Design and the UK's Industrial Strategy

All Party Design and Innovation Group, Design Business Association and British Industrial Design Association submission to the Department for Business, Energy and Industrial Strategy consultation on "Building our Industrial Strategy"

Overview

The Design Business Association (DBA, All Party Design and Innovation Group (APDIG) and British Industrial Design Association (BIDA) are delighted to publish their submission to the Department of Business, Energy and Industrial Strategy consultation on the Government's newly announced Industrial Strategy.

This consultation comes after an open call for evidence run by the DBA, APDIG and BIDA in March 2017.

Design in Context

Design is central to the British economy, helping to drive innovation and improve productivity. Recent research by the Design Council shows that the design economy alone contributes 7.2 percent to the total UK economy.

The sector's high year-on-year growth confirms that the creative industries punch above their weight compared with the British economy as a whole. The most recent statistics available confirm that:

- The value of services exported by the UK Creative Industries in 2014 was £19.8 billion, an increase of 10.9 percent from 2013[1]
- Exports of services from the Creative Industries accounted for 9 percent of total exports of services from the UK in 2014[2]
- Between 2014 and 2015, the number of people employed in the sector rose by 3.2 percent, and between 2011 and 2015 by 19.5 percent[3]

In 2015, a report by the Design Council[4] found that:

- In 2013 the design economy generated £71.7 billion in gross value added (GVA) - equivalent to 7.2 percent of total GVA

[1] Creative Industries: Key Findings, GOV.uk, 20th July, 2016: https://www.gov.uk/government/statistics/creative-industries-2016-focus-on
[2] *Ibid*
[3] *Ibid*
[4] Design Council, *The Design Economy*, October 2015: http://www.designcouncil.org.uk/sites/default/files/asset/document/The%20Design%20Economy%20executive%20summary.pdf

- In the period between 2009-2013, the design economy GVA increased by 27.9 percent, compared to 18.1 percent across the UK economy as a whole
- Approximately 580,000 people are directly employed in the UK's design industries, while a further 1 million designers work across the economy in non-design industries

Design does not exist in isolation. It works across all levels of the economy, allowing for innovation to take place in sectors ranging from agriculture to robotics. As Britain prepares to leave the European Union, it is vital that design is seen both as a major contributor to the British economy in its own right, as well as a driver for growth in terms of both commercialising innovation and manufacturing.

In order to secure the best possible outcome for the UK economy, the DBA, APDIG and BIDA held an open consultation with the sector, requesting their views on how the Industrial Strategy should work to:

- Embed design principles at the heart of British industry
- Promote R&D funding and tax credits for innovative companies and contractors
- Work towards a targeted sector deal for the creative industries
- Give people access to education and training to develop the skills needed for the industries of the future
- Develop Britain's infrastructural capacities by investing in reliable communications, transport and energy

In carrying out this consultation – the DBA, APDIG and BIDA asked six open questions to members. The average DBA member agency employs 14 people and has a fee income of over £1.2 million. In total, BIDA received responses from 91 professional designers and design agencies, with 33 of these providing detailed comments. APDIG consulted amongst its members in the design community, including chairing workshops on the industrial strategy at the University of Chester and the Edinburgh College of Art in collaboration with the Council for Art and Design in Higher Education (CHEAD).

The six questions submitted to members were:

1. You tell us that you're struggling to recruit the right talent for your business. What skills shortages do you have or expect to have? And what do you think has caused the shortage? Does geography play a part and can we link skills needs of the industry to skills provision by educational institutions in local areas? Or do we need a radical rethink! How would you go about developing your future workforce?

2. The Government is offering the Creative Industries (CI) a Sector Deal. The design industry sits within this CI industry grouping but there isn't a predetermined recipe for a Sector Deal as it's not been done before. Given that the Government's emphasis throughout the Green Paper is productivity and growth, what ideas do you have for driving growth in a) your business and our sector of industry (if that's what you want); b) in your clients' businesses; and c) more generally across the UK?

3. The Industrial Strategy also aims to cultivate world-leading sectors. The Creative Industries is generally thought of as a core strength of the UK so how might we protect our world-standing? How might we showcase it to the world and how do we grow it?

4. The design industry in the UK does a lot of work overseas. What could we be doing to enable you to grow your overseas markets?

5. How would you go about embedding design at the heart of all British businesses to help them grow or to help them export their products or services overseas?

6. We need to be bold in our ask of Government, so no idea is too big or too expensive at this stage. But we also know that the simplest ideas are often the best. So how would you kick-start growth and productivity in the UK that brings benefit to the design industry?

