Digital Mayo Strategy Report

Mayo Enterprise & Investment Unit

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Oifig Fiontair Áitiúil
Local Enterprise Office

PMG CONSULT

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1. INTRODUCTION

The Digital Mayo study was commissioned by the Enterprise & Investment Unit (EIU) of Mayo County Council in October 2014 with a view to developing a strategy and road map for supporting and developing the digital sector in Mayo over the coming five years. PMG Consult & Julian Ellison (InTime Media) were appointed to conduct this assignment.

While Mayo (EIU) have instigated this study and will facilitate its implementation, it is critical that all stakeholders play their parts, individually and collaboratively, in delivering a more dynamic digital economy and society in Mayo. In particular, Mayo (EIU) is keen to facilitate the emergence of a private sector led cluster network to provide knowledge transfer and connections for digital enterprises in Mayo. Also education and learning partners, and particularly GMIT, must be at the forefront in a new era of digital skills and innovation support across the county. Community groups and enterprises can also drive the digital agenda in supporting their members and clients to participate in digital skills development and projects to enhance ICT in their communities.

Since it inception in 2012 the Enterprise & Investment Unit has set out to identify and understand the future economic drivers in Mayo. In 2013 the Emerging Economic Sectors study provided an analysis and profile of future sector opportunities for Mayo to target for support and development. These included Tourism (Adventure/Leisure/Heritage & Eco); Renewable Energy; Food & Agri Diversification and ICT & Digital enterpprice. Each of these sectors now has a strategic plan in place for their development with Digital Mayo acting as the plan for the development of the ICT & Digital sector.

Digital Mayo is a strategy and work programme that will drive the digital agenda in Mayo from an enterprise, community and institutional perspective up to 2020. The strategy encompasses a wide range of measures that will support and nurture new digital businesses, innovation and technology application in enterprise, investment in ICT infrastructure and digital skills in the community and the workforce. Digital Mayo will also utilise the county's natural assets and quality of life to promote Mayo as a location for investment by technology enterprises specifically in activities around the Natural Resources Economy (NRE). A key platform for raising awareness and profile of Mayo's benefits to entrepreneurs, FDI and the investment community will be delivered through and exciting programme of conferencing and technology events hosted in Mayo.

Digital Mayo contains four strategic strands to guide future development activity:

1. Promoting an inclusive and progressive Digital Society in Mayo

2. Nurturing digital talent and supporting technology based start-up's

3. Investment in digital Infrastructure

4. Selling Mayo as a centre for innovation in the Natural Resources Economy (NRE) – *tech solutions for non tech sector*

2. BACKGROUND & CONTEXT FOR DIGITAL MAYO

The Brief

In summary the brief for this project was to establish a sector based strategy and implementation plan for the digital and ICT sector in Mayo. In doing so consideration needs to be given to all supports and inputs from the human capital and skills dimension to supports to digital entrepreneurs. In particular attention and consideration has been given to access to incubation and business space and investment funding. Also the creation of a self motivated sector network with soft supports and knowledge transfer for its members is seen as a critical outcome to emerge from the Digital Mayo strategy. In essence the brief seeks to establish a sustainable and growing digital ecosystem in Mayo.

Key Features of a Digital Ecosystem

A digital or technology ecosystem is an environment that will successfully and repetitively create new firms and jobs and attract investment and knowledge towards the development of the sector. Tech / Digital Ecosystems can exist in a defined geography or across different territories but bound by their output or product or service areas. However, they are best identified in city regions that possess dynamic urban factors – infrastructure, skills, services, entertainment, cultural assets, good housing stock etc. They rarely flourish without all these factors.

Some of the key Ecosystem supports will include:

- Specialist advisors and market intelligence,
- Patenting and protecting intellectual property,
- Providing seed finance and investments,
- Support with office location, incubation or laboratory space,
- Recruitment and skills development support,
- Offering networking, connections and collaboration opportunities,
- Connecting entrepreneurs to advanced funding such as angel funds or venture capital firms.

The Digital Society

Over the past decade the digital and technology sector has become a core feature of our lives in every conceivable way from our personal belongings to our consumption, our communication, our interests and influences. Digital brands have come to serve as bywords for our times like **Google, Facebook, Twitter, Skype, Flickr, Dropbox** and so on.

This *digital society* revolution has come at a rapid pace and whilst, at first, new technologies or digital services are often unproven, within a short period they become the new norm. For example, **Paypal** has transformed the way we trade and pay for stuff online and **iTunes** has disrupted the entire system of music publishing and distribution that was established for almost a century, and in doing so the way we source and enjoy our music. Platforms such as **Netflix** is now doing the same in the TV and Film distribution sector. Digital content has replaced or reformed every aspect of media and entertainment distribution and consumption.

Digital infrastructure has largely lagged behind innovations in new technology in both hardware and software. Devices such as smartphones and **iPads** ™ are delivering instant personalised content via digital platforms and services such as **instagram** and **youtube** often powered by user

content. Other valuable online services such as online banking or e-commerce providers are dependent on fast reliable broadband and mobile telecoms infrastructure such as fibre and 4G to deliver their services to as wide a market or audience as possible.

Digital and ICT skills have become a critical element in navigating the new digital sphere and conversing and interacting online. The rate of change in digital and technology skills and digital literacy has been fundamental to ensuring innovation and participation in a digital world but again there is a time lag in ICT skills catching up with new technology. The next generation of digital skills is evidenced by pre school children's ability to engage with technology. The pervasive nature of digital and technology influences in our personal and working lives means that only those with proficient and progressive digital skills and knowledge will be able to fully participate in the future digital society.

The National Digital Strategy (NDS) 2013 seeks to shape our engagement with ICT and digital content through progressive skills development both for citizens and businesses and to extend our participation with, and access to digital technology, through the internet.

Doing more with Digital National Digital Strategy for Ireland: Phase 1

- Cross–Government measures
- Trading online and Entrepreneurship
- Citizen Engagement
- Education & Learning

Some of the key challenges that lie ahead for the digital agenda will be full citizen (and business) engagement with the internet, ICT skills progression, access to services and infrastructure and cyber security.

The Digital Economy

Growth in the technology and digital sectors has outstripped the economy on an unprecedented scale and continues to gather pace, so much so that developing a dynamic digital economy is now the primary driver for economic growth. The Internet has truly come of age after two decades from whence the marketplace first took notice.

Today the internet is the heart of the global economy, channeling interactions for nearly 40 percent of the world's population. ***It took the internet 12 years to gather its first billion users and a third of that time to amass its third billion.*** Smart phone technology together with emerging markets adopting their use is opening more avenues to internet adoption. Broadband subscriptions on mobile phones, now 34 percent of global mobile phone subscriptions, have tripled since 2008.

The next wave of the expansion of the digital economy will be characterised by us as e-consumers rather than just internet browsers. Businesses must adopt best practice in their use of and engagement with the internet in order to survive but if they do there is the potential for them to not only retain existing customers but win new ones and break into new markets and become more productive and profitable in the process.

Investor interest is driving activity and innovation in digital marketplaces. In anticipation of universal mobile Internet access, investors are pouring money into e-commerce ecosystems and

digital marketplaces in the emerging world. In just one week in July 2014, India saw investments of $3 billion flow into competing digital marketplaces Amazon and Flipkart. The Chinese e-commerce giant Alibaba's IPO in September 2014 ranks among the largest public offerings on record and Rocket Internet, the German startup conglomerate aiming to be the Amazon of the developing world, has already been valued at $4.3 billion.

Explaining the Digital & Technology Sector

Taking an employee rather than an enterprise focus will provide a truer analysis of the tech / digital ecosystem of any given area. This analysis will include all technology or digital occupations rather than just operations of enterprises engaged strictly or predominantly in technology:

- ✔ Tech jobs in tech industries
- ✔ Non-tech jobs in tech industries
- ✔ Tech jobs in non-tech industries

Illustrative Case Study: NYC

New York City hosts 291,000 tech jobs on a 20%/28%/52% split across the occupation classification above. This tech/digital employment ecosystem comprises 7% of the total workforce of the NYC region (same as employment in the retail sector).

Average wage rates in the tech occupation spectrum is $40 per hour which is 50% higher than the average in the wider economy. Pay measured against educational attainment is 30% to 45% higher across those employed in tech jobs than the general economy. Employment growth was 33% higher in the decade between 2003 and 2013 than the economy as a whole.

If we take a narrower focus on strictly digital firms, or firms primarily engaged in digital activities, we can identify some prominent sub-sector categories of activities. Among the most common and identifiable are:

- Internet services
- Mobile applications
- Software
- Electronics
- Cloud computing
- ICT & Telecoms
- IT consultancy
- Digital media & marketing
- Data storage and management

3. INTEGRATING DIGITAL MAYO

Emerging Economic Sectors in Mayo

Digital Mayo is one of a number of individual sector strategies that have resulted from the research into Emerging Economic Sectors in Mayo which was conducted in 2013 / 14. The Emerging Sectors work provides for a long-term view of where Mayo needs to position itself for future investment and development priorities and opportunities. In essence the Emerging Economic Sectors Study set a long-term framework for the sustainable economic development of County Mayo. Within this context the Emerging Economic Sectors Study also casts Mayo's future into a wider regional, national and EU strategic policy and development framework.

The implementation plans arising from that study, including the Tourism Strategy, the Food Strategy and the Renewable Energy sector will need to be cross referenced and intertwined with the Digital Mayo strategy and implementation plan. It is particularly important that Digital Mayo adds value to these other priority sectors as a core strand of Digital Mayo is focused on innovation in the Natural Resources Economy.

