

**BLAENAU GWENT ASPIRE
ACADEMY – FUTURE SKILLS
RECOMMENDATIONS (V 2.0)**

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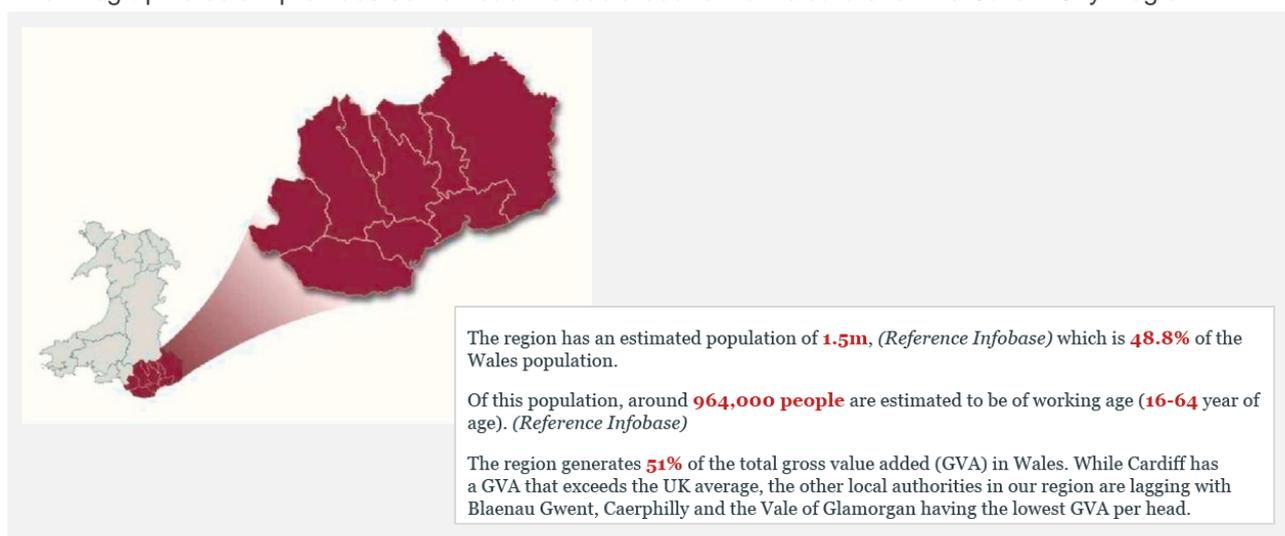
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Foreword

Blaenau Gwent County Borough Council lies within the Cardiff Capital Region of Wales and has a rich industrial and manufacturing heritage, being an early centre of industrial innovation, including coal, iron and steel production, during the Industrial Revolution (1760-1840) and beyond. Iron and steelmaking were of particular importance in the area, some notable dates being:

- 1789 Iron making began in Ebbw Vale
- 1790 First blast furnace established at Ebbw Vale
- 1857 Ebbw Vale Ironworks produced the world's first steel rails for trains
- 1914-18 Women made artillery shells at the Ebbw Vale steelworks for the war effort
- 1927 52 miners killed in an explosion at Marine Colliery
- 1930s Ebbw Vale Steelworks was the largest steel mill in Europe
- 1978 Closure of Ebbw Vale steel plant
- 2002 Closure of Ebbw Vale tinsplate and galvanising works

The infographic below provides some headline socio-economic indicators for the Cardiff City Region:



Source: ¹

- Gross Value Added (GVA) is a widely-quoted economic indicator that is used to compare the relative economic performance of regions of different sizes.
- In this case, GVA represents the monetary value of products and services produced within a local authority within a defined period of time.
- GVA is calculated as the total of all goods and services that are produced during the reference period (output), less goods and services used up or transformed in the production process, such as raw materials and other inputs.