The DBA, APDIG and BIDA call for the Government to think carefully about the role of design and its potential contribution to a positive future for the British economy. In developing a good working relationship with the design profession, the new Industrial Strategy can work to support and reward this vital sector of the economy, giving it the potential to grow itself, and to facilitate the development of businesses in both a sectoral and regional way.

Questions for Consultation

The DBA, APDIG and BIDA have responded to those questions most relevant to design sector.

1. Does this document identity the right areas of focus: extending our strengths; closing the gaps; and making the UK one of the most competitive places to start or grow a business?

We broadly welcome the recommendations set out in *Building Our Industrial Strategy*. After many years of drift and a lack of clarity from Whitehall, the Green Paper makes a positive case for increased Government intervention in facilitating economic growth.

The British economy has a number of strengths, with design being a prominent factor in this. Our organisations work to ensure that good design policy is placed at the centre of the British economy and in ensuring that the Government is aware of this.

More generally, we also welcome the competitive nature of the British economy and the wishes expressed by the Secretary of State for Business, Energy and Industrial Strategy in his foreword to the Green Paper to further promote competition throughout the economy[5]. The design sector is already notable for a highly diversified, competitive market with a number of lessons and elements of best practice that it is keen to see expanded to other areas of the economy. A competitive market has a number of common characteristics and benefits:

- Encourages firms to improve their own efficiencies and seek to reduce costs
- Promotes investment in innovation and emerging technologies and ways of working
- Cumulatively increases the overall productivity of the economy by;
    - Rewarding the most efficient companies
    - Encouraging the least efficient companies to leave the marketplace
- Benefits the consumer by providing the things demanded by all consumers by encouraging greater choice, lower prices, and better quality goods and services

On a national level, research by economists such as Philippe Aghion found that the market liberalisation reforms introduced by the British Government toward the end of the last century –

[5] HM Government, *Building our Industrial Strategy*, 2017, (pg. 6)

especially in terms of reducing barriers to entry and increasing the role of Competition Authorities had a net positive impact on innovation and productivity in the UK.[6]

The DBA, APDIG and BIDA support the aim of the Industrial Strategy with regard to increasing competition. With specific regard to the design sector, there are a number of additional ways to build upon existing strengths and to "close the gaps" in others. Thematically, the key areas of relevance to the design sector that the Government should consider to improve the competitive advantage for British employers, specifically the design sector, are:

- **Higher and Further Education**
  - Ensuring that universities provide the appropriately skilled designers needed for the design firms, industry and innovative jobs of tomorrow.
  - Allowing universities to attract the best talent from home and abroad.
  - Deepening the ties between higher and further education institutions, and employers.
- **Skills and Training**
  - Developing training programs to up-skill the existing workforce.
  - Providing incentives for microbusinesses to further develop their own employees with the skills needed to grow their own businesses.
  - Incentivising professional designers to feed into the skills and development pipeline and national programmes such as the English Baccalaureate.
- **Taxation and Financial Incentives for Innovation**
  - Increasing the scope of research and development tax credits, as called for in the DBA's submission to the 2016 Autumn Statement[7].
  - Increasing access to industrial banking and financing, especially for microbusinesses
  - Promoting the Industrial Strategy Challenge Fund[8] to a wide range of businesses and designers.
  - Continuing to develop, and increase the scope of the Innovate UK Design Foundations funding programme to encourage early design intervention in value creation.
  - Ensuring that tax incentives and non-financial assistance is made available to entrants to markets, as well as established firms.
- **Regional Devolution**
  - Ensure that firms across the UK benefit from policies, regardless of their geographical location.
  - Ensure that City Deals lead to improved communication between companies, local authorities and other major regional economic actors, especially universities.
- **International Trade**
  - Increase access to Export Financing for SMEs and microbusinesses.
  - Mitigate the negative effects of Brexit on trade with EU members, specifically by working towards access to the Single Market and tariff-free trade wherever possible.

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[6] Aghion, P., Blundell, R., Griffith, R., Howitt, P. and Prantl, S.,'The Effects of Entry on Incumbent Innovation and Productivity', *The Review of Economics and Statistics*, Vol 91 (1) MIT Press, 2009

[7] APDIG and DBA, *A Design for Brexit*¸ November 2017: http://www.policyconnect.org.uk/apdig/sites/site_apdig/files/news/580/fieldnewsdownloads/autumnstatement-designforbrexit-finaldraft.pdf

[8] Innovate UK, *Industrial Strategy Challenge Fund – what is it and how is it being formed?*, 7th February 2017: https://innovateuk.blog.gov.uk/2017/02/03/industrial-strategy-challenge-fund-what-is-it-and-how-is-it-being-formed/

Finally, the Industrial Strategy should recognise the unique characteristics and tendencies associated with the design sector.

