Technology Connected

The continued impact of Covid-19 on the Welsh technology industry

June 2020

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1. Overview of the Welsh technology industry

The technology sector within Wales is an innovative industry which is helping transform the way people live, learn and work. 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 and Employability Plan and 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.
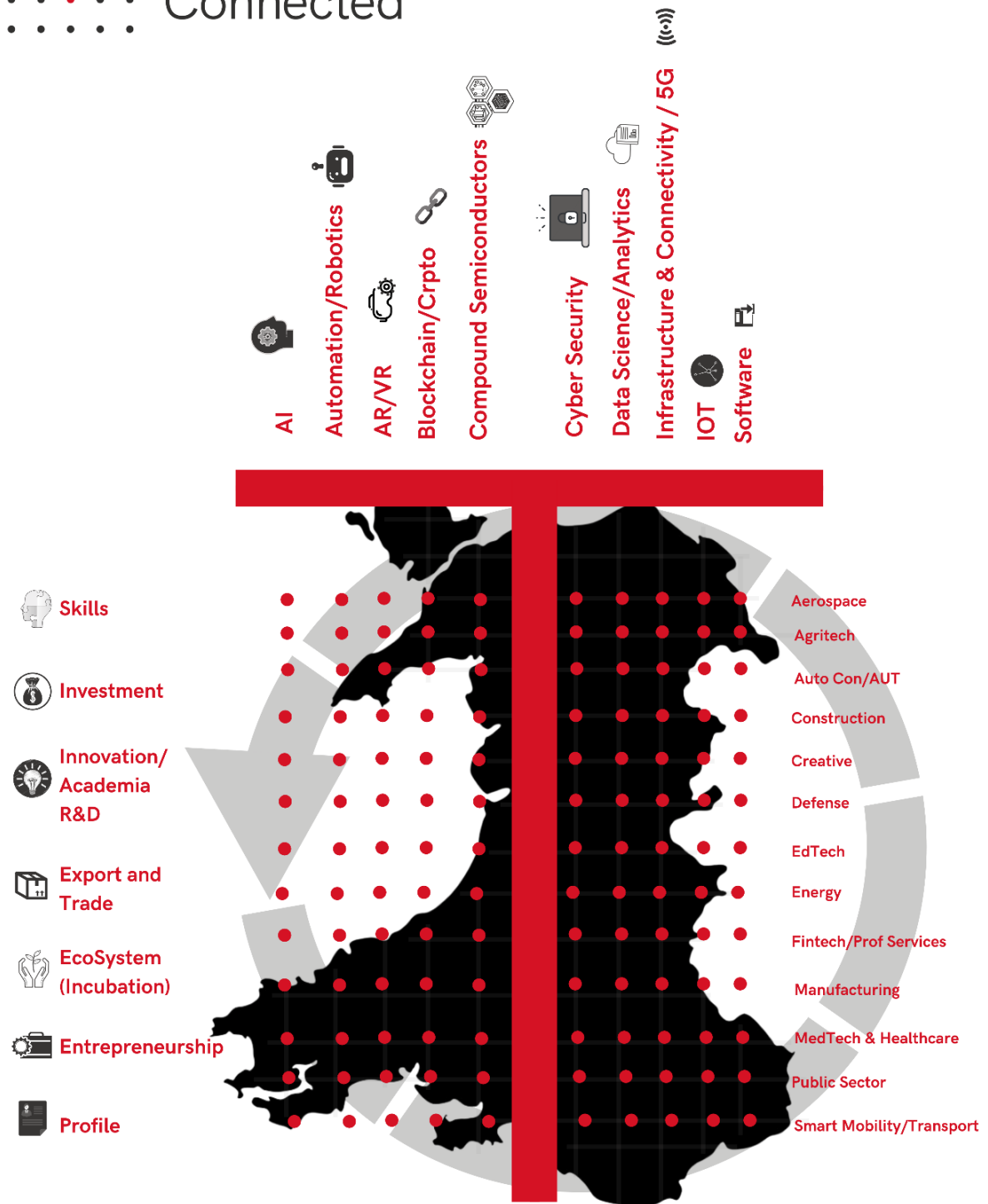
Technology is ubiquitous, and Wales has a vibrant, diverse technology industry from the dynamic new start-up through the clever indigenous SME to the global multinational, all creating, designing and developing technologies that are transforming and disrupting. Welsh technology truly has a global reach and is transforming and disrupting many sectors and markets.