¹

https://businesswales.gov.wales/skillsgateway/sites/skillsgateway/files/documents/2020_02_005%20Cardiff%20Capital%20Region%20Skills%20Partnership%20Employment%20and%20Skills%20Plan%202019%20-%202022..pdf

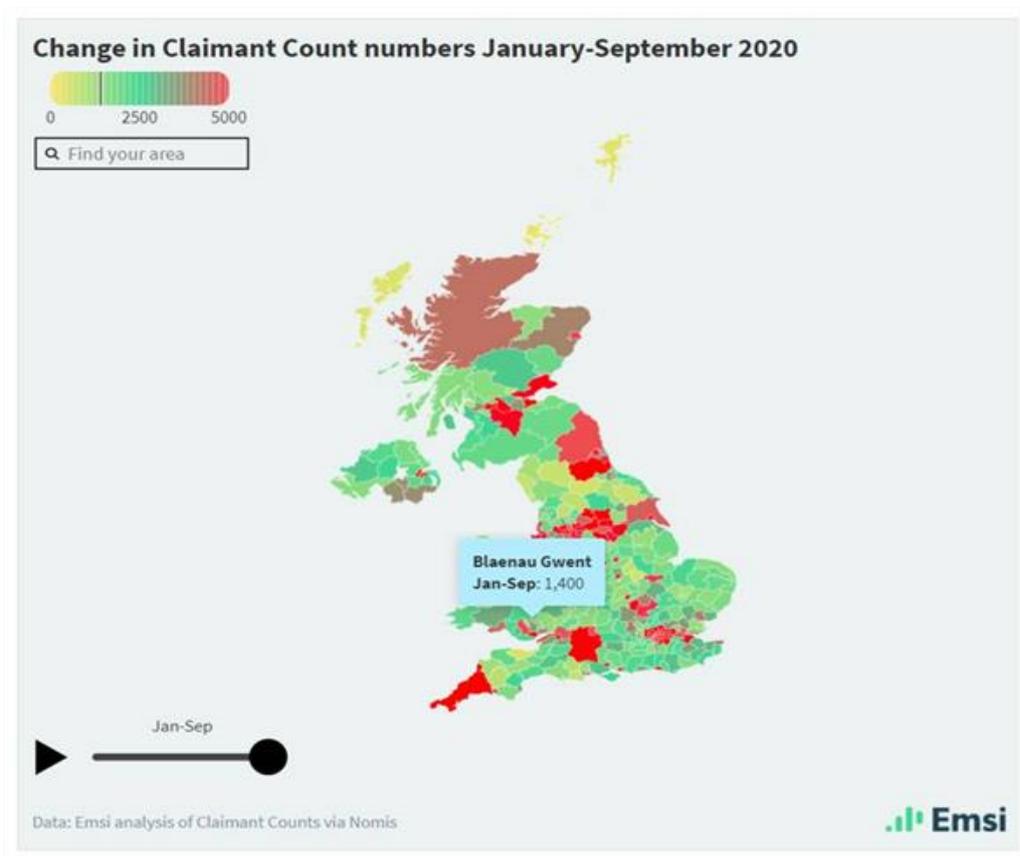
By the early 1920s the Ebbw Vale Steel, Iron & Coal Company employed 34,000 men – its expansion driven by a booming market for Welsh steam coal that was used all over the world in steam locomotives and ships. However, the demise of the use of coal and steam to power industrial machinery led to the decline of many heavy industries, and the subsequent closure of coal mines, steel works and associated activities. This left a legacy of high rates of unemployment, and other associated socio-economic challenges, to be faced by those communities affected by these issues.

Consequently, in common with many post-industrial regions in the United Kingdom, Blaenau Gwent has faced a range of social and economic challenges which have arisen from the shift from an economy and workforce based primarily on secure and relatively well-paid jobs in heavy industries, to a modern economy based upon a diverse range of smaller manufacturing companies.

While the emergence of manufacturing in newer sectors (e.g. automotive, aerospace and pharmaceuticals) in the Blaenau Gwent region is welcome and encouraging, it has yet to replace the volume of jobs and opportunities afforded to earlier generations by large-scale employment in heavy industry.

Unfortunately, the automotive and aerospace sectors are among those that have been most seriously affected by the impact of the Covid-19 pandemic, with job losses affecting not only manufacturing companies but also leading to jobs being shed throughout their associated supply chains.