- It's a diverse sector comprised of a range of firms, ranging from large-scale conglomerates to microbusinesses and independent consultants.
- Design is often under-represented in statistics and government discussions owing to its 'hidden' nature, oftentimes within other sectors of the economy. IBM, for example, employs 1600 designers in-house in the UK but they are included within the employment statistics of the Technology Sector and not Design.
- Growing the UK's manufacturing base by improving or creating new and innovative products which has a major knock-on benefit to their supply chains and the export potential of growing businesses.
- It encompasses nearly all sectors of the economy – from agriculture to management to robotics and AI.
- Design is a cross-cutting enabler in business – working from the inside out across the entire supply chain for major manufacturing projects.
- Crowdfunding increasingly forms part of the business plan for many businesses and agencies.
- It's a sector in which UK is world-leading and which also provides a huge amount of 'soft power'.

In all these areas – design is the perfect sector to assist in increasing the UK's competitive nature. This is achieved both in terms of itself, as well as designers working to increase efficiency and drive innovation for other sectors of the economy.

2. Are the 10 pillars suggested the right ones to tackle low productivity and unbalanced growth? If not, which areas are missing?

The DBA, APDIG and BIDA consider the pillars as cited to be well suited towards talking the issues surrounding the UK's comparatively low levels of productivity and lopsided pattern of regional growth and development. Britain's productivity has continued to lag behind competitors in Europe and North America. According to the latest datasets by the Office for National Statistics[9], it can be summarised that German and American workers now produce more in four days' work than UK workers do in five. If the traditionally high-productive economy of London and the South East is excluded from the figures, the contrast is further exacerbated[10].

The Government is right to note that productivity and unbalanced growth are therefore the two most pressing structural issues that should be prioritised by the Industrial Strategy. However, a number of issues should be taken into account as the Industrial Strategy develops, which are also areas where design can play a major role.

Chief amongst these is a need to ensure that the changing nature of employment is properly incorporated into any strategic planning. The design sector is largely at the forefront of this shift, not least the increasing use of agency and contracted workers, on-going at-work training and development, and diversified work streams that work as part of the wider supply chain. According to

[9] Office for National Statistics, *International comparisons of productivity*, 5th April 2017: https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/datasets/internationalcomparisonsofproductivityfirstestimates
[10] *Ibid*

Design Council research, design is one of the most significant strands of the British economy, contributing 7.2 percent to GDP[11].

Given this, it is vital that design is recognised as a means of working across all the areas identified by the report. Design is – in essence – the foundation stone on which the pillars are standing. For example, developments in affordable energy are essential, but the wholesale adoption of those developments by industry or society will determine their success, and designers are the masters of desirability and usability. Science, research and innovation are in and of themselves of no market value until tangible products and services deliver them to an often unsuspecting audience in a way that it/they can be consumed. By putting the users of any product or service first, designers are uniquely gifted at delivering what they want often before they know they need it. Humanising technology. Commercialising innovation. Designing and delivering new customer experience. But the key to this success is bringing designers into the early, often strategic stages of development.

Many members of the DBA, APDIG and BIDA consider themselves to be organisations that feed ideas, products, expertise and innovation into companies throughout the supply chain associated with industries such as the automotive and aerospace sector. This should be recognised as a key aspect of the future of the British economy, one that is dominated by microbusinesses and SMEs that operate across numerous fields and contribute to a number of different supply chains.

3. Are the right central government and local institutions in place to deliver an effective industrial strategy? If not, how should they be reformed? Are the types of measures to strengthen local institutions set out here and below the right ones?

To be successful, the Industrial Strategy as currently outlined demands a number of focused areas in order to be a true success. The DBA, APDIG and BIDA set out a number of areas below that are relevant to how the government can continue to develop the industrial strategy by working with national, devolved, and local government institutions and bodies.

- **Political Consistency:** Economic policy in the past has suffered by new Governments wishing to make their mark upon the country by developing their own policies – often to the detriment of long-term thinking and the ability for businesses to plan strategically. There must be cross-party consensus as to allow for strategic planning of the Industrial Strategy to be taken out of the usual rough and tumble of politics. A statutory Industrial Strategy Commission, with a remit set in law, would be an obvious way of assisting in this endeavour. The recent creation of the National Infrastructure Commission offers a possible way forward.

- **Intra-Departmental Co-Operation:** The Industrial Strategy is ambitious in wishing to bring together policies and areas of thinking from across Whitehall and the Devolved Administrations. Efforts must be made to ensure that Departments do not seek to enforce their own agendas and views in a way that is liable to cause inconsistency and muddled thinking.

