



Technology Connected

Impact of Covid-19 on the Welsh

Technology Industry

April 2020

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March 2020

1. Introduction

The technology sector within Wales is a thriving, innovative industry which is helping transform and enable society and the way people live, learn, work and play. There are approximately 4,000 technology businesses in Wales, employing an estimated 40,000 people and contributing £8.5bn (8.53%) towards Welsh turnover.¹

The technology sector in Wales was creating new jobs at a rate higher than anywhere else in the UK, with an 83% rise in employment since 2010, according to the Office for National Statistics.²

It is also key in attracting investment, with Welsh start-ups attracting nearly £115 million in investment between 2012 – 2018.³

It contributes a significant amount to the Welsh economy as well as being a creator of high-value high skilled jobs, making its continued success crucial to the successful delivery of the Welsh Government's Economic Action Plan, Employability Plan and recently published International Strategy. In the International Strategy, Wales is recognised as a world leader in cyber security and compound-semiconductors, both fundamental parts of the Welsh technology industry.

Technology is ubiquitous, and Wales has a vibrant, diverse technology industry from the dynamic new start-up through the clever indigenous SME to the global multinational, all creating, designing and developing technologies that are transforming and disrupting markets and sectors. Welsh technology truly has a global reach.

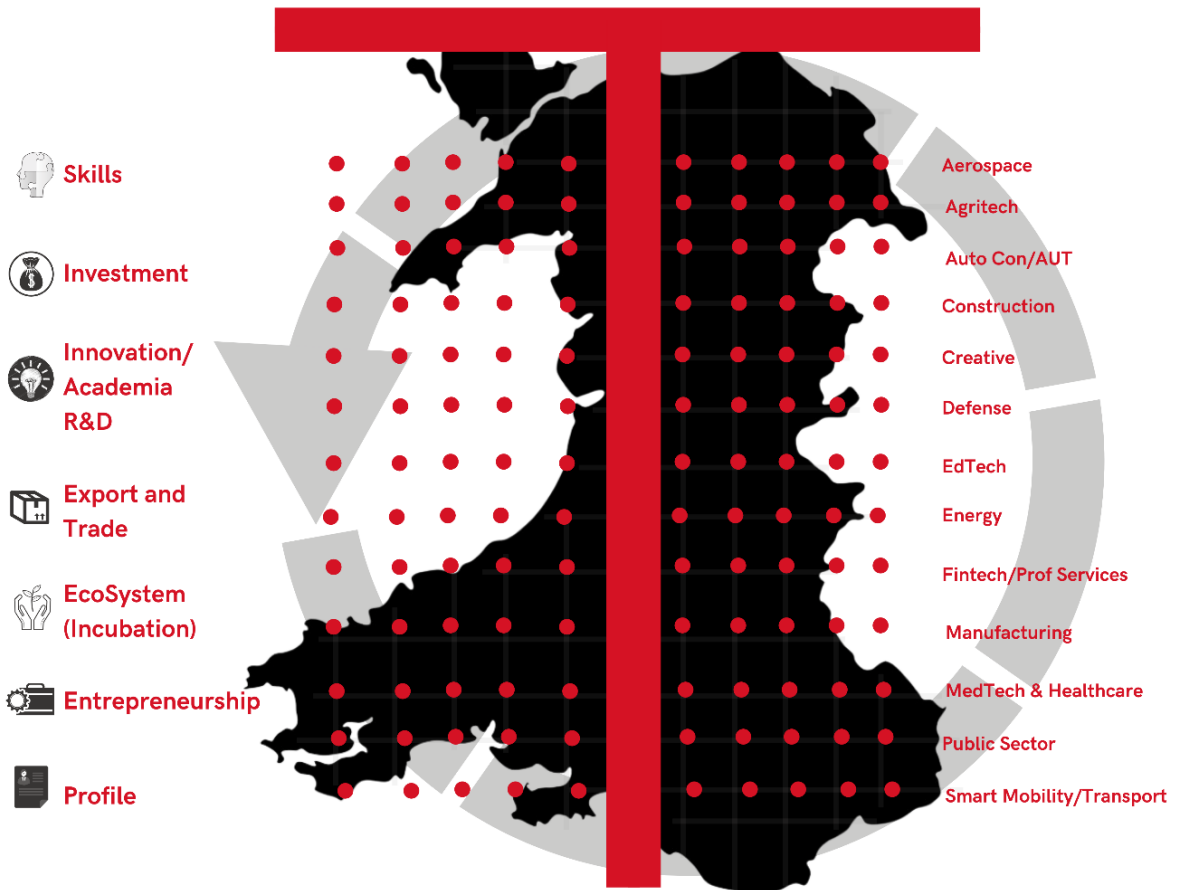
Whilst this global pandemic has created mass uncertainty and the “new norm” is unknown, one thing for sure is that the speed with which any organisation adopts new technology and its citizens adapt to living in a digitally enabled world, the better chance they will have of survival and weathering the storm.

