sweeney
All	Digital Strategy	Joe Guiney
All	Digital Strategy	Michael Healy
All	Digital Strategy	Michelle Power
All	Digital Strategy	Dr. Mihai Bilauca
All	Digital Strategy	Rob O’Driscoll
Community & Citizenship	Community Support Services	Patricia Liddy
Community & Citizenship	Customer Services	Triona Daly
Community & Citizenship	Human Resources	Aoife Duke
Community & Citizenship	Libraries	Damien Brady
Community & Citizenship	Marketing & Communications	Denis Tierney
Community & Citizenship	Social Development	Eileen Humphreys
Community & Citizenship	Social Development	Carmel Kirby
Culture & Entertainment	Arts & Culture	Sheila Deegan
Culture & Entertainment	Social Development	Seamus Hanrahan
Economy & Innovation	Business Improvement Unit	Elaine O’Connor
Economy & Innovation	Economic Development	Brian Kennedy
Economy & Innovation	Economic Development	Jillian Robinson
Economy & Innovation	Finance	Kieran Dore

Domain	Department	Champion
Economy & Innovation	Finance	Pat Murnane
Economy & Innovation	ICT	Jim Dore
Economy & Innovation	Innovate Limerick	Mike Cantwell
Economy & Innovation	Limerick 2030	Kieran Reeves
Economy & Innovation	Local Enterprise Office	Eamon Ryan
Economy & Innovation	Marketing & Communications	Laura Ryan
Environmental Practices	Physical Development	Anne Goggin
Movement & Transport	Physical Development	Carmel Lynch
Movement & Transport	Physical Development	Miriam O'Donoghue
Urban Places & Spaces	Design Delivery & Property Services	Joe Delaney
Urban Places & Spaces	Economic Development	Rosie Webb
Urban Places & Spaces	Economic Development	Maria Woods
Urban Places & Spaces	Physical Development	Vincent Murray

10 APPENDIX E – Limerick Digital Leaders Network

This network, still in development, of key stakeholders from public, private, community & voluntary and private sectors contribute and lead the development of Digital City & Smart Limerick roadmap and initiatives.

The table below lists by Smart Limerick Domains, the Digital Leaders that contributed to the development of this document.

Table 10.1: Limerick Digital Leaders Network

Domain	Organisation	Contact	Title
All	Limerick City & County Council	Dr. Mihai Bilauca	Head of Digital Strategy
Community & Citizenship	An Garda Siochana	David Sheahan	Chief Superintendent
Community & Citizenship	Health Service Executive - University Hospitals Group	Brian McKeon	Director of Informatics, Planning and Performance
Community & Citizenship	ISAX	Anne Connolly	Director
Community & Citizenship	ISAX	Siobhradh Fraser	Limerick Office
Community & Citizenship	Limerick and Clare Education and Training Board	Paul Patton	Director of Further Education & Training
Community & Citizenship	Limerick and Clare Education and Training Board	Brendan Ryan	Further Education & Training
Community & Citizenship	LERO – NUI Maynooth	Prof. Brian Donnellan	Vice President Maynooth University
Community & Citizenship	Limerick Enterprise Development Partnership	George Lee	Manager Community Initiatives and PC

Domain	Organisation	Contact	Title
Community & Citizenship	PAUL Partnership	Anne Kavanagh	CEO
Community & Citizenship	PPAN	Dr. Sean O’Riordan	Manager
Community & Citizenship	UL – CSIS	Prof. Ita Richardson	Associate Professor
Community & Citizenship	UL – CSIS	Prof. Tiziana Margaria	Head of Department
Community & Citizenship	UL – KBS	Yvonne Diggins	Special Projects Officer
Community & Citizenship	West Limerick Resources	Shay Riordan	Manager
Culture & Entertainment	Limerick Royal Project	Dave Burns	Director
Culture & Entertainment	Southern Advertising	Dave O’Hora	Director
Economy & Innovation	IDA- Industrial Development Authority	Fiona Reilly	Regional Business Development Executive
Economy & Innovation	Ballyhoura Development	Padraig Casey	Economic Development Manager
Economy & Innovation	Innovate Limerick	Mike Cantwell	Head of Innovation
Economy & Innovation	LERO – NUI Maynooth	Dr. Niall Connolly	Research Fellow
Economy & Innovation	LIT	Gillian Barry	Head of Innovation & Enterprise
Economy & Innovation	Mary Immaculate College	Dr. David Moloney	Blended Learning Co-ordinator

Domain	Organisation	Contact	Title
Economy & Innovation	Mary Immaculate College	Dr. Maeve Liston	Director of Enterprise & Community Engagement
Economy & Innovation	Mid West Regional Skills	Joe Leddin	Councillor. Mid West Regional Skills Manager
Economy & Innovation	W2 Consulting	Mark O'Connell	Director
Urban Places & Spaces	Limerick Clare Energy Agency	Pat Stephens	Manager
Environmental Practices	Action Point	Ivan O'Connor	Head of IoT
Movement & Transport	Limerick City & County Council	Lise-Ann Sheahan	Limerick Smarter Travel Office
Urban Places & Spaces	Dell EMC	Dave Griffin	Director Limerick Site Programs
Urban Places & Spaces	General Motors	John Gleeson	Chair Mid-West Action Plan for Jobs
Urban Places & Spaces	LERO	Brendan O'Malley	General Manager
Urban Places & Spaces	Limerick City & County Council	Rosie Webb	Senior Architect
Urban Places & Spaces	LIT	Janice O'Connell	Head of IT Department
Urban Places & Spaces	Piercom	Adrian O'Sullivan	Digital innovation
Urban Places & Spaces	Supply Network Shannon	Mark O'Sullivan	Chairman

11 APPENDIX E – Feedback from consultation sessions

This section presents the comments without alteration from the 6 sessions of consultations undertaken with key stakeholders in Limerick City & County between December 2016 and April 2017.

There have been a number of general comments and observations:

- Need to communicate and collaborate on the digital strategy into the wider digital initiatives in the community.
- Need to get big name private sector companies involved to make Limerick more attractive.
- Interaction with local business supports is important selling point.

The remaining part of this section details the points raised across the 6 Smart Limerick Domains:

- Economy & Innovation in Section 11.1.1
- Community & Citizenship in Section 11.1.2
- Culture & Entertainment in Section 11.1.3
- Movement & Transport in Section 11.1.4
- Urban Places & Spaces in Section 11.1.5
- Environmental Practices in Section 11.1.6

11.1.1 Economy and Innovation

Current initiatives

- Limerick2030 - integrated urban and economic strategy helps grow the local economy
- Start-up centre Hartnett in LIT and Nexus centre in UL support innovation
- Innovate Limerick – Digital Skills Academy: The Engine Centre. Focusing on training and skills. Aimed at film industry; where 20% of places are reserved for regeneration areas.
- Digital skills week in MIC. The “All aboard week” where staff, students and wider community aim to improve IT skills. Funded nationally. Part of Life Long Learning week
- Take 1 Step (#T1Step) is a regional campaign to raise digital skills across the Shannon Consortium
- Inviting primary schools to demo their tech initiatives. Similar initiative in LIT.
- Limerick for Engineering showcase. Driven by industry, supported by council, academia, etc.
- Springboard 2017 - companies can up skill employees
- MIC: CoderDojo on Wednesdays and Lego labs into DEIS Schools. Teacher and Parent Training courses.
- FabLab Limerick has a 3-5 years programme
- Living cities initiative
- Learning hub already exists in Kileely. 2000 kids trained last year.
- LERO UL : Education in Primary/Secondary Schools. Research in Software Usage. Smart City Research.

Medium term considerations

- Improve communication and collaboration, internal and external
- Challenge of Broadband/Mobile signals in rural areas, 1) Getting it installed, 2) How to use it.
- Digital Skills Courses for rural areas
- Use of former garda stations, schools, churches by communities. Could we have innovation/teaching and learning spaces in rural communities?
- Support retailers to trade online
- Keep investing in further training to keep track of tech advances. Extension of springboard programme.

Longer term considerations

- Opportunities for future development of Smart Limerick.
- Need to provide business supports to local industry as well as foreign companies.
- Smaller simpler initiatives such as Noise squad from Wales. Anon noise complaint.
- Healthcare digital health card and prescription will lead to healthier communities

11.1.2 Community & Citizenship

Current initiatives

- Models for civic engagement in development
- Garda Mobility programme in development
- Smart Ageing Strategy in Limerick
- ISAX/Volunteering – Lero – Milford Hospice/NCW
- Love Parenting.ie: particular significance.
- Broadening Curriculum Module – Strategies on Social Media for Social Good.
- Limerick.ie - presence of rural areas and communities
- My Limerick platform launched
- Sporting Limerick - Social Media Campaigns
- Nursery Rhymes – Traveller Initiatives
- Connected Health ULH/Brothers of Charity
- AHA and JnJ - Health
- Limerick to Life – Histories
- Castleconnell Community Shoebox initiative (old photographs – digitised)
- Limerick for Engineering.
- LERO works with schools, teacher training.
- Junior certificate courses in coding.
- Digital skills strategy for education with the DES
- Limerick Life Long Learning festival linking with Digital Skills Week.
- Global Limerick Network linking with Diaspora.#

Medium term considerations

- Integration, Leadership, Technology, People, Knowledge.
- Integration of technologies
- Citizen forum for digital engagement
- Linking more UL/LIT/MIC
- Linking ISAX/IBM Smarter Cities Projects / LERO at UL
- Sporting Limerick -City website – integrating systems i.e. Garda/match day info.
- ISAX Smarter Ageing Community – Participate in Living Labs initiatives
- A map of technology companies
- Compatibility of Technology - Integration of Systems
- Security, privacy: Data Protection – GDPR
- Connecting people, organisation and networks
- Technology can isolate: we need to be careful – use to reach people.
- Healthy Limerick: Interconnectivity – 4 people on a regular basis.
- Integration of migrants

Longer term considerations

- Build trust with one another – collaboration not competition
- Citizens Assembly concept – mimic the national CA with a Limerick version!
- How can collaboration at local level be mirrored to National level
- Need a means of letting An Garda know when large events are planned.
- Use of former Garda stations, schools, churches by communities. Could be used for innovation/teaching and learning spaces in rural communities
- Building platforms supporting collection/ management of data.
- Building processes within the community. Re-engineering – re-build internal processes.
- Huge potential due to multi-stakeholder approach – different perspectives complimentary to each other (small scale but all the right ingredients)
- Technology does not have borders: city – rural – agelessness
- Digital Limerick:
 - Communication to the population.
 - Connectivity
 - Way to engage youth (they are tech native)
 - Assistive technologies

- Develop Digital Skills (in collaboration with universities and Research centres)
- Pervasive inclusion fostered by Digital Collective.

