

# The 5G Effect

## Jobs, Skills, Business Opportunities

## Diverse & Inclusive



Our ask:  
Lead, inspire and  
add to your  
messaging the  
opportunities of a  
5G connected world





## Tay Cities Deal & Tay5G

### Skills & Sectors

- [Creative, digital & technology opportunities](#)
- [Enabling technologies for diverse sectors](#)
- [Telecoms Skills](#)
- [Autonomous Vehicles with 5G](#)
- [Smart Cities/Connected Communities](#)
- [Gaming, Virtual Reality & Augmented Reality](#)
- [Virtual Production](#)
- [Healthcare, Agritech, Industry](#)
- [5G-Enabled IoT Applications for Drones](#)
- [Sustainable Fashion & Textiles](#)
- [5G-Enabled Broadcasting](#)

### Diversity, Inclusivity

- [Diversity, Equalities, Inclusivity](#)
- [Scotland: Inclusive Jobs, Skills & Business – policy & challenges](#)
- [Diversity, Equalities, Inclusivity – why they matter](#)
- [DEI in creative, digital and tech](#)
- [Scotland: Economic & Inclusive Growth Policy Landscape](#)
- [UK: Economic & Inclusive Growth Policy & Challenges](#)

### What is 5G

- [5G Connectivity and applications](#)
- [5G transforms Mobile Services](#)
- [What can 5G support?](#)
- [Evolution of Mobile Networks – 3G, 4G and 5G](#)
- [Global economic potential of 5G enabled technology](#)

### Skills & SMEs Opportunities & Support - Examples

- [Diverse and Inclusive Work and Business](#)
- [UK: Digital Economy Skills](#)
- [Scotland: Digital Economy Skills Action Plan](#)
- [Tay Cities Region – Skills & Employability](#)
- [SMEs - Business Growth & Competitiveness Strategies](#)
- [SMEs - Business & Sector Support – National/Regional](#)
- [Global SME Opportunities](#)
- [Scotland and UK: SME Opportunities-Public Procurement](#)

# Tay Cities Deal & Tay5G

Tay Cities Deal is a programme of strategic, economic and social development projects for Tay Cities Region. This brings together the Councils of Angus, Dundee, Fife and Perth & Kinross and diverse public, academic and private sector partners.

Tay5G is a programme of trials and adoption of diverse applications supported by 5G (fifth generation) mobile connectivity. 5G is not 'just faster 4G'. Its much higher performance and efficiency empower new user experiences and connect new industries. The project is working closely with the Scotland 5G Centre, a national centre funded by the Scottish Government. Use case trials include those for sustainable fashion and textiles, connected communities/smart cities, agritech, broadcasting, virtual screen production, eSports and drones for search & rescue and offshore services. Tay5G is also collaborating with the Tay Cities Deal DigiTay Skills Programme.

**Inclusive Growth is a key focus across jobs, skills and business for individuals and SMEs.** We welcome collaboration and discussion with a wide range of organisations across Scotland and the UK to raise awareness of opportunities and benefits for diverse client groups and networks. Later in the year, we are looking to do an online session to explore this further.



Scottish Government  
Riaghaltas na h-Alba  
gov.scot





# 5G connectivity and applications for many sectors need diverse skills and services to support service delivery, training, marketing, R&D, manufacturing, media production and more

The emergence of fifth-generation mobile communication technology, 5G, is revolutionising industrial, public service and commercial landscapes, presenting unparalleled opportunities. As deployment progresses, the potential for a faster, high-capacity, and low-latency wireless connection opens the door to transformative applications for service delivery, marketing, training, manufacturing and media production.

This is generating growing need for skills and services across telecoms, creative, digital and technology and diverse sectors like fashion, energy, entertainment, construction, connected communities, agriculture and healthcare. These offer significant scope for public and private sectors to embrace **diversity, inclusivity and equality**.

We invite you to take a look at more about 5G and just some of the jobs, skills and business opportunities. Going forward we will highlight findings on approaches to development including collaboration by SMEs.



# Diversity, Equalities, Inclusivity

**Diversity** is any dimension that can be used to distinguish groups and people from one another. It is about the range of people in any context including study, work and business.



**Inclusion** means everyone can access the same opportunities to study, work and do business and feels valued, respected and safe.



*'Diversity is being invited to the party; inclusion is being asked to dance.'*

Verna Myers, Diversity and Inclusion Consultant

EHRC: *'It is against the law to discriminate against someone because of a protected characteristic. The nine protected characteristics are: **age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation.**'*

# Scotland: Inclusive Jobs, Skills & Business – policy & challenges

Tay5G's approach to Inclusive Growth is informed by many sources and the excellent work so many public and private sector organisations are doing in this field. As just a few examples:

Scottish Government policy says Inclusive Growth *'combines increased prosperity with greater equity; that creates opportunities for all; and distributes the dividends of increased prosperity fairly'*.

The Digital Economy Skills Action Plan published by **Skills Development Scotland** states that industry has called for a *'framework for urgent and radical action to address our digital economy skills challenge and to help realise the enormous potential of Scotland's digital economy as a strategic enabler of growth'*.

Scotland's National Strategy for Economic Transformation says: A wellbeing economy, based on the principles of prosperity, equality, sustainability, and resilience, is at the heart of our vision for the economy in 2032.

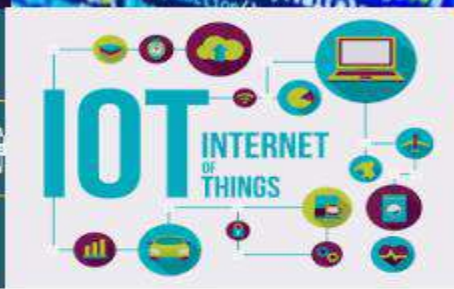
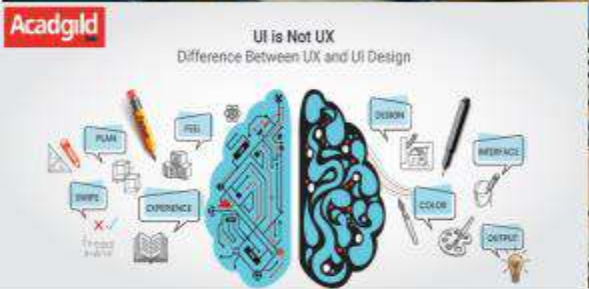
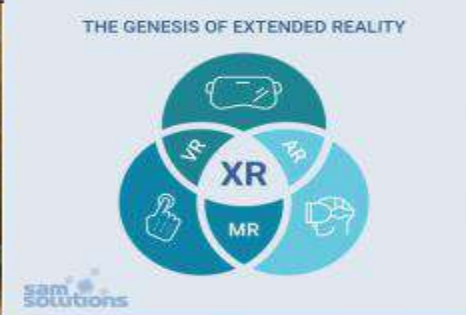
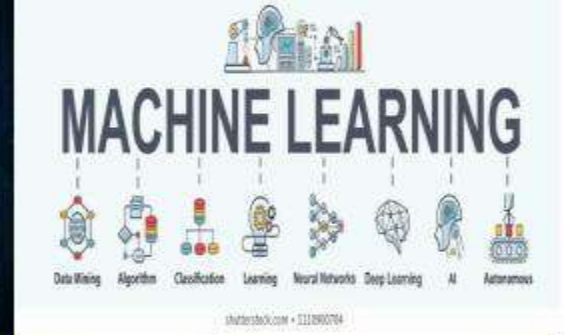
According to **Scotland IS**: *'Diversity in the tech sector has long been recognised as a challenge but despite widespread recognition of the issue we are still a long way from resolving it. Gender balance in particular is still a major problem with women only accounting for 23% of the workforce in digital technologies roles.'*

Scotland IS Report.