From AI, automation and robotics, through blockchain and compound semiconductors to data and photonics, 5g and quantum computing et al - technology will drive the future. We will discuss opportunities for the “new norm in our next report “but in the meantime Wales must be clever and innovative in supporting and growing this industry. Time for baby steps has gone now is the time for a quantum leap.



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AI
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Automation/Robotics
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AR/VR
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Blockchain/Crypto
- 
Compound Semiconductors
- 
Cyber Security
- 
Data Science/Analytics
- 
Infrastructure & Connectivity / 5G
- 
IOT
- 
Software



An example of the breadth of the technology industry in Wales: Technology Connected

Technology Connected is the organisation which represents this important industry in Wales. As the go-to organisation for news, views, insight and connections, we unite the Welsh technology sector, promoting its impact and championing its needs.

Due to its contributions to the economy and profound impact to enable and transform markets and sectors, a successful technology industry is key to a successful Welsh economy. This makes support for the technology industry during this period fundamental to our future as a nation.

The impact of Covid-19 is being felt across all sectors and markets both within the UK and globally.

As the representative organisation for the technology industry in Wales, Technology Connected has conducted a series of qualitative interviews with technology leaders to assess the impact, challenges and opportunities of the global crisis on our industry.

This report aims to outline the current temperature of the technology industry in Wales (understanding it is changing daily) and provide insight on current and future issues and opportunities faced by the sector.

2. Executive Summary: Industry Barometer

The impact of Covid-19 is already being felt across the technology industry to varying levels, presenting both challenges and opportunities for businesses in Wales.

The general consensus across the industry is that the technology sector is uniquely positioned to be particularly adaptive to this disruption. This is due to many businesses already incorporating flexible and remote working policies among their workforce, having previously invested in or developed the required technology to do so efficiently.

In some cases, technology businesses have seen an uplift in customers, especially those providing remote working solutions or who produce technology for medical equipment.

There is a feeling among the technology industry that the Covid-19 pandemic will ultimately result in opportunities for the sector, providing there is support for the industry to survive the short to mid-term hardships.

However, like many other industries, the technology sector faces significant challenges over the short to medium term.

While issues like staff retention and recruitment were only slight concerns due to the already flexible nature of technology businesses, serious issues around cash flow, sales and securing both new business and investment were identified as major issues.

The qualitative research undertaken by Technology Connected found a consensus that smaller businesses, such as Wales' vibrant start-up scene and SME's were the most at risk, with many expecting to see businesses fold.

This concern was exacerbated by the fact that many of these businesses were ineligible for existing government support. The overall feedback was that both the UK and Welsh Government had put good measures in place to help businesses throughout Covid-19, however this support did not cover the technology companies most at risk.

Ultimately, while this report captures a vital snapshot of the current picture in our industry, it should be recognised that we are in a rapidly moving set of circumstances, with great uncertainty.

