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1 ACKNOWLEDGEMENTS

New Economy would like to thank and acknowledge the work of David Brennan Consulting for undertaking this mapping exercise.

New Economy is also grateful to the Gatsby Charitable Foundation for their support of this report. Further information about Gatsby’s education work can be found at gatsby.org.uk/education.
INTRODUCTION

As part of the Government’s localism agenda, responsibility for skills capital investment is being devolved from the Skills Funding Agency to LEPs. This transfer of power signals an opportunity to secure improved alignment between local economic priorities and the development and upgrading of education and training facilities.

Previously the SFA has tended to operate a fairly non-directive, open invitation process with providers. It has been for providers alone to understand market requirements and develop proposals for capital investment to respond to those, in which the state has, or has not, then co-invested.

The approach taken in Greater Manchester will be a more proactive style of state-funded capital investment in skills than has obtained in the past. It will be more partnership-based, with co-investment between the Combined Authority/LEP, providers and possibly employers, founded on a shared understanding of what employers and the city region economy will require in the future, and how the skills system can best respond to meet those needs. This evidence-based approach to capital investment will be particularly important in the context of declining skills budgets from Government.

This research was commissioned by New Economy (on behalf of the Greater Manchester Combined Authority/LEP) in partnership with support from the Gatsby Charitable Foundation. The key objective of the study is to inform decision making so that skills capital investment in engineering and manufacturing technologies training facilities in Greater Manchester follows a coherent plan for local technical education, aligned to labour market requirements, and addresses duplication and gaps in provision.

The report has been produced by an independent consultant and makes a number of recommendations for wider discussion and debate. Whilst the focus is specifically on engineering and manufacturing facilities, it provides a useful mechanism which could be replicated in other priority sectors. It also highlights a number of issues for consideration by the Combined Authority/LEP when developing a process for how the future overall skills capital programme in Greater Manchester could best be delivered.
EXECUTIVE SUMMARY

Strategic Context

In February 2015, the Greater Manchester Combined Authority and the Greater Manchester LEP jointly published the Greater Manchester Manufacturing Strategy. The Strategy was prepared following extensive consultation involving key strategic organisations, service providers and individual businesses across all the key industry sub sectors and supply chains in Greater Manchester. The aim of the Strategy is to create the best possible conditions for the manufacturing sector in Greater Manchester to be able to address its challenges and achieve its full potential.

This study contributes to providing the evidence base to underpin delivery of one of the Strategy’s strategic priority actions, namely:

‘To establish a network of GM Manufacturing Skills Training locations which incorporate key private sector participants and give skills providers access to the latest manufacturing technologies.’

It is intended that this network will build on current infrastructure and work closely with employers to deliver high-quality education and training for engineering and manufacturing industry in Greater Manchester. This will be about getting the right provision in the right place, supporting greater specialization in FE, without unnecessary duplication and ensuring there aren’t gaps caused by unhelpful provider competition.

The Study

At the core of the study is a mapping of all Manufacturing and Engineering Training facilities used by Skills Funding Agency supported providers in Greater Manchester. This provides the baseline information required for any further development of a network of facilities and any further capital investment. To support this, a mapping tool has been completed by all the colleges in Greater Manchester that deliver education and training in Engineering and Manufacturing Technologies and by most of the Greater Manchester private providers who do so. The mapping tool has collected:

- Basic information regarding each provider (e.g. current student numbers);
- Information on the facilities under that provider’s control; and,
- Provider views on how the Combined Authority/LEP might prioritise its skills capital investment in engineering and manufacturing training.

This study reports the findings of that mapping exercise and makes recommendations on how skills capital might be invested in light of these.
Condition of Estate

Providers were asked to give information on the condition of the buildings that house their training facilities (their estate). Over 80% of the estate in Greater Manchester used for delivering engineering/manufacturing technologies skills is graded as good or excellent (Grade A or B). This benchmarks reasonably well against the most recent data for all College estate in Greater Manchester, where 73% is reported as being at Grade A or B. It also benchmarks well against national data where 63% of all college estate nationally is reported as being Grade A or B. This reflects the fact that there has been significant recent (or current) investment in STEM facilities in a number of Colleges in Greater Manchester, including Trafford, Bolton, Hopwood Hall and Wigan & Leigh.

Specialist Equipment

Specialist equipment is not up to date in the majority of facilities, and some equipment is not in a state of proper repair in a quarter of facilities. This type of technical education is expensive to run; requiring industry standard facilities and expert staff, and includes training for niche skills. Therefore while investment in equipment is clearly required, skills providers may struggle to keep up with the specialist equipment that GM engineering firms require (now and in the future) and it may not always be appropriate, affordable and possible for an individual skills provider to purchase the equipment required and then recruit suitable qualified staff to provide the training and operate the machinery.

Utilisation of Facilities

The extent and range of employer engagement in individual facilities is quite extensive. However, only two skills providers reported more than 20 employers accessing full cost courses with them in 2014/15. Full cost courses are courses that receive no subsidy from the state and are financed entirely by employers themselves.

A number of facility managers are reporting significant capacity to grow training activity within the existing estate. In some of these facilities, this may reflect the current under-utilisation of the facility. This offers an opportunity to grow the training offer, but also reflects the previous regime for capital investment which may have paid insufficient regard to the broader context in which providers operate.

Provider Capacity to address Skill Shortages

The existing provider estate, its distribution and its focus of delivery does not appear to be limiting the ability of providers to respond to demand-side pressures. However, some facilities are not equipped to the level or at the capacity required to meet existing demand. A majority of the facilities mapped have identified access to serviceable and industry standard equipment as a constraint on their current operations. This, together with the likely under-utilisation of some estate, suggests that the future focus of capital investment should be on industry standard equipment, rather than new build.
Analysis and consultation with employers and GM training providers recently undertaken by New Economy (Advanced Manufacturing Skills Deep Dive) has already established that the Greater Manchester labour market faces current skill shortages in:

- Electrical engineering;
- Machine build engineers;
- Skilled machine operators;
- Welding; and,
- Electrical work.

Lack of specialist facilities that support welding and fabrication may well be contributing to the skill shortage in welding in Greater Manchester that has previously been identified by New Economy.

All skills providers, excepting one, have hard to fill vacancies for teaching staff. The problem of recruiting and retaining appropriately skilled staff touches on all of the skill areas considered in this study.

There may be a relationship between the difficulty to recruit electrical/electronic training staff and the skill shortage areas in electrical engineering and electrical work previously identified by New Economy. This issue is outside the scope of this study but merits further investigation. For example, might it be possible to address the wage differential between industry staff and educators by organising delivery to larger groups of students, thereby making it viable to uplift the salaries of trainers?

Provider Views on Capital Investment Priorities

There is strong support from training providers and Colleges for using Success Rates as a gateway criterion for Combined Authority/LEP Skills Capital investment (the Success Rate of a course is the number of those who achieved the qualification expressed as a percentage of the number who start a course). Success Rates are one measure of quality commonly used in Skills and Further Education. Once there are robust data, comparable across providers, for other measures (e.g. learner destinations) these should also be considered.

There was no consensus amongst skills providers on whether investment should prioritise apprenticeship-focused facilities. Responses were split six in favour of this approach, seven against.

A number of providers volunteered the opinion that the Combined Authority/LEP would be best to invest capital in collaborative propositions between providers, and between providers and employers.

There is significant scepticism amongst providers that the LEP/Combined Authority’s objective to secure two pounds additional investment for every pound invested in skills capital projects is deliverable.

A number of the providers consulted were strongly of the view that any investment proposal seeking Combined Authority/LEP support should be able to demonstrate the active engagement of key employers. Examples of this might include co-investment, sponsorship of equipment, a commitment to providing work experience or a commitment to open up employer facilities/equipment to support education and training.
Some providers are of the view that when considering proposals for capital investment – particularly for new build – that the impact on the existing training infrastructure be a part of the Combined Authority/LEP’s appraisal of these proposals.

**Recommendations**

The LEP/Combined Authority could consider establishing Minimum Levels of Success for the timely success rates of students and apprentices in Engineering and Manufacturing Technologies. Achievement of these performance thresholds by providers could then operate as a prerequisite for any capital investment. When there is reliable and publicly available destination/progression data for providers at subject level, this approach could be extended to encompass these metrics.

If this approach were to be followed, applicants for Skills Capital with no previous published Success Rates in these Sector Subject Areas could be deemed as having insufficient track record to merit capital investment. Caution, however, would need to be applied to not limit potential new entrants to the market or innovative new approaches.

All proposals for Combined Authority/LEP investment could be asked to demonstrate effective employer engagement with named and confirmed employers. Proposals that demonstrate joint investment with employers or substantial employer sponsorship would then score highly.

Collaborative proposals between providers or between providers and employers should be encouraged and prioritised. This is because engineering and manufacturing provision is expensive and collaboration (i.e. the amalgamation of supply and demand) is more likely to give viable group sizes. Collaboration is also more likely to build specialisation - removing duplication and ensuring niche training is available.

Support could be given to employers to open up their premises and equipment and to allow their staff to make some contribution to teaching (e.g. perhaps masterclasses in particularly fast-changing areas). Arrangements such as this could be available to skills providers and engineering/manufacturing firms across Greater Manchester. To do this, employers may need to be compensated in some way to cover the ‘down time’ and materials and staffing required. The Combined Authority/LEP may wish to establish with the SFA whether skills capital could be used to fund ‘lease’ arrangements to facilitate this type of collaboration.

Investment in this sector should prioritise upgrading equipment and bringing estate up to a reasonable standard. Significant new build is unlikely to be required and may not, therefore, be a priority.

When purchasing equipment, or investing in refurbishment, where possible, all suppliers should be Greater Manchester companies or Member Companies of GTAs and/or are an organisation that employs or will employ Apprentices if they get the contract.

The Combined Authority/LEP should explore with Government the extent to which the Growth Deal capital co-investment target might be made more flexible than the 2:1 match currently expected. It is understood that Government may not have the same level of expectation of capital co-investment in other LEPs.