**Equate Scotland**, an initiative for women in technology reported: *'Currently, it's estimated that only 23% of the tech sector are women, which means 77% of tech roles in Scotland are taken up by men. While there isn't any data pointing to the racial diversity of Scotland's tech industry, in 2018 only 15% of the UK tech sector was made up of people from BAME (Black, Asian, Minority, Ethnic) backgrounds.'*



# Creative, digital & technology opportunities





# Diversity, Equalities, Inclusivity (DEI) – why they matter

A report on Diversity in the tech industry by careers advisory service Prospects says: *'The UK's innovative and fast-growing technology sector has overcome a number of challenges, yet ensuring diversity in the tech workforce is key to its long-term success'.*

In Diversity wins-How inclusion matters, McKinsey & Company explored the connection between a company's business success and its approach to diversity, equality and inclusion. They found that organisations ensuring a greater diversity in their workforce were more likely to perform better when it comes to long-term profitability.

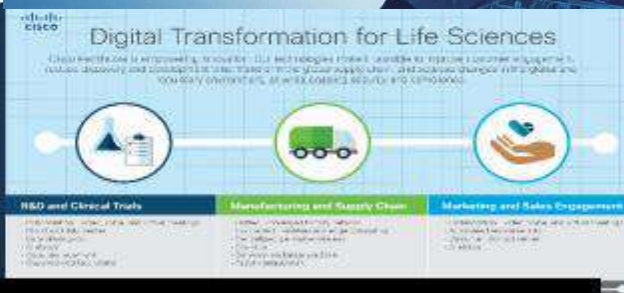
*Gemma Edgar, digital marketing manager at Diversity in Tech, agrees that having a diverse workforce drives innovation, with businesses across the world seeing financial gain as well as improved employee satisfaction and retention as a result of improving their diversity metrics.'*

Given that consumers and users of services and products are highly diverse, it is vital that the workforce delivering these should be equally diverse. On top of that, skills shortages mean that all groups should be tapped for talent.

A report by the Financial Times said: *'Technology experts are in short supply everywhere but in America in particular the situation is acute, affecting tech businesses and those companies in other sectors that rely on an IT function'.*

For Fifth Generation technologies the pace of change is ahead of skills development, meaning continuous upskilling and reskilling are vital. Emerging and evolving technologies such as AI, data analytics, immersive, virtual production and cybersecurity are driving demand for talent and offer jobs and business opportunities for SMEs. Fully embracing these will help to support a resilient and inclusive economy in a vibrant technology ecosystem.

# Enabling technologies for diverse sectors



Architecture  
Automotive  
Biotech  
Construction  
Design  
Energy  
Fashion  
Finance  
Food & Drink  
Healthcare  
Life Sciences  
Manufacturing  
Marketing  
Tourism



# DEI in creative, digital and tech

## Report on Diversity in the tech industry

### PROSPECTS

#### Gender

A Tech Nation report on diversity and inclusion in UK tech companies highlighted the current gender imbalance with only a fifth (19%) of tech workers being women despite being half (49%) of UK workers.

#### Sexual orientation

A study by The Institution of Engineering and Technology (IET) found that almost a third of young LGBTQ+ people avoided careers in STEM subjects due to fears about discrimination.

#### Ethnicity

Tech Nation's report found that people from ethnic minority groups make up a larger share of the technology workforce (15.2%) than they do across the wider UK workforce (11.8%). However, less than a tenth of senior tech leaders are from ethnic minority groups.

#### Social mobility

BCS, The Chartered Institute for IT analysed social mobility in its [\*Moving On Up\*](#) report. It found that the IT profession presents opportunities for social mobility and young people from less advantaged backgrounds would find IT career paths more accessible than other professions such as law and medicine.

#### Disability

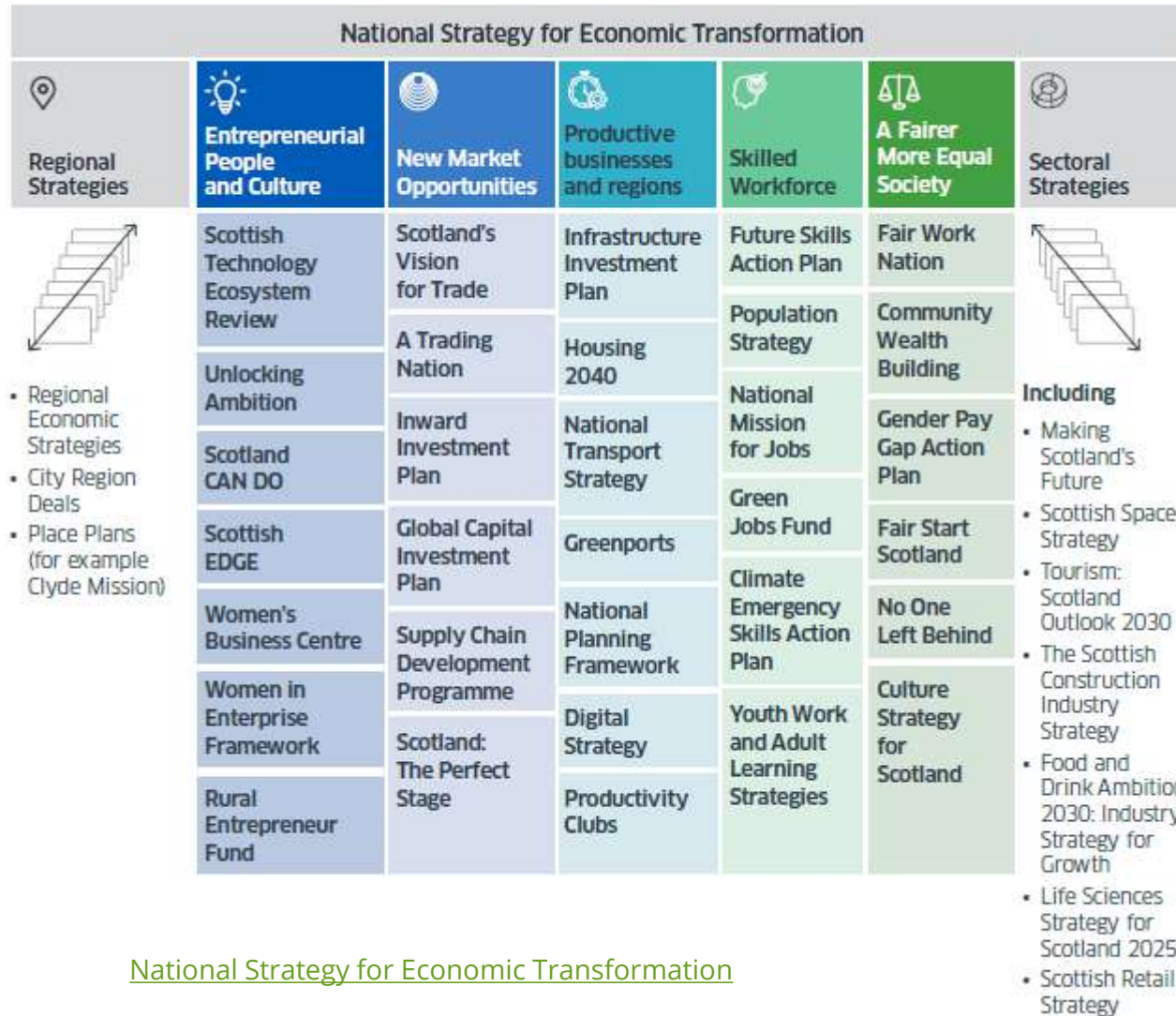
A fifth (19%) of the UK working population has a disability but techUK revealed that IT specialists with a disability were only a tenth (9%) of workers. Tech Nation's *People and skills report 2022* showed opportunities hit a ten-year high, with 870,000 tech and digital jobs available over Jan-May 2022. But with just 54% of disabled people in the UK in work (Office for National Statistics, Jan-Mar 2023), showing a disability employment gap to fill, especially in tech sectors.