Covid-19 has impacted the Welsh technology sector to varying degrees, with parts of the industry being severely impacted, while others have only experienced short-term disruption.

The Covid-19 crisis has also created opportunities for technology businesses, with some within the sector reporting an increase in demand for their services.

*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 continues to be 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, based on a qualitative survey conducted by **Technology Connected** across Welsh technology businesses, will explore the impact of Covid-19 since the rise of the pandemic earlier this year, across a range of recognised impact areas.

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2. Executive Summary: Industry Health Check

When **Technology Connected** conducted its Covid-19 Industry Barometer study in March 2020, it found:

> *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.*

This latest study has found that while the on-going impact of Covid-19 has begun to take a toll in areas of the industry, particularly among smaller businesses, the technology industry has responded with resilience and collaboration, mitigating the impact in comparison to other industries.

The research paints a mixed picture of the industry. On one hand, the research conducted by **Technology Connected** did find that Covid-19 has resulted in **62% of technology businesses reporting a decline in business.** However, while the majority of businesses have seen an adverse impact, including **29%** who have suffered **significant decrease** in business, more than a fifth (22%) have seen no impact at all, with 16% saying they have seen an uplift in business.

Other silver linings include a lack of redundancies in the industry (presently), an overall success in adapting to remote working, and even businesses continuing to recruit and grow. However, the findings of this report does warrant significant concerns for some areas of the sector, specifically the start-up and SME space which has struggled in regards to both business and accessing support, along with technology businesses who supply industries that have been severely impacted..

In the Technology Connect March Covid-19 Impact Report, a conclusion was reached that:

> *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.

This subsequent Industry Health Check has found these concerns to still be valid, with the primary concern from respondents once again centred around cash flow and access to funding.

Another compounding issue has been accessing Government support, which has been difficult for technology businesses. Less than half (48%) of the technology businesses surveyed for this report had successfully managed to receive support from Government initiatives, in particular micro businesses noted frustration in 'falling through the gaps' in support.

The problem faced by the Welsh technology industry is apparently simple. Whilst the industry itself is able to adapt and pivot rapidly, often their customers are not. Service based businesses have been hit with a cull in budgets resulting in less business opportunity and income, while those working as part of a supply chain face the impact of a reduction of customer demand, compounded with supply chain issues themselves, most notably in Aerospace.

However, it should be noted that nearly a third of businesses (32%) had not applied for any funding at all, highlighting that there are pockets of the industry still in very good health.

Based on our findings in this report, we would advise the current overall health of the technology industry in Wales to be treated with modern concern, with particular attention needed to SME and Start-up businesses.

Current Industry Health Warning

| Severe Concern | Moderate Concern | Slight Concern | No Concern | Positive Impact |

We live in a global marketplace which has faced rapid disruption due to the Covid-19 pandemic. However, alongside this disruption opportunity has already begun to develop, especially across technology.

Wales has a unique opportunity to accelerate its position in the global market and grow its influence in technology. In many cases, some of Wales' technology businesses are already doing just that. However, without additional support for

impacted areas, specifically across smaller, emerging businesses, we risk damage to the delicate ecosystem of our technology industry.

3. Continued impact of Covid-19 on the Welsh technology industry

The technology industry has undergone predicted challenges due to the on-going impact of Covid-19, with medium to long term issues predicted. However, it should be noted that some areas of the technology industry are reporting little disruption (over with one in 10 claiming a positive impact).

In the **Technology Connected** Covid-19 Impact Report (March 2020), it was anticipated that start-ups and SME's were likely to be the hardest hit by the virus, along with those who produce physical products and components.

The latest findings outlined in this report suggest the aforementioned concerns were valid, with smaller technology businesses across Wales reporting hardships.