Alongside these sector specific frameworks Digital Mayo will feed into the new Investment Strategy for the county and visa versa. Also the anticipated recommendations and projects that will emerge from the current Creative Hubs study will be integrated with Digital Mayo and the other sector plan where synergy occurs. Digital Mayo will combine and integrate with all of these strategic plans and the other specific promotion and support activities in the new Mayo Enterprise & Investment Unit of Mayo County Council.

Mayo.ie / Brand Mayo

With the establishment of the Mayo Enterprise & Investment Unit in 2012 there has been a drive towards building a strong and unique brand that is true to Mayo and its assets – economically, culturally, socially, geographically and environmentally. This new emerging brand for Mayo is helping to provide direction and tone for the development of the specific strategies mentioned previously and also for the strategic marketing and promotion of Mayo.

One key aspect of the new Mayo brand is the diaspora theme and a sense of reaching out and connecting with the Mayo community worldwide. This relates to Mayo's social, economic and cultural development in a forward looking fashion rather than a dwelling on the past and the old association of Mayo with emigration and economic decline. This welcoming and open attitude will also form a first principle for Digital Mayo. Digital Mayo is also using the Mayo brand and its digital manifestation www.mayo.ie as a beacon for setting the right tone and messages when interacting with digital entrepreneurs and investors and other relevant stakeholders outside the county. In this regard Digital Mayo seeks to be open and engaging, progressive, innovative and fun, a place where people can have a quality of life not affordable or accessible elsewhere and not be at a disadvantage in their professional life by locating in Mayo.

4. STRATEGIC ANALYSIS

Looking at the evidence - where does Ireland stand in the global digital economy?

"The Digital Economy contributes 4.4pc to Ireland's GDP (€7.1bn) and this is growing at 16 per cent per annum (2013) a rate of more than 10 times the rate of growth of the economy as a whole. Digital enterprises support almost 95,000 jobs directly and indirectly in the Irish economy"

Digital and ICT sectors have been heralded as potential saviours for the Irish economy. But, despite our attractiveness to global brands, challenges persist for our digital sector. These must be addressed if digital is to play a truly meaningful role in the country's future economic recovery.

One of the critical challenges is the difficulty in finding employees with the requisite digital skills and experience to fulfill ITC roles. Unlike other sectors of the economy, there are jobs available in digital sectors. The problem is there aren't sufficient numbers of skilled graduates to fill them. It has been estimated that at any given time there are upwards of 2,000 'difficult to fill' vacancies in ITC sectors in Ireland.

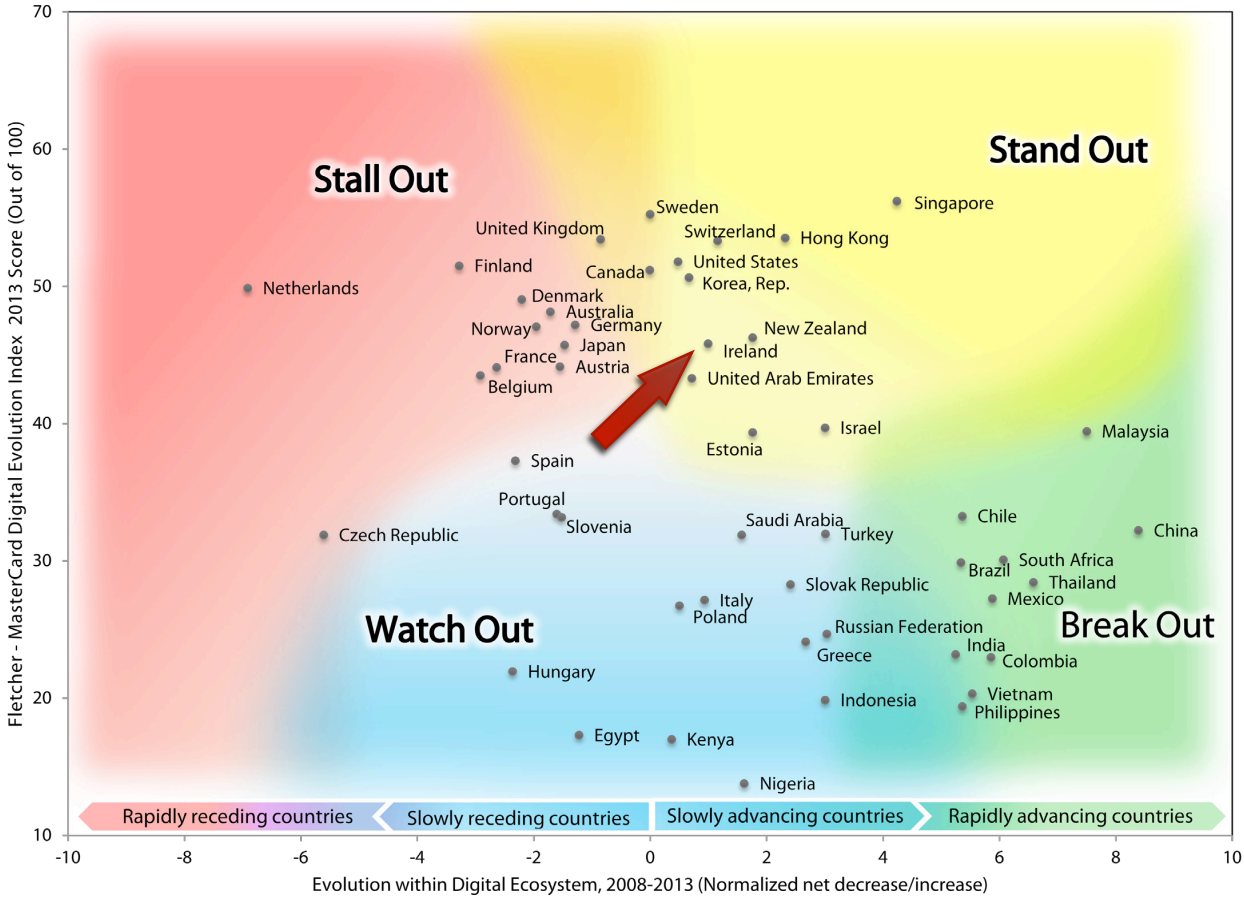
Morgan McKinley's Global Technology Trend Report 2013 found there is a lack of qualified local talent in Ireland, and digital enterprises are being encouraged to look elsewhere to recruit. The Government has gone some way towards addressing this challenge, for example by relaxing visa restrictions for start-up entrepreneurs who come from outside the State. Another way to address skills shortages is the promotion of greater linkages between third-level institutions and industry – to increase students' practical skills, resulting in a pool of ready-to-work, skilled graduates for digital employers to choose from.

Another challenge facing our industry is to ensure indigenous tech companies are facilitated to grow to the extent that they become major world players. To ensure Ireland has a true claim to being a global leader in tech, we need to focus on digital companies that are not only based here, but born and developed here. While we have had some success in fostering digital companies that have achieved international success many indigenous tech companies struggle to grow to a size that truly places them on the world stage.

The Digital Evolution Index (DEI) was created by The Fletcher School, in collaboration with MasterCard Worldwide and DataCash. It analyses the key underlying drivers and barriers that govern a country's evolution into a digital economy including Demand, Supply, Institutional Environment and Innovation. A longitudinal analysis of these four drivers during the years 2008 to 2013 reveals both the current state of a country's digital economy, as well as changes over time. Combining these two measures allows for each country to be assigned to one of four trajectory zones:

- **Stand Out** countries have shown high levels of digital development in the past and continue to remain on an upward trajectory.
- **Stall Out** countries have achieved a high level of evolution in the past but are losing momentum and risk falling behind.

- **Break Out** countries have the potential to develop strong digital economies. Though their overall score is still low, they are moving upward and are poised to become Stand Out countries in the future.
- **Watch Out** countries face significant opportunities and challenges, with low scores on both current level and upward motion of their DEI. Some may be able to overcome limitations with clever innovations and stopgap measures, while others seem to be stuck.



The DEI shows Ireland in the 'Stand Out' zone but at the lower end of the scoring scale. It also contains Ireland in the 'slowly advancing countries' category. While this is in keeping with many other EU and OECD countries it is also in danger of being over taken by other more dynamic and progressive countries that will be competing for the same global FDI opportunities in the tech and digital sectors.