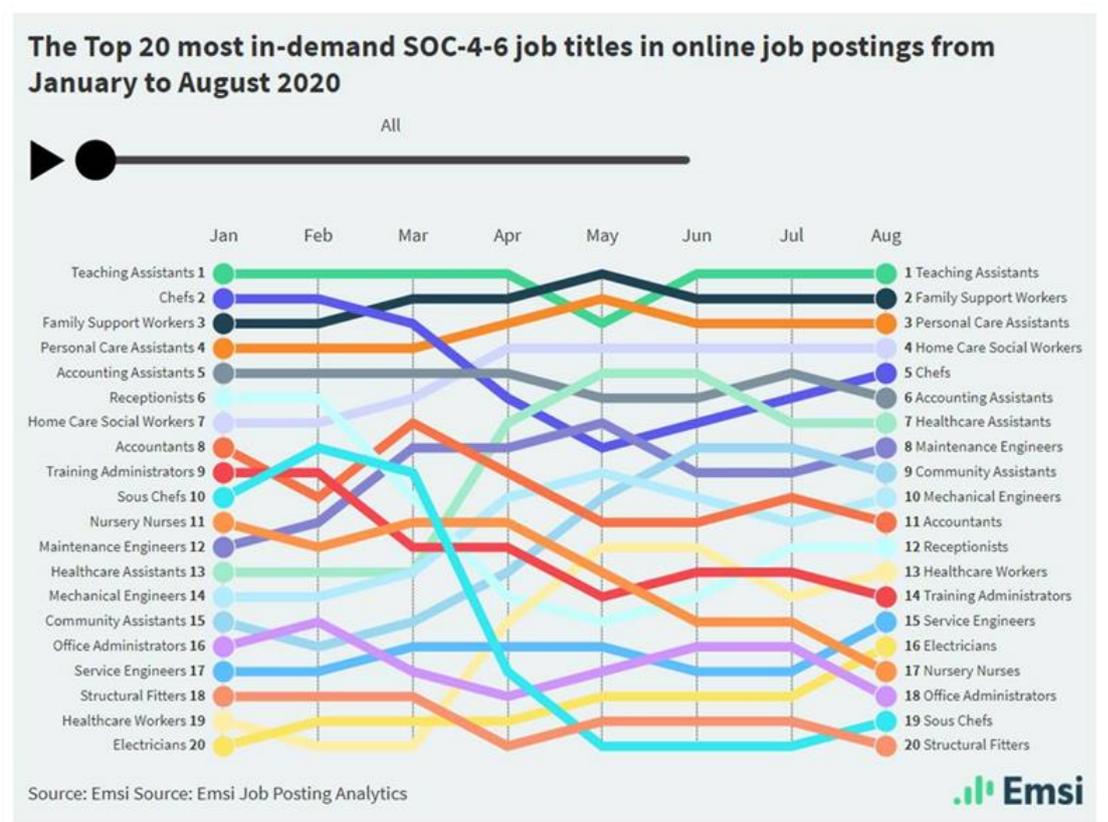
The following chart provides some insight as to the impact of the Covid-19 pandemic since March 2020 – with 1400 jobs having been lost in Blaenau Gwent by September 2020:



Source: ²

² https://www.economicmodelling.co.uk/2020/10/16/an-analysis-of-september-claimant-counts/?utm_campaign=UK%20Blog%20Posts&utm_medium=email&_hsmi=98335885&_hsenc=p2ANqtz-8A1cGs-

The chart below illustrates how the pandemic has initiated a shift in demand for those in-demand job roles which typically require a Level 3 to Level 5 education:



Source: ³

Unsurprisingly, the Covid-19 pandemic has driven a significant increase in demand for workers in the Health and Social Care sector (e.g. healthcare assistants, home care workers, personal care assistants, etc.).