Skills  
Development  
Scotland

*'With the widespread adoption of digital technologies across the whole economy, there is an urgent need to rapidly accelerate a more diverse range of talent entering tech roles from across the UK and abroad to fill the 15,600 vacancies per annum. This will address and narrow existing labour market inequalities. Achieving greater diversity in the digital economy workforce will address the 'lost opportunity risk' by harnessing the skills and talent of a diverse range of individuals who are currently under-represented in the workforce. This will improve the inclusiveness of technological developments and contribute to mitigating skills shortages.'*

# Scotland: Economic & Inclusive Growth Policy Landscape

Figure 2: Alignment with Existing Plans



Scottish Government  
Riaghaltas na h-Alba  
gov.scot

## Equality, Inclusion and Human Rights Directorate

Its purpose is to ensure equalities, inclusion and human rights are at the centre of everything... supporting the Scottish Government to achieve key outcomes in the National Performance Framework.



**SHRED**

Scottish Hub For Regional Economic Development

An interactive platform for collaboration with stakeholders to strengthen shared ability to develop regional economic development, with a focus on achieving this in an inclusive....way.



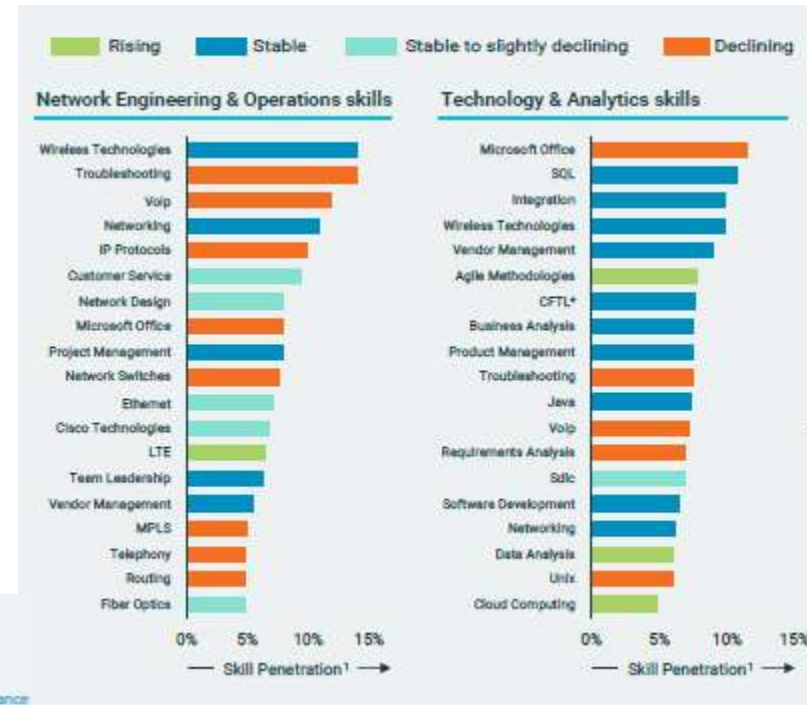
# Telecoms Skills

## Report: What telecoms need to build a future-ready workforce

*'The telecommunications industry is experiencing a period of mass transformation. Telecoms need to act now to build a future-ready workforce.'*

Moreover, innovation trends are increasing the need for new skills and capabilities

	5G and IoT	Cloud and Edge Computing	Big Data & AI	SDN and SASE	Open RAN
Use-cases	<ul style="list-style-type: none"> <li>Broadband-like mobile service</li> <li>Low latency and high network capacity</li> <li>Smart traffic mobility and grid-automation</li> <li>Expanded industrial IoT</li> </ul>	<ul style="list-style-type: none"> <li>Network automation and management</li> <li>Highly scalable and flexible infrastructure</li> <li>Faster time-to-market</li> <li>Targeted consumer experiences and solutions</li> </ul>	<ul style="list-style-type: none"> <li>Virtual assistants for customer support</li> <li>Preventive maintenance</li> <li>Network optimization</li> <li>Recommendation engines</li> </ul>	<ul style="list-style-type: none"> <li>Efficient, smarter network management</li> <li>Dynamic WAN reroutes</li> <li>Stronger security posture</li> <li>Reduced time-to-market for new products</li> </ul>	<ul style="list-style-type: none"> <li>Flexibility, choice, uniformity and agility in RANs</li> <li>Lower TCO of networks</li> <li>Resource sharing</li> <li>Traffic steering</li> </ul>
Key Skills	<ul style="list-style-type: none"> <li>Network slicing</li> <li>Massive MIMO</li> <li>NFV<sup>2</sup></li> <li>Node.js</li> <li>Near field communication</li> <li>Small cells</li> </ul>	<ul style="list-style-type: none"> <li>Cloud computing</li> <li>Virtualization</li> <li>AWS</li> <li>VMware</li> <li>Edge computing</li> <li>Fog computing</li> </ul>	<ul style="list-style-type: none"> <li>Python</li> <li>TensorFlow</li> <li>Data mining</li> <li>Hadoop</li> <li>Machine learning</li> <li>Deep learning</li> <li>NLP</li> </ul>	<ul style="list-style-type: none"> <li>SD-WAN</li> <li>Network virtualization</li> <li>Network automation</li> <li>Kubernetes</li> <li>DevOps</li> <li>Cyber security</li> <li>DevSecOps</li> </ul>	<ul style="list-style-type: none"> <li>C-RAN</li> <li>CI/CD practices</li> <li>vRAN</li> <li>Interoperability</li> <li>OpenStack</li> </ul>
Talent Readiness <sup>1</sup>					