11.1.3 Culture & Entertainment

Current initiatives

- “Our City Our Stories” and “Our County Our Stories”.
- History App – Limerick Landmarks e.g. Mount Saint Lawrence.
- Royal Project - Digital Media Training, Cinema.

Medium term considerations

- Our City, Our Stories – 1 minute videos, Capturing experiences, family stories etc.
- Elemental festival - incorporating Digital Skills
- National festivals run and celebrated in Limerick, Science Week, Maths Week, Fresh Film, Elemental Celebration of the Arts, Engineers Week by all organisations in Education Sector.
- Putting them out on websites, in public areas.
- Opportunity – Link to Mary I and how people learn.
- Genealogy, history are focus of community

Longer term considerations

- Capture social history – see Philaplace project. Explore the City of Neighborhoods through maps, stories, photographs, and documents.
- Fresh Film Festival – Link to Troy Studios. Links to similar organisations in Paris and Denmark.
- Social Media, Twitter etc get our name out there.
- ITLG events.
- App for polling delegates at a meeting.
- Need younger generations idea and opinions.
- Reaching out to Diaspora.
- Need for Digital Live Strategy, it’s already ahead of the population technically.
- Sharing is massive and a huge issue going forward.
- Need for Persona’s development to make the strategy relevant to populace.

11.1.4 Movement & Transport

Current initiatives

- Integrated urban strategy Limerick2030 helps grow the economy
- Balanced cities proposal includes: smart city logistics., app for online purchases, electric last mile delivery

Longer term considerations

- Movement of Cars, Buses and People to give live directions, less pollution.
- RAIL Network – so much unused railway in the Midwest – must be opportunity for development
- Smart Spaces - Smart Cars
- Car sharing schemes to be considered
- Use of cars – 70% of the time cars are parked

11.1.5 Urban Places and Spaces

Current initiatives

- City Council workshops & engagements – urban design via co-creation/collaboration
- Urban Prototyping – e.g. Parklet concept
- Tidy Towns
- Men Sheds
- Art installations in streets / in lanes
- Urban gardens
- Schools cluster in Mungret – aligned with pathway upgrades in village
- Market – extension into Cruises street

Medium term considerations

- Crowd-source methodology for vacancy profile of city
- Heat mapping technology (with Action Point/Dell) – to measure not just footfall but occupancy & density/time dwelling of people in areas
- Autonomous vehicles (General Motors work well advanced)
- Trading energy back to grid – digital homes having ability to save energy + give back surplus to grid
- Schools & Youth engagement
 - TY Projects
 - FDI Companies sponsor a city-centric project
 - School Curriculum – pilot a new ‘civics’ framework that has kids working with real life contexts and projects
 - BT Young Scientist – city council to sponsor, say 6 school projects – again with Limerick real projects in mind
 - Drive the awareness back to the parents/adults

Longer term considerations

- Green-way opportunity – perhaps already in plan
- Shannon River
 - The river should be considered as an asset to cool data centres
 - The weir has messed up rowing in the city – a century-old tradition.
 - Can some re-engineering be considered
 - Set aside funding for civic infrastructure
 - Persona based envisioning – case study idea – champion projects – make visible through apps, digital boards, etc.
 - Personal augmented reality city experiences-tours

11.1.6 Environmental Practices

Current Initiatives

- Climate kick - knowledge and training in the area of climate change.
- Bike Sharing schemes existing in Limerick
- Green Flag Schools
- Secondary School Messaging
- Green Business
- EPA – Calls for Research and Projects
- Waste Management Office – Based in Limerick – Repac
- R&D Projects – Lean Programs – Waste Management
- Sustainability Manufacturing
- Tidy Towns

Longer Term Considerations

- Undertake heat mapping of the City
- Smart Homes – Clever use of technology.
- Data Centre Cooling – Shannon River
- Rail Hub and Spokes – North/South/East/West
- Micro Turbines – Wind Towers on streets.
- Smart Walkways – Sensors on Walkways
- Green Flag Schools – bring learnings home to Parents

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Comhairle Cathrach
& Contae **Luimnigh**

Limerick City
& County Council

BUILDING IRELAND'S FIRST DIGITAL CITY

Towards a Sustainable
Smart Limerick City, Region
and Communities



SMART LIMERICK

INFORMED / ENGAGED / TRANSFORMED



Building Ireland's First Digital City

Towards a Sustainable
Smart Limerick
City Region and Communities

INFORMED – ENGAGED – TRANSFORMED

Smart Limerick Roadmap

DRAFT

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1 Document Control

1 Version control

Ver.	Date	Change log	Authors
0.1	14/11/2016	Initial draft based on Council Digital Champions Forum feedback	M. Bilauca
0.2	06/03/2017	Updated document with short & long term initiatives based on DLN feedback	M. Bilauca J. Guiney M. Power
0.3	22/05/2017	Updates from Digital Champions Forum and Digital Leaders Network focus groups meetings	M. Bilauca S. O'Riordain J. Guiney M. Power
0.4	06/06/2017	Updates from Digital Champions Forum and Digital Leaders Network	M. Bilauca J. Sweeney
0.5	30/06/2017	Updated	M. Bilauca DCF DLN
0.6	11/09/2017	Updated	M. Bilauca DCF DLN
0.7	04/11/2017	Updated	M. Bilauca DCF DLN

2 Related Documents

Reference	Ver.	Date	Title
P06-001LDSDEV-DLN1	1.00	15/12/2016	Workshop 1 Presentation: Limerick Digital Strategy (Draft): Towards a Sustainable Smart Limerick City Region and Communities
P06-001LDSDEV-DLN2	1.00	03/03/2017	Workshop 2 Presentation: Limerick Digital Strategy (Draft): Towards a Sustainable Smart Limerick City Region and Communities

3 Glossary

CCMA	County & City Management Association Ireland
DCU	Dublin City University
DLN	Limerick Digital Leaders Network
GLN	Global Limerick Network
ISAX	Irish Smart Ageing Exchange
LDS	Limerick Digital Strategy
LCCC	Limerick City and County Council
LCCC - BIU	LCCC Business Improvement Unit

LCCC - CM	LCCC Communications & Marketing Department
LCCC - CS	LCCC Customer Services Department
LCCC - CoS	LCCC Corporate Services Department
LCCC - DCF	LCCC Digital Champions Forum
LCCC - DD	LCCC Design & Delivery Department
LCCC - DS	LCCC Digital Strategy Department
LCCC - ED	LCCC Economic Development Department
LCCC - HR	LCCC Human Resources Department
LCCC - ICT	LCCC Information & Communications Technology Department
LCCC - LEO	LCCC Limerick Enterprise Office
LCCC - DS	LCCC Digital Strategy Department
LCCC - PD	LCCC Physical Development
LCCC - PLE	LCCC Planning Licensing and Environmental Services Department
LCCC - PMSG	LCCC Project Management Steering Group
LCCC - SD	LCCC Social Development Department
LCCC - SO	LCCC Service Operations Department
LCETB	Limerick and Clare Education and Training Board
LCEA	Limerick Clare Energy Agency
LERO	The Irish Software Research Centre
LIT	Limerick Institute of Technology
MIC	Mary Immaculate College
UL	University of Limerick

SMART LIMERICK

INFORMED - ENGAGED - TRANSFORMED

80%



OF PUBLIC CONSULTATIONS
USING DIGITAL CHANNELS

2,000

ATTRACTIONS, SERVICES,
COMMUNITY GROUPS &
BUSINESSES

WITH MORE THAN

1,000



EVENTS EACH YEAR IN
A SINGLE INTEGRATED
PLATFORM-LIMERICK.IE

50 NEW
ONLINE



SERVICES, PAYMENTS, LICENCES,
PERMITS AND GRANTS IN 'MY LIMERICK'

40



NEW SMART CCTV
CAMERAS WILL ENABLE
SAFER COMMUNITIES

37,137

PREMISES WILL BE CONNECTED
TO HIGH-SPEED BROADBAND
UNDER THE NATIONAL BROADBAND PLAN



100

SENSORS DEPLOYED
ACROSS CITY & COUNTY - NOISE,
AIR, WATER AND SOIL QUALITY
AND FOOTFALL COUNTING



10

DIGITAL
PUBLIC DISPLAYS



1,000

SMART HOMES

100

SMART
BUILDINGS



1 SMART ENERGY
DEMONSTRATION DISTRICT

2 Executive Summary

This document presents the Smart Limerick Roadmap as a comprehensive portfolio of 10 programmes developed in consultation with the Limerick Digital Leaders Network and the Council Digital Champions Forum between December 2016 and April 2017. The roadmap has been defined with the aim of at increasing Limerick's level of digital maturity by 2020 and setting the foundation for Smart Limerick City Region and Communities.

This is a unapproved DRAFT document for consultation purposes only!

Any inadvertent omissions in this version will be included in the next release of the document.

3 Introduction

The Limerick Digital Strategy puts a new lens on Limerick's strategic development and especially on the ambition to transform our economy and physical space under the Limerick 2030 Economic and Spatial plan [Limerick, 2030]. The Strategy defines a framework that supports and enables the use of digital technologies and the adoption of digital transformation principles across the economic, social and physical domains of Limerick City and County.

The Limerick Digital Strategy aims to lay the foundation for the "Sustainable Smart Limerick City Region and Communities", a Limerick that uses digital technologies and embraces new work practices to empower communities, create better services, accelerate sustainable social and economic growth and to improve the quality of life for all.