However, it is interesting to note the increase in demand for workers in the following engineering/trades disciplines:

- Electricians (2,997 current vacancies across the UK)
- Service Engineers (3,090 current vacancies across the UK)
- Mechanical Engineers (4,169 current vacancies across the UK)
- Maintenance Engineers (4,773 current vacancies across the UK)

While this data reflects the current situation across the UK, **it is also consistent with the findings of an employer survey commissioned by Blaenau Gwent Borough Council which identified demand for Level 4 multi-skilled maintenance engineers (i.e. HNC level⁴), across all manufacturing sectors within the Blaenau Gwent region.** These findings are supported by those job vacancies currently being advertised within a 10-mile radius of Merthyr Tydfil which evidence strong demand for workers with both mechanical and electrical engineering skills at Level 4.

³ https://www.economicmodelling.co.uk/2020/10/13/which-medium-skilled-jobs-are-in-demand/?utm_campaign=UK%20Blog%20Posts&utm_medium=email&_hsmi=98335885&_hsenc=p2ANqtz-80wBFp5-veWpIO8d6W1rfyTTpG9hkOsrTZQqnTDOvOgagTjNcgIDzX7mvRIHAKYqSeWd0GL_xoWlvPJMy3RUgalqUDQ&utm_content=98335885&utm_source=hs_email

⁴ HNC – Higher National Certificate: a Level 4 qualification equivalent to the first year of a university undergraduate programme.

The existence of a strong demand for multi-skilled maintenance engineers validates the important work of the Aspire Shared Apprenticeship Programme⁵ that seeks to enhance skills development within local manufacturing and engineering companies to develop business growth - while tackling unemployment and providing aspirational opportunities for young people across the local authority.

The post-Covid economy

Clearly, in the current environment, there are difficult challenges to be faced but, with targeted economic support and political will, experience tells us that there will also be opportunities for some businesses to diversify by creating new products and services, hence creating new employment opportunities for residents of Blaenau Gwent.

In time, this will begin to address some long-standing socio-economic challenges, helping to **establish Blaenau Gwent as an attractive place to live, thrive and conduct business.**

This report will provide a realistic appraisal of the current and post-Covid-19 business landscape in the Blaenau Gwent region by:

- Analysing primary data gathered from an online survey of local businesses, along with secondary data collated via a desktop study.
- Considering the results of this survey in the wider context of economic key indicators and other relevant metrics.
- Researching, identifying and considering a range of national and local government strategies and initiatives that are aligned to the strategic aims of the Aspire Shared Apprenticeship Programme and the planned Blaenau Gwent (Aspire) Future Skills Academy.
- Proposing a curriculum for the Aspire Future Skills Academy that supports and reinforces the existing Shared Apprenticeship Programme, while also articulating a future skills programme that will deliver, in collaboration with local education and training providers, those skills needed to transform the workforce and realise the ambitions of local and national government.

⁵ <https://www.blaenau-gwent.gov.uk/en/business/jobs-skills/aspire-support-for-employees/>

Blaenau Gwent (Aspire) Future Skills Academy

Blaenau Gwent Future Skills Academy:

‘Helping the local workforce to reach their full potential’

The proposed Blaenau Gwent (Aspire) Future Skills Academy is an essential component of the Welsh Government ‘Tech Valleys’ programme⁶, a brief synopsis of which is shown below:

‘The lag of the economy of the Blaenau Gwent behind the rest of Wales, demands renewed intervention by the public sector along with private sector intervention. Without such assistance, educational under-achievement and limited employment prospects will continue to hinder the prospects of the current and future generations, limiting their ability to realise their potential. Against this background, the announcement by the Cabinet Secretary for Economy and Transport of a programme of investment of £100million, aimed at creating 1,500 new jobs has generated a real focus on achieving change in Blaenau Gwent. As important as the job creation figures will be the transformation of the economy to one of innovation, research and development and skilled employment. The creation of a culture of learning will equip individuals, communities and enterprises investing in Tech Valleys to achieve sustainable, resilient growth.’

The quote above is taken from the Tech Valleys Strategic plan which was published in April 2018. It is reasonable to assert that the impact of the Covid-19 pandemic will make achieving those aims outlined in the plan even more challenging - yet achieving those aims has never been more important.