The capital appraisal process should assess the likely impact of proposals on the utilisation of other facilities in Greater Manchester.
STRATEGIC CONTEXT

1.1 In February 2015, the Greater Manchester Combined Authority and the Greater Manchester LEP jointly published the Greater Manchester Manufacturing Strategy. The Strategy was published following extensive consultation involving key strategic organisations, service providers and individual businesses across all the key industry sub sectors and supply chains.

1.2 In the analysis that underpins the strategy, it is argued that the significant restructuring of manufacturing in the 1980s which led to the loss of larger manufacturing firms also resulted in the creation of a highly skilled labour pool on which the remaining Greater Manchester employers could draw. However, much of the current workforce is now ageing and nearing retirement.

1.3 Whilst the overall numbers employed in the sector are forecast to remain broadly static in Greater Manchester over the next few years, there will be a considerable requirement for skills provision fuelled by two principle drivers. The first is driven by the age demographic of the current workforce and the requirement to replenish existing workers with new entrants. The second of these is the rate of technological and process change in the sector and the skills requirements associated with that.

1.4 The Strategy identifies the following key skills challenges:

- Attracting the future workforce
- Easier routes into manufacturing
- Training facilities requirement from manufacturers
- Improving retention of our engineering graduates
- Addressing employer difficulty in identifying appropriate training providers
- Addressing the skills challenges in micro businesses

1.5 This study is intended to help in addressing the third, fifth and sixth of these challenges. Specifically, this study will contribute to providing the evidence base to underpin delivery of one of the Strategy’s strategic priority actions, namely:-

1.6 ‘To establish a network of GM Manufacturing Skills Training locations which incorporate key private sector participants and give skills providers access to the latest manufacturing technologies.’

1.7 It is intended that this network will build on current infrastructure and work closely with employers to deliver high-quality education and training for engineering and manufacturing industry in Greater Manchester.

1.8 This will be about getting the right provision in the right place, supporting greater specialization in FE, without unnecessary duplication and ensuring there aren’t gaps caused by unhelpful provider competition.
2 STUDY METHOD OVERVIEW

2.1 At inception, it was agreed with New Economy that the mapping exercise would be of Skills Funding Agency (SFA) providers operating in Greater Manchester and that the training in scope was that training classified as being in the second tier Sector Subject Areas 4.1 (Engineering) and 4.2 (Manufacturing Technologies) delivered to Greater Manchester residents.

2.2 In order to identify providers that could be delivering education and training in SSA 4.1 and SSA 4.2 to Greater Manchester residents, the consultant used the 12/13 National Qualification Success Rate tables at institution level to identify all providers delivering apprenticeships in SSA 4.1 and 4.2 and classroom delivery in SSA 4. From these providers were selected those who were also members of the Manchester Colleges Association or the Greater Manchester Learning Provider Network. The providers selected are listed at Annex 1.

2.3 A draft mapping tool was developed and then tested in two workshops with providers. The first of these was organised with the assistance of the GM Learning Provider Network, through the Greater Manchester GTA network and took place at Rochdale Training. The second was with Colleges and organised with the assistance of the Manchester Colleges Association and took place at Trafford College. Both of these workshops helped triangulate some of the issues to be explored and refine the mapping tool that was subsequently used.

2.4 The final mapping tool (Annex 2) was then circulated, with a briefing note (Annex 3), to those providers listed at Annex 1. Once again the GM Colleges Association and GM Learning Providers Forum were both very helpful in circulating the mapping tool and associated briefing note.

2.5 Annex 1 also identifies those providers that responded. In summary all Colleges approached responded as did most private providers. It is the consultant’s belief that the 16 facilities identified by the 14 providers that responded provide a comprehensive map of what is available in Greater Manchester.

2.6 For the purposes of this study, a ‘facility’ is defined as such by the provider. The briefing that accompanied the Mapping Tool advised providers as follows: ‘A ‘specialist facility’ can be: a college department; a college school; a training centre; a workshop; a manufacturing (e.g. food manufacturing) facility; a realistic work environment; a simulation facility; a specialist laboratory; a learning company etc. As this mapping exercise will be used to inform the development of the Combined Authority/LEP network mentioned above, providers should describe their assets in a way consistent with how they would want them honestly described to employers and potential students.’
2.7 The mapping tool sought to capture:

- Basic information regarding the provider;
- Information on the facilities under that provider’s control; and,
- Provider views on how the Combined Authority/LEP might prioritise its skills capital investment in engineering and manufacturing training.

2.8 This report primarily draws data and analysis from the mapping tool and the labour market analysis (‘Skills Deep Dive’ found at http://neweconomymanchester.com/stories/1935-deep_dives_skills_reports) already undertaken by New Economy.
3 CONDITION OF ESTATE

3.1 Training providers and Colleges were asked to give an estimate of the Gross Internal Area (GIA) of the facility(s) on which they were reporting. They were then asked, if known from a Condition Survey or similar (undertaken by a suitably qualified third party), the (estimated) GIA grading profile for this facility as a percentage of GIA against the following condition grades:

- Grade A - As New (Percentage of GIA typically built within 5 years, or may have undergone a major refurbishment in this period)
- Grade B – Sound (Percentage of GIA operationally safe and exhibiting only minor deterioration)
- Grade C- Operational (Percentage of GIA for which major repair or replacement needed in the short to medium term (3-5 years))
- Grade D – Inoperable (Percentage of GIA at serious risk of major failure or breakdown)

3.2 One provider (The Manchester College) provided no information on these questions. A further 3 providers (STEGTA, Bury College and Bolton College) did not provide total GIA data, but did report on the condition of their estate (all 3 reported 100% of GIA at Grade A or Grade B).

3.3 The table below sets out the aggregate estate condition from 10 providers who made a full return on estate condition.

Table 1

<table>
<thead>
<tr>
<th>Condition Status</th>
<th>% of GIA</th>
<th>GIA Sq m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade A</td>
<td>37%</td>
<td>13,707</td>
</tr>
<tr>
<td>Grade B</td>
<td>44%</td>
<td>16,385</td>
</tr>
<tr>
<td>Grade C</td>
<td>19%</td>
<td>7,080</td>
</tr>
<tr>
<td>Grade D</td>
<td>1%</td>
<td>192</td>
</tr>
</tbody>
</table>

3.4 Considering the data from those providers that made a return, over 80% of all estate dedicated to engineering and manufacturing training in Greater Manchester is Grade A or Grade B. Since three further providers reported that their estate was fully at Grade A or Grade B, this is likely to mean that the overall percentage of estate in Greater Manchester is significantly higher than 80% at Grade A/ Grade B.
This benchmarks reasonably well against the most recent data for all College estate in Greater Manchester, where 73% is reported as being at Grade A or B (from the last available eMandate return). It also benchmarks well against national data where 63% of all college estate nationally is reported as being Grade A or B (as reported in BIS FE College Capital Investment Strategy – Dec 2012). This reflects the fact that there has been significant recent (or current) investment in STEM facilities in a number of Colleges in Greater Manchester, including Trafford, Bolton, Hopwood Hall and Wigan & Leigh.
4 SPECIALIST EQUIPMENT

4.1 All facilities covered in this mapping exercise use specialist equipment. The equipment deployed in each facility is briefly summarised in the Section 7. Facility managers were asked three things in the mapping exercise:

- Whether the specialist equipment used is up to date;
- Whether all the specialist equipment in the facility is in a state of proper repair; and
- Where the answer to one or both of the above questions is ‘no’ to describe what type of equipment is affected and whether it should be upgraded, serviced or replaced.

4.2 The responses to these questions presented a more mixed picture than the relatively positive overview of estate condition reported above. In summary, equipment is not up to date in 8 of the 15 facilities that provided a response, and some equipment is not in a state of proper repair in 4 of these facilities.

4.3 It is not necessarily the case that training providers will always require the most up to date equipment to best meet employer needs. Many employers use older equipment on which they expect their staff to be proficient. Because of this, for some elements of training it can be sufficient for providers to use older pieces of equipment that are well-maintained (i.e. refurbished and regularly serviced). However, experience of contemporary equipment provides learners with training that goes beyond the ‘job-specific’ - advantageous both to them and the labour market.

4.4 The equipment identified as requiring upgrading or refurbishment included: lathes; millers; CNC machines and peripheral devices; fabrication/welding equipment; other measuring equipment (including laser scanning and measuring equipment); programmable logic controllers; practical rigs for designing, building and testing both pneumatic & hydraulic circuits; materials testing equipment; and, AM2 testing facilities.

4.5 Whilst a number of providers believe that investment to upgrade or refurbish some equipment is required, skills providers may struggle to keep up with specialist equipment that GM engineering firms require (now and in the future) and it may not always be appropriate, affordable and possible for an individual skills provider to purchase the equipment required and then recruit suitable qualified staff to provide the training and operate the machinery.

4.6 A potential solution, which has been put forward by a consultee, may be to support employers to open up facilities and resources on their premises using their equipment. Arrangements such as this could be available to skills providers and engineering firms across GM. To do this, employers will need to be compensated in some way to cover the ‘down time’ and materials and staffing required.
4.7 Likewise it may be that skills providers could jointly bid for new developments/projects and jointly invest in equipment and staffing and share the resource and facilities throughout the year for all students and GM employers. This will require shared curriculum and resource planning and possibly some logistical support such as minibuses to transport learners to the facility. At least two networks, the GM GTA network and Engineering Futures, might offer the basis for such collaborative joint investment.

4.8 Finally, where niche training is required for relatively small numbers of individuals, it is not sustainable for equipment and staff to be based in every provider location. In order to avoid critical gaps in education and training demand, providers and the LEP/Combined Authority should agree a plan for appropriate specialisation.
5 UTILISATION OF FACILITIES

5.1 The mapping exercise has allowed some assessment of how well existing facilities are being utilised, and the level to which employers, in particular, are engaged with delivery in the facility.