This cannot be done in isolation by an individual or a team, not even by a single organisation. It can only be achieved through collaboration across communities and agencies. It requires collaborative leadership and a readiness to challenge the status-quo with a transformational mindset.

Therefore Limerick Digital Strategy defines a road map of initiatives, as presented in the remaining part of this document, that aim to raise Limerick to a new "*Intermediate*" Level 3 of digital maturity by 2018 and Level 4 "*Advanced*" by 2020 while increasing the impact of these actions across a set of 5 Smart City capabilities:

1. Leadership & Governance
2. Stakeholder Engagement and Citizen Focus
3. Integrated ICT Infrastructure
4. Effective Use of Data
5. Level of Smartness

and 6 Smart Limerick domains:

1. Economy & Innovation
2. Community & Citizenship
3. Culture & Entertainment
4. Movement & Transport
5. Urban Places & Spaces
6. Environmental Practices

This will be achieved by implementing a portfolio of 10 programmes that are lead by the Digital Leaders Network and the Council Digital Champions Forum. The strategic approach (consisting of 7 operational programmes and 3 supporting programmes) is described in Figure 1 below.

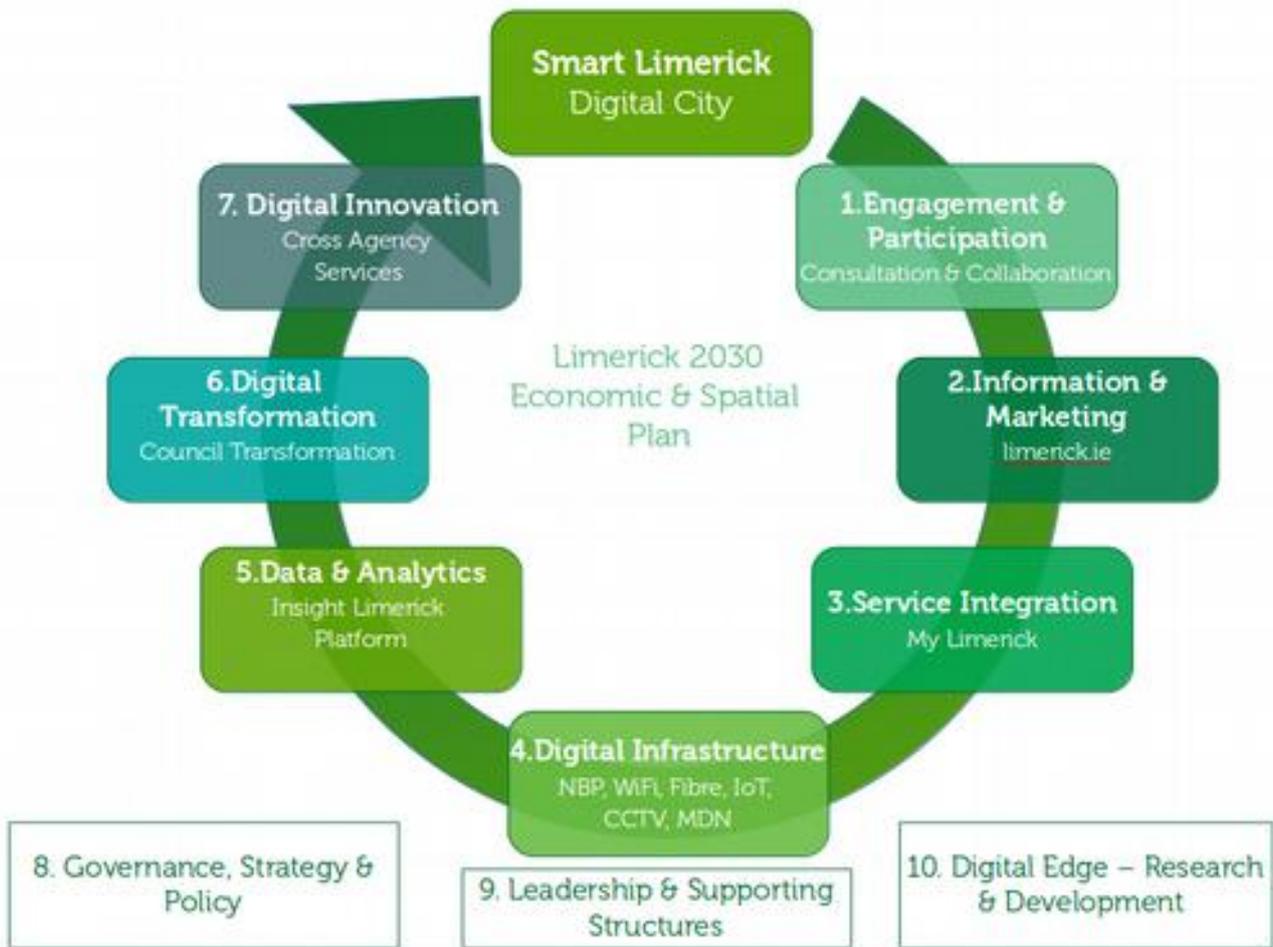


Figure 1: Strategic Approach

In the remaining part of this document the an overview of the Smart Limerick roadmap is presented in one page in Section 4 while the detailed Smart Limerick programme is presented in Section 5.

The last two sections introduce the two forums that contributed to the development of this document: *Limerick Digital Leaders Network* is presented in Section 6 while Section 7 presents the *Council Digital Champions Forum*.

4 Roadmap Overview

The table below presents a listing of the projects for each of the 10 programmes.

Pr.	ID	Action
1. Engagement & Participation	1.1	My Point (Open Consultation Platform)
	1.2	Public Engagement Model
	1.3	Public Participation Network Integration
	1.4	Public Mapping and Data Collection
	1.5	City & Town Engage Program
	1.6	Citizen Open Innovation Lab
	1.7	Council Podcasts
	1.8	Invasive Species App
	1.9	Sustainable Energy Communities
	1.10	Students Engagement
	1.11	Citizen Digital Culture
2. Information & Marketing	2.1	Limerick.ie
	2.2	Limerick.ie App
	2.3	Limerick.ie Economic Report
	2.4	DIGITAL.Limerick.ie
	2.5	SMART.Limerick.ie
	2.6	FILM.Limerick.ie
	2.7	Past Perfect: Future Tense – LCGA Digitalisation
	2.8	HISTORY.Limerick.ie
	2.9	AgeFriendly.Limerick.ie
	2.10	Age Friendly Magazine
	2.11	Community Websites
	2.12	Limerick Film Festivals Platform
	2.13	Smart Sporting Limerick
	2.14	Shannon Fisherman Archive
2.15	Limerick Film Archive	
2.16	HearSay Audio Arts Festival	
3. Service Integration	3.1	MY Limerick.ie
	3.2	MY Limerick.ie – Favourite Amenities
	3.3	MY Limerick.ie – Inspire Me
	3.4	MY Limerick.ie – Cases
	3.5	MY Limerick.ie – Payments
	3.6	MY Limerick.ie – Licences & Permits
	3.7	MY Limerick.ie – Grants
	3.8	MY Limerick.ie – Ping me (Notifications)
	3.9	MY Limerick.ie – My Post Box
	3.10	Integration of National Systems
	3.11	Smart Parking

Pr.	ID	Action
4. Digital Infrastructure	4.1	Municipal Data Network
	4.2	Public WiFi
	4.3	Smart CCTV Pilot
	4.4	National Broadband Plan roll-out
	4.5	Noise Sensors (IoT – Pilot)
	4.6	Air Quality Sensors (IoT Pilot)
	4.7	Water Quality Sensors (IoT Pilot)
	4.8	Soil Quality Sensors (IoT Pilot)
	4.9	Footfall Counters (IoT Pilot)
	4.10	Public Digital Displays
	4.11	Digital Quarter Limerick – IoT Demo
	4.12	Digital Quarters Network
	4.13	Community Centres Footfall Counters
	4.14	360' Live Cameras
	4.15	Citizen DIT Digital Infrastructure
5. Data & Analytics	5.1	Insight Limerick (Council)
	5.2	Insight Limerick (Public)
	5.3	Insight Limerick – Personal Dashboard
	5.4	Insight Limerick – Investor Dashboard
	5.5	Insight Limerick – Community Safety Dashboard
	5.6	ISAX Data Exchange – Limerick
	5.7	Limerick Master Data Management
	5.8	Public Data Co-creation
	5.9	Transport Patterns for Rural Transport
	5.10	Open Data for Autonomous Cars
6. Digital Transformation (Council)	6.1	Council Enterprise Architecture
	6.2	Customer Services – Digital Services
	6.3	Customer Services – Digital Displays
	6.4	Staff Training Portal
	6.5	Customer Relationship Management
	6.6	Mobile Service Operations (CRM App)
	6.7	Smart Service Operations
	6.8	Electronic Records Management
	6.9	Program & Project Management
	6.10	Customer Services – Contact Centre
	6.11	Customer Services – Video Services
	6.12	Telephony & Communications System
	6.13	ICT Infrastructure Upgrade
	6.14	Presentation & Video Equipment
	6.15	Remote Office Communications
	6.16	Disaster Recovery Programme

Pr.	ID	Action
7. Digital Innovation	7.1	The Networks Forge (Smart Collaboration)
	7.2	URBACT Techtown - A digital City Future
	7.3	Horizon 2020
	7.4	Public Safety Enforcement Services
	7.5	Digital Skills Academy
	7.6	Digital Retail Pilot
	7.7	Digital Skills Week
	7.8	Coder Dojo Limerick
	7.9	Digital citizenship & Digital Inclusion
	7.10	Innovation in Community Spaces
	7.11	LG National Service Catalogue
	7.12	Ingenuity
	7.13	Smart Ageing Housing Programme
	7.14	ISAX Innovation Hub
	7.15	Limerick Living Lab
	7.16	Technology Enhanced Learning
8. Optimised Governance	8.1	Digital Limerick Framework 1.0
	8.2	Limerick Digital Strategy 1.0
	8.3	Limerick Digital Strategy 2.0
	8.4	Smart Limerick Strategy
	8.5	IBM Smarter Cities Challenge
	8.6	.IE Geographical Place Names Policy
	8.7	Digital Infrastructure Planning Policy
	8.8	Smart CCTV Policy
9. Smart Limerick Network	9.1	Limerick Digital Leaders Network – DLN
	9.2	Council Digital Champions Forum (DCF)
	9.3	All Ireland Smart Cities Forum
	9.4	Open & Agile Smart Cities – OASC
	9.5	WBA - Connected City Advisory Board
	9.6	TM Forum
	9.7	Association of Strategic Alliance Prof, Digital Inclusion Advisory Group
	9.8	
10. Digital Edge	10.1	Limerick Enterprise Architecture
	10.2	Connected Health
	10.3	Smart Ageing Volunteers Platform
	10.4	Digital Inclusion Needs Study

5 Smart Limerick Roadmap

The table below presents a detailed portfolio of 10 programmes and 106 actions. For each programme the Name and Description of each action is assigned to the relevant Smart City Domain and the main capability that will be improved. While the roadmap intends to set specific targets for each project, in some areas further research is required to determine and measure the current values. This will be developed further in the next release of this document.