Technology Connected research contained in this report focuses on three critical areas for the Welsh technology industry:

1) Access to Government funding
2) Cash flow & Sales
3) Talent and people
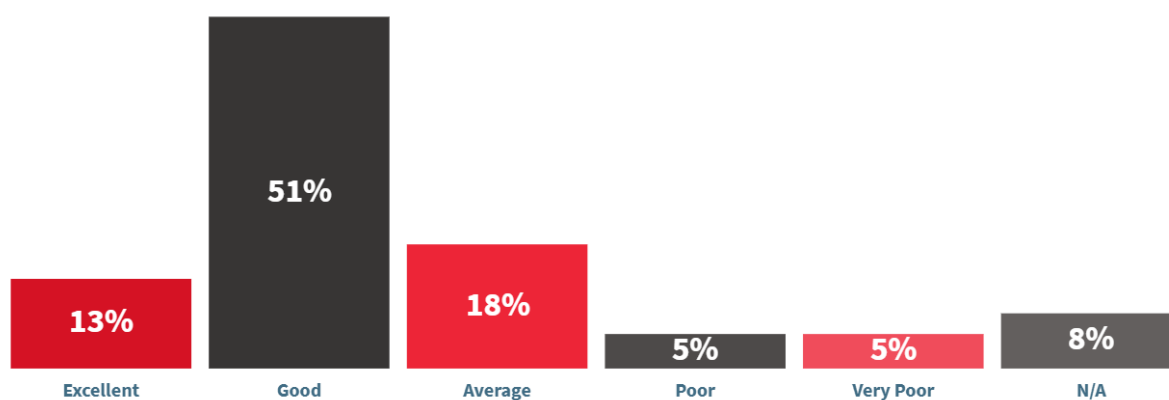
3.1 Access to funding

'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.'
- Katy Chamberlain, Business in Focus

In **Technology Connected** research, access to government funding has been highlighted as a concern in the technology industry.

Both within the research and anecdotally we have seen concerns that the current Government offering, while generous to other sectors, is not applicable to a large proportion of technology businesses.

How would you rate the business support made available by the UK/Welsh Government for businesses:

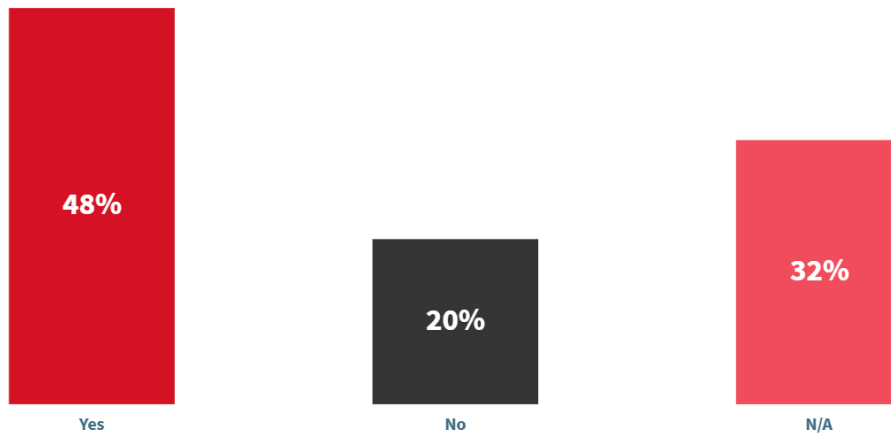| Excellent	Good	Average	Poor	Very Poor	N/A
13%	51%	18%	5%	5%	8%

Net positive: 64%

Though the majority (64%) of technology business rate UK/Welsh Government support as good to excellent, just 48% have been successful in accessing business support through government schemes.