Table 2: Employer Engagement

<table>
<thead>
<tr>
<th>Type of Employer Involvement</th>
<th>Number of Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship employer</td>
<td>15</td>
</tr>
<tr>
<td>Offering work experience</td>
<td>13</td>
</tr>
<tr>
<td>Accessing full cost recovery courses</td>
<td>10</td>
</tr>
<tr>
<td>Sponsoring items of specialist equipment</td>
<td>10</td>
</tr>
<tr>
<td>Involved in a facility organised employer network</td>
<td>14</td>
</tr>
<tr>
<td>Involved in a curriculum advisory panel</td>
<td>12</td>
</tr>
<tr>
<td>Making staff available to support teaching</td>
<td>9</td>
</tr>
<tr>
<td>Receiving business diagnostic/ONA/TNA</td>
<td>11</td>
</tr>
<tr>
<td>Supporting the quality assurance/quality control of curriculum delivery</td>
<td>12</td>
</tr>
</tbody>
</table>

5.2 Each facility was asked the extent to which employers had been engaged in a variety of different ways. As can be seen from the table above, the extent and range of employer engagement is quite extensive. For some providers, employer engagement is built into their basic approach. So, for example, some of the Group Training Associations (GTAs) in Greater Manchester will have active employer membership bases of over 50.

5.3 The table above does not capture the full scope of employer engagement with training and education providers. Examples were given by providers of employers:

- attending Open Evenings to give an overview of their company and Apprenticeship Programmes;
- involvement in IAG/career events and school open evenings.
- releasing ‘Apprenticeship Ambassadors’ to promote apprenticeships to schools and other businesses;
- being active members of Boards of Governors or Boards of Trustees;
- providing meeting rooms etc., when required;
- supplying equipment and material for Apprentices and Training staff;
- providing guest speakers; and,
• sponsoring and helping to fund facilities.

5.4 Providers also report investing to keep staff updated with industry relevant skills. For example, one college reported that staff undertake 30 hrs of continuous professional development (CPD) annually of which most is spent in industry, enhancing their body of knowledge, being familiar with changes in regulations/processing, being aware of new trends and emerging initiatives and the use of technologies etc.

5.5 However, some types of employer involvement are quite low. Only two providers reported more than 20 employers paying for full cost courses with them in 2014/15. Furthermore, it is estimated that in 2014/15 approximately 120 employers in total accessed paid for provision from the 10 facilities where this type of activity was reported. To put this figure in context, this would account for less than 3% of the population of advanced manufacturing companies in Greater Manchester.

5.6 The nature of the mapping exercise and the availability of data means that it is not possible to provide a robust quantification of current space utilisation with ratios derived from floor space (GIA) and student numbers (ILR data). However, provider comments on available capacity are quite illuminating.

5.7 One College respondent commented ‘The College has significant space and facilities and would welcome opportunities to work closely with employers and other partners on its site.’

5.8 A participant from another College commented: ‘The facility is extensive in its size and physical area……the overall total capacity still available for Engineering training is extensive and not yet at full capacity. ….. Additional training capacity could be in the form of block-release, day-release, continuous, roll on/roll off etc. to fit the needs of industry and production timetables.’

5.9 A private training provider commented: ‘We have some empty floor space that could be utilised for an abundance of training activities’.

5.10 Another College said ‘the flexibility offered by the volume of activity across the site means that continued expansion can be easily accommodated’.

5.11 And another ‘Circa 300 m sq of classrooms could be adapted for future workshops or expansion of existing provision, should demand increase.’

5.12 It would appear from these comments that there is significant surplus estate within existing facilities. In light of this, new build should not be a priority for Combined Authority/LEP capital investment at the current time.
6 PROVIDER CAPACITY TO ADDRESS SKILL SHORTAGES

6.1 The table below quantifies the number of facilities delivering training in different skill areas at Levels 2 and 3 in Greater Manchester. So, for example, 13 of the 16 facilities mapped offer training to develop electrical engineers whilst none support marine engineering.

Table 3: Number of Facilities delivering training in different skill areas

<table>
<thead>
<tr>
<th>Sector Subject Area 4.1: Engineering</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeronautical engineering</td>
<td>2</td>
<td>Assembly and fabrication</td>
<td>8</td>
<td>Chemical engineering</td>
<td>2</td>
<td>Coal mining</td>
<td>0</td>
</tr>
<tr>
<td>Electrical engineers</td>
<td>13</td>
<td>Electronics engineers</td>
<td>12</td>
<td>Electrical installation</td>
<td>12</td>
<td>Engineerin g technicians</td>
<td>10</td>
</tr>
<tr>
<td>Mechanical engineering</td>
<td>13</td>
<td>Metal plate eng and technicians</td>
<td>4</td>
<td>Moulders, core makers, die castors</td>
<td>2</td>
<td>Quality control engineers</td>
<td>5</td>
</tr>
<tr>
<td>Sheet metal workers</td>
<td>8</td>
<td>Tool makers and fitters</td>
<td>8</td>
<td>TV, video and audio technicians</td>
<td>2</td>
<td>Water, sewerage plant eng/tech</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector Subject Area 4.2: Manufacturing Technologies</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakery and meat</td>
<td>0</td>
<td>Clothing and footwear</td>
<td>0</td>
<td>Electroplating</td>
<td>1</td>
<td>Food, drink and tobacco processing</td>
<td>1</td>
</tr>
<tr>
<td>Furniture</td>
<td>1</td>
<td>Machinists</td>
<td>3</td>
<td>Metal making and treating</td>
<td>2</td>
<td>Packers, bottlers, canners, fillers</td>
<td>2</td>
</tr>
<tr>
<td>Production and process engineers</td>
<td>6</td>
<td>Smith and forge workers</td>
<td>0</td>
<td>Sugarcraft and cake decorating</td>
<td>1</td>
<td>Printmaking etching/litho screen</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Printers/print finishers</td>
<td></td>
</tr>
</tbody>
</table>
6.2 Analysis and consultation with employers and GM training providers recently undertaken by New Economy (Advanced Manufacturing Skills Deep Dive) has already established that the Greater Manchester labour market faces current skill shortages in:

- Electrical engineering;
- Machine build engineers;
- Skilled machine operators;
- Welding; and,
- Electrical work.

6.3 These occupations will be underpinned by a requirement for training in the core areas of welding and fabrication, electrical engineering, electronic engineering, electrical installation, and mechanical engineering. As can be seen from the table above, this type of support is available in between 10 and 13 of the facilities mapped, depending on the particular skill area, and the facilities in question are well distributed around Greater Manchester.

6.4 The existing provider estate, its distribution and its focus of delivery does not appear to be limiting the ability of providers to respond to demand-side pressures. However, there are some indications that some facilities are not equipped to the level or at the capacity required to meet existing demand. A majority of the facilities mapped have identified access to serviceable and industry standard equipment as a constraint on their current operations. This, together with the likely under-utilisation of some estate identified above, suggests that the future focus of capital investment should be on industry standard equipment, rather than new build.

6.5 This issue has been identified across a wide range of skill areas. For example, a number of providers have identified a need to acquire specialist equipment in welding and fabrication if they are to be able to respond to employer demand. One private provider commented: ‘Welding and Fabrication equipment is continually being improved and updated by suppliers, and it is difficult to keep our equipment up to date.’

6.6 Another commented: ‘Assembly, fabrication and welding is very much in demand in the local area. We have increased the size of this department and doubled the staff in the area due to employer demand. However, some of the equipment is outdated, out of service and does not meet industry standard.’

6.7 In a similar vein, a college respondent observed: ‘There are a shortage of providers with welding facilities and they are expensive to install and run. However, there is a demand for skills in this area which exceeds supply.’
There is a clear read across from these observations and comments from providers regarding welding and fabrication equipment to the identification by New Economy of there being a skills shortage in welding in Greater Manchester.

The mapping questionnaire also sought to establish whether providers were having any difficulty in recruiting appropriately qualified teaching staff. All providers, excepting one, responded ‘Yes’ to the question: - ‘Are there any ‘hard to fill’ vacancies for staff delivering or supporting training and education in this facility?’ The problem of recruiting and retaining appropriately skilled staff touches on all of the skill areas considered in this study.

This quote from a private provider summarises many of the issues: ‘We require they hold a full Assessor Award and have 5 years’ experience in industry plus a desired qualifications being a teaching qualification and IQA award. Our experience is that applicants do not hold the qualifications we require or their location is not within a commutable distance. We have to take this on board and build in training and development in specific areas, past experience has proven that commuting is a problem with staff and therefore we cannot retain them for any length of time. We are also finding it difficult to compete with ‘packages’ offered in industry and therefore we cannot attract the ideal applicant to fully suit our requirements.’

A further issue for the teaching workforce in these skill areas is that of age demographics. The industry workforce as a whole is ageing in these sectors and there is a possibility that issue is being replicated in the training workforce. One training provider commented: ‘With some well-established staff due to retire over the next few years, replacing these highly skilled dual-professionals will be a significant challenge.’

Whilst inspection of provider responses on hard to fill vacancies suggests that this issue is being experienced across most occupational areas, there does seem to be a possible cluster of issues related specifically to electrical/electronic skills.

As one provider commented: ‘…all technical areas are proving hard to fill. This is expected to become an increasing problem for Electrical Installation related skills, as the construction sector continues to recover and expand. The economic upturn and long-term shortages in the Electrical/Electronic Engineering sector are also making it increasingly hard to recruit to this niche field.’ Another said:- ‘Electrical Installation teachers are difficult to recruit. This is partly because there are currently excellent opportunities within industry for these skills.’