## Tech UK Industry Views

*'Intentions are not enough – we need progress in telecoms now'*

*"The hard truth of the matter is that companies often take the easy route rather than the most effective. The problem appears too large, too complicated and too ingrained. We have proven that if you step outside the norm and challenge the status quo you can find solutions that result in a happy, successful, diverse workforce. A workforce that gives you a competitive edge.'*

# UK: Economic & Inclusive Growth Policy & Challenges



## The State of the UK Economy 2024

There is "need for a longer-term, joined up approach in policy areas ranging from education to public services to artificial intelligence.....Economics is not, and should not be, separate from broader social policy concerns. There is no conflict between strategies to ranging from education to tax to regional policy, they are complementary. The UK can be both a more prosperous and a fairer society".



## Ending Stagnation A New Economic Strategy for Britain

"What are the key characteristics of a serious strategy? We suggest five principal requirements.

1. Clear objectives: a strategy must be clear about the problem it is trying to solve, which in our context means the stagnation driven by those two underlying problems of low growth and high inequality. The corresponding prize is stronger, sustainable and inclusive growth."



The new UK Digital Strategy launched in 2022 "brings cross-government tech and digital policies together in one unified roadmap for ensuring digital technology, infrastructure and data drives economic growth and innovation in the coming years. The plan will lead to new jobs, skills and services that benefit and level up the whole of the UK".

*'The new strategy will build on these successes to grow a more innovative, inclusive and competitive digital economy which generates more highly skilled jobs and better choice for consumers across the UK.'*