Table 5.1: Limerick Digital Strategy Roadmap

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			1.Enable Participation Programme							
Community & Citizenship	Citizen Focus	1.1	My Point (Open Consultation Platform) An open consultation platform that enable citizens to express their views in the development of their communities. It enables public submission on strategies and plans proposed by the Council. It links with My Limerick in order to enhance citizen digital experience in a integrated platform.	-	x	x	-	Number of projects and strategies consulted on using this platform	LCCC – SD LCCC – DS Paul Partnership Ballyhoura Development West Limerick Resources	C. Kirby J. Sweeney A. Cavanagh H. Fitzgerald P. Casey S. Riordan D. Cleary
Community & Citizenship	Citizen Focus	1.2	Public Engagement Model A project that aims to develop a new model of public engagement and digital tools by working with communities across the city and county. The project will involve local communities in local government decisions.	x	x	-	-	Model Developed Model adopted by community groups	LCCC – SD LCCC – DS PPN Paul Partnership Ballyhoura Development West Limerick Resources	C. Kirby J. Sweeney A. Cavanagh H. Fitzgerald P. Casey S. Riordan D. Cleary
Community & Citizenship	Citizen Focus	1.3	Public Participation Network Integration Integration with Limerick.ie of the PPN platform used by over 100 organisations in the Limerick Public Participation Network. This is a network of registered groups and associations that can have an influence on policy-making committees of the Council.	-	x	x	x	Number of submissions through PPN	LCCC – SD LCCC – DS PPN	C. Kirby J. Sweeney P. Liddy

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Community & Citizenship	Citizen Focus	1.4	Public Mapping and Data Collection Using facilities such as the FabLab or Community Centres a series of mapathons will be organised each year to engage the local community to further develop open mapping datasets using Open Street Map	-	-	x	x	Number of mapathons Number of datasets	FabLab LCCC – DS LCCC – SD LCCC – ED	J. Burron M. Power P. Liddy R. Webb
Urban Places & Spaces	Citizen Focus	1.5	City & Town Engage Program A program of community engagement started in 2017 to explore ways to make the city more liveable in the design of new public realm projects and initiatives supported by a digital platform.	-	x	x	x	6 annual meetings	LCCC – ED LCCC – DS LCCC – CM	R. Webb J. Sweeney L. Ryan
Community & Citizenship	Citizen Focus	1.6	Citizen Open Innovation Lab A city centre space in the Georgian Innovation District, where citizens, students, volunteers can co-design and co-create solutions for better places, spaces and communities, supported by a digital platform.	-	-	x	x	Development of Lab Space & Platform Number of sessions	LCCC – ED LCCC – DS LCCC – BIU	R. Webb J. Sweeney E. O'Connor
Community & Citizenship	Citizen Focus	1.7	Council Podcasts A project that will see council meetings recorded and presented online for download or as podcasts. The project aims to enhance transparency and community participation in local issues	-	x	x	-	Number of podcasts Number of users	LCCC – CoS LCCC – DS LCCC – DD	C. O'Connor J. Sweeney M. McEvoy
Environmental Practices	Effective Use of Data	1.8	Invasive Species App A mobile app that enables communities to report locations where invasive species of plants have taken over land. The locations are then presented as open data in the Insight Limerick Service (see below)	x	x	x	-	Number of users Number of submissions	LCCC – PD LCCC – DS	A. Goggin J. Sweeney M. Healy
Environmental Practices	Stakeholder Engagement & Citizen Focus	1.9	Sustainable Energy Communities A community program in which everyone works together to develop a sustainable energy system. These 'living laboratories' create a culture of innovation and facilitate the emergence of new	-	x	x	x	Number of initiatives	Limerick Clare Energy Agency	P. Stephens

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			sustainable energy technologies and practices that deliver 'energy smart' towns and cities.							
Community & Citizenship	Citizen Focus	1.10	Students Engagement Involve/Engage with local schools and transition year students to feed into projects for the region. Continue the development of digital champions	-	-	x	x	Number of champions	MIC LIT	M. Liston J. O'Connell
Community & Citizenship	Citizen Focus	1.11	Citizen Digital Culture FabLab to host a year long programme on digital culture to help developing critical thinking beyond simply technical competency on digital matters	-	-	x	x	Number of events hosted Number of participants	FabLab Limerick LCCC – DS	J. Burron M. Bilauca
2.Information & Marketing										
Community & Citizenship	Stakeholder Engagement & Citizen Focus	2.1	Limerick.ie A integrated digital experience platform that enables information sharing for all citizens, locals and businesses. It integrates over 15 websites including dedicated local towns websites. It is the digital marketing platform for promoting Limerick.	x	x	x	x	Number of users	LCCC – CM LCCC – DS	L. Ryan O. O'Connor J. Sweeney
Community & Citizenship	Stakeholder Engagement & Citizen Focus	2.2	Limerick.ie App A mobile app that enhances the digital citizen experience of Limerick by enabling visitors, locals and business to find out what Limerick has to offer and to provide personalised services for booking events, make payments, etc.	-	-	x	x	Number of users Number of services	LCCC – CM LCCC – DS	L. Ryan O. O'Connor J. Sweeney
Economy & Innovation	Stakeholder Engagement & Citizen Focus	2.3	Limerick.ie Economic Report A report that include's economic performance of Limerick City & County in the context of the Mid-West region.	-	x	x	x	Number of issues	LCCC – CM	L. Ryan
Economy & Innovation	Stakeholder Engagement & Citizen Focus	2.4	DIGITAL.Limerick.ie A website to present and rack progress on the Limerick Digital Strategy	-	x	x	-	Number of users	LCCC – DS Limerick DLN	J. Sweeney M. Bilauca

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Economy & Innovation	Stakeholder Engagement & Citizen Focus	2.5	SMART.Limerick.ie A catalogue of Smart City and Region initiatives that enables more opportunities for collaboration between agencies, private and voluntary sector	-	x	x	x	Number of users	Limerick DLN LCCC - DCF	M. Bilauca J. Guiney
Economy & Innovation	Levels of Smartness (Leisure & Recreation)	2.6	FILM.Limerick.ie A project developed by Innovate Limerick specifically geared towards the film, television, moving image art and online video industries, in Limerick and the Mid-West region.	x	x	-	-	Number of users	Innovate Limerick	M. Cantwell
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	2.7	Past Perfect: Future Tense – LCGA Digitalisation GALLERY.Limerick.ie Digitalisation of the Collection –LCGA. Supported by the Creative Ireland initiative, Limerick City Gallery of Art will run a pilot project to digitise part of its permanent collection of art in advance of the 80th anniversary of the inaugural exhibition. Ten community groups will be invited to join a ten week programme to enhance and enable creativity in Limerick by bringing together technology, arts and heritage. This pilot project will form the foundation for further developments related to LCGA's permanent collection. Digitalisation of the collection will make it accessible to a much wider audience and will be accompanied by a stimulating programme of engagement activities.	-	x	x	-	Number of users No bookings	LCGA LCCC - Arts LCCC - DS	U. McCarthy S. Deegan J. Sweeney
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	2.8	HISTORY.Limerick.ie A website that brings together information from the Limerick Museum, Archives and Local Studies	-	-	x	x	Number of users	LCCC – Arts LCCC - DS	S. Deegan J. Sweeney
Community & Citizenship	Stakeholder Engagement & Citizen Focus	2.9	AgeFriendly.Limerick.ie A website that supports the Limerick Age Friendly program	-	x	x	x	Number of users	LCCC – CM LCCC – Age Friendly LCCC - DS	L. Ryan A. Rizzo J. Sweeney

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Community & Citizenship	Stakeholder Engagement & Citizen Focus	2.10	Age Friendly Magazine A magazine generated from the content on Limerick.ie, ready for print by local communities in order to bring information to isolated communities and older people. To be distributed through the local post office	-	-	x	x	Annual Number of issues	LCCC – CM LCCC – Age Friendly An Post	L. Ryan A. Rizzo
Community & Citizenship	Stakeholder Engagement & Citizen Focus	2.11	Community Websites Support Tier 2, 3 & 4 towns and communities with the development of dedicated web portals and content that promotes everything that happens in each locality.	-	x	x	x	25 Local Community websites integrated in Limerick.ie	LCCC Ballyhoura Development West Limerick Resources	P. Liddy
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	2.12	Limerick Film Festivals Platform Connect 6 film festivals taking place in Limerick, and provide an increased level of integration to improve digital experience. Include a dashboard for communications, tourism, training and engagement	-	-	x	x	Information about the 6 festivals in one place	Fresh Film Festival	D. Burns
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	2.13	Smart Sporting Limerick Develop partnership programs for smarter sporting Limerick. Develop social media, increase digital involvement in sports in Limerick for all supporters of any Limerick team	-	x	x	x	Number of users	LEDP Innovate Limerick	G. Lee M. Cantwell
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	2.14	Shannon Fisherman Archive Limerick City and County Council Archives and Mary Immaculate College have committed to a major oral history project to capture and index the memories of the fishermen and other linked trades. Once a major industry for many communities living on the banks of the Shannon, the fishermen and reed cutters' traditional way of life is now reduced to a small number. This project will deliver a digital sound archive as an essential first step in preservation of this story. To enhance and communicate this project to a wide audience it is proposed to commission a short film and a series of photographs documenting this vulnerable yet very	-	x	-	-	Number of audio recordings	LCCC – Arts MIC	S. Deegan