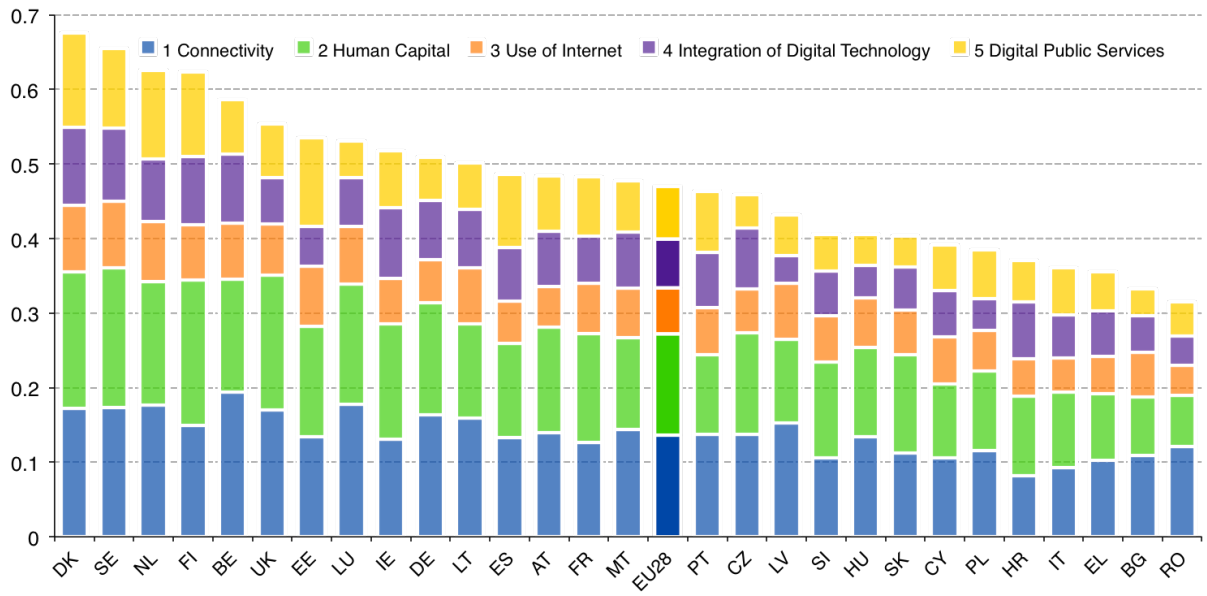
The Digital Economy and Society Index (DESI)

(DESI) is a composite index produced by the EU that summarises relevant indicators on Europe's digital performance and tracks the evolution of EU member states in terms of their digital competitiveness. It includes five main indicators or areas of focus:

- **Connectivity** measures the deployment of broadband infrastructure and its quality. Access to fast broadband-enabled services is a necessary condition for competitiveness.

- **Human Capital** measures the skills needed to take advantage of the possibilities offered by a digital society. Such skills go from basic user skills that enable individuals to interact online and consume digital goods and services, to advanced skills that empower the workforce to take advantage of technology for enhanced productivity and economic growth.
- **Use of Internet** accounts for the variety of activities performed by citizens already online. Such activities range from consumption of online content (videos, music, games, etc.) to modern communication activities or online shopping and banking.
- **Integration of Digital Technology** measures the digitisation of businesses and their exploitation of the online sales channel. By adopting digital technology businesses can enhance efficiency, reduce costs and better engage customers, collaborators and business partners. Furthermore, the Internet as a sales outlet offers access to wider markets and potential for growth.
- **Digital Public Services** measures the digitisation of public services, and focuses in particular on eGovernment and eHealth. Modernisation and digitisation of public services, including eHealth, can lead to efficiency gains for the public administration, citizens and businesses alike as well as to the delivery of better services for the citizen.

DESI Country Comparison (Headline Indicators) 2014

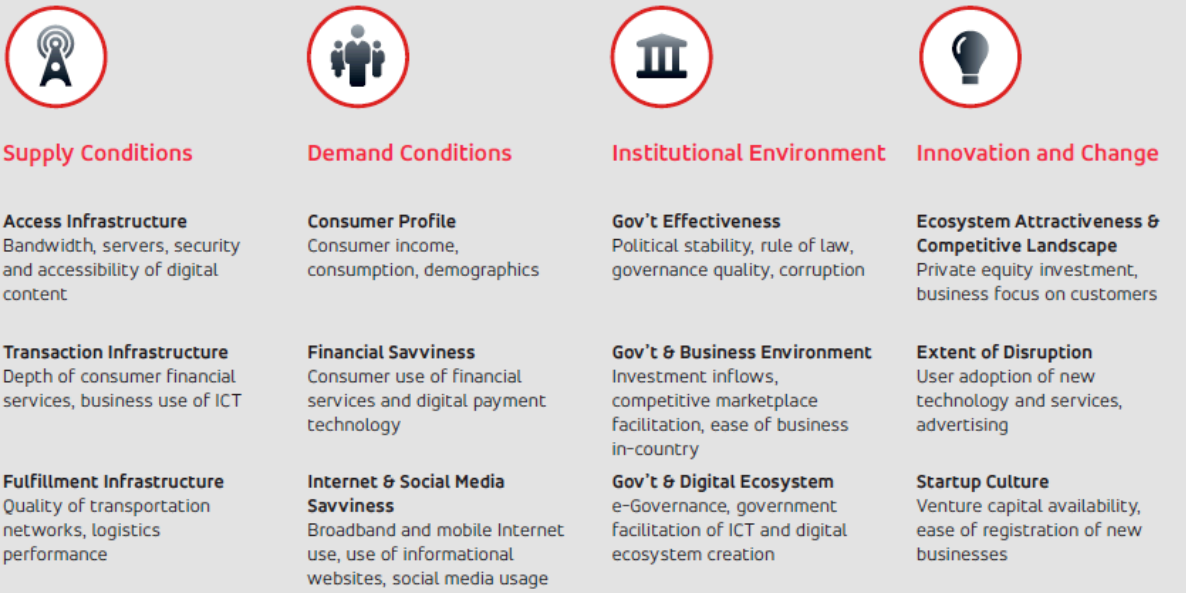


Again on the DESI analysis Ireland performs reasonably well in comparison with the EU average and ranks 9th in the EU across this multiple indicator index. However, Ireland falls some way behind higher scoring or leading countries including Denmark, Sweden, Holland and Finland who all score higher than Ireland on each of the five indicators and overall. Belgium and Luxemburg score particularly strong on the connectivity measure with UK and Germany also performing well on this indicator. Conversely Ireland scores poorly on the connectivity measure but out performs most countries on the integration of digital technology measure and also performs above average on the human capital or digital skills measure. Ireland must now make significant strides on a few key fronts including broadband and G4 infrastructure rollout, internet usage and the digitisation and access of public services, in order to become a leading digital location.

Some of the key inputs and indicators of a location's digital evolution are contained in the diagram below. These measures will be a good benchmark and scorecard for the monitoring and evaluation of the success of a digital strategy at a national level but many of the factors will also be relevant in a local or regional context.

FIGURE 2: THE DRIVERS OF DIGITAL EVOLUTION

The four drivers, 12 components and sample indicators



Key Emerging Trends and Markets in the Digital Economy

Some of the big growth markets and areas of opportunity in digital are likely to be found in Mobile technologies, Green IT, Cloud Computing, Data Management and Internet services and e-commerce. In addition to these clearly defined markets innovation in technologies that assist or even transform the way we live will also produce future waves of investment and opportunity. Examples of these innovation technologies, many of which are already well advanced in R&D terms, include Augmented and or Virtual Reality; the Internet of Things and technologies that produce Smarter Towns and cities.

SWOT Analysis of Mayo's Digital Credentials / Potential

It is important to examine the position of Mayo in a micro, as well as, a macro context as a backdrop to the development of the Digital Mayo strategy. In this context a SWOT analysis of Mayo's digital credentials and its potential for growth will help to identify assets to build upon, barriers to be removed, gaps to fill and opportunities to exploit.

A summary SWOT analysis is presented overleaf which has been conducted in a workshop session involving the project team consultants and drawing on evidence and information from a number of strands of research and consultation. In particular, a detailed online survey of digital and tech businesses conducted in December and January, a review of prior research and strategy

material and a series of consultations with enterprise and economic development agencies, industry leaders, digital entrepreneurs and other key stakeholders.

While all of the factors contained in the SWOT are not ultimately proven by hard evidence they are rooted in evidence and are strongly and commonly held opinions and views about the relative position of Mayo in the context of the enterprise and digital agenda under review.

Each of the SWOT factors acts as starting position for generating strategy options. For example, as strength might be a factor to build upon in the strategy and conversely a weaknesses will require a solution based action to help achieve specific or broad objectives or goals within the strategy.

Strengths	Opportunities
• Quality of life & cost of living in Mayo • GMIT / IiBC Castlebar • Ireland West Airport Knock • Natural Resources Economy • Progressive Enterprise Supports • Strong Mayo business network and diaspora	• Enhanced digital infrastructure • Digital Strategy implementation • Economic recovery & investment • Global growth in the digital sector • Centre for innovation in NRE • A techie conference centre & playground • Inc 6o / (MEIU) partnership to deliver a new digital entrepreneurship model
Weaknesses	**Threats**
• Secondary location for FDI • Lacking in key Digital Ecosystem factors - R&D; labour & skills; urban infrastructure & amenities • Low or no cluster development at present especially in tech sectors • Underdeveloped infrastructure in road, power/grid, broadband, mobile networks	• Underperformance of Mayo in innovation investment by both enterprises and institutions • Competition from other regions to capture investment in digital sectors and knowledge services • Macro economic climate & EU stagflation

Positioning Mayo

Finding Mayo's unique advantage and selling points will need to form the core of the Digital Mayo strategy. However, Mayo will need to ensure that the foundations and building blocks of a digital strategy are in place. Many of these elements will be generic to any location and will include a good level of infrastructure in place, a population engaged in digital learning and discovery and a set of incentives and supports to help businesses to grow with digital tools.

Given Mayo's peripheral location and its lack of population or enterprise concentration together as reflected in the SWOT analysis it will be imperative that the county is in a position to offer a few unique advantages to entrepreneurs and investors in the digital sector.

Zoning in on Digital Mayo

Objectives

- Develop leadership & COE profile for Mayo in key niche areas of technology;
- More firms and jobs in Mayo;
- Adding value to other sectors and clusters in Mayo
- Quality supports and business networks for digital firms and start-up's;
- Knowledge & technology transfer.