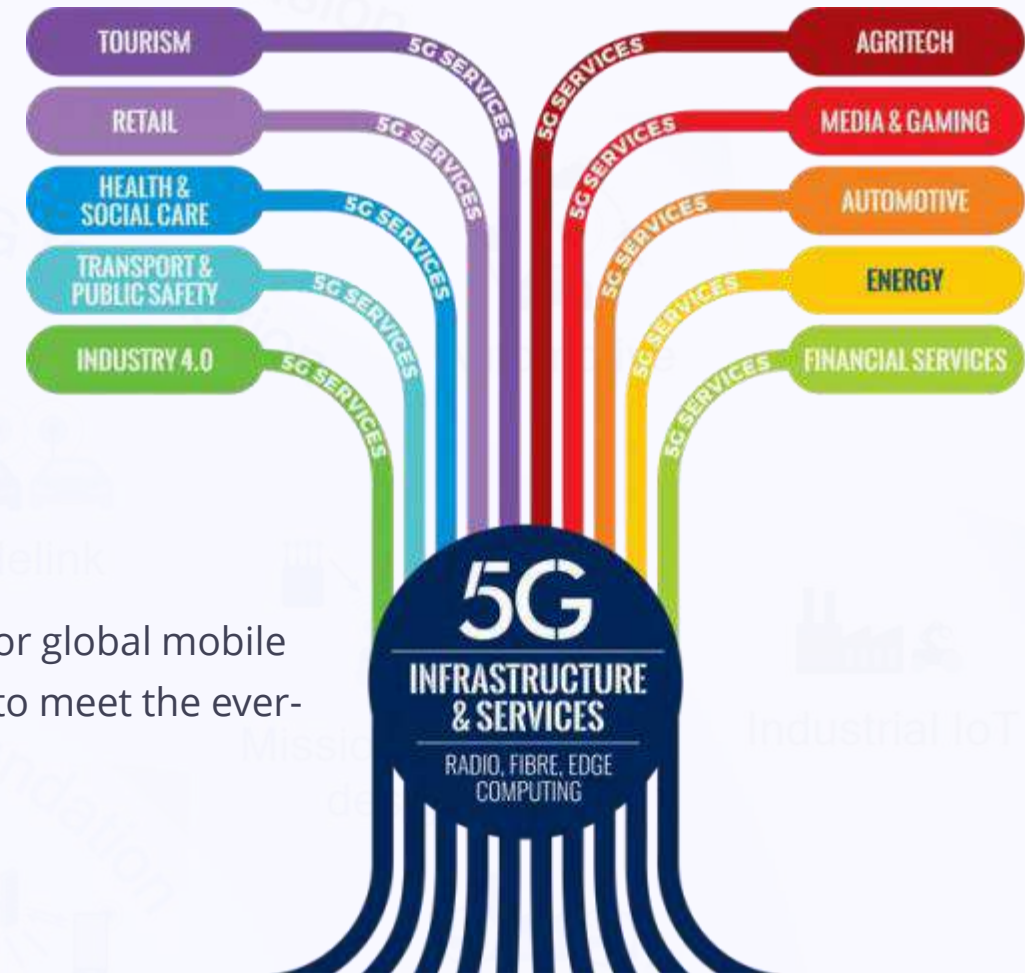
# 5G Transforms Mobile Services

## Broadband-Equivalent Mobility

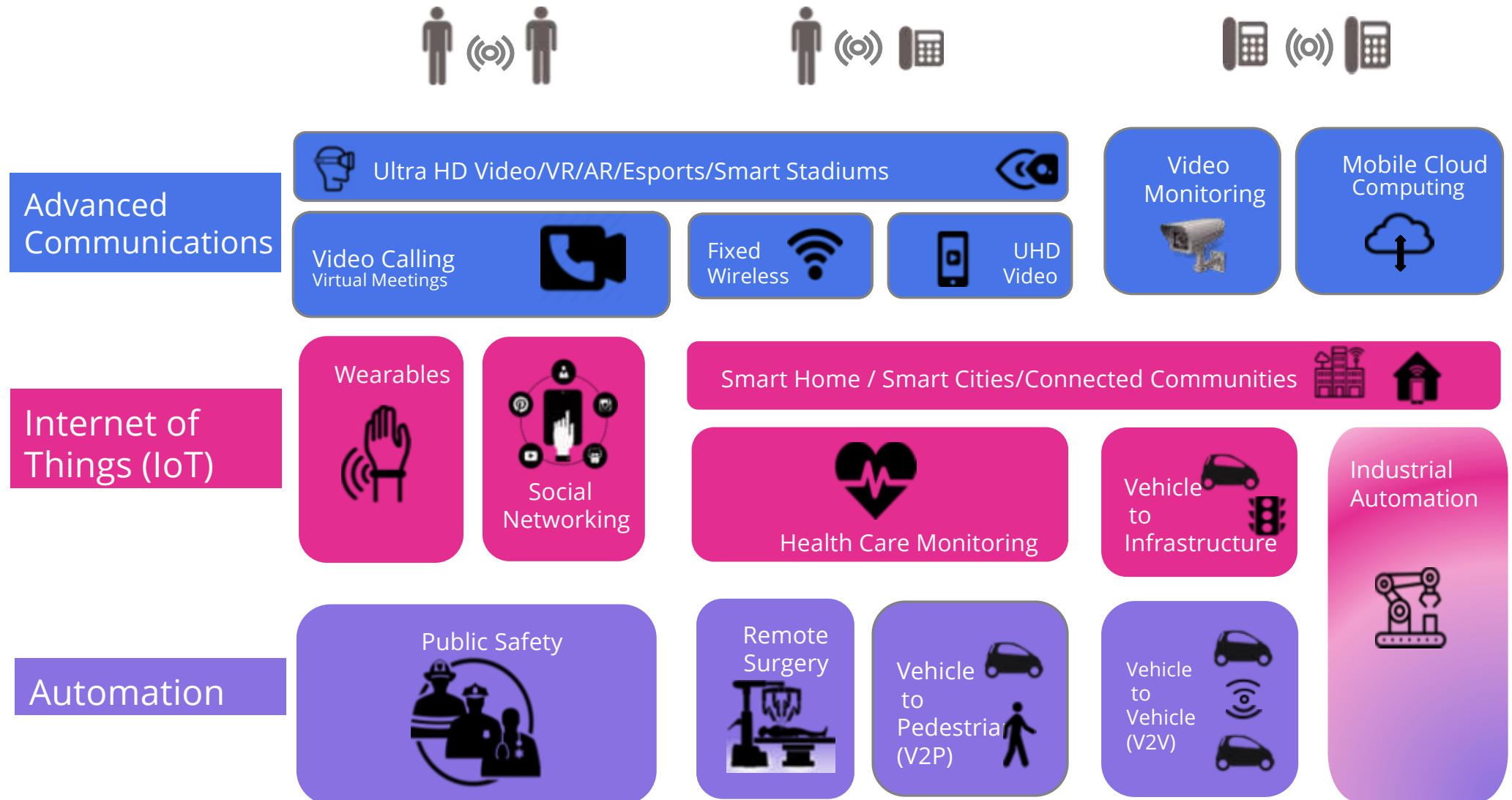
- 1 5G revolutionises mobile services, equipping users with seamless, high-speed connectivity comparable to traditional broadband, unleashing new possibilities for uninterrupted, high-definition mobile content streaming.

## Efficient Network Deployment

- 2 The widespread adoption of 5G establishes a robust foundation for global mobile service providers, enabling scalable, high-performance networks to meet the ever-growing bandwidth and connectivity demands of users.

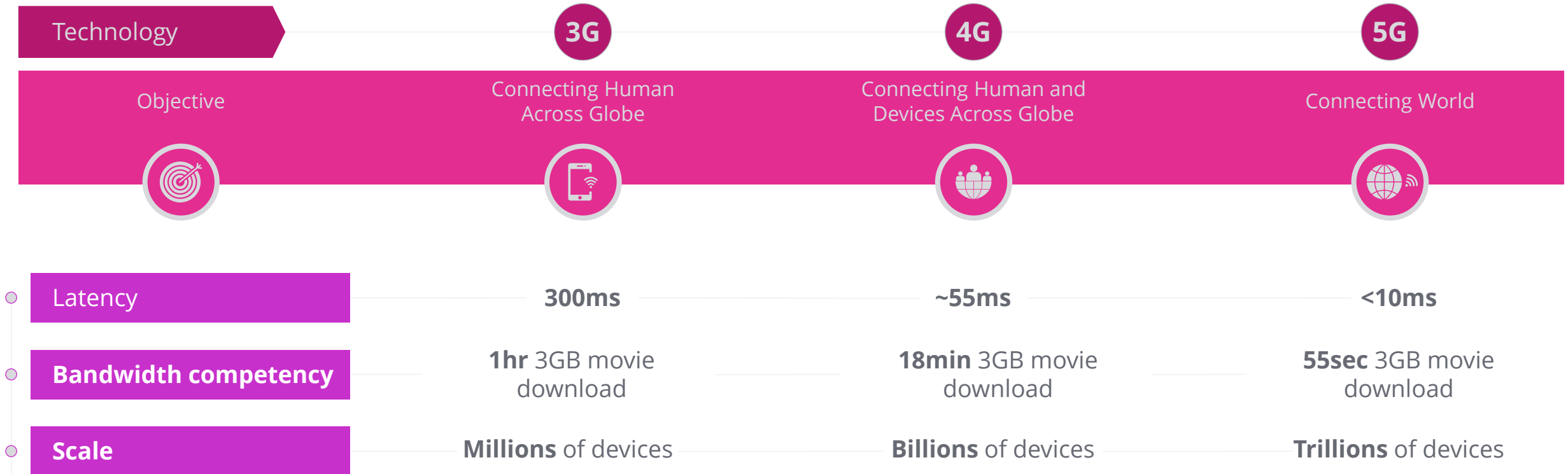


# What can 5G support?





# Evolution of Mobile Networks – 3G, 4G and 5G

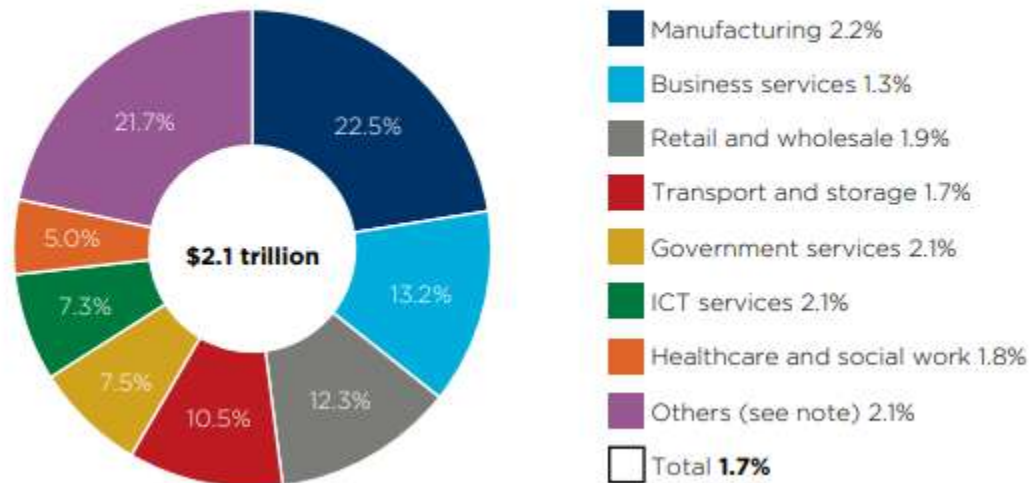


- 36 spectrum bands for 5G A approved for – sub-1GHz; 1GHz to 6Hz; and above 24GHz bands
- Approved spectrum bands are globally recognized as 5G spectrum and allow operators to revamp existing 2G/3G/4G spectrum

# Global economic potential of 5G enabled technology

**“5G ROLLOUT.....PROJECTED TO BOOST GLOBAL GDP IN 2030 BY \$1.3 TRILLION”**

**Sectoral distribution of global productivity-enabled GDP gains from full 5G rollout in 2030**







## Autonomous Vehicles with 5G



# Smart Cities/Connected Communities

## Digital Twins

A digital twin is a computer programme that uses real world data to create simulations that can predict how a place, product or process will perform.