Our findings suggest that the world will be a significantly different place post-Covid-19, with a 'new normal' both in industry and in the way we live and work. The technology sector in Wales is uniquely positioned to take advantage of this disruption and new world, and with the right support, could expand its global influence and impact on Wales' economy, industry, skills and global reach.

3. Challenges faced by the technology industry

The technology industry will face significant short to medium term challenges as a result in Covid-19, with different businesses hit to varying degrees.

In its research, Technology Connected found it is anticipated that start-ups and SME's will be hit the hardest by the pandemic, with serious concerns that some may simply not survive.

Predictably, technology businesses which produce physical components are experiencing difficulties at present, despite in some cases seeing an increase in sales. This is due to social distancing measures impacting shop floor productivity, and a compounded impact of disrupted supply lines.

The key issues uncovered in Technology Connected's qualitative research were supported by the findings of the *Tech Nation Covid-19 Impact Survey* conducted at the beginning of April.

"How do you see the COVID-19 pandemic impacting your business over the next few weeks/month?"



- Source; [Tech Nation](#)

Here we can see that cash flow, sales, investment and new business are the primary concerns from the predefined options presented to businesses to choose from.

In our interviews, we also uncovered issues relating to the speed and accessibility of Government support, which is leaving some technology businesses behind.

3.1 People

Due to the adaptive nature of the technology sector, most businesses have transitioned well into remote working.

However, some businesses which work in lab or shop floor environments have reported issues with productivity, due to social distancing rules preventing business as usual.

Staff well-being and mental health has been a concern among businesses, who are trying to adapt to new ways to communicate with their staff across the period. Some have set up channels such as Slack or Whatsapp as ways of keeping both formal and informal communication with workers, with others going as far as setting up weekly video quizzes and games to help keep employees connected and engaged.

Due to the Coronavirus Job Retention Scheme not being fully operational as yet, many businesses are reporting being left in uncertainty in regard to staff retention, but most are committed to keeping their businesses running as usual, if possible.

As across all of the industry, there has been a slow down in recruitment and graduate placement across the technology sector, however this has not been as dramatic as in other sectors. With Digitally enabled businesses who are able to do so, are adapting to remote interviewing and continuing with on-boarding new talent, especially those who are actively recruiting due to an increase in demand for their services or goods.

3.2 Finances

3.2.a Cash Flow

'Cash and then Severe UK / global recession or even depression might put a blocker on non-mission critical projects... We are starting to see some projects postponed'

Cash flow is becoming a significant issue for businesses, especially smaller companies without large cash reserves.

Many businesses have seen their orders decrease rapidly, especially in areas which are seen as 'non-essential', as customers begin to cut back spending and postpone or cancel projects.

In most cases businesses are trying to walk a tightrope of deferring payments for customers, while managing their own creditors.

'It is very early days and when the inevitable, ensuing economic hardship starts to bite, then some clients will go out of business - especially smaller'

ones in vulnerable business sectors - and the ones that survive may well cut back on their R&D activities and related budgets ... depending on who your clients are and what they do, there could well be a very significant impact in due course.'

While the consensus is that most larger businesses will be able to weather the short-term difficulties, there is already concern for SME's and start-ups who will find it tough to survive without immediate access to cash, this will inevitably have a knock on effect across the supply chain.

3.2.b Uncertainty in the market

'While the financial urgency is around immediate cash flow and then the recovery from 3 months or more of lost sales, support later will also be needed to reopen an accelerate routes to market, to potential customers and to investors'

As to be expected, the impact of Covid-19 across multiple global markets has had a knock-on effect on businesses. Larger companies have seen a negative impact to company valuations, while other businesses are struggling to find investment or access business support (such as loans) due to a more cautious financial market.

This will be a crucial issue for investment and growth led start-ups and SME's, who will suffer substantially if they are unable to attract projected investment or funding. While the business interruption loans have been welcomed, due to the growth nature of technology businesses, many have been unable to access them.