Targets

- Start-up firms and tech entrepreneurs;
- Attract at least 1 global player in each sector;
- Conference / network base;
- Focused supports including incubators, investment fund, expertise, labour & skills;
- Data centre location on strength of trans-atlantic fibre project / renewable energy infrastructure

Structure

Cluster management framework:

- Partnership
- Networks
- Events
- Promotion
- Cross sectoral collaboration
- EU & national programmes
- Community – Digital Competence / Digital Society

5. DIGITAL MAYO STRATEGY – *Joining the dots…*

Strategy Context

Digital and Technology firms and jobs are increasingly driving economies and accounting for a greater share of inward investment and enterprise creation on a global and local level. The giants of global enterprise now feature tech firms like Apple, Microsoft, Google, Amazon, Facebook, Samsung, and HP alongside traditional industry players like Exxon Mobil, Shell, Toyota, General Electric, JP Morgan Chase, CitiGroup, Pfizer, P&G, Coca-cola and other conglomerates with market valuations in excess of $200b. In fact, Apple is currently the highest valued enterprise in the world with a market capitalisation of $483b and a global workforce of more than 80,000 people.

Ireland plays a major role in this tech enterprise dynamic with over 37,000 jobs in ICT sectors, most of which are in global firms with strategic operations here. Nine of the worlds' top 10 digital or tech firms have significant operations in Ireland, many of whom have their HQ here. High tech skills shortages and job vacancies are a common feature of the sector. Dublin has hosted the 'web summit' for the past three years bringing over 20,000 high profile tech guru's, investors and other industry influencers, all adding to our global tech credentials. While this scenario paints an exciting and prosperous picture for Ireland inc, the reality is that very little of this activity is based outside of a few key urban centres, and in particularly Dublin city.

"Ireland has become the global technology hub of choice when it comes to attracting the strategic business activities of ICT companies. This has earned Ireland the reputation for being the heart of ICT in Europe"
IDA

However, Mayo does not have a recognised technology cluster nor does it possess the common features of a dynamic tech / digital enterprise ecosystem. These common features will include a critical mass of large firms, a strong rate of successful start-up's, R&D institutes, specialised and advanced 3rd level education programmes, a dynamic and skilled labour market, investment community and many of the typically 'urban' services and assets that characterise and play host to established and embryonic technology or digital clusters. Where tech related companies have reached scale in Mayo, they show little overlap in terms of focus or location.

This lack of clustering or concentration of enterprise, together with a large and predominantly rural geographic profile, means that Mayo must find creative ways of delivering services. Mayo also needs to retain its own talent, and attract in talent, to sustain a meaningful digital enterprise base. This can only be done by offering entrepreneurs an outstanding suite of services and some compelling quality of life factors in order to compete with other locations.

Some of the obvious questions posed by this background will include the following:

- Can Mayo stimulate and retain a rich flow of digital start-up enterprises – *home grown talent?*
- What could Mayo do to attract more tech businesses in – *digital entrepreneurs & FDI projects*?
- What sort of businesses would these be – *tech & non tech?*
- How could Mayo compete with major metropolitan centres in Ireland, and beyond, for these businesses – *what are our USP's*?

- How can this be marketed and promoted – *Digital Mayo?*

Strategy Rationale

Mayo has a great opportunity to bring real growth to its tech sector by joining the dots…

Marrying entrepreneurs in this sector to Mayo's attractive quality of life and emerging ICT infrastructure has the potential to deliver some inward investment in the digital sphere. But Mayo must provide a broad range of supports to tackle skills shortages, better facilities and infrastructure and access to investment finance for start-up's and growth cycles in dynamic enterprises.

Attracting technology and digital entrepreneurs and the investment community to Mayo through niche conferences and events can put Mayo on the digital map. Harnessing new technology and innovation in Mayo's Emerging Economic Sectors (Energy & Marine; Food & Agri; Tourism & Leisure) will provide a unique set of niche tech areas of focus where Mayo can become host to world leading technology providers and innovators.

Alongside this focus on attracting digital and technology talent from outside the county in these niche areas of the natural resources economy, this strategy will create awareness and support structures for local companies in the digital / technology space to identify commercial innovation and collaboration opportunities to bring new products, services and solutions to Mayo's emerging economic sectors. This virtuous circle of driving innovation and growth in our natural sectors with locally based solution providers will reinforce the economic impact and create real 'homegrown' clusters.

Mayo must nurture the talent and entrepreneurship gene amongst its residents and retain this valuable resource in the county. This will mean having a quality standard in start-up support, access to finance, business premises and incubation, a vibrant network for digital and creative entrepreneurs to meet, share ideas and collaborate.

At the community level and through the education system digital skills and participation must be promoted in exciting and engaging ways especially for the very young and the elderly to help foster a dynamic digital society. Government can play a strong role in promoting digital skills and literacy through delivering public services online and providing incentives for citizens to adopt technology to live more sustainably and contribute to the democratic process through social media and other dedicated websites and platforms.

Finally Mayo must keep pace with the development and roll out of digital infrastructure, and other key enterprise infrastructure, if it is to have a viable offer to FDI and digital entrepreneurs. In particular, fast fibre, mobile networks, transport, energy grid and renewable energy.

Vision for Digital Mayo

Digital Mayo will future proof a digital society and enterprise base for the economic and social wellbeing of the county. In doing so Digital Mayo will promote Mayo as a physical and virtual environment where technology and digital solutions are brought to the natural resources economy creating clusters of specialised enterprises around Mayo's emerging sectors. It will also nurture creativity and innovation in local entrepreneurs and SME's to grow and prosper. It will build global connections around knowledge transfer and events in cutting edge and niche technologies. All of this will be under pinned by tech entrepreneurs choosing Mayo as a quality location for investment and lifestyle

Digital Mayo Mission Statement

Digital Mayo will create the framework for key partners and stakeholders to drive improvements in: our digital infrastructure; digital participation by citizens; digital enterprise creation and growth and Mayo's reputation for innovation and collaboration. This will happen through a series of actions contained in the Digital Mayo Implementation Plan and through a host of other plans such as the National Digital Strategy and the National Broadband Plan. It will be guided by a set of first principles and will be monitored and evaluated against a focused set of Key Performance Indicators for digital success.

Guiding Principles

- ✔ Digital Dynamo – Digital technologies must be harnessed as a driver and accelerator of economic growth and innovation in our enterprise base.

- ✔ Digital Start – Technology start-up's and digital entrepreneurs will be encouraged and nurtured and their success will be celebrated.

- ✔ Digital Access – Accessibility and inclusion will be a given this includes service provision, infrastructure, access to finance, access to skills and enterprise support. This also means that Mayo is an open and welcoming place to take your ideas and investment.

- ✔ Digital Health – A digital and technology best practice barometer for business and communities to measure their digital health.

- ✔ Digital Co-lab – Digital partnerships and collaboration between enterprise agencies, education institutions and industry will foster cross fertilization of ideas and digital solutions for enterprise and society.

- ✔ Digi Soc – A Digital Society will be a more inclusive, progressive and productive framework for engaging citizens and promoting Mayo as a plugged-in and open place to visit and reside.

- ✔ Digital horizon – that Mayo will future proof its physical and soft infrastructure and service provision by ensuring that a quality and up-to-date digital foundation is built into future planning.

Digital Mayo KPI's

- Numbers of new tech / digital start-up created
- ITC / Digital FDI projects successfully secured
- Job creation in digital firms
- Businesses assisted through Digital Mayo Digital Health Check
- Mayo Co's adopting e-commerce and other key digital innovations
- New IT or digital occupation posts created in non tech SME's
- Graduate output from IT, Computer Science and Digital related HE programmes
- Growth rates in household broadband connections
- New public services delivered in digital (percentage of all service accessed)

Strategy Framework

Digital Mayo is built on four key themes for organisation and action.

Figure 5.1: Snapshot of Digital Mayo

Key Theme 1: Promoting an inclusive and progressive Digital Society in Mayo

Mayo, like all areas, must keep pace with developments in technology and digital skills if it is to sustain a skilled labour force, attract investment and participate fully in a rapidly evolving digital world. Progressive digital locations will reap the benefits of next generation technology development and investment.

This strategic theme is geared towards making Mayo a location where both residents and businesses are provided with the incentives and services to maximise the opportunities in a digital and technology context. Engaging the population in digital learning, applying innovative technology in community services and showcasing technology in creative ways will equip our people with the skills and know how to be digitally competent in an ever expanding digital future.

Bringing digital into our homes and embracing developments in digital infrastructure and services will be essential in engaging residents in a digital future. Equipping citizens with the technology and skills to enhance their lives in meaningful ways.

The first priority for Digital Mayo must be to create awareness about the digital agenda and the supports and learning supports available to all. Digital Mayo must also excite and inspire people to get involved in digital and technology events and activities in their communities. Again the community and education sector have a key role to play here. Also digital champions and experts must be identified and supported to give their time and expertise to these activities in a voluntary capacity.

Examples of community focused digital events and activities

While Mayo (EIU) will have a strong role to play in facilitating, and in some instances, resourcing some of these occasional events and programmes, there will be a crucial role for the education system. From the primary level to 3rd level through GMIT and further education providers a progressive and proactive approach to adopting digital learning and delivering that knowledge.

There are already examples of a progressive approach to higher level digital skills development in Mayo through the GMIT with its new degree programme in Digital Media and Society. This course, now in its second year, compliments the already established higher degree courses in Computer Services Management and Information Technology Administration.

Also community groups and clubs and particularly community service providers are in a unique position to support their members and clients to develop a greater appreciation of digital and their digital skills. For example, the Bene*f*IT Programme is a Government grant initiative providing

funding to third sector and not-for-profit organisations for the provision of digital literacy training. Since its inception the IT Skills programme has been delivered in over 700 communities across the country. Programmes such as this have the potential to deliver training to thousands of people in Mayo through community and voluntary organisations and are suitable for clients who want to take their first step in digital and IT literacy or to refresh and update their skills for a digital future.

