

UK Digital Strategy: Sema Response

We submit this response as the not for profit Science, Engineering, Manufacturing and Technologies Alliance (Semta), an alliance which brings together employers from across the Advanced Manufacturing and Engineering sector to address their skills needs.

Semta broadly welcomes the Government's digitally-led approach to service provision. In time, digitisation has the potential to significantly reduce the cost of administering and providing Government services while enhancing accessibility. However, there are also potential drawbacks which employers in the Advanced Manufacturing and Engineering sector we represent will be anxious to see recognised and addressed.

We welcome the £1.8 billion investment in digital services announced by Government through the recent Autumn Statement, along with £450 million for the Government Digital Service. The improvements made by the Government Digital Service to government websites, making them cleaner and consistent, hopefully set the template for its future work. Given the continued spending restraint being expected of Government departments, including a 26% cut to the Cabinet Office budget by 2020, the boosted investment in the Government Digital Service and digital services is a welcome demonstration of the Government's enthusiasm for digitisation.

In Advanced Manufacturing and Engineering, there is a dichotomy. On the one hand, this is a cutting-edge, technologically innovative sector containing a number of digitally engaged employers. On the other, it is a sector with an ageing workforce and a large skills gap when it comes to digital. [A 2014 BIS commissioned survey](#) showed a 6% year-on-year jump in the numbers of young people considering careers in engineering – young entrants to the sector can bring fresh ideas and innovation, and their digital literacy, boosted further by the inclusion of computing in the new school curriculum, will hopefully help older, less digitally-literate colleagues to make the transition into the new digitally-led world. The challenge is to ensure that older workers are not left behind.

Semta is especially keen to see that the government's National College for Digital Skills, ADA, acts as a beacon for digital skills in the wider economy and shares its expertise and innovation across sectors. While ADA's website leads with the claim that there are 130,000 tech sector jobs to be filled each year, there is also a need for some [800,000 new engineers to be trained by 2020](#) to avert a serious skills shortage in the Advanced Manufacturing and Engineering sector – and in high-tech manufacturing establishments, there is an obvious need to ensure that those engineers are digitally literate.

[The most recent Manufacturing Barometer](#) showed that 71% of small-to-medium sized enterprises in the sector planned to increase workforce skills from July 2015 to June 2016 and believed that that investment would increase productivity, while 56% planned to implement new computer software and systems – without staff with the required skills and expertise, or the capacity to acquire it, those new systems could lead to a slowdown in productivity, not a boost, so while it's pleasing to see a majority of small-to-medium sized enterprises in the sector planning to improve their workforces' skillsets, the proportion needs to be boosted still further. Government, given that it is leading the charge in digitisation, has a role in ensuring that small-to-medium sized enterprises both recognise the importance of digitally upskilling their existing workforces and have the capacity and wherewithal to do it.

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The potential benefits to the Advanced Manufacturing and Engineering sector of greater digital skills are evident regarding innovation and boosted productivity. Given that the Advanced Manufacturing and Engineering sector is [already amongst the UK economy's best performing](#) in terms of turnover and gross value added per employee, we are hopeful that improved digital skills amongst the workforce will help to ensure that in the face of fierce competition from international competitors the sector is able to maintain its position. With the pace of progress of technological advancement in the sector, e.g. in 3D printing and with 'smart factories', there is a risk that without boosted digital skills amongst the workforce the Advanced Manufacturing and Engineering sector in the United Kingdom will be left behind international competitors where those skills are more prevalent. The United Kingdom is leading the way in a number of new technologies, e.g. 3D printing, but without the requisite workforce skills there is a risk that we as a country will be unable to take advantage and will see our world-leading status eroded.

Government can play its part in ensuring the United Kingdom has a sufficiently digitally skilled workforce by ensuring that digital skills form a sizeable component of all apprenticeships undertaken within public sector organisations. This would help to ensure that there is a wider benefit to the economy and to employers derived from these apprenticeships, by providing a steady stream of new talent entering the workforce with digital skills and with demonstrable experience of applying those skills in a workplace setting.

With more digitally literate employees in Advanced Manufacturing and Engineering, there would be greater potential for innovation and thus a greater likelihood that the United Kingdom's Advanced Manufacturing and Engineering sector remains a world leader – so any investment made by government in digital skills for small-to-medium sized enterprises would likely be more than repaid through boosted productivity. [A recent report by the Tinder Foundation](#) estimated that if the 12.6 million United Kingdom adults without basic digital skills were taught how to use computers, there could be a boost of over £14 billion to the economy over the next decade. Boosting those workers' digital skills will also ensure that the Government gets the best bang for its buck [when making its £1.7 billion investment in superfast broadband to 2020](#). Taken together, this investment would help to ensure that workers in Advanced Manufacturing and Engineering enterprises of all sizes across the United Kingdom have digital skills and that their employers are best able to utilise them.

The new Digital Apprenticeship Service is one example of a digital policy which is sound in theory but could lead to serious difficulties if the implementation is poor or there is insufficient support offered to its users. Small-to-medium sized employers in our sector have expressed concerns to us regarding what they perceive as a focus on the needs of larger employers, who will also have a greater human capacity to become proficient in using the new system. Ample support is needed to ensure that smaller employers are equally as capable of using the new system – as well as online resources like factsheets, there ought also to be investment in the support staff needed to work with employers as and when they require assistance. Without doing so, there is a risk that while larger employers will save money and time, smaller employers will experience the opposite – and this is a risk that could be repeated across other areas where government is digitising too, e.g. tax returns.

Given previous difficulties in ensuring large procured IT projects are delivered on time and to

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budget, we welcome [the Skills Minister's announcement](#) that the Digital Apprenticeship Service will be procured in phases and that a range of providers will be used to supplement the government's existing expertise. Care needs to be taken, however, to ensure that a mish-mash of providers and contracts does not lead to fragmentation of service levels and usability; it's vital that, building upon the template set by the Government Digital Service, externally procured digital services are user friendly and consistent.

To conclude, the focus on and investment in digital services by government is welcome and we see substantial potential benefits to the Advanced Manufacturing and Engineering sector so long as the risks and potential drawbacks identified in this submission are fully considered and steps taken to mitigate against their impact.