A College commented:-‘It is difficult to find fully qualified members of staff for Electrical/Electronics’, and another college respondent said:- ‘It is proving extremely difficult to recruit quality mechanical and electrical engineering lecturing staff. The recruitment of mechanical and electrical assessors is particularly difficult due to the low salaries usually offered.’
This cluster of comments suggests that there may be a relationship between the difficulty to recruit electrical/electronic training staff and the skill shortage areas in electrical engineering and electrical work previously identified by New Economy. This issue is outside the scope of this study but merits further investigation. For example, might it be possible to address the wage differential between industry staff and educators by organising delivery to larger groups of students, thereby making it viable to uplift the salaries of trainers?
7 LOCATION OF FACILITIES

7.1 The addresses of facilities for training in engineering and manufacturing skills in Greater Manchester are set out below and the locations of these facilities can be seen from the map overleaf.

### ADDRESSES OF GM FACILITIES

<table>
<thead>
<tr>
<th>Facility</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Facility: GM Skills Centre</td>
<td>Skills Solutions, Unit 32, Ashburton Point, Wheel Forge Way, Trafford Park, M17 1EH</td>
</tr>
<tr>
<td><strong>B</strong> Facility: Engineering Technical Centre</td>
<td>Rochdale Training, Fishwick Street, Rochdale, OL16 5NA</td>
</tr>
<tr>
<td><strong>C/D</strong> Facility: Mechanical Engineering Workshop/ Electrical/Electronic Engineering Workshop</td>
<td>Centre for Science &amp; Technology, Trafford College, Talbot Road, Manchester, M32 0XH</td>
</tr>
<tr>
<td><strong>E</strong> Facility: Oldham Engineering Group Training Association (trading as OTC)</td>
<td>Lees Rd, Oldham, OL4 1JP</td>
</tr>
<tr>
<td><strong>F</strong> Facility: STEGTA at the Wellacre Academy</td>
<td>Irlam Rd, Flixtone, M41 6AP</td>
</tr>
<tr>
<td><strong>G</strong> Facility: Bakewell Centre</td>
<td>Stockport College, Wellington Road South, Stockport, SK1 3UQ</td>
</tr>
<tr>
<td><strong>H</strong> Facility: Tameside College</td>
<td>Beaufort Road, Ashton Under Lyne, OL6 6NX</td>
</tr>
<tr>
<td><strong>I</strong> Facility: Wigan &amp; Leigh College, Pagefield Campus</td>
<td>Walkden Avenue, Wigan, WN1 2JH</td>
</tr>
<tr>
<td><strong>J</strong> Facility: STEM Centre, Bolton College</td>
<td>Deane Road, Bolton, BL3 5BG</td>
</tr>
<tr>
<td><strong>K</strong> Facility: Stockport Engineering Training Association</td>
<td>18 Hammond Avenue, Whitehill Industrial Estate, Stockport, SK4 1PQ</td>
</tr>
<tr>
<td><strong>L</strong> Facility: Hopwood Hall College Middleton Campus</td>
<td>Rochdale Road, Middleton, M24 6XH</td>
</tr>
<tr>
<td><strong>M</strong> Facility: Hopwood Hall College Rochdale Campus</td>
<td>St Mary's Gate, Rochdale, OL12 6RY</td>
</tr>
<tr>
<td><strong>N</strong> Facility: Bury College</td>
<td>Market Street, Bury, BL9 0BG</td>
</tr>
<tr>
<td><strong>O</strong> Facility: City Skills Centre</td>
<td>Salford City College, 50 Frederick Road, Salford, M6 6QH</td>
</tr>
<tr>
<td><strong>P</strong> Facility: The Manchester College</td>
<td>Whitworth House, Whitworth St, Openshaw, M112WH</td>
</tr>
</tbody>
</table>
The offer of each of the facilities mapped above is described overleaf. In summary, the existing provider estate, its distribution and its focus of delivery does not appear to be limiting the ability of providers to respond to demand-side pressures.
A Facility: GM Skills Centre, Skills Solutions

7.3 The Greater Manchester SkillCentre is a vocational training centre covering industrial trade areas. It is situated in Trafford Park, Manchester, but as the name implies, its catchment area is Greater Manchester as a whole. The SkillCentre provides a free minibus service to assist learners in getting to and from the facility. Engineering training is primarily delivered to apprentices, employed by employers within Greater Manchester, whom attend on a day release basis and further education students whom attend on a block release basis. Within the engineering sector, there are 2 workshops with an additional electrical installation workshop. There are additional classroom and computer room facilities. Engineering Day Release apprentices attend to work towards a vocational qualification that is an integral part of their apprenticeship framework. Engineering further education learners are aged 16-18 and attend on a block release basis. Their training programme is badged as a Study Programme and offers the opportunity to achieve an engineering or electrical installation nationally recognised qualification and where appropriate, English and maths qualifications. Extensive support is given to the learners to help them progress into employment and further training.

7.4 The Greater Manchester SkillCentre is equipped with 6 lathes, 3 milling machines, 2 band saws, 1 guillotine, 4 pedestal drills, 1 pedestal grinder, 1 CNC machine, 4 conveyors, 1 compressor, 3 inverter drive units and a number of welding bays.

B Facility: Engineering Technical Centre, Rochdale Training

7.5 Rochdale Training has a fully operational Engineering Workshop/Technical Centre incorporating fitting, electrical, fabrication and welding, CAD and machining sections, to deliver practical on-the-job training to Apprentices, Trainees and learners from local schools. The facility also has recently refurbished classrooms to deliver the theory i.e. the Technical Certificate Level 2 to 4 including HNC in Advanced Manufacturing. The Centre has 6 full-time and 3 part-time staff to deliver the practical skills training, one English, Maths and IT tutor and 7 part-time subject specialist lecturers to deliver theory/technical certificates. There are also three Training Officers to support the learners and employers in partner companies. The Centre is managed by an Engineering Manager who has 24 years industrial experience and 8 years in education/training.

7.6 Rochdale Training is equipped with:-

- Lathes - 5 Colchester Triumph lathes, 3 Colchester Student lathes, and a Colchester Master lathe.
- Millers – Parkson horizontal, Adcock & Shipley horizontal, 3 Bridgeport vertical, and a Lion vertical.
CNC Machines – Denford Bravura 6 station lathe, Denford Triac 2.5 Axis miller, Denford Micro router 3 Axis router/miller, and a Denford Novaturm lathe. All CNC machines are running Fanuc software.

Fitting - Radial Arm, Pedestal Drills, Shaper, and Pedestal Grinders


C Facility: Mechanical Engineering Workshop, Trafford College

7.7 The Mechanical Engineering workshop is the main Engineering training facility at the Centre for Science and Technology (opened September 2013). This large integrated facility spans several hundred square meters and provides the essential skills for all Engineering and Manufacturing training. Skills delivered within this facility include the following:-

- Machining Skills – including Milling/Turing
- Welding – MIG/TIG/MMA
- Sheet Metal Fabrication
- Hand Fitting/ Hand Tool Skills
- Mechanical Maintenance

7.8 Training is delivered by a team of dedicated Engineering staff who tailor skills training packages to meet the specific requirements of each employer. As well as training the college’s own Full Time, Part Time and Apprentice learners, the facility is drawn on by a range of employers including Siemens, Manchester University, Kellogg’s, Saica etc. Engineering and Manufacturing training delivered at the Centre covers a range of levels from Level 1 to Level 5 and continues to enjoy a high reputation with employers across the Engineering community. Also included at the site, are over 30 workshops dedicated to the delivery of STEM related technical training. Included in these additional facilities is the Material Testing Laboratory. This combined theory/practical workshop is sponsored by Manchester University and facilitates the study and testing of a range of material mechanical properties.

7.9 Specialist equipment includes:- 6 Horizontal/Vertical Milling Machines, 11 Harrison/Colchester Lathes, 4 Pedestal Drills, 30 Fitting benches (plus vices & hand tools etc.), 12 MIG/TIG/MMA Welding stations. 1 X Denford CNC Milling Machine, 3 Metal Folders, 5 Grinding Machines, 3 Powered Saws (Horizontal/Vertical), and a Guillotine. There is also a full suite of Mechanical workshop tools and associated facilities and a range of Material Testing machines, including Pressure, Torsion, Tensile, Creep and Rotational Fatigue.
D Facility: Electrical/Electronic Engineering Workshop, Trafford College

7.10 The Electrical Engineering, Electrical Test/Inspection, Electrical Installation and Electronic Engineering facilities at the Centre for Science and Technology are extensive. These include:-

- Electrical Maintenance facility - this Engineering facility trains apprentices to maintain and install electrical equipment found in Engineering and Manufacturing environments.
- Electronics Laboratory - this practical facility supports the design, development, construction of Electronic circuits and technologies.
- Siemens sponsored STEM Laboratory - this sponsored facility incorporates an array of the latest Siemens PLC workstations, sensors and actuators.
- Electrical Installation Workshops. These workshops train apprentices on the installation and modification of electrical power circuits.
- AM2 Test Centre. This 4 booth commercial centre assesses the final AM2 Electrical Installation practical exam.
- Electrical Test & Inspection Workshops - contain the various assessment rigs for apprentices to train and achieve their Test and Inspection qualifications.

7.11 As well as training the college’s own FT, PT and apprentice learners, these facilities have proven particularly popular with other providers who bring their apprentices from across the region. This popularity has resulted in a trebling of numbers to more than 50 employed apprentice learners in year 1 alone this year. Similarly, facilities delivering training in Electrical/Electronic Engineering and associated PLC Automation Controllers have proved popular with Siemens and associated Solutions Partners.

7.12 Specialist equipment within the facility includes:-

- A Siemens S7 PLC programming laboratory with 5 development workstations and associated control development rigs.
- A 20 station Electronics workshop with associated electronics build and test equipment. The facility also contains an array PLC control hardware rigs.
- A 15 bay Test and Inspection training facility and a 15 bay Test and Inspection assessment facility.
- A 18 bay electrical installation workshop, with capacity for over 36 Engineers to work simultaneously.
- A 12 bay Electrical Maintenance workshop with associated control and drives.
- A commercial AM2 test facility with four full-specification test bays.
Oldham Engineering Group Training Association Ltd. (trading as OTC), based in Oldham, is an established independent Training Provider, with almost 50 years' experience dealing in Apprenticeships and NVQ programmes and has charitable status. OTC hold a contract through the Skills Funding Agency delivering Apprenticeships in Engineering/Manufacturing, Business Administration, Customer Service and Warehousing.