We will be dealing with access to, and reliability of, digital infrastructure (broadband and 4G) under key theme 3 below however, community level digital service such as open public wifi access in community spaces and public areas would send a positive and progressive message to both residents and visitors that Mayo is plugged into digital.

The strategic activities that will be delivered under this key theme will include:

- **Promoting digital literacy through formal and informal learning in schools, further education, online learning and community based learning**
- **Establish a *Digital Futures Forum & Digital Champions* to help communities utilise and exploit digital tools**
- ***Digital Discovery* for kids through coder dojo and other community focused events e.g. Mayo Science & Technology Festival, Mayo 2040, Mayo Ideas Week and other community focused events**
- **School based programmes for primary and secondary level to go digital**
- **Adopt best practice and supports from the National Digital Strategy (NDS) and Digital Agenda for Europe (see Appendix B & D)**
- **Mayo leading in the Digitisation of public services**

Key Theme 2: Nurturing digital talent and supporting tech based start-up's and supporting SME's to go digital

This theme provides the greatest opportunity for economic impact in the medium to long term. The activity around this theme can also be designed and implemented with a greater degree of control at the local level and in concert with relevant partners and the private sector. Facilitating entrepreneurs and SME's with the right environment and supports to innovate and invest is the key to unlocking the enterprise potential here.

Mayo can truly open up a new era of entrepreneurship and enterprise creation through a dynamic and slick approach to delivering business supports. Utilising the existing network of enterprise space in the county and the newly formed Inc60 model and network to power digital knowledge and know-how will be a catalyst for kick starting and sustaining a cycle of digital enterprise creation and growth.

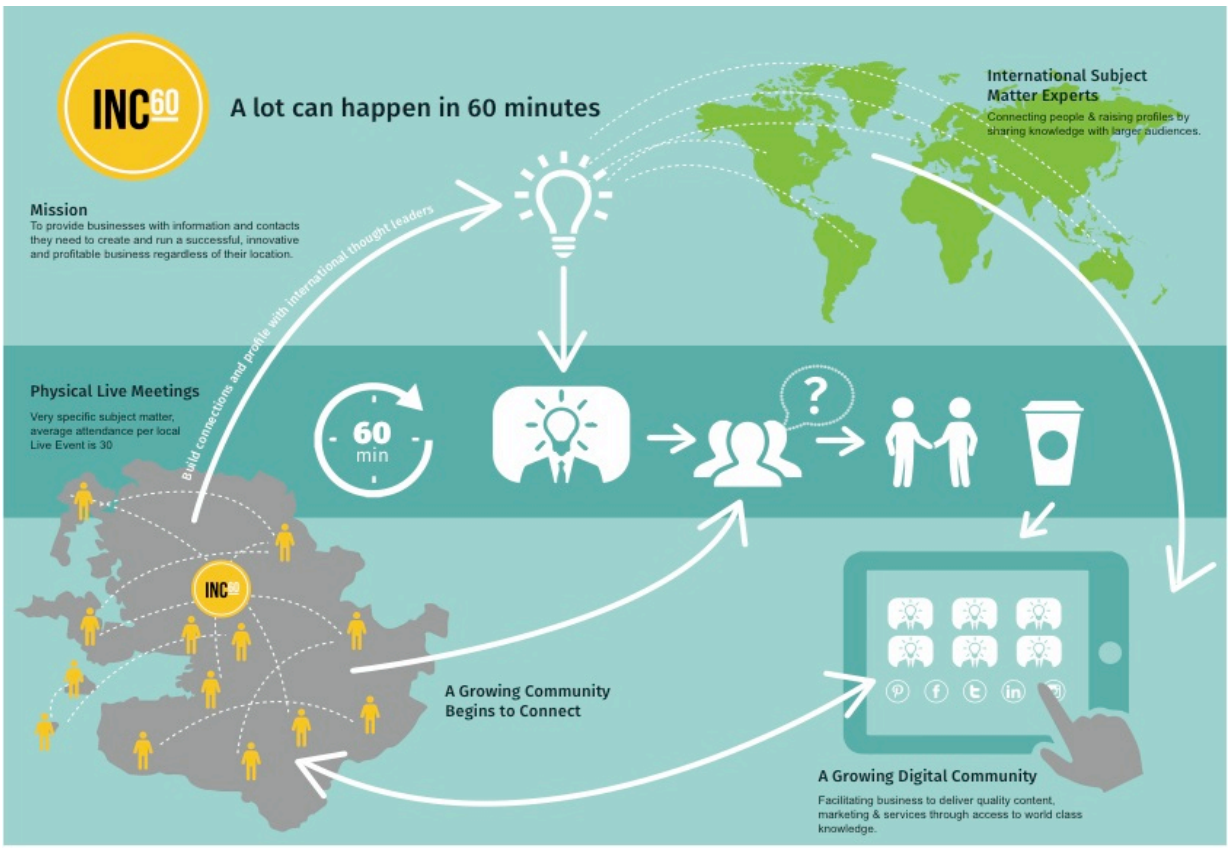
At present the client network of the Innovation Hub at GMIT in Castlebar are being exposed to, and served with, a higher level of digital and entrepreneurship support. The facility was set up in 2006 as a business incubator for Technology based start-up and operates as part of the Institute of Technology (IOT) Innovation Hub network. This means that clients can assess supports and services that are not available to the general enterprise centre network across the county.

The iHub facility has hosted the Enterprise Ireland sponsored New Frontiers enterprise start-up programme for four years which is a unique opportunity for Mayo based entrepreneurs with a start-up concept to develop their business proposition and scale up their venture. In addition to the New Frontiers programme the iHub has also facilitated an SME innovation programme funded by the South West Mayo Development Company in 2011 and 2012. The management team at the iHub also regularly organise and host presentations from a variety of experts and practitioners that provide specific supports to entrepreneurs such as IP specialists and patent agents, venture capital and investment advisors and technology practitioners.

In recent months the Inc 60 model and programme has been born out of the iHub in Castlebar and organically grown into a focused sector support body delivering knowledge and connections to users through technology and entrepreneurship led events. Inc60 itself rests heavily on digital applications and cutting edge technology to deliver its events. In particular, its focus on linking the speaker to the audience, from a remote location and in real time, through video conferencing platforms and creating a vibrant network around knowledge and ideas sharing through social media is leading by example.

The Inc 60 mission is *"to provide businesses with the information and contacts they need to create and run a successful, innovative and profitable business regardless of their location"*.

The operational format is detailed below in the Inc 60 picogram.



Making the Inc60 programme available through-out the county will deliver real and tangible benefits to start-up's and businesses irrespective of location. In some instances Inc60 has been hosted by large companies, who have the facilities to accommodate a large gathering of entrepreneurs, and the experience of building a successful enterprise. This environment and knowledge transfer, set in an informal context, is the piece of the enterprise agenda that the private sector can deliver on best.

It will be essential that Mayo (EIU) utilise Inc60 to drive certain knowledge and network functions for Mayo entrepreneurs rather than attempting to invent a public sector led model for delivering these functions. In addition to this local entrepreneurship support model Digital Mayo needs to draw in new and innovative programmes and organisations that are operating in a dynamic start-up environment. Programmes such as Start-up Ireland who's mission is to "make Ireland a global start up hub… by 2020"

Startup Ireland is an independent, not-for-profit, representative body for Ireland's startup sector. The startup sector in Ireland comprises startups and their supporters in Research Centres, Tech Transfer Offices, Incubation/CoWorking Space Providers, Commercial Attaches at Embassies, Professional Services Providers (Accountants, Lawyers, Patent Agents), Innovation Managers at large Corporates, Investors, State Enterprise Support Agencies, Country Network Associations/Chambers, Mentor/Angel Investors and the Diaspora.

Startup Ireland focus on high impact start-up businesses that have the potential to grow rapidly internationally thereby creating significant jobs and innovation in Ireland. As a member of the international Startup Nations network the focus is at the strategic level on those systemic, framework conditions which can lead to a sustained improvement in conditions for high impact entrepreneurship in Ireland.

Startup Irelands mission is to help build a world class startup ecosystem in Ireland by making Ireland the best place in the world to establish a high impact technology startup. This in turn will help lead to Ireland becoming a leading global destination for high impact startups that want to scale up rapidly, effectively a "Startup Island".

However, the network of supports around Startup Ireland are concentrated in the main cities and at present do not touch into second tier locations such as Mayo. The objective here must be to draw in this level and type of activity to elevate Mayo into a high impact start-up location and environment.

The critical actions that will need to be delivered through Mayo (EIU), Inc 60 and other partners under this key theme will include:

- **Talent Spotting through proactive engagement with the sector, education institutions, enterprise centres and business networks**
  - ✔ Through repetitive events e.g. Inc60, and a more familiar network of entrepreneurs will produce clearly identifiable digital talent to draw into relevant and bespoke support programmes
  - ✔ Using external experts and proven digital entrepreneurs outside of Mayo through social media groups and connected through Mayo based events Digital Mayo will leverage world class minds and emerging technologies for the benefit of our local network
  - ✔ Digital Mayo participating in collaborative networks in the pursuit of knowledge, contacts and best practice including EU funded transnational sector programmes focusing on digital themes

- **Simple & Slick start-up support package for digital sector**
  - ✔ A combined approach between Mayo (EIU), EI and Inc 60 will deliver a full suite of service including mentoring & enterprise training, small scale finance support, knowledge transfer and events & networking across the county.
  - ✔ Digital Health Check using a digital and technology scorecard as a manual to adopting and implementing innovation in businesses. This will be delivered in conjunction with relevant Inc60 modules, online supports and mentoring and will lead to businesses becoming accredited with a system of digital competence and compliance similar to the Lean Manufacturing Six Sigma master-classes and belt hierarchy

- **Access to business incubation or enterprise space (*Wild Enterprise Way*)**
  - ✔ A focus on niche micro enterprise requires a network of centres of excellence in the county, building on the IiBC model. Mayo must utilise existing enterprise space in a flexible manner to provide access to new start-up's, relocating entrepreneurs, freelance contractors and other small and growing commercial entities including community and social enterprises.