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			valuable intangible aspect of Limerick's heritage - the story of county Limerick's relationship with the river.							
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	2.15	Limerick Film Archive The Limerick Film Archive was created to locate and acquire film, video and cinema material of Irish interest, with particular emphasis on items relating to the mid-west region. Since its inception, the archive has been successful in acquiring over 100 film titles, over 800 hours of video material and a large file on local and national cinemas. The archive also has the largest collection of data and stills on Irish film players in Ireland. The collection promises some rare sights of the city and county such as old street scenes, parades, sports items, important events (Shannon Scheme at Ardnacrusha) and Shannon Airport in days gone by. Creative Ireland funding will help leverage other sources of funding to begin the digitisation of this important collection.							
Culture & Entertainment	Levels of Smartness (Leisure & Recreation)	2.16	HearSay Audio Arts Festival The HearSay Audio Arts Festival is a celebration of creative audio in all its forms, including radio features, film sound, sound art, theatre sound, music and audio fiction. The support provided through Creative Ireland Programme will enable the growth of the festival and build its capacity to deliver high quality creative experiences to communities living in County Limerick and visitors from beyond.						Kilfinane Communities LCCC - Arts	Residents of Kilfinane and surrounding areas Professionals working with sound. S. Deegan
3. Service Integration										
Community & Citizenship	Stakeholder Engagement & Citizen Focus	3.1	MY Limerick Provide a secure account that can be used by citizens, businesses and visitors to discover digital	x	x	-	-	No users registered	LCCC – CM LCCC – DS Limerick DLN	L. Ryan J. Sweeney M. Bilauca

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			content about Limerick and also to transact with the Council initially, and with other organisations in time in a single integrated platform							
Culture & Entertainment	Stakeholder Engagement & Citizen Focus	3.2	MY Limerick.ie – Favourite Amenities Enable users to define collections of favourite attractions and promote these to a wider global audience through social media	-	x	-	-	Number of favourites	LCCC - CM LCCC - DS	O. 'Connor J. Sweeney
Economy & Innovation	Stakeholder Engagement & Citizen Focus	3.3	MY Limerick.ie – Inspire Me Present Limerick attractions, events, articles based on the user preference selected as favourite content	-	x	-	-	Number of users LCCC - DS	LCCC - DS	J. Sweeney
Community & Citizenship	Stakeholder Engagement & Citizen Focus	3.4	MY Limerick.ie – Cases A project that aims to enable local citizens to submit and track requests for service representations for council services	-	x	-	-	Number of cases	LCCC – DS LCCC – CS LCCC - BIU	J. Sweeney T. Daly E. O'Connor
Economy & Innovation	Stakeholder Engagement & Citizen Focus	3.5	MY Limerick.ie – Payments Provide the ability to pay online for Council Services initially. It is envisaged that in time the platform will allow its users to pay for services provided by other organisations.	-	x	x	x	Number of transactions 80% of council services	LCCC – DS LCCC – CS LCCC – BIU LCCC – FN DLN	F. Grace T. Daly E. O'Connor J. Leahy M. Bilauca
Economy & Innovation	Stakeholder Engagement & Citizen Focus	3.6	MY Limerick.ie – Licences & Permits Enable locals and businesses to apply online for licences, certificates, permits, registrations and authorisations including the ability to pay online and submit documentation	-	x	x	x	80% of licences	LCCC – DS LCCC – CS LCCC – BIU LCCC - PLE	F. Grace T. Daly E. O'Connor G. Doherty
Economy & Innovation	Stakeholder Engagement & Citizen Focus	3.7	MY Limerick.ie – Grants Enable locals and businesses to apply online for grants and submit documentation	-	-	x	x	80% of grants	LCCC - CSS LCCC - BIU LCCC – CS LCCC – DS	P. Liddy E. O'Connor T. Daly F. Grace
Community & Citizenship	Stakeholder Engagement & Citizen Focus	3.8	MY Limerick.ie – Ping me (Notifications) Enable users to manage when they want to be notified by email / SMS of significant events occurring in their area, e.g. on new infrastructure	-	-	x	x	Number of personal notifications	LCCC - DCF LCCC – DS LCCC – CS LCCC – BIU	M. Bilauca F. Grace T. Daly E. O'Connor

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			developments, community events, public consultation, meetings, planning applications, etc.							
Community & Citizenship	Stakeholder Engagement & Citizen Focus	3.9	MY Limerick.ie – My Post Box Enable users to receive and submit any documentation for Council services in electronic format	-	-	-	x	Number of users	LCCC – DCF LCCC – DS LCCC – CS LCCC – BIU	M. Bilauca F. Grace T. Daly E. O'Connor
Community & Citizenship	Stakeholder Engagement & Citizen Focus	3.10	Integration of National Systems As digital services are delivered at both national and also at local level the use of common Digital Ids (My GovID, Revenue, etc.) facilitates an enhanced digital experience for citizens.	-	-	x	x	Number of users with integrated IDs	LCCC – DS LCCC – CS LCCC – BIU	J. Sweeney T. Daly E. O'Connor
Movement & Transport	Level of Smartness (Smart Transport)	3.11	Smart Parking Integration of Limerick Parking App in a Limerick app in order to develop an enhanced digital experience for visitors and locals. Use Smart technologies to facilitate better on street parking	-	-	x	x	Number of users	LCCC – PD LCCC – DS LCCC – CM	V. Murray M. Bilauca L. Ryan
			4. Infrastructure							
Economy & Innovation	Integrated ICT Infrastructure	4.1	Municipal Data Network A fibre network developed by the Council that acts as a high-speed high-capacity communication backbone between various districts in Limerick City. It will connect Council Offices, Traffic Controllers, Variable Messaging Systems, Public Displays, Public WiFi access points, CCTV, and other IoT Devices.	x	x	x	x	Double the length of fibre Double the number of applications	LCCC – ICT LCCC – PD LCCC – DD	J. Dore V. Murray J. Delaney
Economy & Innovation	Integrated ICT Infrastructure	4.2	Public WiFi Deploy Public WiFi Access points in Limerick City and Tier 2, Tier 3 and Tier 4 towns in Public Buildings, Parks, Town Centres and other public spaces. This infrastructure is important to attract tourists, investors and also a talented workforce to	-	x	x	-	40 Access Points, in 17 town centres	LCCC – ICT LCCC – PD LCCC – DD	J. Dore V. Murray J. Delaney

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			Limerick							
Community & Citizenship	Levels of Smartness (Smart ICT)	4.3	Smart CCTV Pilot Deploy a Smart CCTV platform that can connect in an initial pilot project 40 Smart CCTV cameras from 14 towns. The platform must be able to connect all CCTV cameras and provide access to council departments for Traffic Management, Community support services, emergency response, etc.	-	x	x	-	40 Smart CCTV in 14 towns	LCCC – DS LCCC – CSS LCCC – IT An Garda Siochana	M. Bilauca P. Liddy J. Dore D. Sheahan D. O'Connor
Economy & Innovation	Integrated ICT Infrastructure	4.4	National Broadband Plan roll-out Support and enable the effective roll-out of the National Broadband Plan which will deliver high-speed broadband to all premises in Limerick City & County	x	x	x	x	Number of premises connected (22,349 in the intervention area)	LCCC – DS DoAHRA	M. Bilauca
Environmental Practices	Levels of Smartness (Smart ICT)	4.5	Noise Sensors (IoT - Pilot) Deploy Noise sensors in Limerick City with the view of extending at a later stage in Tier 2 towns of Limerick County and other rural locations. Pilot on O'Connell street redevelopment project the noise levels before, during and after construction. Pilot in the Georgian Innovation District – Digital Quarter. Evaluate the use of lower costs sensors in order to capture data from	-	x	x	x	Number of sensors	LCCC – PD	A. Goggin
Environmental Practices	Levels of Smartness (Air Quality)	4.6	Air Quality Sensors (IoT Pilot) Deploy Air Quality sensors in Limerick City with the view of extending at a later stage in Tier 2 towns of Limerick County. Pilot on O'Connell street redevelopment project the noise levels before, during and after construction. Pilot in the Georgian Innovation District – Digital Quarter.	-	x	-	-	Number of sensors	LCCC – PD	A. Goggin
Environmental Practices	Levels of Smartness (Smart ICT)	4.7	Water Quality Sensors (IoT Pilot) Deploy Water Quality sensors in the main river basins in order to control the water quality, manage and respond faster to pollution incidents	-	-	x	x	Number of sensors	LCCC – PD	A. Goggin

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Environmental Practices	Levels of Smartness (Smart ICT)	4.8	Soil Quality Sensors (IoT Pilot) Evaluate the use of Soil Quality sensors in the areas surrounding the main river basins in order to control the water quality, manage and respond faster to pollution incidents	-	-	x	-	Number of sensors	LCCC – PD	A. Goggin
Economy & Innovation	Levels of Smartness (Smart ICT)	4.9	Footfall Counters (IoT Pilot) Pilot and deploy footfall counters in Limerick City centre to capture data needed for design and development of City Centre, tourism, forward-planning, etc. Expand the pilot to the Tier 2 towns in Limerick County.	x	x	x	-	Number of sensors Number of public datasets	LCCC – DS LCCC – ED LCCC – PD LCCC – DD	M. Bilauca M. Woods A. Goggin J. Delaney
Economy & Innovation	Levels of Smartness (Smart ICT)	4.10	Public Digital Displays Federated content from Limerick.ie will be presented on public displays in shop windows, public spaces and public buildings together with data and information from the Insight Limerick Service	-	-	x	x	Number of displays	LCCC – DD LCCC – PD LCCC – DS LCCC – CM	J. Delaney V. Murray M. Bilauca L. Ryan
Economy & Innovation	Levels of Smartness (Smart ICT)	4.11	Digital Quarter Limerick – IoT Demo Evaluate the use of energy consumption sensors, WAN networks and IoT gateways in the Digital Quarter in Limerick City. Expand the model in Digital Quarters in Tier 2 towns in Limerick County.	-	x	x	x	Number of sensors Number of public datasets	DELL LCCC – DS LCCC – ICT	J. McCann D. Griffin M. Bilauca J. Dore
Economy & Innovation	Levels of Smartness (Smart ICT)	4.12	Digital Quarters Network A network of City and towns districts where digital infrastructure and technology is deployed to support better citizen engagement, data, town operations management, and online services: Limerick City, Rathkeale, Newcastle West and Kilmallock.	-	-	x	x	4 Digital Quarters	LCCC – DS	M. Bilauca
Community & Citizenship	Levels of Smartness (Smart ICT)	4.13	Community Centres Footfall Counters (IoT Pilot) Pilot and deploy footfall counters in 6 Community Centres in Limerick City to capture data needed to better understand patterns of access to services and	-	-	x	x	6 Community Centres	LCCC – SD LCCC – DS	P. Liddy M. Healy