A further complication is posed by the uncertainty created by the UK’s decision to leave the European Union (Brexit), and the imminent expiry of the Brexit transition period on 31st December 2020. At the time of writing, a trade deal with the European Union has yet to be agreed: without a trade deal UK goods will, from 1st January 2021, be subject to tariffs and border checks under the rules of the World Trade Organisation (WTO).

Even the most optimistic scenario - where a trade deal with the European Union is agreed prior to the expiry of the Brexit transition period – may well lead to economic uncertainty, and possible disruption to supply-chains, especially in the short-term.

To summarise, it is clear that those ambitions outlined in the Tech Valleys programme will only be realised by adopting a collaborative approach between all stakeholders. This report will identify opportunities to meet these challenges, justify their inclusion in the current political and economic landscape, and, crucially, propose realistic and innovative solutions that will address the core outcomes of the Blaenau Gwent Future Skills Academy, which are:

- Reduce unemployment
- Reduce the numbers of 18-24 year olds who are claiming benefits
- Increase median earnings (by place of residence)
- Reduce the number of economically inactive people
- Continue to reduce/maintain the number of young people who are NEET
- Increase skills level 0-4 (NVQ).

⁶ <http://democracy.blaenau-gwent.gov.uk/Data/Executive%20Committee/201807251000/Agenda/att8703.pdf>

Alignment with Tech Valleys Strategic Plan (April 2018)

The Tech Valleys Strategic Plan, published by Welsh Government in April 2018, maps the transition from the Ebbw Vale Enterprise Zone (established by Welsh Government in 2012), to a programme of activities that will address the economic and societal needs which are *'founded in the demise of traditional industries in many of the South Wales Valleys, and, in particular, those of Blaenau Gwent.'*

The objectives of the Tech Valleys Strategic Plan are to be realised via the curation and promotion of a portfolio of related and complementary projects, underpinned by a commitment from Welsh Government to invest £100million over a 10-year period. To achieve this, collaboration between all **stakeholders (i.e. business, academia and the public sector)** is essential, along with developing an environment that is conducive to **inward (public and private) investment**.

In addition to these economic proposals, the core tenets of the Tech Valleys programme will be **growth, fair work and decarbonisation** – to the mutual benefit of all residents.

It is recognised that a successful outcome to the Tech Valleys programme will require strong and effective strategic governance, along with access to the following key elements:

- **Property (commercial and residential)** – to accommodate businesses and their workforces
- **Education and Skills** – to enable businesses to implement new technologies, secure existing revenue streams, and diversify their products and services into new markets
- **Infrastructure** – improved transport links, and, crucially, digital connectivity throughout the region
- **Inward investment** – companies, especially the smaller SMEs will require access to funding to enable them to **invest in Industry 4.0 technologies** such as automation, data analytics and additive manufacturing

Prior to the publication of the Tech Valleys Strategic Plan, proposals to establish an automotive technology park in Ebbw Vale were already well advanced. In April 2018, the South Wales Valleys area was home to several significant and well-established automotive manufacturing facilities, including the Ford engine plant at Bridgend which employed over 1600 workers.

In addition, Aston Martin Lagonda had announced plans to build its DBX model at a new manufacturing facility at St. Athan, leading to the creation of 750 jobs by the second quarter of 2020. There were also plans for TVR to build their new Griffith supercar in Ebbw Vale, leading to the refurbishment and refitting of the currently-disused Techboard factory on the Rassau industrial estate – with 200 jobs being created when production is fully up and running.

Clearly, a strong automotive sector would provide a firm foundation for manufacturing within Blaenau Gwent, while supporting a diverse supply chain, creating high-quality employment opportunities for local residents, and attracting inward investment and talent to the region.

However, events occurring since the Tech Valleys Strategic Plan was published have dealt a severe blow to the automotive sector in the South Wales Valleys, most notably **the decision by Ford in June 2019 to close its engine plant at Bridgend by September 2020**.