The Company operates from Oldham close to the town centre in a building fully owned by OTC. The training and assessment of NVQ's are carried out in the workplace, there are well-equipped workshops on site for supporting engineering provision. There are also two IT suites, a Materials Handling Training centre, three classrooms and two conference rooms.

OTC currently has access to 150 companies with a wide range of facilities, which cover training and assessment needs of the learners. 58 local companies are member companies and representatives from the board of trustees. OTC is a member of Group Training Association England and staff regularly attend GTA meetings and conferences, where there are opportunities to network and share good practice with similar providers.

The Mechanical Department currently has the following specialist equipment:- Pillar Drill, Vice, Reciprocating saw and Band saw, Pedestal grinder, Bench grinder, Surface grinder and Linisher, Fly press, Lathe, Vertical Miller, Rotary table and Dividing head.

CNC equipment: CNC Miller and CNC Lathe.

The Electrical Department currently has the following specialist equipment:- Lap top, PLC units, Simulation Panel, Test boards, Multimeter and Loop Tester, Soldering Irons, Helping hands, Extraction units, Wire straps, Mats.

The Fabrication and Welding Department currently has the following specialist equipment: - MIG Set, Reciprocating saw, Band saw, Guillotine, Extraction unit, Vice, Fly press, Izod tester, Welding booth, TIG set, MMA Set, Folder, Plasma cutter, Rollers, Pillar drill, Micrometers, Vernier, and Vernier Height.

These are STEGTA’s facilities within a school 6th form. The facilities are equipped with engineering machinery, lathes, milling machines, pillar drills, benches and hand tools.
Facility: Bakewell Centre, Stockport College

7.21 The engineering and manufacturing facility of Stockport College is housed mainly in the Bakewell Centre which was purpose built and opened in November 2010 supported by an engineering workshop in the Whitworth Centre (purpose built and opened in 2009) and a welding facility in the Vernon Workshops. All of these facilities are based at the Town Centre Campus of Stockport College. The facilities include engineering and welding workshops, general classrooms and specialist classrooms.

7.22 Specialist equipment includes: - Welding – 12 welding bays used for training apprentices. There are also CAD facilities used for LR (FT and PT) and apprenticeship delivery. An engineering facility sponsored by ManDiesel to support apprenticeship, classroom learning and HE students. There is also a large engineering workshop fitted out with Felder tools and machinery.

Facility: Tameside College

7.23 The facility has a number of distinct areas to support local industries, these being: Mechanical workshop for machining processes such as milling, turning, drilling, grinding and fitting. Fabrication & welding workshop covering basic fabrication processes plus MIG, TIG, MMA and Gas welding processes & virtual welding machine. Dedicated workshop for CNC Machining and CAD/CAM. Dedicated workshop for pneumatic, hydraulic, logic control and process control technologies. Dedicated laboratories for electrical and electronic engineering.

7.24 Equipment in the facility includes: - Lathes, Milling Machines, Drilling Machines, Grinding Machines, fabrication and welding equipment, used to deliver basic skills development as part of apprenticeship programmes from level 1 up to level 3.

7.25 CNC lathes and milling machines, pneumatic and hydraulic training rigs, logic control and process control training rigs, electronics trainers, used for Level 2 up to level 4 programmes.
Facility: Wigan & Leigh College, Pagefield Campus

7.26 The Centre of Excellence in Engineering at Wigan and Leigh College Pagefield Campus comprises a multi-million pound dedicated engineering centre with a range of specialist labs and industry standard equipment. The facility delivers a range of full and part-time courses from level 1 to HND level and there are plans to expand the provision to include degree level qualifications in association with the University of Central Lancashire. The centre is widely recognised for its innovation, range of provision and progression opportunities to higher levels of study, apprenticeships and Higher Education.

7.27 There has been recent investment in a range of equipment to support the delivery of full-time and part-time courses. These include:-

- Manual machine tools – lathes, milling machines, drills, grinders, etc.;
- Industry standard CNC lathe, milling m/c and co-ordinate measuring m/c;
- 3D rapid prototyping;
- Hydraulic / pneumatic training rigs and equipment,
- CAD / CAM and FEA software;
- Fluid power training rigs and equipment;
- Fully equipped fabrication and welding facility including CNC plasma cutter;
- Fully equipped electrical power laboratory;
- Electrical / electronic laboratories including PLCs;
- Electrical installation workshop;
- Sustainable technologies and renewable energy centre;
- Fully equipped motor vehicle workshop with industry standard diagnostic testing equipment.

Facility: STEM Centre, Bolton College

7.28 The centre was opened in September 2014, providing Engineering provision to accommodate Electrical/Electronic, Manufacturing, Mechanical and Operations & Maintenance programmes.

7.29 The STEM Centre is a state of the art facility with high end investment in equipment and resources to engage and enhance the delivery of part time, full time and apprenticeship programmes.
7.30 Equipment includes:
- AutoCAD/CAM and CNC dedicated classroom including 3D printer facility to provide both 2D and 3D Parametric solid modelling
- Hydraulic training rigs and equipment
- Pneumatic training rigs and equipment (Festo)
- Control systems rigs (Festo)
- Fluid power training rig and equipment (Festo)
- PLC training equipment (Siemens)
- Materials testing equipment (including hardness and tensile testing equipment)
- Fully equipped fabrication and welding facility including: MIG, TIG and MMA and Gas welding processes
- Electrical/Electronic laboratories (2) – fully furnished bespoke facility including Oscilloscopes, Function generators, Power supplies, Multi-meters and Multi-Sim simulation package

7.31 Bolton College construction facilities include:
- High specification Electrical installation workshops
- Industry sponsored (VIESSMANN) classroom/workshop for the delivery of sustainable technologies and renewable energies (green room) offering training in Photovoltaic, Solar Panels, Air Source Heat Pumps and Rain Water Harvesting

7.32 Electrical Installation programmes are delivered to Level 2/Level 3 full time learners in addition to Level 3 Electro technical advanced apprenticeship frameworks.

K Facility: Stockport Engineering Training Association

7.33 Stockport Engineering Training Association Ltd was established in 1966 to provide a training facility for companies in the Greater Manchester Area. There are extensive workshop facilities covering Hand Fitting, Mechanical, Machining, Hydraulics and Pneumatics Electrical, Fabrication & Welding and Further Education and IT facilities. There are also a range of facilities for providing additional skills relating to Health and Safety, i.e.; Work at Height, Scaffolding and Confined Spaces.

The Middleton Campus of Hopwood Hall College has a new build Technology Centre (4571 m sq), purpose built in 2011. Compromising of state of the art workshops for motor vehicle, engineering, CAD and 3D modelling, electrical and electronic manufacturing, electrical installation, brickwork, carpentry & joinery. A range of IT suites and general classrooms enable the effective delivery of practical and theory.

The Electrical & Electronics Department has the following specialist equipment: Oscilloscopes, Function generators, Power supplies (Digital and analogue), Multi-meters (Digital and analogue), Air extraction, Micro-chip programmers, Proteus (industry standard simulation package), and Multi-sim (education standard simulation package).

The Engineering & Welding Department has the following specialist equipment: CNC machines, Plasma cutter, Guillotine, Press Break, Tempering Oven, Furnace, Lathes, Combination welding sets (MIG, TIG and MMA), Gas welding facility, Auto CAD.

The Rochdale campus of Hopwood Hall College has a 200m sq facility dedicated to TV/audio production, comprising of green room, studio, editing and digital suites. Specialist equipment includes:- Sony NX5 broadcast camera’s, specialist PCs with i5 processors for editing, radio desk (sound) for live broadcasting in the studio, and green screen with lighting.

Bury College has highly resourced facilities that support education and training in a range of disciplines in Engineering, including industry standard machine workshops, laboratories and equipment to support industry projects, practical activity, testing and modelling, health & safety disciplines.

The facility is a skills centre which includes classrooms and specialist workshops. Workshops include Electrical Installation, Welding and Commercial Heating and Ventilation (fitters). The workshops have benefitted from an upgrade which started in 2013 and is still underway. An ACS gas centre is currently under construction.

Electrical Installation workshops which house training and assessment bays to the awarding body requirements. Deliver level 1 – level 3 Electrical Installation qualifications in addition to Apprenticeship frameworks in Electrical Installation.
Equipment includes safe isolation rigs and specialist level 3 assessment areas for inspection and testing. Gas welding bays in addition to TIG and MIG welding equipment and rigs.

Facility: The Manchester College

The Manchester College is the largest college of further education in England and the major provider of 16 to 18 and adult learning in Greater Manchester. The facility at the Manchester College has electro-electronic testing equipment.
8 PROVIDER VIEWS ON LEP SKILLS CAPITAL INVESTMENT PRIORITIES

8.1 The final section of the mapping tool asked providers to give their views on the approach the Combined Authority/LEP should take in investing Skills Capital. All the providers that responded agreed that Engineering and Manufacturing should be a priority for CA/LEP Skills Capital investment. It is possible that, had this question been asked of all providers (including non-engineering providers), there would have been no such unanimity.