- ✔ A programme of digitising and co-branding the network of centres and spaces across the county to act as the local focal points for Digital Mayo activity

- **Access to start-up and growth finance for HPSU or scalable digital ventures**
  - ✔ Establish a Digital Mayo investment fund to help finance local digital or tech start-up's
  - ✔ Build contacts and relationships with investment community and business angels
  - ✔ Support the development of a regional syndicate of the Halo Business Angel Network (HBAN) for the west and other finance or investor forums focusing on Mayo

- **Events, Conferencing & Networking**
  - ✔ Inc60 schedule of knowledge transfer and networking events
  - ✔ Start-up weekends/retreats and 'collaboration camps'
  - ✔ Developing a global online community around Inc60 events using relevant themes including Mayo diaspora; Innovation in NRE; surf summit hang-outs, TEDx talks
  - ✔ Niche Digital & Tech conferences focused around innovation in key areas of the NRE
  - ✔ Digital Mayo to develop a strong presence at wider business networks and events e.g. MeetWest; Trade Expos etc

- **Encouraging SME's to go Digital**
  - ✔ National Digital Strategy priorities for SME's (e-commerce / digital skills)
  - ✔ Innovation awards and best practice templates
  - ✔ Digital Health Check using a digital and technology scorecard as a manual to adopting and implementing innovation in businesses
  - ✔ Knowledge / technology transfer & Innovation partnership supports between clusters of businesses and specialist technology providers

Snapshot of Conference Options to promote Digital Mayo on the global stage

Conference events serve to put Mayo on the map as a place that is not only engaging with, but leading in the digital sector. They bring industry experts, new products and media coverage into the county. They create opportunities for local people to network with relevant companies and entrepreneurs. They also break new ground in their own fields and provide a unique, memorable experience for all involved.

We propose four events that could be held on an annual basis, with perhaps two to start with in the first year. These are in addition to the Surf Summit, but they are marketed extensively to the Surf Summit audience.

Conference Option 1: ***Drones, their technology, performance and uses.***

- **Working Title:** The International Drone Show.

- **Rationale:** Drones are becoming a major new market category for digital technology with a very wide range innovative applications. Mayo has already held a pioneering conference about Drones in 2014. The county offers a perfect environment to demonstrate drone aircraft, with open skies and expansive countryside.

- **Opportunity:** Mayo could readily create the European equivalent of the Web Summit for Drones. Or, to put it another way, the Drone equivalent of the Farnborough aircraft show UK.

- **Event Format:** Two days of delegate only discussions and presentations would look at technical innovation and performance, application use cases and policy and regulatory challenges. The public would also be spectators in practical competitions which test drones for speed, endurance, and agility. These might include drone races and obstacle courses or practical challenges such as taking a package to Clare Island and back, with public spectators able to enjoy the spectacular demonstartion.

- **Target Audience:** Drone companies, investors in drones, regulators, drone service providers, component technology manufacturers.

- **Location:** Westport, down at the Quays, possibly using the old fish factory as a hanger and base for the Drone Show.

Conference Option 2: Sport and Adventure Tourism - *Technology for the great outdoors.*

- **Working Title:** The Wild Atlantic Sport and Adventure Technology Challenge.

- **Rationale:** Mayo is already a significant destination for Irish visitors wishing to enjoy the county's great outdoors, on bikes, in boats and canoes, or on foot. Participants can readily be found to climb, swim, sail, kite surf, run and ride along Mayo's coastline. This is a fast growing sector, with big opportunities in the US leisure market. All the major consumer technology giants are gearing products for health applications.

- **Opportunity:** Mayo creates a unique format conference that combines actual adventure and activities with a gathering for those creating new apps and technology for anyone who enjoys the great outdoors. There have been conferences held in cities like London looking at this sector, but none where those technologies would actually be deployed.

- **Event Format:** A three day conference integrated with a number of competitive sporting events offering prizes for participants – a regatta out of Rosmoney, a Croagh Patrick climb, a Greenway mountain bike relay race, a round island swim... Participants in these challenges will be offered the extra incentive of being able to try out the latest technologies and devices provided by those presenting at the conference. The conference will then review the performance of these technologies and capture user feedback. The conference therefore focuses on practical implementation of technologies, offering visions of where the sector is going.

- **Target Audience:** Event Organisers and Sports Group Managers, Sports Medicine Practitioners, Technology Suppliers, App creators, Consumer technology manufacturers, Investors, Adventure Tourism Companies.

- **Location:** Clew Bay & Erris

Conference Option 3: ***Big Data – The technologies, applications, legal and philosophical issues and directions around the explosion of data in a digitally enabled society.***

- **Working Title:** The Big Data and Future Society Summit

- **Rationale:** Big Data is happening and is driving investment and innovation in information technologies, creating major new public policy issues, and leading to the re-engineering of many long standing industries

- **Opportunity:** Mayo offers great potential for data centres for major cloud computing platforms such as IBM's Softlayer, or Amazon Web Services, with cheap and extensive land, secure energy suppliers and plenty of cooling wind. This conference aims to get Mayo into the consciousness of those making investment decisions on new data centres, by bringing together thought leadership in the Big Data field with a specific focus on imagining how our world will change as big data applications gather pace, hence the Big Data and Future Society Summit.

- **Event Format:** Free events for the public to hear about the implications of Big Data lead by key note speakers, who also lead the delegate only conference over two days and nights of technically and intellectually rich discussion and debate.

- **Target Audience:** Data Centre Operators, Technology Pundits, Customers for Big Data, Journalists, Software technology companies, entrpreneurs and investors

- **Location:** Ballina

Conference Option 4: Information Technology for Agriculture and Food Production

- **Working Title:** The Farm and Food Digital Technology Show
- **Rationale:** Farming and food production is at the heart of Mayo as it is for the rest of Ireland, and indeed the world economy. Achieving production improvements and efficiencies through the use of information technology is possible now even for smaller farms and artisan food producers. The EU is actively investing in technologies and software development partnerships (The FIWARE Project in particular) to equip European farming with new technology tools.
- **Opportunity:** No other regular event in Europe focusses on agriculture in this way. 4G is capable of transforming rural and remote connectivity, and what are the implications for Ireland's countryside and the businesses which are dependent on it? Farmers are enabling themselves with smart phones and laptops but how much more could they get out of these to help them with their farm, and who are the innovators that are enabling this? This event answers these questions and becomes a feature of the farming year in Ireland and well beyond, gaining a reputation as the showcase for innovation in its sector.
- **Event Format:** 2 days of demonstrations and workshops where participants get to see Information Technology solutions for Farm and Food Production. The event proceedings are published on-line as a reference hub for the sector to see the latest and best use cases for relevant technologies.
- **Target Audience:** Farmers, Mart operators, Buyers and Processors of Food, Artisanal Food Producers, Supermarket buyers, entrepreneurs, investors and local IT companies.
- **Target Numbers:** 15 show case companies, 300 delegates.
- **Location:** Claremorris

Key Theme 3: Digital Investment & Infrastructure

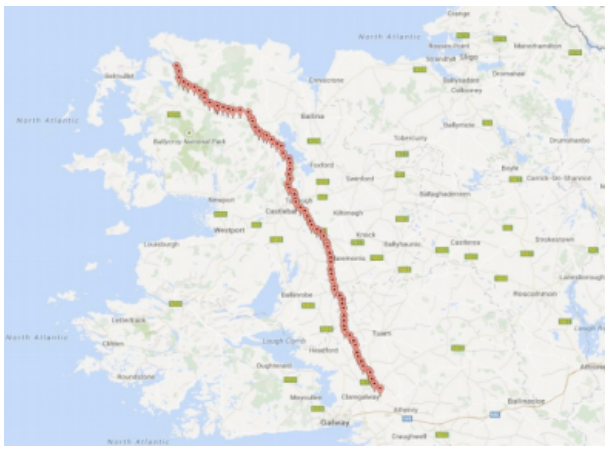
This theme is the most critical driver to ensuring a digital future for Mayo. It will also be the leaver for harnessing future investment, both FDI and indigenous, in digital and other knowledge intensive sectors. Indeed all the strategic themes of this strategy will be dependent on a connected and accessible digital infrastructure for their success. Digital locations will be judged, first and foremost, on the strength of their infrastructure. Being at a disadvantage in this regard will leave Mayo under the radar in a digital context.

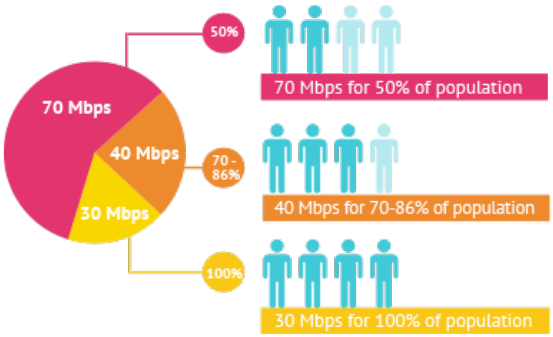
Much of the implementation of key projects around this theme will lie outside the direct control of local players. However, Mayo County Council has taken a proactive approach in setting the right planning framework and has played a key role in facilitating national and international investors and contractors to prioritise Mayo for these strategic infrastructure projects.