## Enhanced Data Utilisation

5G's rapid data transfer capabilities enable AI systems to process vast amounts of information, powering intelligent solutions for real-time decision-making and predictive analysis.

Tay5G Smart Cities is led by SME, [Digiflec](#) and is trialling traffic management at the Tay Road Bridge and Dundee City Centre. This involves the use of technology including sensors, cameras, LIDAR and Digital Twins.

[Catch the free webinar on 28<sup>th</sup> February 2024.](#)

## Smart Places

Internet of Things (IoT) is fundamental to enabling smart, connected communities. Devices are used for monitoring and send massive data to the cloud to inform and optimise management of buildings and places. 5G networks enable seamless connectivity for artificial intelligence driven IoT devices.



# Gaming, Virtual Reality & Augmented Reality

## Immersive Gaming

5G propels gaming to new heights, with ultra-low latency and high computing capacities for a breathtaking and seamless experience.

## eSports and Events

5G supports events at both arenas and diverse locations beyond without the expense and time for extensive cabling.

## Real-Time Interactive

Virtual, Augmented and Extended Reality capitalise on 5G's speed, capacity and low latency to deliver in real-time technical analysis, information and immersive experiences for entertainment, information, industrial and other applications.

Tay5G eSports was led by SMEs [Esports Scotland](#) and Northern Lights Arena and delivered a 4 day eSports competition at Dundee's DCA, It also [showcased plans for a new arena at Dundee's waterfront.](#)







# Virtual Production

Tay5G Virtual Production is led by Abertay University. In a first for the UK film industry, a test sequence used 5G to connect industry quality digital backdrop screens in studios in Dundee and Manchester, allowing two actors to be filmed against the same virtual environment.

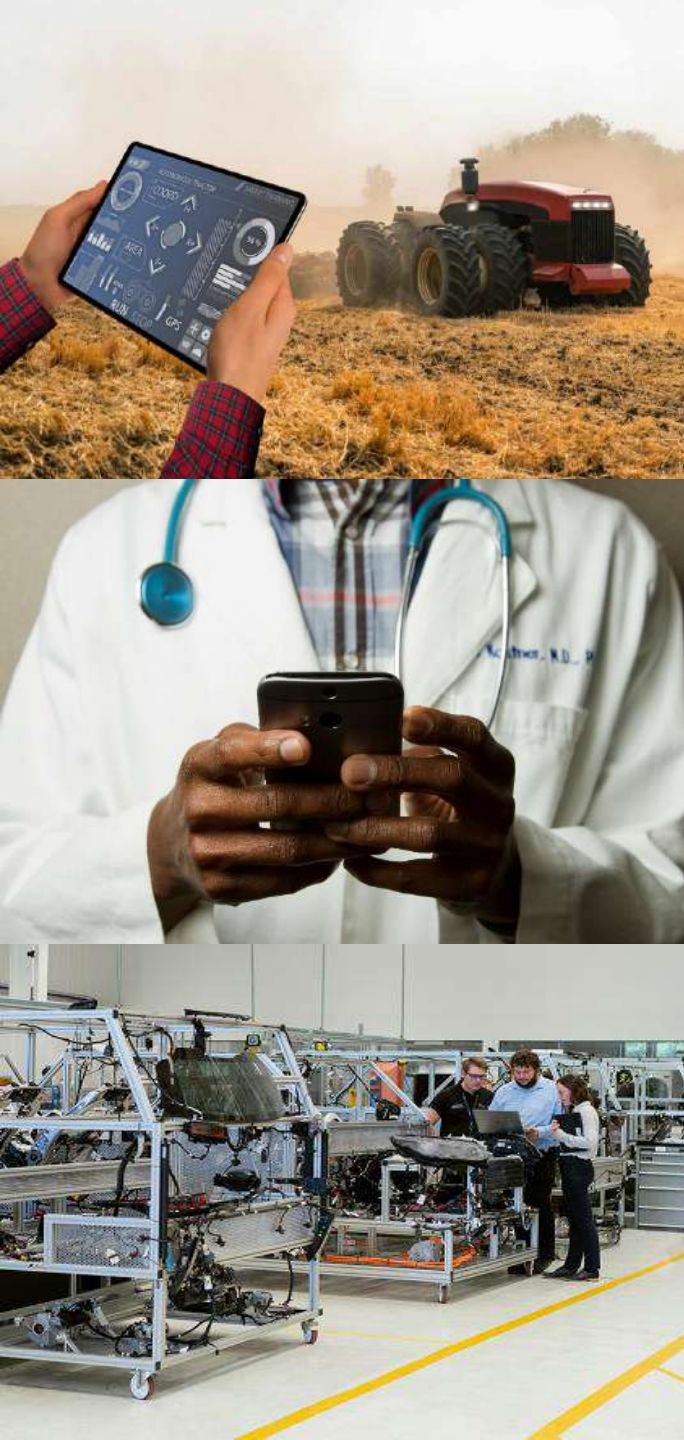
Virtual Production is a new cinematography technique that uses computer-generated imagery (CGI), high-definition LED screens and motion capture to create virtual sets, allowing filmmakers and theatre directors to create large-scale digitally generated environments for real-time interaction. It's also a more effective alternative to greenscreen.

The production involved InGAME (Innovation for Games and Media Enterprise); VSS (Video Screen Services); Space Digital; StoryFutures; Royal Holloway, University of London; telecoms company AWTG and the Scotland 5G Centre.

Abertay is now the lead in Scotland for the UK government supported, £80m [CoSTAR Virtual Production programme](#).  
[Watch the behind the scenes video on Youtube.](#)



# Healthcare, Agritech, Industry



## Healthcare

5G facilitates prompt doctor-patient connectivity and enables IoT wearables to proactively alert medical professionals, promising a transformative shift in patient care. The technology also enhances remote monitoring and helps facilitate remote surgery and precise data-driven diagnoses.

## Agriculture

With 5G-enabled IoT sensors, the agricultural industry gains invaluable insights into crop health, irrigation needs and pest control driving sustainability and efficiency.