Table 4: Number of providers identifying skill areas as a priority for investment

<table>
<thead>
<tr>
<th>Sector Subject Area 4.1: Engineering</th>
<th>Aeronautical engineering</th>
<th>Assembly and fabrication</th>
<th>Chemical engineering</th>
<th>Coal mining</th>
<th>Design and development engineers</th>
<th>Electrical engineers</th>
<th>Electronic engineers</th>
<th>Electrical installation</th>
<th>Eng technicians</th>
<th>Marine engineering</th>
<th>Mechanical engineering</th>
<th>Metal plate eng and technician s</th>
<th>Moulders, core makers, die castors</th>
<th>Quality control engineers</th>
<th>Quarrying and extraction</th>
<th>Water, sewerage plant eng/tech</th>
<th>Welding and fabrication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 (2)</td>
<td>8 (8)</td>
<td>2 (2)</td>
<td>0 (0)</td>
<td>10 (10)</td>
<td>9 (13)</td>
<td>9 (12)</td>
<td>8 (12)</td>
<td>9 (10)</td>
<td>0 (0)</td>
<td>10 (12)</td>
<td>7 (8)</td>
<td>7 (8)</td>
<td>1 (2)</td>
<td>3 (5)</td>
<td>10 (12)</td>
<td></td>
</tr>
<tr>
<td>Sheet metal workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Bakery and meat</td>
<td>1 (0)</td>
<td>1 (0)</td>
<td>0 (0)</td>
<td>0 (1)</td>
<td>2 (1)</td>
<td>1 (1)</td>
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<tr>
<td>Furniture</td>
<td>0 (1)</td>
<td>0 (1)</td>
<td>0 (1)</td>
<td>0 (1)</td>
<td>0 (1)</td>
<td>0 (1)</td>
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<td>0 (1)</td>
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<tr>
<td>Production and process engineers</td>
<td>3 (6)</td>
<td>3 (6)</td>
<td>3 (6)</td>
<td>3 (6)</td>
<td>3 (6)</td>
<td>3 (6)</td>
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<td>3 (6)</td>
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</tr>
</tbody>
</table>
8.2 Table 4 above aggregates provider views on which skills this investment should focus on. The number of providers supporting prioritised investment in a skill area is shown in black, the number of facilities who currently deliver in that skills area are shown in brackets. From this it can be seen that the provider views on priorities for investment broadly mirror the current distribution of provision.

8.3 Providers were asked if the Combined Authority/LEP should establish a minimum Success Rate threshold for providers before considering capital investment with them. Thirteen responded to this question, only one disagreed with the suggestion that such a threshold should be established. This shows strong support from training providers and Colleges for using Success Rates as a gateway criterion for Combined Authority/LEP Capital investment.

8.4 A number of providers wanted to go further than merely establish a success rate threshold. For example, one responded: “I believe that the LEP should invest in providers who meet the following criteria;

- A provider should be a minimum Ofsted Grade 2.
- They should be able to demonstrate excellent Employer engagement.
- They are aware of the skills challenges of SME’s and have the capability to help them.
- They should demonstrate good QSR data, both Success Rates and Timely achievement. They should be able to demonstrate good Apprenticeship growth and Progression
- Good Audit Results
- Can provide bespoke training for employers
- Can provide good IAG and ongoing Pastoral support”

8.5 The consultation section of the questionnaire also sought views on whether priority should be afforded to capital investment that supports facilities for apprentices rather than other types of learners. There was no consensus on this question. Responses were split six in favour of this approach, seven against.

8.6 From a strategic perspective, there are a number of reasons why the Combined Authority/LEP might want to prioritise investment that supports delivery for apprenticeships. Apprenticeships are clearly the preferred route of most employers. In addition, the current policy and funding context promotes apprenticeships very heavily. The class-room route for adults is being cut by 24% in 2015/16 compared to 2014/15. It is questionable whether the state will be funding any meaningful training in engineering and manufacturing skills for adults other than apprenticeships in two to three years’ time.

8.7 A number of providers volunteered the opinion that the Combined Authority/LEP would be best to invest capital in collaborative propositions between providers, and between providers and employers. So, for example, one respondent said that a mechanism for the Combined Authority/LEP to secure greater leverage
from its investment would be to ‘Invest in equipment jointly with all North West group training associations.’ Similarly: ‘Skills providers could jointly bid for new developments/projects and jointly invest in equipment and staffing and share the resource and facilities throughout the year for all students and GM employers.’ One provider argued that provider collaboration would also bring better value for money because: ‘the LEP could therefore negotiate discounts, as they would be buying for more than one organisation.’

8.8 There is significant scepticism amongst providers that the LEP’s objective to secure two pounds additional investment for every pound it invests in skills capital projects is deliverable. This scepticism is merited. The policy objective of investing in a one for two ratio predates 2010. Since then, the classroom adult skills budget has halved and the rate paid by the EFA to support the teaching of 18 year olds has been cut by 30%. This has put significant financial pressure on providers and a tight application of the 1:2 investment ratio will likely undermine the Combined Authority/LEP’s ability to deliver projects with high strategic impact.

8.9 There may be merit in the Combined Authority/LEP exploring with Government the extent to which the Growth Deal capital co-investment target might be renegotiated. It is understood that Government may not have the same level of expectation of capital co-investment in other LEPs.

8.10 A number of the providers consulted were strongly of the view that any investment proposal seeking Combined Authority/LEP support should be able to demonstrate the active engagement of key employers. For example: ‘some match funding/contribution should be sought from employers but this could be “in kind”.’ Similarly: ‘Bids must have employer backing with employers ‘approving’ the suitability of any equipment that is being proposed to ensure it meets the needs of business.’ And another: ‘Investments could require employer endorsement before being provided.’

8.11 Providers were asked for any specific proposals they wished to make regarding Combined Authority/LEP skills capital investment. A large majority of those that provided a specific response proposed investment in specialist equipment. A couple of providers suggested refurbishment. One provider proposed a new build project. One provider suggested investment in minibuses as a way of addressing facility under-utilisation.

8.12 The Combined Authority/LEP should consider a proposal made by a GM GTA: ‘We believe that when purchasing equipment, all suppliers should be Greater Manchester companies or Member Companies of GTAs and/or are an organisation that employs or will employ Apprentices if they get the contract.’

8.13 Some providers are of the view that when considering proposals for capital investment – particularly for new build – that the impact on the existing training infrastructure be built into the Combined Authority/LEP’s appraisal of the proposal. For example: ‘When assessing an application the panel should also consider the impact it may have on training facilities that may be already
established within the LA or neighbouring LA’s to see whether it may duplicate or enhance provision or whether other collaborative approaches should be developed.’ Similarly: ‘Avoid duplication as you risk an over-supply of underused facilities. Favour specialist centres that offer niche provision, together with collaborative approaches with SMEs and larger industry sponsors, FE and private training providers.’

8.14 The move from the SFA provider-proposal led capital investment regime to the Combined Authority/LEP strategy-led capital investment regime should also result in the Combined Authority/LEP paying due regard to the broader context of supply and demand.
9 Recommendations

Based on our research we make the following recommendations:

9.1 The LEP/Combined Authority could consider establishing Minimum Levels of Success for the timely success rates of students and apprentices in Engineering and Manufacturing Technologies. Achievement of these performance thresholds by providers could then operate as a prerequisite for any capital investment. When there is reliable and publicly available destination/progression data for providers at subject level, this approach could be extended to encompass these metrics.

9.2 If this approach were to be followed, applicants for Skills Capital with no previous published Success Rates in these Sector Subject Areas could be deemed as having insufficient track record to merit capital investment. Caution, however, would need to be applied to not limit potential new entrants to the market or innovative new approaches.

9.3 All proposals for Combined Authority/LEP investment could be asked to demonstrate effective employer engagement with named and confirmed employers. Proposals that demonstrate joint investment with employers or substantial employer sponsorship would then score highly.

9.4 Collaborative proposals between providers or between providers and employers should be encouraged and prioritised. This is because engineering and manufacturing provision is expensive and collaboration (i.e. the amalgamation of supply and demand) is more likely to give viable group sizes, collaboration is also more likely to build specialisation - removing duplication and ensuring niche training is available.

9.5 Support could be given to employers to open up their premises and equipment and to allow their staff to make some contribution to teaching (e.g. perhaps masterclasses in particularly fast-changing areas). Arrangements such as this could be available to skills providers and engineering/manufacturing firms across Greater Manchester. To do this, employers may need to be compensated in some way to cover the ‘down time’ and materials and staffing required. The Combined Authority/LEP may wish to establish with the SFA whether skills capital could be used to fund ‘lease’ arrangements to facilitate this type of collaboration.

9.6 Investment should prioritise upgrading equipment and bringing estate up to a reasonable standard. Significant new build is unlikely to be required and may not, therefore, be a priority.

9.7 When purchasing equipment, or investing in refurbishment, all suppliers should, where possible, be Greater Manchester companies or Member Companies of GTAs and/or are an organisation that employs or will employ Apprentices if they get the contract.
9.8 The Combined Authority/LEP should explore with Government the extent to which the Growth Deal capital co-investment target might be made more flexible than the 2:1 match previously expected. It is understood that Government may not have the same level of expectation of co-investment in other LEPs.

9.9 The capital appraisal process should assess the likely impact of proposals on the utilisation of other facilities in Greater Manchester.
ANNEX 1

Providers approached to complete the mapping/audit are set out below. The 14 providers that returned a completed mapping tool are underlined in bold.

ALLIANCE LEARNING
AVANTA ENTERPRISE LIMITED
BLUE TRAINING (U.K.) LIMITED
**BOLTON COLLEGE**
**BURY COLLEGE**
**ECONOMIC SOLUTIONS LIMITED (MANCHESTER SOLUTIONS)**
**HOPWOOD HALL COLLEGE**
JTL
**LEARNDIRECT LIMITED**
**MANCHESTER COLLEGE**
NORTH LANCS. TRAINING GROUP LIMITED (THE)
**OLDHAM ENGINEERING GROUP TRAINING ASSOCIATION LIMITED (THE)**
PEARSON IN PRACTICE SKILLS BASED LEARNING LIMITED
PROCO NW LIMITED
**ROCHDALE TRAINING ASSOCIATION LIMITED**
**SALFORD CITY COLLEGE**
**STEPTA**

**STOCKPORT COLLEGE OF FURTHER AND HIGHER EDUCATION**
**STOCKPORT ENGINEERING TRAINING ASSOCIATION**
**TAMESIDE COLLEGE**
**TRAFFORD COLLEGE**
TRAINING 2000 LIMITED
**WIGAN AND LEIGH COLLEGE**
YMCA TRAINING

ANNEX 2

The Mapping tool used is set out overleaf.
Engineering and Manufacturing Training in Greater Manchester: Mapping and Consultation

Introduction
Thank you for agreeing to complete this questionnaire, it should take no longer than 25mins. The information collected will be used by the Combined Authority/LEP for two purposes:

1. To support the establishment of a network of GM Manufacturing Skills Training locations which incorporate key private sector participants and give skills providers access to the latest manufacturing technologies.
2. To inform the development of the Combined Authority/LEP’s priorities for skills capital investment for engineering and manufacturing

The questionnaire is in three Parts. Part 1 collects headline information on your current education and training delivery in Sector Subject Area 4.1 (Engineering) and Sector Subject Area 4.2 (Manufacturing Technologies). Part 2 collects information on the facilities and equipment (owned and controlled by your organisation) used to support training in Sector Subject Areas 4.1 (Engineering) and 4.2 (Manufacturing Technologies). Part 3 asks for your views on skills capital investment priorities.