A further blow has been the impact of the Covid-19 pandemic on the automotive industry worldwide. As a consequence, **Aston Martin Lagonda have announced plans to cut their workforce by 500 staff as part of a restructuring exercise**, following a collapse in the company's share price from over 400p per share at the beginning of 2019 to 70p at time of writing. The impact of this announcement on the St. Athan manufacturing facility is unclear, but the outlook remains uncertain, with pre-tax losses of more than £120million for the current financial year and net debt nearing £1billion.

At time of writing, **TVR have yet to commence production of the Griffith model at the Rassau site** – the Techboard building is still awaiting refurbishment and the TVR website has not been updated since March 2020; the last update on the TVR Twitter feed being 11th June 2019.

More disappointingly, proposals by Sir Jim Ratcliff, the CEO of Ineos Automotive, to build a new 4x4 vehicle – the **'Ineos Grenadier'** - in Bridgend, creating up to 500 jobs, have been scrapped, with the vehicle **now to be manufactured in France**.

The decision by Ineos to build its factory in Europe was followed by an announcement in the same week that **plans by the lithium-ion battery start-up company, BritishVolt, to establish an automotive battery 'Gigafactory' in the Vale of Glamorgan, have also been abandoned in favour of a new location in North-East England**.

Finally, it is reasonable to assert that the UK government's recent announcement that the sale of petrol and diesel cars and vans will be outlawed in the UK by 2030, in tandem with the yet-to-be realised impact of Brexit on the UK automotive sector, will lead to a period of considerable uncertainty within the sector, with investment decisions likely to be postponed until clarity returns.

Nonetheless, the opportunity for innovative projects to have a positive impact within the automotive sector remains, as evidenced in the prospectus for the *'Test Facility for Future Mobility'* - published by Blaenau Gwent County Borough Council - which articulates the requirement to refocus the South Wales Valleys automotive sector away from a reliance on traditional manufacturing, towards those value-added services that will be required to support the future automotive sector

This prospectus identifies four trends that will change the way in which the automotive industry will develop future vehicles:

- Autonomous driving
- Diverse (shared) mobility
- Connectivity to high-bandwidth mobile networks (5G)
- Vehicle electrification (and hydrogen – fuel cell – power)

All of these trends will demand a workforce with the appropriate skills. This will support existing and future supply chain development, offering local SMEs a potential path for economic growth via the development of new products and services.

Clearly, in light of these developments, it would be prudent to explore opportunities afforded by activity in other manufacturing sectors - while continuing to track the progress of the TVR project at Ebbw Vale, and other similar projects that may bear fruit as the impact of the pandemic eases.

By analysing this rigorous and unambiguous body of evidence, this report is, nonetheless, able to offer a dual strategy for delivering the vision of the Tech Valleys programme:

1. Offering viable and realistic solutions to support existing members of the manufacturing community within Blaenau Gwent - via the signposting and provision of a range of products, services and training solutions, **which have been proven by the MTC's members and clients to facilitate the adoption of those Industry 4.0 technologies** illustrated in **Figure 1**.