It is important to note the efforts and role played by the community and the private sector also in advancing Mayo's position for strategic digital infrastructure investment. For example, Claremorris was the first Fibre Town in Ireland under the 'Fibre to the business' (FTTB) network with an investment by e-net and AirSpeed delivering 250Mbs broadband to the local business community. This project was largely facilitated by Claremorris Chamber in conjunction with Mayo County Council.

Castlebar is the latest town to receive a fibre network with the announcement by e-net of a €1.5m investment for the construction of a new metro fibre network for the town. The installation will include duct, sub duct and fibre optic cables to be deployed across the town, connecting its major commercial and industrial zones, educational institutions and medical premises, as well as sites for Government use. The network is scheduled for completion in November 2015. Castlebar now joins six other Mayo towns as part of the MAN, including Ballina, Belmullet, Ballinrobe, Claremorris, Kiltimagh and Knock.

Mayo County Council and Shell are also currently implementing a Fibre backbone alongside the Corrib gas pipeline from Erris. This essential fibre line will deliver high capacity broadband once lit and will allow for a spur of fibre to link Castlebar and Westport into the backbone line. This 'backbone' of fibre will also have the potential to link up with the Emerald Network transatlantic fibre cable landing at Kilalla Bay to create a uniquely outstanding opportunity for strategic investment in big data management.





The key priorities and actions under this theme are:

- **FDI primed and ready to go**
  - ✔ IDA Technology Parks (Castlebar & Westport) and strategic property portfolio updated with quality marketing brochures
  - ✔ Investment Strategy and Action Plan implementation
  - ✔ Digital Diaspora will become a digital
  - ✔ Key sector intelligence research and profiling with regional partners including WDC, EI and BMW Regional Assembly

- **Key infrastructure investment and development**
  - ✔ Fibre backbone from Erris through county
  - ✔ Transatlantic fibre line progression
  - ✔ 4G and Long-Term Evolution (LTE) mobile network coverage
  - ✔ More urban locations and investment sites / zones implementing key fibre infrastructure such as the MAN rings and FTTB networks

- **Branding & Marketing for Digital Investment**
  - ✔ Development of suite of marketing materials and sector / location profiles for investment marketing
  - ✔ Utilising Mayo.ie as a key platform and touch point for building Mayo enterprise profile nationally and internationally
  - ✔ Implementation of Investment Strategy

- **Data centre location (in conjunction with Transatlantic Fibre project)**
  - ✔ The trans-atlantic fibre line arriving in Killala Bay will create the potential to spawn data centres which in turn can stimulate other digital businesses. This internationally strategic piece of digital infrastructure places Mayo at a critically advantageous point in the transatlantic data traffic system. Together with our cooling climate, renewable energy supply, access to water and cheap available development land Mayo can position itself as a premier location for big data and cloud based storage and management. To date Mayo County Council has facilitated this key project to an advanced stage of implementation readiness in conjunction with key project investors and delivery contractors Emerald Networks.
  - ✔ Implementation of a masterplan for a key data centre facility to be undertaken by a partnership of key venture stakeholders led by Mayo County Council.

Key Theme 4: Selling Mayo as a centre for innovation in the Natural Resources Economy (NRE) – *tech solutions for non tech sectors*

This theme will be crucial in profiling and promoting Mayo as a location for venture development and collaboration and indeed for targeting FDI activity in Mayo's emerging sectors. These sectors include Food & Agri diversification, Renewable and Smart Energy, Marine and Tourism (particularly outdoor pursuits and adventure). Together these sectors are being promoted as the Natural Resources Economy in order to position and profile Mayo as a centre for innovation in these fields.

The strategic actions towards building Mayo's USP's as a 'Centre for Innovation in the NRE' will be:

- **Brand identity under Mayo.ie to be promoted to target sectors and technology players from FDI to solo entrepreneurs**
- **Build an Invent & Invest marketing plan around Digital Mayo**
- **Quality of life factor is a key selling point for Mayo and one which differentiates us from other 'digital locations'**
- **Conferencing and knowledge transfer in key NRE growth fields (see suggested conferencing options outlined above)**
- **Establish an observatory for NRE innovation and work towards a specific R&D / Centre of Excellence in the county**

Centre for Innovation in the NRE – *Illustrated by example*

Case Study 1: Livestock Mart Online Auction Platform

By summer 2015, Balla Mart will be equipped with four high definition cameras capturing activity during one of the rings on a sale day. The video stream will be presented to farmers on either Android or iOS devices. Farmers will also be able to bid remotely on animals at the same time as those in the ring. The project has been initiated by an entrepreneur based in Roscommon but the technology is being developed in Co. Mayo using both local technical talent and specialist video streaming experts in Belgrade, Serbia.

The project is being facilitated by the co-operative Aurivo who are keen to bring innovation to their Mart activities given the decline in sale volumes relative to farm-to-farm sales via the likes of Done Deal. Such a project provides an excellent example of how technology can bring new opportunities to the agricultural sector. It also shows how a mix of local and international skills can combine to bring a new product to market. This is the kind of project we envisage in our proposals for expanding digital technology businesses in the Natural Resource Economy, using local businesses with a need for innovation as a spring board for solutions which address a national and international market opportunity.

What other examples could there be?

A good place to start is to look at the portfolio of operating businesses that the (EIU) has contact with and ask them what technology could help them expand:

- ✔ **A micro-brewery might have a challenge managing its stock levels as demand increases providing a need for a bespoke software solution for its process controls.**

- ✔ **An agricultural equipment company might need to provide information and support to its customers in the field more effectively on how to calibrate their equipment given different environmental conditions.**

- ✔ **An energy provider may want to map and develop virtual reality imaging software to monitor its facilities and to train its staff off site.**

- ✔ **An adventure tourism business might increase customer satisfaction by offering a mobile application to its customers cycling the Wild Atlantic Way to help them locate sites of historical or cultural interest.**

- ✔ **A Destination Management Organisation might want to exploit the experiential nature of the marine adventure tourism product through video and photography captured from drone technology. Behind this there is post production and editing functions and web development elements such as a booking engine and digital marketing strategy.**

Such companies know their own business challenges and the task of the (EIU) could be match-make local technology firms with these (EIU) clients, throw in a little grant support, and help the tech company create a solution which could have much wider application.

One could also ask the same question of other indigenous sectors in the county and see whether they have problems that could benefit from a technology solution.

Would sheep farmers benefit from an aerial drone to help them check out upland pastures more easily? Could the salmon research institute benefit from a better way of tracking fish out at sea with a new micro-chip design? Would it be useful to have a website dedicated to the sale of surplus hay and silage across Ireland?

These are just examples. There could well be more opportunities in the marine and renewable energy or food production sectors where local operators could benefit from assistance with a new technology product or service.

6. IMPLEMENTATION PLAN

Organising for Action & Capacity Building

Getting started on the Digital Mayo journey will require a dedicated driver. This means that there will need to be a clearly identifiable organisation and individual(s) that act as the focal point for the strategy and take direct responsiblity for its coordination and implementation. Naturally, other stakeholders will play key roles in the planning and implementation also but there must be a leader that takes overall responsibility for Digital Mayo.

In organisational terms this will be the ***Mayo Enterprise & Investment Unit*** of Mayo County Council. This unit is the central resource for economic and enterprise development in the county and responsible for implementing strategies for a number of emerging economic sectors including tourism, food & drink, renewable energy and the marine. This Digital strategy will form the final piece of the sector and cluster development framework for county Mayo.

The first critical action that needs to be taken is the appointment of a ***Digital Officer*** to lead and manage the work of strategy implementation and to act as a focal point for other digital or technology related activities that emerge or present over time. This officer will also interface with the other sector officers on areas of overlap between Digital Mayo and wider development agendas.

Partnership development around the Digital Mayo strategy will be the next critical item. Each of the key stakeholders and delivery partners will need to be engaged with to establish an platform and commitment to the principles and realising the vision and objectives of the strategy through the implementation plan and individual projects. The key partner organisations will include GMIT, Enterprise Ireland, Micro Finance Ireland, Halo Business Angel Network (HBAN), local and regional development agencies, Inc 6o, Local Chambers and other business groups and the primary and secondary education sector. The social and community sector must also be engaged through the Mayo Community Forum and Mayo Science & Technology and through the network of Mayo Associations to connect with the Mayo business and social diaspora.

Digital Champions will need to be identified across all sectors of society and business to help promote the digital society and economy in their respective zones of influence. This will include digital entrepreneurs, large enterprises & FDI Companies, teachers with strong IT skills, community leaders and social entrepreneurs. A network of these digital champions will need to be established to connect them to the Digital Mayo strategy and to allow for a sharing of ideas and access to support for driving new projects or campaigns.

This ***Digital Mayo Forum*** will exist in a virtual and real context where members will share ideas and information and promote best practice in digital applications to all sectors of society and the economy. This element of the Digital Mayo structure will be very important when it comes to promoting projects at a community level or among business networks but equally in demonstrating a strong and embedded sense of Digital Mayo when it comes to drawing in external investment, funding or new infrastructure. The Digital Mayo officer will co-ordinate and

facilitate this group and disseminate the advice and resources emanating from the Digital Mayo Forum.

Creating Awareness – *spreading the word*

Once the Digital Mayo organisational structure is established and roles are defined it will be essential to generate awareness about the strategy. In this regard a focused approach to delivering information about Digital Mayo to relevant individuals, organisations and business networks but also to the general public will need to commence.