'Frustrating to be slightly above the threshold for rates relief and being refused all grants and forced to take loans because we can afford them right now. What about in a few more months? Will people be able to afford them then?'
-Unattributed

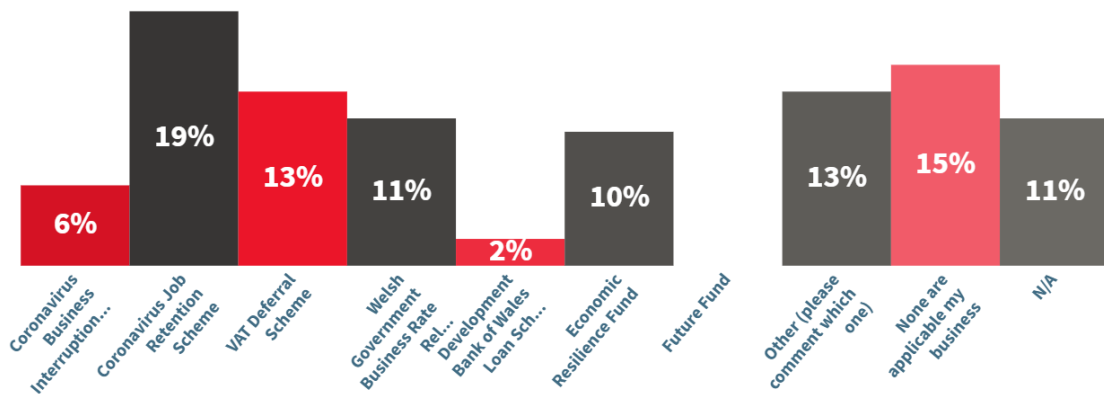**Have you been successful in receiving any support from these schemes?**

Respondents asked about access to govt scheme. Large proportion of N/A refers to being non-eligible but not formally rejected

Notably, one in five (20%) respondents said they had been unsuccessful in their application to government funding. However, nearly a third (32%) had not applied at all for funding, which marks a positive sign for the industry.

Across the board, the proportion of technology businesses accessing government schemes is low. Of the schemes available, the most subscribed (or applied for) initiative was the Coronavirus Job Retention Scheme, however still less than a fifth (19%) of technology businesses in the study had applied or made use of the scheme.

Welsh Government led schemes had a particularly low application rate from technology businesses, with just 2% of firms in the studying having made use of the Development Bank of Wales Loan Scheme, and 13% accessing the Welsh Government Business Rate scheme.

Has your organisation applied or made use of any business support scheme? If yes, please select which schemes.

Coronavirus Business Interruption... **6%**
Coronavirus Job Retention Scheme **19%**
VAT Deferral Scheme **13%**
Welsh Government Business Rate Rel... **11%**
Development Bank of Wales Loan Sch... **2%**
Economic Resilience Fund **10%**
Future Fund
Other (please comment which one) **13%**
None are applicable my business **15%**
N/A **11%**

15% of businesses said there are no schemes applicable to them. N.B at time of research, the Future Fund was yet to be fully detailed

A persistent concern from the technology industry has been that many businesses, especially across SME and micro businesses are simply not eligible for most of the government funding initiatives.

'We are sure that nothing applies to us, we are one of those that slips through the 'cracks
-Unattributed

'Applied but was declined for Welsh Government's Economic Resilience Fund because number of employees =1 not 1+ for my business.'
-Unattributed

Overall, feedback indicates that current government support, while warmly received, has not been an effective support system for a proportion of the technology industry (small businesses).

'[We] Tried [to apply for funding] but we don't tick the eligibility boxes!'
-Unattributed

With the research showing 62% of technology firms suffering a decline in business, compared with just 48% successfully accessing support, this creates a potential business hardship rate of 14% across the technology sector.

Of all technology businesses, start-ups, SME's and micro businesses have been the most impacted by a lack of access to support, with many businesses 'slipping through the cracks' of ineligibility.

'[Government] seem to have very little knowledge of the tech sector and of small businesses'
-Unattributed