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			support applications for further funding. Expand the pilot to other community centres							
Culture & Entertainment	Levels of Smartness (Smart ICT)	4.14	360° Live Cameras This project will enable potential visitors and the Global Limerick Network to access live footage from Limerick. The Limerick diaspora want a closer engagement by way of communication about and from Limerick.	-	-	x		Number of cameras Number of users	LCCC – DD LCCC – ICT LCCC - GLN	J. Delaney J. Dore P. Daly
Community & Citizenship	Levels of Smartness (Smart ICT)	4.15	Citizen DIT Digital Infrastructure Fab Lab Limerick will contribute and support citizen centred DIT (Do-it-together) digital infrastructure projects in the city. Open-source city-scale wireless networks, crowd-sourced environmental monitoring, smart energy networks, citizens participation devices, etc.	-	x	x	x	Number of users Number of applications	FabLab	J. Burron
5.Data & Analytics										
Economy & Innovation	Effective Use of Data	5.1	Insight Limerick – Data as a Service (Council) A shared repository and services for data management, aggregation, mapping, visualisation, analytics and reports that is shared across Council departments and acts a a source of open data for the public Insight Limerick service	x	x	x	x	Number of datasets Number of data owners	LCCC LCCC – DCF	M. Healy M. Bilauca
Economy & Innovation	Effective Use of Data	5.2	Insight Limerick – Data as a Service (Public) A shared repository and services for data management, aggregation, mapping, open data, visualisation, analytics and reports that is available to the public to access and also to contribute.	-	x	x	x	Number of datasets Number of users	LCCC - DS	M. Healy
Community & Citizenship	Effective Use of Data	5.3	Insight Limerick – Personal Dashboard Enable users to activate a Personal Dashboard in Insight Limerick using My Limerick account to explore data and save personalised queries and	-	-	x	x	Number of users Number of	LCCC - DS	M. Healy

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			reports.					datasets		
Economy & Innovation	Effective Use of Data	5.4	Insight Limerick – Investor Dashboard Easy access to property, offices and land listings. Support for attracting companies interested in investing in the region.	-	-	x	x	Number of indicators Number of datasets	LCCC – DS	M. Healy
Community & Citizenship	Effective Use of Data	5.5	Insight Limerick – Community Safety Dashboard In a collaboration between An Garda Siochana and LCCC a Community Safety Dashboard will be developed as part of Insight Limerick to present data in relation to accidents, crimes reported, etc. in order to increase transparency and to support evidence-based decisions.	-	-	x	x	Number of datasets Number of indicators	An Garda Siochana LCCC – DS	D. Sheahan H. Costello M. Healy
Economy & Innovation	Effective Use of Data	5.6	ISAX Data Exchange - Limerick The Data Exchange aims to enable members access open source government data, link that data with data generated from 500 older people using wearable technologies and with sensors in their homes	-	x	x	x	Number of datasets available Number of users	ISAX LCCC - DS	A. Connolly S. Fraser M. Healy
Community & Citizenship	Effective Use of Data	5.7	Limerick Master Data Management MDM strategy would enable organisations in Limerick to derive better insights from data, accelerating the implementation of their strategies. If the data was collected and analysed, it would show more clearly how issues affect the community and allow stakeholders to replace assumptions with evidence-based insights.	-	x	x	-	Strategy Adopted Pilot completed with 2 organisations	Limerick DLN LCCC – DS	M. Bilauca J. Sweeney
Economy & Innovation	Effective Use of Data	5.8	Public Data Co-creation Using community events to develop a rich collection of data sets that will accelerate the delivery of strategies and services in Limerick, e.g. jobs register, business register, food register, startup register, etc.	-	x	x	x	Number of datasets created with public input	LCCC – DCF LCCC – DS LCCC – LEO	M. Bilauca M. Healy E. Ryan
Movement &	Effective Use	5.9	Transport Patterns for Rural Transport	-	x	x	-		West Limerick	S. Riordan

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Transport	of Data		A project that aims to develop and understanding on how rural limerick moves						Resources	D. Cleary
Movement & Transport	Effective Use of Data	5.10	Open Data for Autonomous Cars A project that aims to demonstrate how Limerick Open Data can be used in the development of software solutions for autonomous vehicles	-	x	x	-		General Motors LCCC	J. Gleeson M. Healy
6. Council Digital Transformation										
Community & Citizenship	Levels of Smartness (Smart ICT)	6.1	Council Enterprise Architecture Develop the ICT Architecture that enables more efficient services and data flow by integrating and connecting ICT systems and business processes and by minimizing duplication	-	x	x	x	Number of integrated processes	LCCC – DS LCCC – BIU	M. Bilauca E. O'Connor
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.2	Customer Services – Digital Services Develop a suite of digital services to support Council customers to transact online and through My Limerick and Limerick.ie (knowledge base, online forms, online surveys, etc.)	x	x	x	-	Number of transactions	LCCC – CS LCCC – DS	T. Daly F. Grace R. O'Driscoll
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.3	Customer Services – Digital Displays A suite of digital displays will be deployed in all Council buildings to facilitate communications with public and staff	x	x	-	-	Number of Displays	LCCC – CS LCCC – CM LCCC – DD	G. McNamara D. Tierney M. McEvoy
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.4	Staff Training Portal A portal where Council employees can find training material (text and video), video recordings of presentations on various topics that help them with their daily duties. Also materials for interview preparation or for promotion in various career paths.	x	x	x	-	Number of users Number of courses published	LCCC – HR LCCC – DS	A. Duke J. Guiney
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.5	Customer Relationship Management The introduction of a CRM supports standardisation of customer support services and the adoption of an integrated approach to service delivery across all	x	x	x	x	Number of standard processes integrated	LCCC – BIU LCCC – CS LCCC – DS	E. O'Connor T. Daly R. O'Driscoll

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			departments for 6 standard processes: licences, inspections, enforcements, prosecutions, grants and fines					Number of transactions		
Community & Citizenship	Levels of Smartness (Smart ICT)	6.6	Mobile Service Operations (CRM App) Enable field supervisors and outdoor staff in Service Operations and Maintenance Services to access and update data in the CRM using mobile devices in order to provide timely and accurate information required by customers and needed for better decisions and management	-	x	x	x	Number of users Number of transactions using Mobile App.	LCCC – DS LCCC – SO	R. O'Driscoll R. Lowth R. Gallagher G. O'Connorr M. O'Donovan
Community & Citizenship	Levels of Smartness (Smart ICT)	6.7	Smart Service Operations Enable Maintenance Services department to engage and transact with maintenance services suppliers (housing, roads, environmental, parks, etc.) using digital channels. Develop and implement a Supplier Portal.	-	-	x	x	Number of users Number of transactions	LCCC – DS LCCC – SO	R. O'Driscoll R. Lowth R. Gallagher G. O'Connorr M. O'Donovan
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.8	Electronic Records Management Implement Electronic Records Management to facilitate more effective access to records, remove paper based records and the costs associated with paper and to improve services provided to our customers	x	x	x	x	Number of departments using EDRMS	LCCC – CoS. LCCC – DS	C. O'Connor J. Hayes F. Grace
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.9	Program & Project Management Develop Project Management methodology, governance, processes and systems that will be adopted across all Council departments for co-ordinating projects internally and externally	-	x	x	x	Number of projects tracked across LCCC	LCCC – PMSG LCCC – BIU LCCC – DS	E. O'Connor E. O'Connor M. Bilauca
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.10	Customer Services – Contact Centre Enable customers to contact the Council's Customer Services thorough multiple channels (Phone, Email, Social Media, Web chat,, etc.)	-	x	x	-	Number of transactions by channel	LCCC – CS LCCC – ICT	T. Daly J. Dore
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.11	Customer Services – Video Services Enable citizens to contact customer services advisers using video. This service is particularly in	-	-	-	x	Number of video contacts with	LCCC – CS LCCC – ICT	T. Daly J. Dore

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			demand by older people living in isolated communities.					customers		
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.12	Telephony & Communications System Upgrade the telephony system in the Council to an integrated system	-	x	x	-	800 users in 34 locations	LCCC - ICT	J. Dore
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.13	ICT Infrastructure Upgrade Upgrades to hardware, SAN, networking, servers to enable increased demand from digital services (Electronic Records, CRM, CRM Mobile, customer portals, etc.)	x	x	x	-	Number of services upgraded	LCCC - ICT	J. Dore
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.14	Presentation & Video Conferencing Equipment Enable Council employees to participate in video conferences without the need to travel. Enable meetings thorough digital processes (electronic documentation, presentations, minutes of the meeting) to enhance efficiency and also to support Knowledge Management.	-	x	x	-	Number of meetings rooms with video conferencing facilities	LCCC - ICT	J. Dore
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.15	Remote Office Communications Upgrade Upgrade communications network to Council Offices to support a minimum 30 Mbs in a more reliable solution	-	x	x	-	Number of sites Downtime incidents	LCCC - ICT	J. Dore
Community & Citizenship	Stakeholder Engagement & Citizen Focus	6.16	Disaster Recovery Readiness Programme As all council operations rely on ICT to deliver services, it is essential that the Council has a good Disaster Recovery & Business Continuity plan and resources in place	x	x	x	x	Time to recover from a critical situation	LCCC - ICT	J. Dore
			7. Innovation - Cross Agency Services							
Economy &	Levels of	7.1	The Networks Forge (Smart Collaboration)	-	x	x	-	10 Active	LCCC – DS	J. Sweeney