'I'm hearing a number of stories about CBIL loan requests being rejected by the banks, with the underwriters stating reasons like they wouldn't have supported the business prior to the coronavirus impact, forecast profitability, etc'

'This was always a massive concern with the announcements because once it translates into reality - the banks currently and will continue to take a very risk adverse view.'

3.2.c Inability to access Government support

While there has been an acknowledgment of the efforts made by both the Welsh and UK Governments to keep businesses moving, issues have been raised around eligibility and speed of support.

In many cases start-ups which form a core part of the Welsh economic ecosystem are ineligible for a number of initiatives, as are micro limited companies such as technology contractors.

'Financial support [is needed] for those whose customers haven't been able to buy or receive the goods and services. SME's have a short time to bust and rely on cash flow. Gov is helping but some key small suppliers may well be in ruins'

While initiatives such as the Government Coronavirus Job Retention Scheme have been met with support and approval, there have been issues raised in both the speed in which businesses will be able to access funds, and a lack of clarity on which businesses and employees are eligible for support.

'This is especially tough for those who are not eligible for either the grants related to Small Business Rates Relief or those who are not eligible for the WG's Economic Resilience fund.'

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4. Customers and sales

'Advisory clients and our tenants are seeing order books simply disappear overnight at present and income generating activities disappear or be deferred for an undefined period.'

Though some technology businesses have seen a significant increase in demand, across the board most are struggling to attract new business, causing issues across both cash flow and growth.

This presents a serious issue for start-ups who are generally growth-led and as such cannot simply tread water as they are reliant on growth-based investment.

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5. Supply chain

'Impact areas for lab access being partially mitigated by having on site skeleton staff with all of the complications of distancing. Supply chain will be impacted with delays due to less staff and efficiency of suppliers, but this impact will start to bite deeper the longer this lockdown continues'

Issues with supply chains have had an impact on technology businesses, especially those with a 'just in time' production process. While goods shortages remain an issue, delays in goods being held at customs for longer periods of time are causing delays in production. Only consolation being that due to Brexit uncertainty over past months manufacturing organisations have been holding key supplies in stock which has enabled them to keep producing even if at reduced levels.

Social distancing measures, while broadly welcomed, have also had an impact on businesses, especially those with lab or 'shop floor' environments, where it has been difficult to implement.

As a result, in many cases production timelines have slowed and non-essential research and development has been temporarily scaled back. The latter could have serious ramifications for Wales' ability to lead in innovation, costing the technology industry months or even years of vital R&D time.

'There often isn't the possibility of just putting them on hold until economic times improve, because rights can sometimes be lost without the chance of them being revived.'

In addition to traditional supply chain metrics, the Covid-19 pandemic has seen strain on the digital supply chain, impacting infrastructure and businesses.

In particular, issues relating to the availability and speed of cloud storage have been raised, as servers are understandably prioritised to serve essential services such as the NHS.

Likewise, the strain on the national broadband network has led to frustration and difficulties for businesses and for staff remote working. Frequent drops in connection and speed have impacted productivity and there is a general feeling that the pandemic has highlighted weaknesses within the network infrastructure that will need to be addressed if Wales truly wishes to adopt a flexible, digital working culture.

4. Opportunities

While it is already established that Covid-19 is having a negative impact on many businesses across Wales, in some areas the technology industry is seeing growth and an increase in both current and future opportunities.

Both **Technology Connected** and Tech Nation research found a consensus that the technology industry is uniquely placed to provide solutions for other sectors during this period, as well as playing a key part in helping fight the spread and impact of the virus.

Areas of note include telecommunications and video conferencing, compound semiconductors and businesses which produce technology that enables medical technology, along with cyber security, data and cloud storage solutions.

'[There are] Great opportunities for those whose technology underpins services or communications which promote remote and home working'

For instance, a separate supplementary research commissioned by Technology Connected through an omnibus panel found that 40% of businesses would consider expanding remote working practices post-Covid-19, creating clear opportunities for providers of hardware, software, digital infrastructure and distribution.