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This is a particular cause for concern to the industry, as these small businesses are often key drivers of innovation, growth and investment in the sectors, alongside their vital contributions to the wider economy.
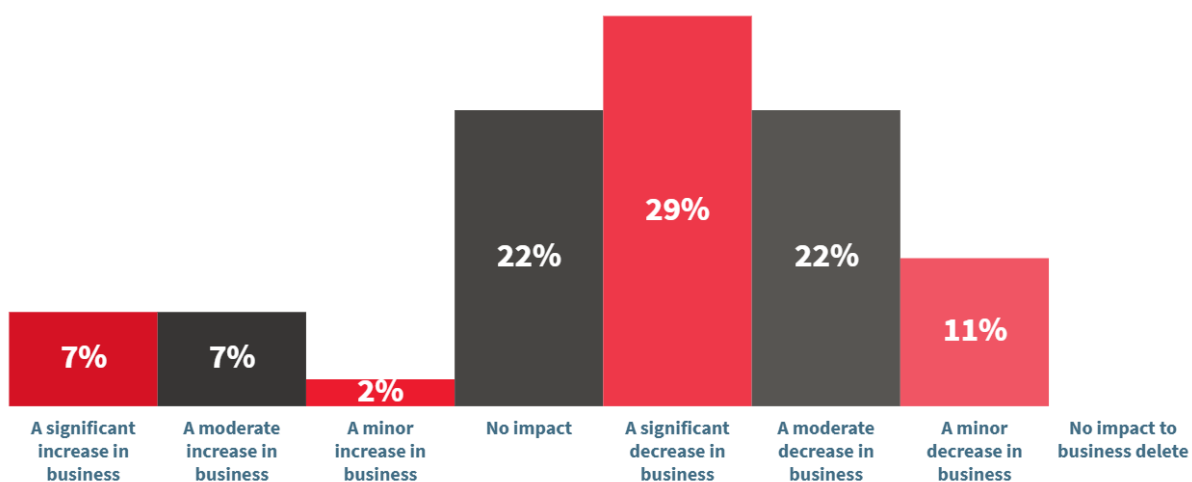
Without action and support, it is possible that the impact of Covid-19 could damage this crucial area of the technology industry, causing a significant negative long-term impact to the industry and its ecosystem.

3.2 Cash flow & Sales

The on-going Covid-19 pandemic has had a net negative impact on business for many technology organisations in Wales.

While there have been reports (which this research supports) of businesses seeing increased demand, especially within medi-tech and remote working solutions, overall, the majority of technology businesses have been adversely impacted.

Since the Covid-19 pandemic my business has seen:

7%	7%	2%	22%	29%	22%	11%	
A significant increase in business	A moderate increase in business	A minor increase in business	No impact	A significant decrease in business	A moderate decrease in business	A minor decrease in business	No impact to business delete

The research found that the vast majority (62%) of technology firms have seen a negative impact on their business sales since the beginning of the outbreak.

Generally speaking, technology companies affected are being hit with three core issues in relation to business performance:

- **Decrease in customer demand** – perhaps the most obvious problem, there is simply less demand for non-essential goods and services as businesses slash budgets or delay projects and consumers tighten their belts. This issue is true across both service-based businesses and those which create consumer technology.

  For technology firms working as suppliers in industries where there has been a large disruption (such as hospitality, travel and aerospace), this issue is particularly prevalent, making them key areas of concern.

- **Impact to supply chain** - Issues with supply chains have had an impact on technology businesses, especially those with a 'just in time' production

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process. While goods shortages remain an issue, delays in goods being held at customs for longer periods of time are causing delays in production.

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.

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

- **Uncertainty in markets** - With much of the start-up community growth and investment led, a lack of confidence in the market will likely see a long-term adverse impact as gaining investment continues to prove difficult. While there are some examples of Welsh technology companies continuing to secure private funding, there is a concern that a cautious market may limit and delay growth, or cause businesses to fold entirely.

However, it is important to note that only around a third (29%) of businesses have reported significant decrease in business. While this is not an insubstantial number, it is likely to be comparatively small compared to other industries, especially once we consider that 38% of businesses are reporting either no impact or a positive impact on business.

While this report is limited to the technology industry, the nature of the sector means it has been able to adapt and innovate to an extent, mitigate the impact of Covid-19 and seizing opportunities where possible.