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Innovation	Smartness (Smart ICT)		A collaboration platform for various groups and networks in Limerick to share data, documents, information, and for enhanced knowledge management in a co-ordinated way. Implemented for Limerick Digital Leaders Network, Digital Champions Forum and by all Broadband Officers in Ireland for the National Broadband Plan. It can be used for Global Leaders Network chapters, Regeneration communities, etc..					Networks	LCCC – DLN GLN	J. Guiney M. Bilauca P. Daly
Economy & Innovation	Leadership & Governance	7.2	URBACT Techtown - A digital City Future An EU funded project which looks collaboratively at what cities can do to support businesses to access the digital skills and innovations they need in order to start, grow and compete. TechTown partners will explore further the role and viability of digital, content creation and technology clusters and how advantages may be gained from major city or national initiatives to benefit job creation and growth in small and medium sized cities.	x	x	x	-	Number of meetings Number of recommendations	LCCC – ED LCCC – DS Urbact Local Group	R. Webb M. Bilauca
Environmental Practices	Levels of Smartness (Smart Buildings)	7.3	Horizon 2020 Develop a proposal for Horizon 2020 funding for Smarter Cities & Communities to demonstrate solutions at district scale integrating smart homes and buildings, smart grids (electricity, district heating, telecom, water, etc.), energy storage, electric vehicles and smart charging infrastructures as well as latest generation ICT platforms	x	x	-	-	Project Proposal submitted by due date for EU Horizon 2020	LCCC Smarter Travel LERO - DCU	M.O'Donoghue L. Sheahan R. Webb M. Bilauca V. Murray M. Helfert
Community & Citizenship	Stakeholder Engagement & Citizen Focus	7.4	Public Safety Enforcement Services A pilot project that aims to deliver in a collaboration between LCCC and An Garda Siochana an improved public safety control services by using mobile technologies	-	x	x	-	Number of users Number of transactions	An Garda Siochana / LCCC – DS LCCC – BIU	D. Sheahan H. Costello M. Bilauca E. O'Connor
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.5	Digitally Skills Academy Digital Skills Academy is being established in Limerick to take advantage of the opportunities	-	x	x	x	Number of attendees	Innovate Limerick	M. Cantwell

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			being created by the opening of Troy Studios Limerick. At least 20% of attendees must come from a regeneration area of Limerick					Number of companies		
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.6	Digital Retail Pilot Enable SMEs to transact online by providing in a pilot project the procurement platform where suppliers of retail digital solutions (omni-channel, online shopping, customer relationship, stock management, etc.) meet SMEs that seek solutions for online retail. This project will support the existing Trading Online Voucher Scheme and aims to combat the ROPO-effect (research offline, purchase online)	-	-	x	x	Number of users Number of transactions	LCCC – LEO LCCC – DS LERO – DCU	E. Ryan M. Bilauca M. Helfert
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.7	Digitally Skills Week The schedule of events at MIC aims to build digital skills and capacity for staff, students, primary schools and the general public through on-campus and online Technology Enhanced Learning (TEL) workshops, showcases, webinars and case studies	-	x	x	x	Number of attendees	MIC	M. Liston
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.8	Coder Dojo Limerick Mary Immaculate College students support the CoderDojo Limerick together with local champions who introduce kids to the world of Scratch	x	x	x	x	Number of attendees	MIC	M. Liston
Community & Citizenship	Stakeholder Engagement & Citizen Focus	7.9	Digital citizenship & Digital Inclusion A cross agency initiative to develop and deliver new digital skills programmes that address the digital skills needs of citizens most at risk of exclusion	-	x	x	x	Number of attendees	LCETB (FET Division) Paul Partnership Ballyhoura Development West Limerick Resources LCCC – DS Community Groups	P. Patton B. Ryan A. Cavanagh H. Fitzgerald P. Casey S. Riordan D. Cleary M. Bilauca

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.10	Innovation in Community Spaces Use community spaces in rural towns as innovation centres. Support digital community events in these locations (meet-ups, talks, presentations)	-	-	x	x	No of community events held	Ballyhoura Development West Limerick Resources	P. Casey S. Riordan D. Cleary
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.11	Local Government National Service Catalogue In order to facilitate better services for citizens and businesses across the local authorities in the region a key challenge is the definition of common services names, processes, application forms leading to an overall improved experience. A business case will be developed to standardise not only service names at local and regional level but also at national level.	x	x	-	-	Business case adopted by CCMA	LCCC – DS LCCC – SD	M. Bilauca C. Kirby
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.12	Ingenuity Ingenuity is a Start Your Own Business Programme for entrepreneurs aged 50+, led by Ireland Smart Ageing Exchange (ISAX) and sponsored by Bank of Ireland	x	x	x	x	20 new smart ageing and mature entrepreneur led start-ups	ISAX	A. Connolly
Community & Citizenship	Levels of Smartness (Smart Neighbourhoods)	7.13	Smart Ageing Housing Programme ISAX has formed two clusters in Smart Ageing Housing and Functional Foods – with 18 companies involved to-date.	-	x	x	x	?	ISAX	A. Connolly
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.14	ISAX Innovation Hub ISAX is creating a hub in Limerick and provide collocation spaces and supports to smart ageing start-ups and graduates of our business start-up programmes.	-	x	x	x	20 new smart ageing and mature entrepreneur led start-ups	ISAX	A. Connolly
Economy & Innovation	Stakeholder Engagement & Citizen Focus	7.15	Limerick Living Lab A collaboration between academic institutions, the council and SMEs in Limerick to enable students or unemployed to develop new skills and to support local entrepreneurs by developing new innovative	-	-	x	x	Number of solutions identified in the Living Lab	LERO LIT LCCC – ED LCCC – DS	B. O'Malley J. O'Connell R. Webb M. Bilauca

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			solutions to city challenges (green energy, traffic & parking, waste management, etc.) using a Small Business Innovation Research (SBIR) model.							
Community & Citizenship	Stakeholder Engagement & Citizen Focus	7.16	Technology Enhanced Learning Further develop links between LCETB and community-based centres to promote and support Technology Enhanced Learning (TEL) in community based settings.	-	x	x	x	Number of sessions Number of attendees	LCETB (FET Division) Paul Partnership Community Groups	P. Patton B. Ryan A. Cavanagh H. Fitzgerald
8. Optimised Governance										
Economy & Innovation	Leadership & Governance	8.1	Digital Limerick Framework 1.0 This framework provides the structure and guidance for all Limerick Digital Strategy stakeholders to engage in the development of the Digital City and the Smart Limerick City Region & Communities	x	-	-	-	Number of stakeholders consulted	LCCC – DS LCCC – DCF	M. Bilauca
Economy & Innovation	Leadership & Governance	8.2	Limerick Digital Strategy 1.0 The first release of this strategy will include the Digital Limerick Vision, Goals & Principles, and the first evaluation of Limerick’s Digital Maturity using an international benchmarking model. Also included is a draft roadmap developed in consultation with stakeholders and the Digital Limerick Network	-	x	-	-	Number of stakeholders consulted Strategy adopted by Council	LCCC – DS LCCC – DCF Limerick DLN	M. Bilauca
Economy & Innovation	Leadership & Governance	8.3	Limerick Digital Strategy 2.0 The second release of this strategy will evaluate progress to date and provide an updated road map			x		Number of stakeholders consulted	LCCC – DS LCCC – DCF Limerick DLN	M. Bilauca
Economy & Innovation	Leadership & Governance	8.4	Smart Limerick Strategy As Limerick reaches a new level of digital maturity following the implementation of the Digital Limerick roadmap it is envisaged that by 2019 the Digital Strategy will support the development of a Smart Limerick Strategy.				x	Number of stakeholders consulted Strategy adopted	LCCC – DS LCCC – DCF Limerick DLN	M. Bilauca

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Economy & Innovation	Leadership & Governance	8.5	IBM Smarter Cities Challenge A report by top experts at IBM has made fifteen recommendations which enable Limerick City and County Council to respond to the needs of older people through better use and management of shared information.	x	x	-	-	Number of recommendations implemented	LCCC – DS Age Friendly Limerick IBM Ireland	M. Bilauca A. Rizzo
Community & Citizenship	Leadership & Governance	8.6	.IE Geographical Place Names Policy A policy that enables local community companies, clubs, etc. to use a geographical .IE place name domain as a web site provided the web site is used to promote the interest of the general community, promote local tourism, community or club related activities and facilities and is of general benefit to the community in the geographical area of the domain name	-	x	x	-	Number of communities with a .IE web presence	LCCC – DS LCCC – SD	M. Bilauca P. Liddy
Economy & Innovation	Leadership & Governance	8.7	Digital Infrastructure Planning Policy In order to ensure that new developments in Limerick are supporting the vision of a digitally connected society the Council will update its planning policies. Any single commercial or housing development exceeding 4 units will be required to demonstrate how fibre enabled Internet is made available to these premises	-	x	x	-	Number of applications validated	LCCC – PLE LCCC – DS	S. Duclot M. Bilauca
Community & Citizenship	Leadership & Governance	8.9	Smart CCTV Policy A policy that sets the context and conditions for installation and use of Smart CCTV	-	x	-	-	Policy adopted by Council	LCCC - SD	P. Liddy
			9. Smart Limerick Networks							
Economy & Innovation	Stakeholder Engagement & Citizen Focus	9.1	Limerick Digital Leaders Network – DLN A network of key stakeholders from public, private, community & voluntary and private sectors that influence and lead the development of Digital City &	-	x	x	x	Number of shared initiatives, events &	Limerick DLN	M. Bilauca