Findings from the qualitative research poise long-term questions around a 'new normal' post Covid-19. With more businesses likely to adopt remote working and technology needed to rebuild and improve infrastructure and efficiencies – there is likely to be significant opportunities for technology businesses in the future, providing they are able to weather the current circumstances, making support key for the industry.

'Cloud services and enablement and remote work capability and all the associated services are now and forever will be more important than ever.'

In summary, aside from the immediate boost for some businesses, the aftermath of Covid-19 and the creation of the "new norm" will largely depend on technology.

6. How the technology industry is rising to the challenge of Covid-19

Despite the challenges presented by the Covid-19 pandemic, the technology industry is reacting positively, proactively and pragmatically.

The global crisis has highlighted the strength of the community, fostering collaboration among businesses, who are sharing knowledge and resources to help each other and other sectors during this time.

Many businesses within our industry are offering free services to essential workers and industries including cloud space, telecommunications services and cyber security services, along with sharing and making PPE.

Within the community, some businesses are providing online resources for others and sharing experiences to help others navigate the same problems.

There has also been a rise in community action groups and online groups to share resources and sign-post work for contractors and freelancers who have now found themselves out of work.

7. How Technology Connected supporting the technology industry through Covid-19

The Covid-19 pandemic is an unprecedented global crisis which is impacting all people and industries across the world.

As the voice of the Welsh technology industry, **Technology Connected** is actively working to help support Welsh technology firms during this difficult period through a range of initiatives.

While the immediate impact of the Coronavirus is uncertainty, we recognise the great opportunity and responsibility that exists for the technology industry in both the current climate and in the pivotal role it will play in rebuilding the global economy.

As such, along with helping to unify and support the technology industry through this crisis, **Technology Connected** is also working with key stakeholders to ensure the value and impact of the technology community is supported on a larger scale.

Some of the ways we are working with the industry to support technology are:

- Launching a new online community for technology businesses to share support, insight and resources during the covid-19 pandemic. The **Technology Connected** [LinkedIn](#) group gives businesses a place to come together as a community to help support each other. The group also posts regular updates to signpost advice, developments and opportunities to feed into stakeholders to influence support for the industry.
- Giving businesses opportunities to raise their profile and promote their brands through our new partnership with Business News Wales.
- We realise that now is a crucial time for the technology industry in Wales and it is more important than ever for our industry to work together to find solutions to the challenges we will inevitably see over the upcoming months. In the spirit of supporting and connecting, we believe our network should be accessible to all.

That is why, **Technology Connected** has opened up free membership for three months to allow all technology businesses access to the membership benefits and support offered by the organisation.

We are also allowing the option of deferring invoicing for three months for existing members, to help support them throughout Covid-19.

8. Methodology

In response to feedback from the technology industry that it was being bombarded with a variety of surveys and opinion polls, **Technology Connected** conducted qualitative research among key leaders in the technology industry.

Interviews were conducted both in person and via email with members of **Technology Connected's** Technology Leadership Council, which is comprised of thought leaders and influences across multiple disciplines of the technology industry within Wales.

Representing their discipline, Technology Leadership Council members are experts in their field who speak on behalf of their sector and act as thought leaders and ambassadors for Welsh technology across the world.

The Technology Leadership Council is comprised of:

Name	Organisation
Prof. Pete Burnap	Cardiff University
Christian Coates	Method4
Katy Chamberlain	Managing Director - Business in Focus
Nia Davies	Davlec
Lee Griffin	GoCompare
Dr Cerian Jones	Cerian Jones IP
David Jones	OfCom, Qualifications Wales, Aneurin Bevan Local Health Board, Welsh Revenue Authority
Nicola McNeeley	HCR Lawyers
Chris Meadows	IQE PLC
Julian Morris	Cisco
Damon Rands	Wolfberry
Prof. Rob Rolley	General Dynamics, UKSCD
James Smith	DevOpsGroup
Gareth Williams	Thales UK
Rob Wilson	Sony UK

This report also pulls supplementary data from the Tech Nation Covid-19 impact Survey commissioned in March 2020.