As such, we suggest this is evidence of the industry's unique resilience and ability to rapidly pivot based on the global marketplace. It is these attributes which should provide confidence in the potential for the industry to 'bounce back' post Covid-19 and help significantly in the economic recovery of Wales. However, this will be in part dependent on the health of the start-up and SME community, which is currently an area warranting serious concern due to the aforementioned funding issues.
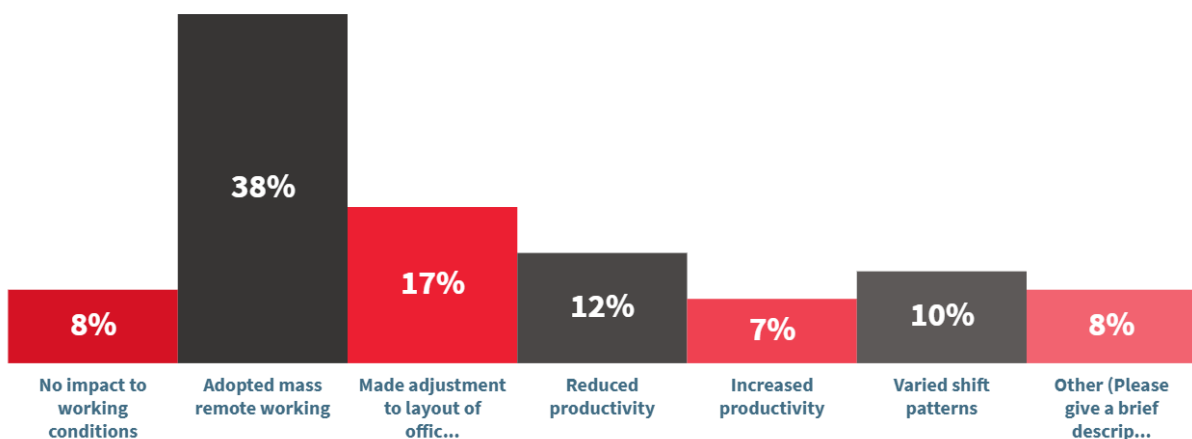
3.3 People

3.3.a. Remote Working

'It is unclear whether an office will ever be needed again in the future.'
- Unattributed

Another area where there has been largely positive news is in the shift to remote working and social distancing practices.

As predicted in the **Technology Connected** *Covid-19 Impact Report March 2020* study, workforce related issues, such as adapting to remote working and redundancy concerns still remain comparatively low compared to other sectors.

Across the board, many technology businesses have adapted mass remote working with relative ease. Just 12% of respondents identified a drop in productivity due to Covid-19, balanced by 7% reporting increased productivity – in effect creating a net drop of just 5% - however, this is only true for businesses who are able to continue to produce.

Still thinking about staff, how has Covid-19 impacted the way in which you work (tick all which apply)?

No impact to working conditions	Adopted mass remote working	Made adjustment to layout of offic...	Reduced productivity	Increased productivity	Varied shift patterns	Other (Please give a brief descrip...)
8%	38%	17%	12%	7%	10%	8%

The general consensus is that, where possible, technology businesses are 'business as usual'. However, this is clearly not possible among all businesses, especially those with a production or lab environment – in these instances, businesses have made adjustments to building layouts or employee shift patterns to accommodate social distancing practices.

'We will always be a remote team. It was the future of work as we saw it. Covid-19 has just accelerated it'
-Unattributed

While not explored in-depth in the scope of this report, several respondents made comments regarding the future of the modern office, suggesting that Covid-19 may result in permanent remote working for some businesses, after experiencing benefits in cost saving and employee happiness.

As such, we suggest the findings warrant more consideration as to the 'new normal' and life post Covid-19, which could have a potentially dramatic and positive impact on public health and infrastructure across Wales.