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
			Smart Limerick					activities		
Community & Citizenship	Stakeholder Engagement & Citizen Focus	9.2	Council Digital Champions Forum (DCF) A network of key senior Council officials that influence and lead the development of Digital City & Smart Limerick	x	x	x	-	Number of shared initiatives, events & activities	LCCC - DCF	M. Bilauca
Economy & Innovation	Stakeholder Engagement & Citizen Focus	9.3	All Ireland Smart Cities Forum A cross border initiative that focuses on the advancement of smart city programmes across Ireland. The Forum, supported by Maynooth University, is made up of local government officials representing Cork, Dublin, Limerick, Galway, Waterford, Belfast and Derry. The first meeting of the forum took place in Limerick on 25 th of June 2015	x	x	x	x	Number of shared initiatives & activities Number of events	LCCC - DS	M. Bilauca
Economy & Innovation	Stakeholder Engagement & Citizen Focus	9.4	Open & Agile Smart Cities - OASC The Open & Agile Smart Cities initiative (OASC) is a city-driven, non-profit organisation with the overall objective to create a Smart City market. OASC was founded in January 2015 and came to life with the first wave of cities joining in March 2015. OASC continues to grow.	x	x	x	x	Number of international publications and events with Limerick presence	LCCC - DS	M. Bilauca
Economy & Innovation	Stakeholder Engagement & Citizen Focus	9.5	WBA - Connected City Advisory Board The Connected City Advisory Board (CCAB) develops, shares and promotes thought-leadership and practical framework for the social and economic development and sustainable operation of the Connected City ecosystem.	x	x	x	x	Number of international publications and events with Limerick presence	LCCC - DS	M. Bilauca
Economy & Innovation	Stakeholder Engagement & Citizen Focus	9.6	TM Forum Limerick City & County Council join TM Forum, the global industry association that drives collaboration and collective problem-solving to maximize the business success of communication and digital service providers and their ecosystem of suppliers.	x	x	x	x	Number of international publications and events with Limerick presence	LCCC - DCF	M. Bilauca
Economy &	Stakeholder	9.7	Association of Strategic Alliance Professionals	-	x	x	x	Number of	LCCC - DS	M. Bilauca

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
Innovation	Engagement & Citizen Focus		ASAP is the community of choice for alliance, collaboration, and partnering professionals because of the tools and resources, education and professional development, and the community for networking offered to its members.					international publications and events with Limerick presence		
Community & Citizenship	Stakeholder Engagement & Citizen Focus	9.8	Digital Inclusion Advisory Group Bring together key stakeholders to develop cross-agency approaches to digital inclusion which will <ul style="list-style-type: none"> Address inequalities in digital skills and technology usage and Promote the use of technology to address exclusion 	-	x	-		No of Meetings Meeting outputs	LCETB (FET Division) Paul Partnership Ballyhoura Development West Limerick Resources LCCC – DS Community Groups	P. Patton B. Ryan A. Cavanagh H. Fitzgerald P. Casey S. Riordan D. Cleary M. Bilauca
			10. Digital Edge – Research & Development							
Economy & Innovation	Stakeholder Engagement & Citizen Focus	10.1	Limerick Enterprise Architecture A research program developed by LCCC in collaboration with LERO to define the urban enterprise architecture that enables integration of urban services, processes, data and systems, removes duplication and facilitates data flow from sensors and systems in order to make better evidence-based decisions by council employees, management, politicians and the public	x	x	x	-	Number of projects that use LEA Number of integrated systems	LERO – DCU LCCC – DS	M. Helfert M. Healy
Community & Citizenship	Stakeholder Engagement & Citizen Focus	10.2	Connected Health Research project to increase the use of technology for delivering improved patient experience	-	x	x	x	?	LERO - UL	I. Richardson
Community & Citizenship	Stakeholder Engagement &	10.3	Smart Ageing Volunteers Platform Connect older age volunteers to opportunities in	-	x	x	x	?	LERO – UL ISAX	I. Richardson A. Connolly

Domain	Main Improved Capability (TM Forum)	AID	Action	2016	2017	2018	2019 - 2020	Metric	Organisation	Leader
	Citizen Focus		their communities by developing with IBM and ISAX an intelligent platform that match volunteers skills to needs							S. Fraser
Community & Citizenship	Stakeholder Engagement & Citizen Focus	10.4	Digital Inclusion Needs Study Commission research to identify key gaps and disparities in technology usage and digital skills needs in urban and rural communities in Limerick City and County	-	x	x	-	Research completed No of recommend.	LCETB (FET Division) Paul Partnership Ballyhoura Development West Limerick Resources LCCC – DS Community Groups	P. Patton B. Ryan A. Cavanagh H. Fitzgerald P. Casey S. Riordan D. Cleary M. Bilauca

6 Limerick Digital Leaders Network

This network, still in development, of key stakeholders from public, private, community & voluntary and private sectors contribute and lead the development of Digital City & Smart Limerick roadmap and initiatives.

The table below lists by Smart Limerick Domains, the Digital Leaders that contributed to the development of this document.

Domain	Organisation	Contact	Title
All	Limerick City & County Council	Dr. Mihai Bilauca	Head of Digital Strategy
Community & Citizenship	An Garda Siochana	David Sheahan	Chief Superintendent
Community & Citizenship	ISAX	Anne Connolly	Director
Community & Citizenship	ISAX	Siobhradh Fraser	Limerick Office
Community & Citizenship	Limerick and Clare Education and Training Board	Paul Patton	Director of Further Education & Training
Community & Citizenship	Limerick and Clare Education and Training Board	Brendan Ryan	Further Education & Training
Community & Citizenship	LERO – NUI Maynooth	Prof. Brian Donnellan	Vice President Maynooth University
Community & Citizenship	Limerick Enterprise Development Partnership	George Lee	Manager Community Initiatives and PC
Community & Citizenship	PAUL Partnership	Anne Kavanagh	CEO
Community & Citizenship	PPAN	Dr. Sean O’Riordan	Manager
Community & Citizenship	UL – CSIS	Prof. Ita Richardson	Associate Professor
Community & Citizenship	UL – CSIS	Prof. Tiziana Margaria	Head of Department
Community & Citizenship	UL – KBS	Yvonne Diggins	Special Projects Officer
Community & Citizenship	West Limerick Resources	Shay Riordan	Manager
Culture & Entertainment	Limerick Royal Project	Dave Burns	Director
Culture & Entertainment	Southern Advertising	Dave O’Hora	Director
Economy & Innovation	Ballyhoura Development	Padraig Casey	Economic Development Manager
Economy & Innovation	Innovate Limerick	Mike Cantwell	Head of Innovation

Domain	Organisation	Contact	Title
Economy & Innovation	LERO – NUI Maynooth	Dr. Niall Connolly	Research Fellow
Economy & Innovation	LIT	Gillian Barry	Head of Innovation & Enterprise
Economy & Innovation	Mary Immaculate College	Dr. David Moloney	Blended Learning Co-ordinator
Economy & Innovation	Mary Immaculate College	Dr. Maeve Liston	Director of Enterprise & Community Engagement
Economy & Innovation	Mid West Regional Skills	Joe Leddin	Councillor. Mid West Regional Skills Manager
Economy & Innovation	W2 Consulting	Mark O'Connell	Director
Environment Practices	Action Point	Ivan O'Connor	Head of IoT
Movement & Transport	Limerick City & County Council	Lise-Ann Sheahan	Limerick Smarter Travel Office
Urban Places & Spaces	Dell EMC	Dave Griffin	Director Limerick Site Programs
Urban Places & Spaces	General Motors	John Gleeson	Chair Mid-West Action Plan for Jobs
Urban Places & Spaces	LERO	Brendan O'Malley	General Manager
Urban Places & Spaces	Limerick City & County Council	Rosie Webb	Senior Architect
Urban Places & Spaces	LIT	Janice O'Connell	Head of IT Department
Urban Places & Spaces	Piercom	Adrian O'Sullivan	Digital innovation
Urban Places & Spaces	Supply Network Shannon	Mark O'Sullivan	Chairman

7 Digital Champions Forum

This network of senior Council staff support the development of the Digital City & Smart Limerick initiatives. The table below lists by Smart Limerick Domains, the digital champions that contributed to the development of this document.

Domain	Department	Champion
All	Digital Strategy	Fergal Grace
All	Digital Strategy	James Sweeney
All	Digital Strategy	Joe Guiney
All	Digital Strategy	Michael Healy
All	Digital Strategy	Michelle Power
All	Digital Strategy	Dr. Mihai Bilauca
All	Digital Strategy	Rob O'Driscoll
Community & Citizenship	Community Support Services	Patricia Liddy
Community & Citizenship	Customer Services	Triona Daly
Community & Citizenship	Human Resources	Aoife Duke
Community & Citizenship	Libraries	Damien Brady
Community & Citizenship	Marketing & Communications	Denis Tierney
Community & Citizenship	Social Development	Eileen Humphreys
Community & Citizenship	Social Development	Carmel Kirby
Culture & Entertainment	Arts & Culture	Sheila Deegan
Culture & Entertainment	Social Development	Seamus Hanrahan
Economy & Innovation	Business Improvement Unit	Elaine O'Connor
Economy & Innovation	Economic Development	Brian Kennedy
Economy & Innovation	Economic Development	Jillian Robinson
Economy & Innovation	Finance	Kieran Dore
Economy & Innovation	Finance	Pat Murnane
Economy & Innovation	ICT	Jim Dore
Economy & Innovation	Innovate Limerick	Mike Cantwell
Economy & Innovation	Limerick 2030	Kieran Reeves
Economy & Innovation	Local Enterprise Office	Eamon Ryan
Economy & Innovation	Marketing & Communications	Laura Ryan
Environmental Practices	Physical Development	Anne Goggin
Movement & Transport	Physical Development	Carmel Lynch
Movement & Transport	Physical Development	Miriam O'Donoghue
Urban Places & Spaces	Design Delivery & Property Services	Joe Delaney
Urban Places & Spaces	Economic Development	Rosie Webb
Urban Places & Spaces	Economic Development	Maria Woods
Urban Places & Spaces	Physical Development	Vincent Murray

Table 7.1: Digital Champions Forum