Tay5G Agritech is led by the commercial arm of the renowned [James Hutton Institute](#) and delivering trials on remote monitoring of crops and operation of automated tractors. We'll have video and more information soon.

## Industry and Manufacturing

5G, combined with AI and IoT is a catalyst for significant improvements in logistics, manufacturing, and retail through streamlined operations, inventory management, and advanced predictive analytics to deliver competitive advantages.

# 5G-Enabled IoT Applications for Drones

## Enhanced Surveillance Capabilities

5G networks eliminates range limitations for drones allowing them to be flown beyond visual line of sight and enabling real-time data transfer and access to expertise and immersive information to support industrial, healthcare and other processes.

## Seamless Connectivity

5G empowers drones with expansive range, high-resolution imaging, and ultra-low latency connectivity for security surveillance, logistics management, and aerial data acquisition.

Tay5G Drones Search & Rescue and Offshore Services are led by SMEs, [Jet Engineering System Solutions](#) and [DTLX](#). 5G enables drones to be flown beyond visual line of sight. Drones can also deliver heavy equipment including '5G in a box' so people at a remote location can connect with expertise and video or VR guidance on technical processes. Trials are being conducted between March and May. We'll have video and more information soon.





# Sustainable Fashion & Textiles

*'More realistic augmented reality experiences, seamless video streaming, faster online transactions and more specific location information are all set to improve as more countries become 5G enabled...'*

## VOGUE BUSINESS

*'This potential to boost digital communication for fashion brands comes at a time when connecting with customers via new technologies is increasingly important, says Neil Saunders, managing director of GlobalData. For fashion brands, investing in mobile tools has proven a lifeline to customers hoping to engage with brands digitally, either through online clienteling and shopping or omnichannel technologies such as click-and-collect or contactless checkout.'*

Tay5G Fashion is led by fashion and textiles organisation, [Scotland Re:Design](#). This has seen delivery of Hidden Floors, a 5G enabled fashion show at V&A Dundee Museum of Design that was also livestreamed to an audience beyond. A competition was run to select a group of designers so they could use 5G and design technology to develop designs. In future, customers can try digitally before ordering and manufacture, so reducing products going to landfill. There's an installation at the museum where you can take a look. Want to know more? [The Scotland 5G Centre takes up the story](#).



# 5G-Enabled Broadcasting

Traditionally, media broadcast cameras deployed to cover major sporting, cultural, news gathering, and entertainment events are either hard-wired or use dedicated wireless unidirectional RF radio channels to transmit video footage to the production desk. However, with advancement in video resolution to HD and UHD formats and increasing requirements for low latency video transfer and bi-directional camera control, private 5G-enabled broadcast connectivity is showing how it can enable new and more creative production workflows and operational benefits for broadcasters and other stakeholders.

Tay5G Broadcast is led by Scottish multi-award winning 5G radio company, [Neutral Wireless](#), and is delivered alongside outside broadcast and remote production partner, [QTV](#). Previous 5G-enabled broadcast successes include televising the final departure of HM Queen Elizabeth II from Scottish soil, the coronation of HM King Charles III in London, as well as several 5G-enabled live broadcasts from Kenya, New Zealand, The Netherlands, and Ireland. Under the Tay5G Challenge Fund, 5G-enabled bi-directional camera control is being showcased at football sporting events in Tay Cities Region to support live broadcasts and video assisted refereeing (VAR). Further details will be provided soon on this use case, but in the meantime, check out this video from the recent IBC global media industry event – showcasing “[5G-enabled broadcast from the middle of nowhere](#)”.



# Diverse and Inclusive Work and Business



## Building inclusive workplaces

Chartered Institute of Personnel and Development

*'Research links inclusion with employee satisfaction, creativity and reduced absenteeism, meaning that employees and employers stand to gain by being more inclusive. To do this, organisations need to take targeted action as part of their D&I strategies, recognising that inclusion is relevant to everyone in the business. Indeed, research suggests that there are five areas where action needs to be taken - employee behaviour, line manager capability, senior leadership, policies and wider people management practices, organisational culture, climate and values.'*

*Organisations must consider the broader picture; inclusion is more than simply 'including' diversity – it is about individual experience and work, and creating a positive environment in which everyone can influence, share knowledge and have their perspectives valued.*

***Tapping into all employees' knowledge and perspectives can only help business make better decisions and understand their customers – both of which are vital for businesses to continue to thrive and innovate into the future.'***

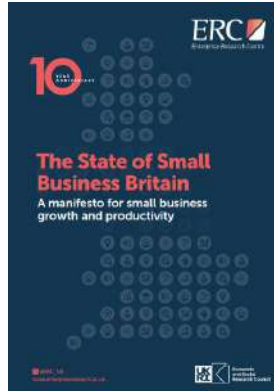
## The State of Small Business Britain

A manifesto for small business growth and productivity

Economic and Social Research Council

This looks at areas including Growth, the Small Business Ecosystem, Innovation, Leadership and Internationalisation.

*'The evidence...shows that the current financial and business support system...does not reflect the diversity of the entrepreneurial experience. Although entrepreneurs from underserved groups often demonstrate remarkable resilience, they deserve a system that better suits their needs. Our research highlights marked variation in the way that different kinds of entrepreneurs are currently engaged by existing support services and networks and indicates that there is a need for change and the creation of more and targeted forms of support from specialists who understand the specific challenges different groups face, tailored to local circumstances. This isn't about leaving mainstream support the same and providing small new niche programmes but re-orienting the ecosystem to recognise the diverse needs of the small business community across the entire entrepreneurial journey, from intention to scale-up.'*



# UK: Digital Economy Skills

## Convening private sector partners to fuel our digital skills base and upskill our workforce

“DCMS is launching the Digital Skills Council, which will work closely with powerful private sector partners to address some of the specific challenges.... The council will encourage employers to:

- Invest in employer-led digital upskilling of the existing workforce....
- Inspire the next generation to see digital and tech as an essential career path into a broad range of careers....
- Include a more diverse range of candidates in industry's vision of the digital workforce. DCMS will work with industry to **promote diverse and inclusive recruitment and retention practices** within the industry, and ensure that people from a wide range of ethnic and socioeconomic backgrounds are encouraged into digital roles.”