- **Devolution and City Deals:** Design is fortunate to be a sector that is truly national. Many of the DBA's and BIDA's members work throughout the country, and even those based in

[11] Design Council, *The Design Economy*, October 2015: http://www.designcouncil.org.uk/sites/default/files/asset/document/The%20Design%20Economy%20executive%20summary.pdf

London carry out consultancy work for business across Britain. Firms naturally wish to work with the Devolved Administrations and look forward to engaging with combined authorities, such as those in Greater Manchester and Merseyside. However, many businesses remain unsure of the correct 'Levers' of power and the patchwork nature of this devolution agenda. Clarity is required to ensure that firms are able to operate in the most open and local way possible.

- **Accessibility:** Government should ensure that all firms are able to feel comfortable and secure in applying for assistance, support and contracts. It is vital that the design sector and the many SMEs and microbusinesses that comprise it are treated in an equal way to the large employers that dominate other sectors, such as aerospace and defence.

In addition to this, the DBA, APDIG and BIDA also agree with the views expressed in March 2017 report by the Localis think-tank.[12] Following Brexit, the establishment of a new funding platform to replace European structural funds and the Local Growth Fund would do much to secure a new way of securing the future for microbusinesses and SMEs. The proposed "Accelerated Growth Fund" is an allocation mechanism which should be devolved to strategic authorities, with the government working to set investment priorities.

4. Are there important lessons we can learn from the industrial policies of other countries which are not reflected in these ten pillars?

Germany's famous *Mittelstand* of microbusinesses and SMEs working in tandem with regional government is often cited in these consultations as a model to aspire towards, but the similarities – whilst welcome – are also to be considered in the context of the unique cultural and social characteristics of central Europe that are almost certainly impossible to replicate in Britain.

However, the approach to medium-sized lenders and industrial banking *should* be treated as a way forward for how businesses finance themselves and how they consider international trade. Currently, many industrial lenders are too large, distant and unwilling to lend to the SMEs, microbusinesses and start-ups that provide the bulk of the British economy, design in particular. A true revolution in banking and finance should be considered by the Department and HM Treasury.

Moves to introduce a second national stock exchange for the innovative sector and technological start-ups (similar to the NASDAQ) should also be considered, in 1914, the UK had over twenty regional stock exchanges, including Bristol, Cardiff, and Sheffield. Eleven remained open until the 1970s, when they amalgamated with the London Stock Exchange. The Liverpool Exchange remained in operation throughout the harsh economic climate of 1980s before eventually closing in 1991.

This level of devolved financial services and financing could play a major role in achieving the Government's aim of rebalancing the British economy outside of London and the South East.

While the European Union accounts for over half of all Germany's trade, many of its firms have a global reach. A recent study by the *Institut für Mittelstandsforschung* in Bonn found that all SMEs with export presence also generated about a fifth of their revenues from exports, and of that percentage, with 45 percent of this originating from non-EU trade partners.[13]

[12] Localis, *The Making of an industrial strategy: Taking back control locally*, March 2017, (pg. 51)
[13] Maaß, F.; Führmann, B., *Innovationstätigkeit im Mittelstand – Messung und Bewertung*, Institut für Mittelstandsforschung Bonn (2012)

The significant rise in the number of SMEs in the UK demonstrates that schemes such as the *Help to Grow* policy have had some successes[14], but it is clear that the industrial strategy needs to do more to develop how this domestic strength can be made more international in outlook.

5. What should be the priority areas for science, research and innovation investment?

According to a recent report by the tax consultancy Forrest Brown, 73 percent of businesses believe that Brexit makes the government's extra spending on R&D more important[15] whilst three-quarters of the microbusinesses have never made use of government funding[16]. There is clearly a need for the Government to give greater attention as to how SMEs and microbusinesses can gain access to investment funds, R&D tax credits, and research grants.

Design plays a major role in contributing to the economic impact and significant potential to drive further growth and innovation in other sectors. However, Government continues to focus too narrowly on the scope of most research into the impact of Research and Development. Design and the creative sector is a major contributor to the economic value of R&D spending, but receives far less exposure or direct Government support than 'Hard' Sciences.

The role of R&D Tax Credits is crucial to the design sector. It is essential that the Department and HM Treasury continue to support them, although they should be expanded to designers who are not traditionally seen as occupying the right position within the supply chain.

The new Innovation Fund must serve to properly support the role played by design across all sectors, especially in terms of 'up-skilling' designers working along and across the supply chain. Investment in research and development exists largely to mitigate the effects of market failure. Designers can spend months and even years working on ideas and concepts that end up being unsuccessful or impossible to market. R&D Tax Credits and innovative funds, therefore, exist to ensure that organisations are not harmed by taking measured risks.