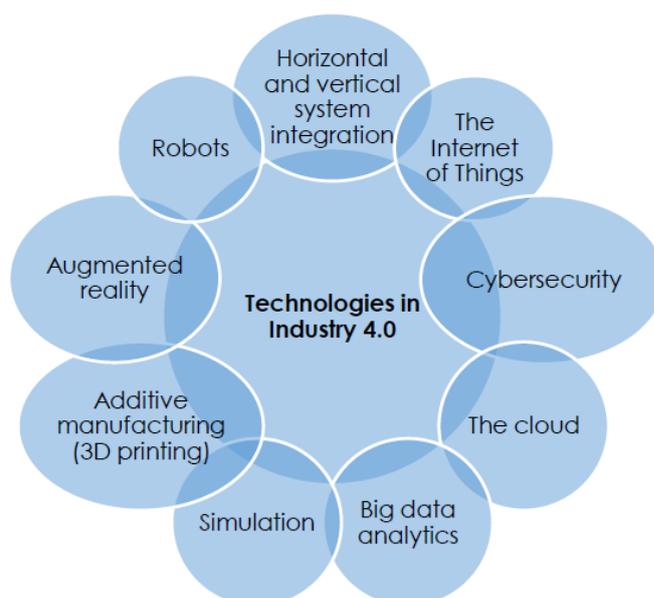


Figure 1 Technologies Related to Industry 4.0

2. The impact of the pandemic on the automotive sector has been unforgiving. While opportunities for innovation within this sector doubtless remain, it is difficult to envisage how, in isolation, such activities will be able to deliver socio-economic benefits at the scale demanded by the Tech Valleys strategy. Consequently, **this report offers an opportunity for the Tech Valleys advisory board, and other local stakeholders, to work alongside the MTC, and other High Value Manufacturing Catapult (HVMC) partners, to help develop an advanced manufacturing sector to meet the needs of the Modern Methods of Construction (MMC) industry** - which has been identified as an essential component of Welsh Government strategy to deliver affordable, high-quality social housing at scale to residents of Blaenau Gwent and further afield. The following benefits could be realised by such a programme:
 - SMEs who are currently active in the construction sector supply chain can diversify into the MMC sector, with the potential to attract investment and develop new revenue streams.
 - SMEs who are **not** currently active in the construction sector may also identify opportunities to diversify into the MMC supply chain.
 - The upskilling and reskilling required by the adoption of MMC methods will require a comprehensive programme of skills and training to be delivered via local colleges in partnership with other providers.
 - Local residents will benefit from better access to high-quality social housing, along with the opportunity to gain employment in a sector that delivers sustainable social and economic benefits to their communities.
 - Blaenau Gwent will be at the heart of a developing sector with the potential to deliver transformative change at local and national levels.

Many of those techniques and methods required by MMC are transferrable skills that will be of value to other sectors within advanced manufacturing (e.g. CAD, software simulation, etc.).

Executive summary

The original scope of this project was agreed in November 2019 between Martin Dury (Head of Future Skills at the Manufacturing Technology Centre) and Tara Lane and Bethan McPherson of Blaenau Gwent County Borough Council.

The initial aim of the project was to identify the future skills which would be required by the local workforce to support advanced manufacturing in the Blaenau Gwent region, with the intention of developing a Future Skills Academy focusing on the advanced manufacturing sector. The Academy's aim is 'to enhance the existing local education and training offer to support local and national industrial strategies and skills agendas,' as per the core outcomes indicated previously.

However, during the early phase of the project it quickly became apparent that the impact of Covid-19 on several hitherto thriving sectors (particularly the aviation and automotive manufacturing sectors), would necessitate a rapid reappraisal of the project aims – to ensure that our recommendations for the future skills curriculum to be supported by the Aspire Future Skills Academy are still relevant in the post-Covid economy.

In the current environment, it is essential that all recommendations are underpinned by empirical evidence that will test their relevance and impact – especially their potential to meet the skills and training requirements that are necessary to support key government policy initiatives at local and national level.

To achieve this, a comprehensive **desk top study** of local, regional, and national policy and strategy documents was undertaken, along with analysis of key economic indicators from the Office of National Statistics (ONS) and other audited sources.

In addition, an **on-line survey** was carried out to ascertain the attitudes of local businesses in the Blaenau Gwent region, and to begin to identify those skills which are currently in demand by the Blaenau Gwent business community. As the survey was conducted during the Covid-19 pandemic, it captures current attitudes, uncertainties and challenges, thus providing, at a micro-level, some insight as to how the pandemic may potentially reshape the local and wider economy.

While the employer survey identifies an ongoing requirement for 'traditional' engineering skills across a variety of sectors (particularly multi-skilled maintenance engineers with higher-level qualifications), it also gives some indication of opportunities for companies within Blaenau Gwent to **diversify their current business activities** by becoming involved in strategic projects within the construction sector – especially within **the rapidly-developing Modern Methods of Construction (MMC) sector**.

This is an exciting prospect, as it affords an opportunity to not only 'enhance the existing local education and training offer to support local and national industrial strategies and skills agendas' - in accordance with the aim of the Future Skills academy – but to equip local communities within Blaenau Gwent region with the skills and knowledge to enable them to tackle pressing social issues, such as building new social housing and retaining young talent within the region.