## Digital skills and inclusion

*“We must also enable people in every part of society - irrespective of age, gender, physical ability, ethnicity, health conditions, or socio-economic status - to access the opportunities of the internet. If we don't do this, our citizens, businesses and public services cannot take full advantage of the transformational benefits of the digital revolution. And if we manage it, it will benefit society too. Our approach to delivering these objectives focuses on three strands:*

- 1. ensuring that we continue to tackle the root causes of digital exclusion and that everyone can increase their digital capability to make the most of the digital world*
- 2. developing the full range of digital skills that individuals and companies across the country need in an increasingly digital economy, and supporting people to up-skill and re-skill throughout their working lives.*
- 3. strong collaboration between the public, private and third sector to tackle the digital skills gap in a co-ordinated and coherent way, so the sum is greater than the parts and everyone everywhere has better access to the training they want.”*



# Scotland: Digital Economy Skills Action Plan

The Plan identifies notes **five thematic areas of opportunity** where the enhancement of digital economy skills will make an essential contribution to the ambitions of the Scottish Government's National Strategy for Economic Transformation:

- Supporting a Vibrant Technology Economy will Contribute to Economic Growth
- Supporting Growth in Emerging Sectors will Contribute to Scotland's Prosperity
- Increasing Scotland's Digital Maturity Will Lead to Increased Productivity Growth
- Supporting a Diverse Digital Economy will Contribute to Inclusive Growth
- Cross-sector Collaboration to Address the Climate Emergency



Agreed priority actions support inclusivity across individuals and SMEs:

- Create opportunities for all young people to develop critical digital economy skills which will support a high-growth, resilient, and inclusive Scottish economy
- Improve the evidence base of current and future digital economy skills needs to support the transition to a digital economy and increase the pace of economic growth
- Improve the digital leadership skills of small and medium sized organisations to enable more rapid scale-up and growth
- Ensure that more skills and employment opportunities contribute to a fairer, more inclusive, and diverse digital economy
- Rapidly increase the acquisition of critical digital economy skills through workforce development, upskilling, and reskilling

# Tay Cities Region – Skills & Employability

Some examples are:



DigiTay, is part of a £20 million investment under the Regional Skills and Employability Development Programme, funded by the Scottish Government. It is part of the Tay Cities strategy to create a smarter and fairer region and support inclusive economic growth.

Objectives are to:

- Understand and satisfy businesses' digital and data requirements
- Identify and plug digital skills gaps where they exist across the region
- Embed skills, supporting digital and data driven innovation
- Increase opportunities for specialist roles within digital and creative industries
- Create an unrivalled talent pool across the region



The Discover Work Service represents all employability support available in Dundee. They provide support to find work and for employers to find new employees and develop their existing workforce.



DYW is employer led and helps employers to connect with young people in schools and colleges across Scotland. Through DYW, employers provide inspirational opportunities for young people to help them understand and develop the skills they need to succeed.

# SMEs - Business Growth & Competitiveness Strategies

- **Innovation** - SMEs try to achieve returns on their knowledge base including their own investment in R&D
- **Technology** - innovative uses to reduce SME costs and increase productivity
- **Niche** - SMEs choose to become sophisticated global players in a targeted product or service
- **Network** - SMEs work and collaborate with other SMEs or large organisations to expand and diversify expertise and markets
- **Cluster** - SMEs locate at a hub or other focal point with others to capitalise on knowledge sharing and collaboration
- **Internationalisation** - SMEs exploit their strengths on global markets



**Collaborative Growth Programme** – ‘Challenging times require businesses to take innovative approaches to enable business growth. Collaborating may enable businesses to pivot, reduce risk, leverage additional knowledge and resources and be more successful and profitable. The programme offers funding to SME-led networks to support costs associated with facilitation, to scope out innovative collaborative projects with the potential to increase business competitiveness.’

Some models of public support for collaboration or cooperative working are:



**Co-operative Development Scotland** supports companies and community groups across Scotland that want to adopt employee ownership or co-operative business models.



‘Cluster Building - whether geographically focused within Scotland, or, as appropriate for certain sectors, spread across Scotland in various locations, allow us to build coherent attractors and focal points where success breeds success and which create maximum economic impact and opportunities for growth. Clusters attract inward investment, provide opportunities for local businesses and new business creation and attract talent which benefits from multiple employment options and limits risk.’



# SMEs - Business & Sector Support – National/Regional

Whilst this is not a review of all sources of skills and business support it is helpful to illustrate this with some further examples that include focus on digital and embrace inclusive growth.



TechScaler is a programme for creating, developing and scaling tech startups.



Regional agency for screen and digital supporting production and sector development



Business Gateway offers advice, professional resources and support to new and growing businesses



The CoSTAR national network will provide researchers, companies and institutions across the UK with infrastructure for world-class research and development in screen and performance technology.



ScreenSkills supports talent across the UK at every level, from new entrants to programmes for mid-career professionals and executives across the industry.



ALBA | CHRUTHACHAIL



The national agencies for screen and creative industries in Scotland.

# Global SME Opportunities

Business for Inclusive Growth (B4IG) is a partnership between the OECD and a global, CEO-led coalition of companies fighting against inequalities of income and opportunities. More and more people in all societies are being left behind, not able to benefit from the immense wealth created by globalisation and technology. In the context of the COVID-19 crisis, this fight against inequality is more necessary than ever. B4IG is united in helping to build stronger and more inclusive business models.

## BUILDING INCLUSIVE WORKPLACES

---

- > Jobs Strategy
- > OECD Employment Outlook: the Future of Work
- > Going Digital
- > All Hands In? Making Diversity Work for All

## STRENGTHENING INCLUSION IN COMPANY VALUE CHAINS & ECOSYSTEMS

---

- > International trade and balance of payments statistics
- > Making the Green Recovery Work for Jobs, Income and Growth

## DEVELOPING ADAPTED TOOLS TO MEASURE AND VALUE THE IMPACT OF INCLUSIVE BUSINESS

---

- > OECD Well-being Framework
- > Social Impact Investment Initiative
- > FDI Qualities Toolkit: Measuring the sustainable development impacts of investment
- > Measuring the impact of businesses on people's well-being and sustainability: Taking stock of existing frameworks and initiatives
- > Social Impact Investment: The Impact Imperative for Sustainable Development
- > Managing and measuring the impact of sustainable investments: A two-axes mapping

# Scotland and UK: SME Opportunities-Public Procurement



The first Public Procurement Strategy for Scotland provides a future high-level vision and roadmap for Scottish public procurement which all public sector bodies can align to and deliver against.



The new Procurement Act *"is expected to come into force October 2024 delivering lasting change...The Act establishes a new public procurement regime following the UK's exit from the EU...and will deliver simpler, more effective public sector procurement, and help SMEs secure a greater share of approximately £300bn of expenditure per year."*



This largely concerns the public sector market in England but is equally open to SMEs based in Scotland.



# Thank you for your time



The Scotland 5G Centre supports the delivery of advanced communication solutions to show businesses just how valuable 5G can be to their organisation and to the economy as a whole.

For more information go to:  
<https://scotland5gcentre.org>



Tay5G is led by Dundee City Council's creative, digital and technology team in cooperation with stakeholders including the Councils of Angus, Fife and Perth & Kinross, the Universities of Abertay, Dundee and St. Andrews, the Scottish Futures Trust and the Scotland 5G Centre .

To contact the Tay5G team:  
Email [tay5g@dundeecity.gov.uk](mailto:tay5g@dundeecity.gov.uk)  
Call +44 (0)182 432483

For more information go to:  
[www.tay5g.com](http://www.tay5g.com)