The DBA, APDIG and BIDA agree with the challenges associated with investment in research and development as noted by the Competition and Markets Authority (CMA)[17]. In practice it is challenging to direct subsidies so that they only address market failures without some degree of unintended distortion to competition. We are happy to work with relevant bodies to see how this can be addressed.

6. Which challenge areas should the Industrial Challenge Strategy Fund focus on to drive maximum economic impact?

The Industrial Challenge Strategy Fund represents a positive development for the design sector. It is also very welcome to hear that the creative industries are eligible to participate in the bidding

[14] Britain's mid-sized companies overtake the Mittelstand by revenues, *Daily Telegraph*, 23rd February 2015, http://www.telegraph.co.uk/finance/economics/11428040/Britains-mid-sized-companies-overtake-the-Mittelstand-by-revenues.html

[15] ForrestBrown, *Igniting Innovation*, 6th March 2017, https://forrestbrown.co.uk/news/igniting-innovation-industrial-strategy-survey/

[16] *Ibid*

[17] Competition and Markets Authority, *Response to the Government's Industrial Strategy Green Paper*, March 2017: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/606013/cma-response-to-industrial-strategy.pdf

process. The Fund should serve to help correct the knowledge gap that has often persisted at the state level with regard to the value of design within innovation.

The DBA, APDIG and BIDA look forward to working collaboratively with Research Councils and other bodies to participate in research in the currently identified eight areas where *"there is great market potential, excellent UK research and industrial capability, where we think the timing is right for a major drive, and where public money can work alongside private sector investment to make the UK a world leader."*[18]

These eight areas are – for clarification:

1. Bioscience and biotechnology
2. Leading edge healthcare and medicine
3. Manufacturing processes and materials of the future
4. Smart, flexible and clean energy technologies
5. Quantum technologies
6. Robotics and artificial intelligence
7. Satellites and space technologies
8. Transformative digital technologies

InnovateUK has expressed a willingness to consider two more areas that may be added to this list:

1. Integrated and Sustainable Cities
2. Technologies for the Creative Industries

It is clear that both of these areas are of particular relevance to the creative and design sector and it is strongly encouraged that they are incorporated fully into the matrixes of the Challenge Fund.

Please note that the Knowledge Transfer Network (KTN) is a member organisation of the APDIG – however, they have excused themselves from this consultation.

The DBA, APDIG and BIDA support the CMA's view that

> *"When deciding how to allocate the Industrial Strategy Challenge Fund, the CMA recommends that policy makers consider how competition currently operates in markets that are candidates for support, and how competition in the market might be impacted by the award of support. In general, horizontal measures that do not discriminate by location, industry sector, or firm are less likely to cause concerns"*[19]

Given the horizontal nature of design and its ability to work across sectors, design clearly has the potential to work across these sectors to introduce new technologies that are of relevance to a number of supply chains.

11. Do you agree with the different elements of the vision for the new technical education system set out here? Are there further lessons from other countries' systems?

[18] HM Government, *Building our Industrial Strategy*, 2017, (pgs. 30-31)
[19] Competition and Markets Authority, *Response to the Government's Industrial Strategy Green Paper*, March 2017: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/606013/cma-response-to-industrial-strategy.pdf (pg. 6)

The design sector is a diffuse one that is wide-ranging in where it sources employees from. Whilst many are trained graduates and post-graduates in dedicated disciplines, many others come from outside a design background entirely. In many respects – this gives design a level of strength and flexibility.

However – the consultation makes a number of key points for how the new technical education system can be adapted. The Industrial Strategy should be based on developing a learning and skills strategy that is fully incorporated within both primary and secondary education, whilst also leaving in place a framework to properly develop future skills.

The consultation cites a number of major changes and reforms to the post-16 education landscape. It is vital however that these are properly incorporated into the existing secondary system and that proper consideration is given to how young people can take up a career in design. This is best achieved via properly signposted routes into technical education and apprenticeships by working with employers and business associations.

These reforms should ideally begin at the primary level, continuing throughout a student's career.

It is also clear that more investment is required in the existing STE(A)M subjects, with a view to ensuring that the designers and engineers of tomorrow are given the early education that they require.

Furthermore – the APDIG concurs with the views of the D&T Association that Design and Technology should be counted as a core part of the English Baccalaureate. Design and Technology currently forms part of the National Curriculum, ensuring that pupils and young people are given exposure to the fields that prompt future study – not just in design and the creative subjects, but in 'hard' sciences and engineering.