Press & PR will be important from the outset to drive the Digital Mayo strategy. This media focus will involve general press releases and features of a more specific nature depending on the target audience and the area of focus. Initially, and in conjunction with a full media launch, a Digital Mayo press statement and feature will need to be sent to all regional newspapers and other media outlets. A shorter and more focused version can be prepared for the national and weekend newspaper market. For example, the Sunday Business Post and other national broadsheets can highlight the initiative in their technology and business sections.

This PR campaign needs to be progressive and ongoing rather than a big launch with no follow through. An ongoing periodic feature on tech or digital businesses in Mayo could be run on a monthly basis with one or all of the regional newspapers in the county. This feature would be branded Digital Mayo and highlight the success of digital enterprises in the county along with general information and news about projects under the Digital Mayo strategy.

Digital Mayo road show to showcase the strategy and its action plan will need to be delivered across the county in a series of workshop or information evenings. These meetings will be open to the public but must be promoted heavily in advance with invitations sent to all local stakeholders including business representatives, community organisations, education providers, development agencies and other interest groups. The presentation format and event management must be slick and engaging in order to inspire confidence and buy-in to the strategy and to help embed the Digital Mayo partnership. These localised events will also be an ideal opportunity to identify and recruit Digital Champions in each local area.

Digital Mayo online (digital marketing strategy) will need to reflect the strategic nature of the initiative as well as driving discussion and information sharing around Digital Mayo. The online presence of Digital Mayo will need to be multidimensional and encompass website, social media, e-zine and perhaps some interactive tools in time. The quality of the content and its management will also be an important aspect to provide confidence and engage with its audience whether that is strategy stakeholders, partners or the general public. Initially a full suite of information and support tools around Digital Mayo will be incorporated into the Mayo.ie platform as well as the Mayo County Council and Mayo LEO websites. This information service will need to be presented as a programme which will evolve over time.

The second key dimension, and perhaps the most important, will be the promotion of Digital Mayo and its specific activities, through a wide variety of social media platforms. In particular, Linkedin and twitter will deliver a focused message to entrepreneurs but also facebook and youtube will have a role to play in promoting the digital society elements of the strategy to the community. Other platforms and services to utilise alongside social media will include slideshare,

TEDx (ideas worth spreading) and other central resources for entrepreneurs. The management of the information on these platforms will require the right skills and focus and will place an uneven demand on resources. For example, in the run up to and during a key Digital Mayo event there will need to be a continuous drive on social media.

Online news services such silicon republic and other technology and enterprise media channels will need to be utilised for raising the profile of Mayo in the digital sphere when there is a critical announcement or a success story worth sharing.

Events & Expos. In addition to the local information workshops highlighted above Digital Mayo will need to plan it presence and function at key events at a local, regional and national level. This will include events like the GMIT hosted annual Spirit of Entrepreneurship event, Meet West and Mayo Day events. Other strategic events and conferences where there is an opportunity to position the Digital Mayo 'stall' will need to be identified and reviewed on an ongoing basis.

Strategy Timescales

The Digital Mayo strategy is broken down into three distinct timescales:

- short-term actions = immediate to two years;
- medium term actions = two to four years
- long-term actions = beyond 2018

In addition to this project scheduling and planning there will be a set of activities that are 'ongoing' and will need to be progressed throughout the lifetime of the strategy. Each of these timescales are indicated in the summary implementation table below and a more detailed description and set of instructions are provided in the individual project development sheets in Appendix D.

Short Term Activity

In the first year of implementation Digital Mayo will be a requirement to show results from early actions. This will help to build confidence and motivate the partners as well as to ensure that the strategy is on track in terms of its project management. Some of the short-term actions and projects are designated as such because of their readiness or ease of planning and execution. Others are identified as short-term due to the priority or urgency of the action. In each case the initial and early actions will set the standard and expectation for strategy in its entirety.
Some of the key short-terms actions that are contained in the Digital Mayo strategy will include:

- Establishing a package of tailored support measures to digital start-up's
- Development of the Inc60 model for developing the digital sector network and knowledge transfer
- Creating a Digital Mayo Pass for access to incubation or enterprise space in the county
- Conference production on at least one area of innovation or digital in the Natural Resources Economy
- Establishment of Digital Mayo Forum and supporting Digital Champions

Driver Projects

There are a few driver or breakthrough projects that have the capacity to reposition Mayo on the digital map. These projects, if delivered in full and on time, will provide Mayo with an opportunity to attract FDI enterprises in the digital sector that it has, to date, not been able to seriously compete for. They will also make Mayo a location for entrepreneurs to come and start new ventures and test their new technologies as well as provide more clustering opportunities for home grown tech enterprises. In short the driver projects contained in the Digital Mayo strategy are designed to place Mayo in the top tier of digitally enabled and dynamic locations where investment and employment in the sector are happening routinely.

Some of the key Driver Projects contained in Digital Mayo include:

- Transatlantic Fibre cable project
- Assembly of 'Big data' Centre Masterplan with viable market proposition
- Key infrastructure programme – broadband backbone; G4 network coverage, fibre rings and fibre towns rollout, open and connected public spaces (everywhere!) wifi hotspots

Key Strategy Themes

Section 5 of this document sets out and details the strategy framework and the four key themes of Digital Mayo. The four Key Themes are:

KT1: Promoting and inclusive and progressive Digital Society in Mayo
KT2: Nurturing digital talent and supporting tech based start-up's and supporting SME's to go digital
KT3: Digital Investment & Infrastructure
KT4: Selling Mayo as the Centre for Innovation in the NRE – *tech solutions for non-tech sectors*

Each of these key themes are conceived and designed to embody a set of related activity that can be managed and promoted in a cluster approach and to separate target groups. While this element of subdivision and sub text to the strategy is there to support management and communication objectives it is not to detract from the significant element of cross over and synergy between all four key themes. All of the key themes have an interrelationship with eachother to a greater or lesser degree in that no one theme would stand alone as a strategy in its own right and therefore each will depend upon the other key themes being progressed.

Each of the Digital Mayo strategy actions are presented below grouped into their respective Key Theme.

Key Theme 1: **Promoting an inclusive and progressive Digital Society in Mayo**		
Ref	**Action Item**	**Summary Description**
KT1:1	***Digital Learning & Skills***	Promoting digital literacy through formal and informal learning at a community and workplace level
KT1:2	***Digital Futures Forum & Digital Champions***	Establish a *Digital Futures Forum & Digital Champions* to help communities utilise and exploit digital tools
KT1:3	***Digital Discovery***	*Digital Discovery* for kids through coder dojo and other community focused events
KT1:4	***Adopting National & EU Best Practice***	Adopt best practice and supports from the National Digital Strategy (NDS) and Digital Agenda for Europe
KT1:5	***Digitising Public Services***	Mayo leading in the Digitisation of public services

Key Theme 2: **Nurturing digital talent and supporting tech based start-up's and supporting SME's to go digital**		
Ref	**Action Item**	**Summary Description**
KT2:1	***Digital/Entrepreneurial Talent Spotting***	Digital and technology talent spotting through proactive engagement with the sector.
KT2:2	***Digital Start-up Support***	A Simple & Slick start-up support package for digital sector entrepreneurs.
KT2:3	***Wild Enterprise Way***	Access to business incubation or enterprise space across the county in a flexible and easy manner 'Digital Mayo Pass'
KT2:4	***Start-up & Growth Finance***	Access to start-up and growth finance for HPSU or scalable digital ventures through a number of channels and a new investment fund.
KT2:5	***Digital Events, Conferencing & Networking***	Building a profile of digital and technology related events and conferences in Mayo and expanding the network of digital entrepreneurs in Mayo.
KT2:6	***Encouraging SME's to go Digital***	Utilising existing resources and programmes to encouraging SME's to adopt digital and online tools, invest in innovation and implement ICT skills training for all staff.

Key Theme 3: **Digital Investment & Infrastructure**		
Ref	**Action Item**	**Summary Description**
KT3:1	***FDI primed and ready to go***	Ensuring key investment sites are available, accessible and serviced with key infrastructure including power and broadband.
KT3:2	***Digital infrastructure investment and development***	Continued progression of key digital infrastructure investment including: ▪ Fibre backbone along gas line from Erris and connecting key communities and urban areas, in or close to its path, with fibre spurs and metro fibre rings; ▪ Transatlantic fibre line implementation and connection; ▪ 4G (LTE) mobile network coverage to be discussed with all telecoms operators in the county; ▪ More urban locations and investment sites / zones implementing key fibre infrastructure such as the MAN rings and FTTB networks;
KT3:3	***Branding & Marketing for Digital Investment***	Drawing Digital Mayo into the wider suite of Mayo branding and marketing formats and strategies. In particular, incorporating Digital Mayo into the Mayo.ie platform alongside other key sectors and producing marketing profiles for inward investment marketing.
KT3:4	***Data centre location***	Implementation of the Data centre masterplan linking with the Emerald Express transatlantic fibre cable and the fibre backbone projects.

Key Theme 4: **Selling Mayo as a centre for innovation in the Natural Resources Economy (NRE) – *tech solutions for non tech sectors***		
Ref	**Action Item**	**Summary Description**
KT4:1	**Brand development for NRE**	Brand identity under Mayo.ie to be promoted to target sectors and technology players from FDI to solo entrepreneurs
KT4:2	**Conferencing & Knowledge Transfer**	Conferencing and knowledge transfer in key NRE growth fields
KT4:3	**Mayo NRE Observatory / R&D Centre**	Establish an observatory for NRE innovation and work towards a specific R&D / Centre of Excellence in the county

PROJECT PORTFOLIO