Please provide the name and contact details of the senior manager responsible for coordinating responses to this questionnaire from colleagues within your organisation.

<table>
<thead>
<tr>
<th>Questionnaire contact name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position in organisation</td>
</tr>
<tr>
<td>Tel no</td>
</tr>
</tbody>
</table>
Part 1 – The Training You Provide
Please complete the table below. Please *estimate* the number of learners *from Greater Manchester* that you will have enrolled as your learners in Sector Subject Area 4.1 (Engineering) and Sector Subject Area 4.2 (Manufacturing Technologies) in contract year/academic year 14/15.

<table>
<thead>
<tr>
<th>Type of Provision</th>
<th>Estimated learner numbers in learning 14/15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16-18</td>
</tr>
<tr>
<td>Learner Responsive delivery in SSA 4.1 at full level 2</td>
<td></td>
</tr>
<tr>
<td>Learner Responsive delivery in SSA 4.1 at full level 3</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship delivery in SSA 4.1 at Level 2</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship delivery in SSA 4.1 at Level 3</td>
<td></td>
</tr>
<tr>
<td>Learner Responsive delivery in SSA 4.2 at full level 2</td>
<td></td>
</tr>
<tr>
<td>Learner Responsive delivery in SSA 4.2 at full level 3</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship delivery in SSA 4.2 at full level 2</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship delivery in SSA 4.2 at full level 3</td>
<td></td>
</tr>
</tbody>
</table>

Where you deliver this learning in-house, and use a specialist facility in Greater Manchester which you own or control to do so, please complete a Part 2 template for that facility. Please complete a Part 2 template for each facility in Greater Manchester that you use to deliver specialist training in SSA 4.1 and SSA 4.2. If you use facilities that you do not own or control, please provide contact details for each such facility below.

Contact details for facilities that are used by your organisation but controlled by third parties:-

<table>
<thead>
<tr>
<th>Facility 1</th>
<th>Facility 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facility Name</strong></td>
<td><strong>Facility Name</strong></td>
</tr>
<tr>
<td><strong>Contact Name</strong></td>
<td><strong>Contact Name</strong></td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td><strong>Address</strong></td>
</tr>
<tr>
<td><strong>Tel</strong></td>
<td><strong>Tel</strong></td>
</tr>
</tbody>
</table>
If you sub-contract SFA or EFA-funded activity in SSA 4.1 or SSA 4.2 to a third party, please provide their contact details below.

<table>
<thead>
<tr>
<th><strong>Sub-contractor 1</strong></th>
<th><strong>Sub-contractor 2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-contractor Name</strong></td>
<td><strong>Sub-contractor Name</strong></td>
</tr>
<tr>
<td><strong>Contact Name</strong></td>
<td><strong>Contact Name</strong></td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td><strong>Address</strong></td>
</tr>
<tr>
<td><strong>Tel</strong></td>
<td><strong>Tel</strong></td>
</tr>
</tbody>
</table>
Part 2 – Your Facilities
Please complete a Part 2 for each facility that you own or control, which is used to deliver training in SSAs 4.1 or 4.2.

<table>
<thead>
<tr>
<th>Facility Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Basic Information
Please tick the statement below which is true for this facility

- This facility is owned by my organisation
- This facility is owned by a third party

At any one time, how many learners in SSAs 4.1/4.2 can this facility accommodate? [ ]

Considering all learners (apprentices, learner responsive, full cost recovery, school students etc) supported within the facility, either enrolled with you, or enrolled with another organisation that uses the facility, approx. how many learners were there in 13/14? [ ]

Please identify below what type of learners are using the facility and in what proportions.

<table>
<thead>
<tr>
<th>Type of Learner</th>
<th>As a proportion of all learners using the facility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Apprentices on your ILR/contract</td>
<td></td>
</tr>
<tr>
<td>FT Learner Responsive (SFA/EFA) on your ILR/contract</td>
<td></td>
</tr>
<tr>
<td>PT Learner Responsive (SFA/EFA) on your ILR/contract</td>
<td></td>
</tr>
<tr>
<td>School students</td>
<td></td>
</tr>
<tr>
<td>Private/Commercial/Full-cost recovery enrolled with your organisation</td>
<td></td>
</tr>
<tr>
<td>Delivered by, and enrolled with, a partner organisation</td>
<td></td>
</tr>
</tbody>
</table>

The Type of Training Supported – What type of training does this facility support? Please tick all that apply.
### Sector Subject Area 4.1: Engineering

<table>
<thead>
<tr>
<th></th>
<th>Assembly and fabrication</th>
<th>Chemical engineering</th>
<th>Coal mining</th>
<th>Design and development engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeronautical engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical engineers</td>
<td>Electronics engineers</td>
<td>Electrical installation</td>
<td>Engineering technicians</td>
<td>Marine engineering</td>
</tr>
<tr>
<td>Mechanical engineering</td>
<td>Metal plate eng and technicians</td>
<td>Moulders, core makers, die castors</td>
<td>Quality control engineers</td>
<td>Quarrying and extraction</td>
</tr>
<tr>
<td>Sheet metal workers</td>
<td>Tool makers and fitters</td>
<td>TV, video and audio technicians</td>
<td>Water, sewerage plant eng/tech</td>
<td>Welding and fabrication</td>
</tr>
<tr>
<td>Electrical engineers</td>
<td>Electronics engineers</td>
<td>Electrical installation</td>
<td>Engineering technicians</td>
<td>Marine engineering</td>
</tr>
<tr>
<td>Mechanical engineering</td>
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<td>Moulders, core makers, die castors</td>
<td>Quality control engineers</td>
<td>Quarrying and extraction</td>
</tr>
<tr>
<td>Sheet metal workers</td>
<td>Tool makers and fitters</td>
<td>TV, video and audio technicians</td>
<td>Water, sewerage plant eng/tech</td>
<td>Welding and fabrication</td>
</tr>
</tbody>
</table>

### Sector Subject Area 4.2: Manufacturing Technologies

<table>
<thead>
<tr>
<th></th>
<th>Bakery and meat</th>
<th>Clothing and footwear</th>
<th>Electroplating</th>
<th>Food, drink and tobacco processing</th>
<th>Food hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakery and meat</td>
<td>Clothing and footwear</td>
<td>Electroplating</td>
<td>Food, drink and tobacco processing</td>
<td>Food hygiene</td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td>Machinists</td>
<td>Metal making and treating</td>
<td>Packers, bottlers, canners, fillers</td>
<td>Plant and machine operatives</td>
<td></td>
</tr>
<tr>
<td>Production and process engineers</td>
<td>Smith and forge workers</td>
<td>Sugarcraft and cake decorating</td>
<td>Printmaking etching/litho screen</td>
<td>Printers/print finishers</td>
<td></td>
</tr>
</tbody>
</table>

**Activity in the Facility** – Please tick all that apply

<table>
<thead>
<tr>
<th>Workshop (s)</th>
<th>Simulator</th>
<th>Specialist laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing (eg food manufacture) Facility</td>
<td>Realistic Work Environment</td>
<td>Learning company</td>
</tr>
</tbody>
</table>

---

New Economy 044
Facility Description
Please describe this facility in no more than 200 words:

Estate Size
If known, please provide the estimated Gross Internal Area (GIA) of this facility in m sq:

Estate Condition
If known, from a Condition Survey or similar, please set out the (estimated) GIA grading profile for this facility below as a percentage of GIA:

<table>
<thead>
<tr>
<th>Condition Status</th>
<th>% of Facility GIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - As New</td>
<td>Percentage of GIA typically built within 5 years, or may have undergone a major refurbishment in this period</td>
</tr>
<tr>
<td>B – Sound</td>
<td>Percentage of GIA operationally safe and exhibiting only minor deterioration</td>
</tr>
<tr>
<td>C - Operational</td>
<td>Percentage of GIA for which major repair or replacement needed in the short to medium term (3-5 years))</td>
</tr>
<tr>
<td>D – Inoperable</td>
<td>Percentage of GIA at serious risk of major failure or breakdown</td>
</tr>
</tbody>
</table>

Specialist Equipment
Please describe the specialist equipment within the facility and the types of training this is used to support:

___
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the all the specialist equipment used in this facility up to date?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Is all the specialist equipment used in this facility in a state of proper repair?</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

If No to either question, please set out below what type of equipment is affected and whether it should be upgraded, serviced or replaced. If the latter, what should it be replaced by?:

---
**Number of Employers involved with the Facility in 14/15**

Please estimate the number of employers engaged in different ways with this facility. Please **tick** the relevant boxes, one box for each activity type.