Research by the National Foundation for Educational Research highlighted those students who undertake Design and Technology A-Level are:

- Four times more likely to pursue an engineering degree (19 percent compared to 5 percent)
- More likely to study for degrees in:
    - Creative Arts (26 percent)
    - Design (9 percent)
    - Architecture (9 percent)[20]

In addition to these further and higher education trends, design also considers how to apply mathematics and science to practical situation. It serves a key role in ensuring that young people have their creative and innovative minds developed during their formative education years.

The DBA, APDIG and BIDA also call for Design and Technology to become a mandatory curriculum subject in secondary schools. In England, this would most likely be as part of the English Baccalaureate. Consultations should be made with the devolved administrations for similar policies to be implemented in Scotland, Wales and Northern Ireland.

[20] National Foundation for Educational Research, *Analysis of NPD, ILR and HESA Datasets for The Design and Technology Association*, 2015, https://www.data.org.uk/media/2215/analysis-fo-npd-ilr-and-hesa-datasets-for-the-dt-association.pdf

13. What skills shortages do we have or expect to have, in particular sectors or local areas, and how can we link the skills needs of industry to skills provision by educational institutions in local areas?

Skills provision in the design sector was identified by the DBA, APDIG and BIDA as being vital to the success of the industrial strategy. For all sectors of the economy, improving access to potential employees of all levels of skills and training was regarded as being crucial to how innovation is developed across the sector.

One of the oft-repeated comments in this area regards the distinction between STEM and STEAM – that is to say, ensuring that "Art" is considered equal with Science, Technology, Engineering and Maths. Research from across the sector – including by NESTA – has indicated that jobs within the design and creative sectors are at much less at risk of being lost to automation than in other areas. [21] They are therefore 'future proofed' to much more of an extent than many other areas of the economy.

Almost all designers surveyed by the DBA and BIDA felt there to be a shortage of industry-ready designers, with a consensus of those surveyed supporting the view that it is difficult to recruit the right design staff because of lack of suitable skills. A statement by WPA Pinfold was typical:

> *"Recruitment has been a major issue for us – the equivalent level of talent to London is not widely available. We are having to train up design graduates, at our own cost – hence our Design Academy."*[22]

In many respects, this view encapsulates both strands noted in the response to Question 1. Workers outside London and the South-East are less productive than most competitor nations in Europe and North America, which is exacerbated by a lack of strategic thinking in the relationship between educational providers, industry, and government institutions.

A number of themes emerged with regard to criticism of current approaches to design education, particularly in terms of how design is accommodated by the tertiary sector. It was felt by the sector that many design students suffer upon graduation by through universities not always being in a position to teach skills that are required by design consultancies and firms. The education sector should be incentivised to work more closely with the design profession to ensure:

- More training for routine design principles such as CAD modelling and surfacing principles
- Less focus on specific subjects of only transitionary benefit – such as smartphone app development
- Increased support for students wishing to transfer from Foundation Design Courses
- More industry placements as part of design courses – modelled on the successful establishment of Sandwich/Year in Industry degrees common in engineering and once the pride of design degree courses

More general recommendations with regard to the higher and further education system are:

[21] Nesta, *Creativity vs Robots*, 22nd April 2015, http://www.nesta.org.uk/sites/default/files/creativity_vs._robots_wv.pdf
[22] WPA Pinfold, *Evidence to the Industrial Strategy Consultation*, March 2017

- Improvement in the collection of statistics in terms of the demand for degree and training programs by employees over an annual, five-year, and ten-year period
- Adoption of the German model for university and vocational study where businesses and central government vary course numbers according to industry demand
- Reintroduction of the post-study work visa for international students
- Commissioning of an industry-led report into how to improve the retention of talented international students and researchers by SMEs and microbusinesses

Finally, there is a perception amongst many design firms that design needs to have a dedicated 'champion' in Government.

The GREAT campaign has been of long-lasting benefit to how Britain is perceived abroad. This should also be done domestically as well. Many young people are unaware of how well Britain's design and creative sector has been developed nationally. This should be taken forward with the industry working with universities to promote design, not just for dedicated courses, but across other sectors as well.

14. How can we enable and encourage people to retrain and upskill throughout their working lives, particularly in places where industries are changing or declining? Are there particular sectors where this could be appropriate?