'[We] may well increase work from home on long term basis, and therefore reduce [our] office requirements'
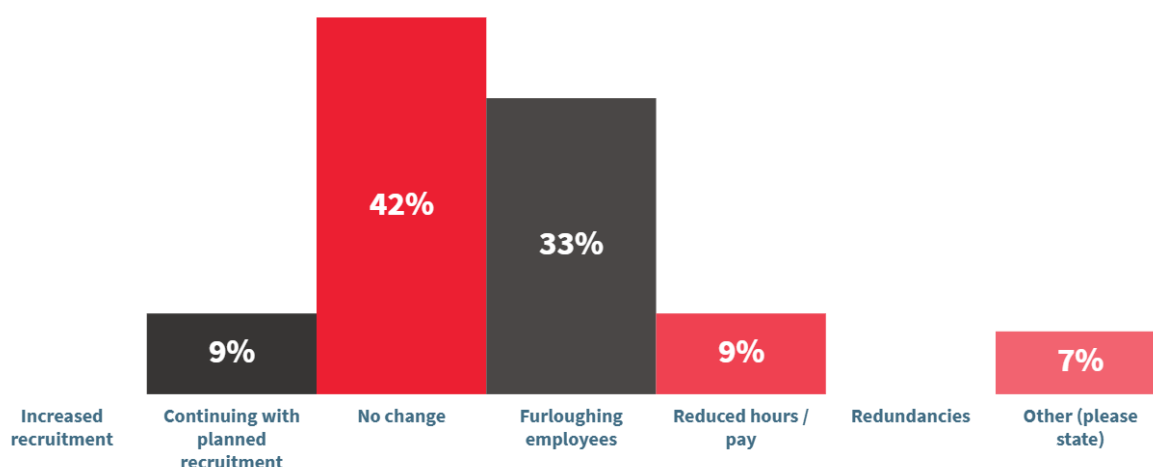*-Unattributed*

3.3.b. Employment

There has been surprisingly little change in regard to employment in the technology sector throughout Covid-19, with many technology businesses continuing to recruit, employ and on-board staff remotely, where possible.

Two fifths (42%) of businesses surveyed said there had been no change to their organisation in regard to their employees, with nearly one in 10 technology firms specifically stating they were carrying on with scheduled recruitment.

Thinking about your employees, how has Covid-19 impacted your business?

Increased recruitment	Continuing with planned recruitment	No change	Furloughing employees	Reduced hours / pay	Redundancies	Other (please state)
	9%	42%	33%	9%		7%

The hope of a Covid-19 employment boom has unfortunately failed to materialise, with none of the respondents stating they had increased recruitment to cope with new demand. This aligns with the earlier stated results, which showed just a handful of businesses enjoying an uplift.

Notably, a third (33%) of technology firms have furloughed employees within their organisation, which represents a potentially significant proportion of the Welsh workforce. However, based on UK Government data surrounding the Coronavirus Job Protection Scheme, this figure is low compared to other industries, supporting the theory that the technology sector is a key provider of high-value jobs and will play a major part in helping the economic recovery post Covid-19.

3.3.c. Talent

Another area for concern is across academia, which could have a notable impact on the skills pipeline for the technology industry.

The impact of Covid-19 has created widespread disruption across every level of education, the effect of which may become apparent in the months to come.

This impact is all true among job placement schemes and graduate recruitment, leaving candidates, students, businesses and schools in limbo.

While much of higher education has transitioned to distance learning, to various level of success, Covid-19 has created a skills bottleneck which may have a dual effect of preventing graduates from accessing placements or roles (as firms delay on-boarding), while also slowing the pipeline of skills for technology businesses who are reliant on a stream of new talent.

In some areas, mostly among primes, we are seeing both internships and recruitment continuing, albeit virtually, however this is very much the exception rather than the rule. As such, it is pivotal to create a clear strategy to ensure we continue to produce a healthy pipeline of talent, and a system which provides high skilled employment within Wales.

Initiatives such as the Cardiff University Year In Industry programme with Technology Connected have been responsible in helping to retain talent within Wales. For instance, as a result of the scheme more than 70% of students now choose to stay in Wales for work placements, whereas previously more than 70% left the country to do so.

It is paramount we continue to support and adapt these schemes where possible in order to retain high skilled talent and jobs within Wales. Likewise, it will be vital for the country to encourage students to study STEM subjects, especially among female students, to fill the inevitable gaps in our talent pipeline.

4. 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.

5. 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:

- Helping to showcase the Welsh technology industry across the world and attract business and investment, by founding the first-ever **Wales Tech Week** to be held as a free virtual festival between 13-17th July.

- 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.

8. Methodology

Technology Connected conducted qualitative research among members in the form of online survey forms through May.

This report also pulls supplementary data from the **Technology Connected** Covid-19 Impact Report commissioned in March 2020.