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Number of Employers Engaged</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Number of employers with apprentices using the facility in 2014/15</td>
<td></td>
</tr>
<tr>
<td>Number of employers offering work experience to learner responsive students in 2014/15</td>
<td></td>
</tr>
<tr>
<td>Number of employers accessing full cost recovery courses in the facility in 2014/15</td>
<td></td>
</tr>
<tr>
<td>Number of employers sponsoring items of specialist equipment in the facility in 2014/15</td>
<td></td>
</tr>
<tr>
<td>Number of employers involved in a network convened by, or linked to, the facility in 2014/15</td>
<td></td>
</tr>
<tr>
<td>Number of employers involved in a curriculum advisory panel, or similar, for the facility in 2014/15</td>
<td></td>
</tr>
<tr>
<td>Number of employers making their staff available to support teaching within the facility in 2014/15</td>
<td></td>
</tr>
<tr>
<td>Number of employers benefiting from business diagnostic/ONA/TNA</td>
<td></td>
</tr>
<tr>
<td>Number of employers supporting the quality assurance/quality control of curriculum delivery</td>
<td></td>
</tr>
</tbody>
</table>

Please describe and quantify any other forms of employer involvement with the facility that are not captured by the table above:-

Please describe below any significant barriers to engaging with employers
Future Partnering and Networking
Does the facility have any capacity that could support additional training in the future, in partnership with employers or other providers? Please describe what these arrangements might look like:-

K. Staffing

Please estimate how many staff are involved in the delivery of training and learning in SSAs 4.1 and 4.2 within this facility.

<table>
<thead>
<tr>
<th>Sector Subject Area 4.1 Engineering</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated number of Teaching staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated number of FT Teaching staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated number of technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated number of FT technicians</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector Subject Area 4.2 Manufacturing Technologies</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated number of Teaching staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated number of FT Teaching staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated number of technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated number of FT technicians</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are there any ‘hard to fill’ vacancies for staff delivering or supporting training and education in this facility: Yes/No
If the answer to the above question is yes, please briefly describe the issue(s):-
Part 3: Skills Capital Consultation

A. The Combined Authority/LEP will identify priorities for skills capital investment. Do you believe investment in facilities to support training in Engineering and Manufacturing technologies (i.e. to support training in the Tier 2 SSAs 4.1 and 4.2) should be one of those priorities Yes/No

If Yes, please answer the questions below. If No, thank you for your time. Please email the questionnaire to mappingresponse@outlook.com. Please email your response before 12am on Wednesday March 4th.

B. If you believe facilities to support Engineering and Manufacturing Technologies should be a priority for Combined Authority/LEP Skills Investment, are there any sub-categories that should receive particular support? Please tick all that apply.

<table>
<thead>
<tr>
<th>Sector Subject Area 4.1: Engineering</th>
<th>Sector Subject Area 4.2: Manufacturing Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aeronautical engineering</strong></td>
<td><strong>Bakery and meat</strong></td>
</tr>
<tr>
<td>Assembly and fabrication</td>
<td>Clothing and footwear</td>
</tr>
<tr>
<td><strong>Chemical engineering</strong></td>
<td>Electroplating</td>
</tr>
<tr>
<td><strong>Coal mining</strong></td>
<td>Food, drink and tobacco processing</td>
</tr>
<tr>
<td><strong>Design and development engineers</strong></td>
<td>Food hygiene</td>
</tr>
<tr>
<td><strong>Electrical engineers</strong></td>
<td>Machinists</td>
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<td>Plant and machine operatives</td>
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<tr>
<td><strong>Moulders, core makers, die castors</strong></td>
<td><strong>Production and process engineers</strong></td>
</tr>
<tr>
<td><strong>Quality control engineers</strong></td>
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<td><strong>Quarrying and extraction</strong></td>
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<tr>
<td><strong>Welding and fabrication</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Marine engineering</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Quality control engineers</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Marine engineering</strong></td>
<td></td>
</tr>
</tbody>
</table>
C. Please set out your rationale for your answer to question B below. For example, you may believe that there is a shortage of facilities (demand exceeds supply) in Greater Manchester; or that existing facilities are in poor quality estate, or that additional investment in specialist equipment is required; or that existing facilities are inaccessible etc.

D. Do you have any specific suggestions or proposals as to how the Combined Authority/LEP should invest in facilities or equipment to support Engineering and Manufacturing Technologies? If so, please set these out briefly below:

E. In order to secure best value for money, and to meet the expectations of Government, the Combined Authority/LEP will seek to ensure that skills capital investment acts as a lever for significant additional investment. In commissioning proposals for capital investment, do you have any suggestions of the approach that the Combined Authority/LEP should take to maximise the leverage secured?

F. Do you believe the Combined Authority/LEP should establish a minimum Success Rate threshold that providers are required to meet before they benefit from the investment of skills capital? Yes/No

G. Should priority be afforded to capital investment that supports facilities for apprentices rather than other types of learners? Yes/No

Thank you for your time and input. Please email the completed questionnaire to mappingresponse@outlook.com. Please return your response before 12am Wednesday March 4th.
ANNEX 3

Briefing Note

Engineering and Manufacturing: Mapping of Skills Facilities and Skills Capital Consultation.

Introduction

The Combined Authority/LEP has identified Engineering and Manufacturing as being key drivers of future growth for the Greater Manchester economy. To ensure that the opportunities the Manufacturing sector presents are harnessed to the full, the Combined Authority/LEP is publishing a Manufacturing Strategy. The Strategy has a number of key recommendations. One of those is “Establish a network of GM Manufacturing Skills Training locations which incorporate key private sector participants and give skills providers access to the latest manufacturing technologies.”

In order to progress this recommendation, New Economy is now:-

- Mapping existing facilities that support training in Engineering and Manufacturing Technologies in Greater Manchester
- Consulting SFA providers on future Skills Capital investment by the Combined Authority/LEP in facilities that deliver Engineering and Manufacturing Technology training.

Maximising the impact of Skills Investment

As part of the Government’s localism agenda, responsibility for skills capital investment is being devolved from the Skills Funding Agency to LEPs. This transfer of power signals an opportunity to secure improved alignment between local economic priorities and the development and upgrading of education and training facilities.

This approach to commissioning will be a more proactive style of state-funded capital investment in skills than has obtained in the past. Previously the SFA has tended to operate a fairly non-directive, open invitation process with providers. It has been for providers alone to understand market requirements and develop proposals for capital investment to respond to those, in which the state has, or has not, then co-invested.

The approach taken in Greater Manchester will be more partnership-based, with co-investment between the Combined Authority/LEP and providers founded on a shared understanding of what employers and the city region economy will require in the future, and how the skills system can best respond to
meet those needs.

An objective of this mapping and consultation exercise is to ensure that skills capital investment in Engineering and Manufacturing Technologies facilities will be well-founded and complement the existing training infrastructure.
Background

Analysis and consultation with employers and GM training providers by New Economy has already established that the Greater Manchester labour market faces current skill shortages in:

- Electrical engineering;
- Machine build engineers;
- Skilled machine operators;
- Welding; and,
- Electrical work.

There are also indications that there may be some significant skill gaps within the existing workforce. The Gatsby Foundation has reported that, nationally, 25% of Technicians and 30% of Skilled Workers are qualified at level 2 or below. These roles would generally be regarded as requiring skills and underpinning knowledge at level 3 or above.

Whilst the forecasting model used by New Economy is forecasting an overall decline in those employed in Level 3 and 4 occupations in the sectors of Engineering and Core Manufacturing in Greater Manchester, the Manufacturing Strategy identifies the issue that much of the workforce in manufacturing is nearing retirement and so significant levels of replacement demand are still anticipated.

This reported position in Greater Manchester is consistent with the national picture. For example, EngineeringUK estimates that the UK needs to double the number of engineers entering the profession each year between now and 2020 to meet expected demand and to counter the number of engineers retiring.

The Manufacturing Strategy for Greater Manchester brigades an analysis of the economic, labour market and skills supply issues and, from this, suggests that there are six critical skills challenges facing the Manufacturing sector in Greater Manchester:

- Attracting the future workforce
• Easier routes into manufacturing
• Training facilities requirement from manufacturers
• Improving retention of our engineering graduates
• Addressing employer difficulty in identifying appropriate training providers
• Addressing the skills challenges in micro businesses

It is clear from this that the establishment of a network of training locations, with the involvement of key private sector partners in the sector, whilst not a panacea, may go some of the way to addressing the key skills challenges that have been identified in the City Region.

Facilities Mapping and Capital Investment Consultation

This mapping is focussed specifically on those facilities that are used to deliver specialist training in Engineering and Manufacturing Technology. To be precise, the focus is on those specialist facilities used to deliver Level 4, Level 3 and Level 2 learning aims that fall within either the second tier Sector Subject Area 4.1 (Engineering) or 4.2 (Manufacturing Technologies). The funding streams in scope are:- EFA, ASB Learner Responsive, Apprenticeships (16-18 and adult), and FE Loans.

For the purpose of this mapping, providers are being asked to describe their own ‘specialist facilities’. A ‘specialist facility’ can be:- a college department; a college school; a training centre; a workshop; a manufacturing (eg food manufacturing) facility; a realistic work environment; a simulator facility; a specialist laboratory; a learning company etc. As this mapping exercise will be used to inform the development of the LEP network mentioned above, providers should describe their assets in a way consistent with how they would want them honestly described to employers and potential students.

The first two parts of the questionnaire constitute the mapping of facilities.

Part 1
Part 1 asks you to:- a) estimate the number of learners from Greater Manchester that you will have in Sector Subject Area 4.1 (Engineering) and Sector Subject Area 4.2 (Manufacturing Technologies) in 14/15; b) asks for contact details for those facilities used by you but not controlled by you; and, c) asks for information on subcontractors who deliver activity in Engineering or Manufacturing Technologies through your SFA/EFA contract.
Part 2
Part 2 captures information regarding each specialist facility used to support the delivery of the provision described in Part 1. Please complete one Part 2 template for each facility you are reporting on.

Part 3
Part 3 is a brief consultation on possible priorities for Combined Authority/LEP skills capital investment.

Returning the Questionnaire
Please email a completed version of the questionnaire, with one Part 2 template complete for each facility, to mappingresponse@outlook.com. Please return the questionnaire no later than 12am Wednesday March 4th. If you wish to discuss any aspect of this process, please call 07512 367162 and a member of the study team will return your call.