The consultation made no reference to the effects of automation on employment, but this is vital to understanding the value of retraining and upskilling workers currently in employment, and those entering it over the next two decades. A recent report by PwC suggested that up to 30 percent of UK jobs could potentially be at high risk of automation by the early 2030s. This is lower than the US (38 percent) or Germany (35 percent), but higher than Japan (21 percent).[23] However, the sectors affected are very disproportionately affected, ranging from transportation and storage with up to 56 percent of jobs at risk from automation, to education at 9 percent.[24] Design was not mentioned, although similar studies indicate that the proportion of jobs affected by automation would be low. As Nesta noted in their 2015 report, *"crucially, for both the UK and the US, none of the jobs at all in the highly creative category (including design) are at high risk of automation."*[25]

As previously stated, design is an area that the UK excels in, and this offers scope for new designers to be trained for the future, and also for people currently in the workforce to be re-trained and re-focused for design and innovation. The Industrial Strategy offers the opportunity for people to be trained to move into future workplaces and industries. The design sector promotes creativity, problem-solving and other skills that are effectively future-proofed against technological developments in terms of industrial automatism.

The Industrial Strategy should place a renewed focus on the value of life-long learning and revitalise the adult education sector, which is well placed to be further involved in. Employers should be encouraged financially to emphasise the value of in-work training, and the design profession – which works across all sectors of the economy – is well placed to help facilitate this.

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[23] PwC, Will robots steal our jobs? The potential impact of automation on the UK and other major economies, 2017, https://www.pwc.co.uk/economic-services/ukeo/pwcukeo-section-4-automation-march-2017-v2.pdf

[24] *Ibid* (pg. 35)

[25] Nesta, *Creativity vs Robots*, 22nd April 2015, (pg. 15) http://www.nesta.org.uk/sites/default/files/creativity_vs._robots_wv.pdf

By constantly training people workers could continue to develop their own skills, increasing productivity and sustainability and also leading to more equitable growth in wages.

The DBA, APDIG and BIDA further welcome the Industrial Strategy's focus on both education for young people as well as life-long learning and reskilling for older workers in the economy. The green paper accurately recognises that the cycles of technological innovation are now occurring at a faster and faster rate, and ensuring that workers have suitable access to retraining is essential to mitigate for job losses.

The DBA, APDIG and BIDA also recommend that employers should be incentivised to operate continuous professional development (CPD) programs with responsibility for the employee's development.

23. Are there further steps that the Government can take to support innovation through public procurement?

A number of members made the point that Government does not truly understand the value of design and often conflate it with other elements of the creative industries. Whilst design is difficult to define exactly – a common view is that it is most effective when fully integrated into business or to organisation operation; Design and designers work best when their work is value in of itself, rather than being seen as auxiliary to other sectors of the economy. The Design Value System offers a data-driven overview of this.[26]

Design fosters innovation throughout the wider economy, especially in the manufacturing sector, but the system surrounding the Government procurement system demands a great deal of improvement. The positive response to **GOV.uk** demonstrates that when good design principles are placed at the centre of a project from inception, the benefits are clear, and this must become the norm in future.

In addition, the Government must also seek to improve how independent contractors are treated under current procurement rules. In particular, reforms to IR35 for independent contractors have greatly increased uncertainty within the sector, increasing risk and damaging scope for innovation.

The impact of IR35 and the role of HMRC in this area should be properly investigated to ensure that bidders for Government contracts are not unfairly treated by attempts to limit tax evasion elsewhere within the economy.

25. What can the Government do to improve our support for firms wanting to start exporting? What can the Government do to improve support for firms in increasing their exports?

As stated in the preamble – design is by some measures the 7th largest sector of the economy – with the majority of dedicated design agencies being SMEs with a highly adaptive approach to changes in demand and scope.

The DBA, APDIG and BIDA broadly welcome the establishment of the Department for International Trade, but efforts must be made to ensure that the new Industrial Strategy and the Department for Business, Energy and Industrial Strategy works with the DIT and other parts of the Whitehall

[26] Design Management Institute, *The Value of Design*, http://www.dmi.org/?DesignValue [retrieved Thursday 13th April, 2017]

apparatus to ensure that firms can understand the complexities associated with cross-border commerce. In addition, Government should be prepared to work closely with industry bodies, trade associations, and other non-state bodies to ensure that Government policy is truly reflective of the views and opinions of the private sector. These bodies are a vital conduit between Whitehall and individual SMEs and developing these links either informally, or by establishing formal *"Sector Committees"* within the DIT could do much to increase the relationship between the state and private sectors.

Post-Brexit, it is almost certain that the cost of trading with the European Union will increase both in a monetary and a time sense, and clarity on this matter is naturally seen as a matter of priority. A report by Civitas suggests that were the UK to leave the EU without a trade deal, UK exporters could face the potential impact of £5.2 billion in tariffs on goods being sold to the EU.[27] For design agencies, many of which operate with small overheads, the effects could be even more serious.

Therefore, the industrial strategy needs to support how SMES and microbusiness export post-Brexit. Even now, many firms and consultancies have neither the expertise nor the resources to understand the complexities of trading with the European Union, to say nothing of the almost certain-complexities of post-Brexit commerce. There are a number of policies that should be treated as a priority for DBEIS, working in co-operation with the DIT and other relevant Departments.

- Tailored support for SMEs and Microbusinesses businesses wishing to expand overseas, especially in terms of improving knowledge and understanding of how trade deal works.
- Any post-Brexit trade deal should make every effort to retain the benefits of access to the Single Market and Customs Union, especially with regard to preserving the carnet system to allow for the tariff free movement of design goods and samples between the UK and the European Union. The Government must be prepared to provide financial and administrative support to mitigate the effects of import/export duties as appropriate.
- Efforts to simplify export strategy and increase the accountability and accessibility of relevant Government Departments and Ministers were creative and design exports are to be focused.
- More should be done to sell British design throughout the world. This does not simply apply to shouting about the achievements of individual designers, but noting how the design sector contributes to the value-added from British manufactures, services, and new and emerging technologies.
- The sector is keen to move into new markets and is keen to contribute to discussions with new free-trade deals as appropriate.

31. How can the Government and industry help sectors come together to identify the opportunities for a 'sector deal' to address – especially where industries are fragmented or not well defined?

Driving growth in the design sector has traditionally, and almost certainly will remain a major challenge for the economy given how the landscape of design is such a constantly changing one. Design is naturally closely involved in the sector deal for the creative industries sector currently being proposed by Sir Peter Bazalgette.

[27] Protts J., *Potential post-Brexit tariff costs for EU-UK trade*, Civitas, October 2016 http://www.civitas.org.uk/reports_articles/potential-post-brexit-tariff-costs-for-eu-uk-trade/

As noted, design exists across almost all areas of the economy. It feeds into everything from automotive and aerospace manufactures, to digital communications, to the service sector. In this respect, it is typical of how the modern economy works, being as it is dominated by thousands of SMEs working across the supply chain of dozens of industries and products across the country.

It is important therefore to ensure that the 'sector deals' of all types are not seen in the context of protecting the interests of a single sector, but in terms of their contribution to nation-wide growth across the wider economy. Government must be willing to genuinely engage with SMEs and individual designers just as much as with 'headliners'. Close interaction with industry membership groups such as the DBA, BIDA, Design and Art Direction (D&AD), as well as institutions such as the Design Museum, Design Council and Victoria & Albert Museum will be vital in securing a representative body of evidence from across the sector.

32. How can the Government ensure that 'sector deals' promote competition and incorporate the interests of new entrants?

Sector deals must be willing to think globally but plan locally. Whilst a centrally organised strategy is important in ensuring that the design economy is treated seriously at the Ministerial level, any sector deal must be prepared to engage fully with both regional and council bodies to ensure that the design sector is able to thrive in depth.

Government can continue to promote a diverse and open design industry by allowing councils and other local authorities to promote and commission design projects. This will allow universities, colleges and emerging talent to retain the ability to develop and expand over time. Securing a positive vision for design will also be aided by further promoting design as an attractive career path for young people, and close engagement with local authorities (especially those in areas with devolved skills and education budgets) is vital. The design economy outside London has much to give to the likes of Greater Manchester, Merseyside and the West Midlands, and therefore any sector deal for design and the creative economies must take into account the likes of the Northern Powerhouse and the Midlands Engine policies.

In addition, Government must be willing to see design as an increasingly integral aspect of many businesses. The relationship between the design industry and clients is increasingly interconnected, with many firms now having their own in-house design teams. The relationship between design agencies and individual firms has changed greatly in recent years, but this is not a negative. It is a sign of an increasingly diversified part of the economy, and therefore the prospective sector deal should seek to engage with as many stakeholders and industries firms as possible.

As discussed, improving access to microfinancing and industrial growth funds should be prioritised. This applies both for individuals wishing to enter the sector, as well as SMEs and other small firms wishing to expand.

About the Design Business Association

The Design Business Association (DBA) exists to promote professional excellence through productive partnerships between commerce and the design industry to champion effective design which improves the quality of people's lives.

For more information please visit: http://www.dba.org.uk/

About the APDIG

The All-Party Parliamentary Design and Innovation Group is a cross-party coalition of Parliamentarians and design sector organisations that work to develop new design policy ideas, critique existing government decision-making around design, communicate within Parliament the enormous potential value of design, and help the design community better engage with the policy process.

For more information please visit: http://www.policyconnect.org.uk/apdig

About the British Industrial Design Association

The British Industrial Design Association represents the collective interests of designers creating products, interactions and services for industry. Our members translate technology into human focused solutions that meet real market needs.

For more information please visit: http://www.britishindustrialdesign.org.uk