27 September 2016

Business, Innovation and Skills Committee
House of Commons
London
SW1A 0AA

Dear Sir/Madam,

The IET’s response to the inquiry from the Business, Innovation and Skills Select Committee on the Government’s Industrial Strategy

In response to your call for evidence, we would like to submit our comments to the enquiry questions on the above topic.

The Institution of Engineering and Technology is Europe's largest professional engineering and technology organisation. The members represent a wide range of expertise, from technical experts to business leaders, encompassing a wealth of professional experience and knowledge.

This response has been compiled on behalf of the IET Board of Trustees by the IET’s Manufacturing, Energy, Innovation, Communications and Devolved Regions Policy Panels. The policy panels include a diverse panel of experts that provide unbiased impartial advice for government and parliamentary stakeholders.

If the IET can be of any further assistance please do not hesitate to contact me.

Yours faithfully,

Paul Davies
Head of Policy

The Institution of Engineering and Technology
Email pdavies@theiet.org
Telephone: 01438 765687
1. **What does the Government mean by industrial strategy, and what does the private sector want from one?**

1) An industrial strategy must set out, in simple terms, why it exists, and remain constant to this purpose into the long term. The IET suggest that the purpose of an industrial strategy is to help government, industry and society work together to deliver a resilient, productive, sustainable and competitive industrial economic sector.

2) From the IET report “Engineering and Industrial Strategy”, there are four key pillars which form the basis of a successful industrial strategy. These are:

   1. A comprehensive and defined strategic vision of the challenges the Government is seeking to resolve, along with a set of strategic objectives or themes which will help to develop solutions. A strategy should be developed before industrial policy decisions are taken.
   2. This strategic vision should be backed up by sound and accessible analysis, so that all actors can take decisions based on the facts.
   3. A long term approach should be taken, with milestones to serve as review points. At these points industry and government can assess next steps.
   4. The strategy should be embedded across all of government with clear accountability for review and delivery provided.

3) In order to have a successful strategy, government needs to clarify; what is encompassed by “industry” and why it remains important to our economy and what in 5, 10 and 20 or 30 years success would look like and how we will measure it.

4) Industry – in the context of an industrial strategy – should include the production of things that add value to the UK and the key enablers that surround them. Specifically this would include manufacturing, energy and communications sectors but not farming.

5) Generating economic growth is an outcome from a strategy not a strategy in itself. The process of identifying these strategic objectives should not sit solely with government, but should involve active engagement with all sections of industry. There are considerable challenges in conflating the public goal of employment onto industry and this should be avoided, least it distracts from the goal of productivity that helps deliver long term prosperity.

6) An industrial strategy should set out its purpose and remain constant to it, it should be developed in close co-operation with stakeholders (including SMEs and start-ups), it should clarify those situations that trigger government action, it should use all of governments assets (and not just cash), and it should seek multiple benefits from single actions.

   - What does the private sector want from an industrial Strategy?
7) Private sector requires guided investment combined with government support – not always financial, often political – to achieve a common objective. That might mean investing in an industry or investing in a relationship with another country or region to access that market preferentially.

8) Government’s key role should be to provide a sense of direction and to show leadership as the owner of the sector’s ‘roadmap’ (but not the master planner). The private sector seeks:

- Clarity on investment in enabling capability and infrastructure development (including physical and human resources);
- A stable (but adaptable) policy position for at least two terms of Parliament;
- Revised government procurement policies (particularly in the light of the leave vote). An example might be a revision to the SBRI rules, so that competition winners who achieve successful project outcomes can have sole rights to bid for specific tenders, rather than having to run the gauntlet of an Official Journal of the European Union (OJEU) process;
- A clear position concerning regional development following Brexit, when the UK is no longer eligible to bid for European Regional Development Funds (ERDF).

9) Fundamentally, the private sector requires clear long-term objects from an industrial strategy. Short-term aims can result in ‘flip flop’ policy decisions that are detrimental to investor confidence and can be disastrous for the commercial survival of entrepreneurs. Having a plethora of short term initiatives actively damages the UK’s innovative capacity, because of the wasted investment (in time and finance) that is caused when an initiative is closed down (eg Green Deal).

10) In times of change, it is particularly valuable to encourage innovative thinking. Entrepreneurs such as start-up companies and projects such as Community Energy initiatives can bring fresh thinking, and this is more likely to come from small organisations rather than incumbent corporate players. They both have roles, but entrepreneurs require special attention if they are to survive and flourish. The role of strategic public procurement to enhance innovation must be enhanced significantly and communicated clearly.

2. How interventionist in the free market should Government be in implementing an industrial strategy, for example in preventing foreign takeovers of UK companies?

11) A good strategy does not make intervention more likely, rather it makes it more predictable - and that builds confidence and supports investment. In order to build this confidence there needs to be buy-in to the overall strategy. This needs to be cross-departmental and as far as possible cross-party; the latter only being possible if the temptation to talk about policy is avoided.

12) Policies in investment, (both public and private sector) competition and international trade, need to be based on a sound analysis of UK strengths and weaknesses and good evidence about what works - both at home and in other
countries, any industrial strategy should demand such an evidence base, work to create the evidence where gaps exist and be willing to adapt to new evidence that emerges.

13) When it comes to foreign takeovers/investment, the judgement on government support should be based upon the foreign investment’s commitment to UK jobs, UK research, UK innovation and UK skills development. These ‘common good’ elements are far more important than whether or not foreign investors own UK blue-chip assets.

14) The concept of ‘sticky investment’ should be explored, whereby companies in receipt of significant government investment are required to stay in UK ownership or remain and develop within the UK; perhaps with further incentive to be included via a government procurement framework.

15) If the government has a clear industrial strategy that blends the benefits of markets with necessary co-ordination to ensure interoperability and open systems, then competition is encouraged and customers are better served. The UK can then choose to potentially resist foreign takeovers in chosen areas of global competitiveness and dominance, based on the overarching strategy.

3. What lessons can be learnt from:
   • Previous governments’ industrial strategies?

16) There are many examples of successful UK strategies agreed between business and government and priorities which have contributed to UK business success - for example in the UK automotive and aerospace sectors and in bioscience. These provide good models for future industrial strategy.

17) In general success follows those strategies which bring together the private and public sectors to focus on longer term sources of competitive advantage through innovative new products and services.

18) The nature of industry is that it is continuously changing, and has changed a good deal since the last discussion of ‘industrial strategy’. In particular the government could usefully support and encourage the development of the supporting communications and connectivity on which industry is now becoming more dependent on, as well as placing a strong focus on the physical infrastructures that facilitate movement of people and goods, and the social infrastructures that create attractive lifestyles to improve well-being and help make the UK an attractive place for people with key skills to locate.

   • Other countries' attempts to develop industrial strategies?

19) Industrial strategies in other countries include some effective examples; in the US, DARPA and SBIR interventions have been effective in boosting entrepreneurial innovation (creating ALL the major technologies that are used in the Apple iPhone, for example). In Finland, the close linkage of TEKES with VTT and partner universities has been transformative for several industries. In
the Eire and in the Far East, planning and tax concessions have attracted large-scale semiconductor manufacture.

20) In the US, California has Silicon Valley as a hub of semiconductor and innovative technology. Having specific areas of the country being developed/adapted for specific types of industry is a good approach as it draws in talent from around the world and gives focus to what improvements are important to that specific area for that industry (university/training, infrastructure, tax incentives etc.).

4. What tensions exist between the objectives of an industrial strategy and the objectives of other policies, and how should the Government address these tensions?

21) The IET believe that a positive outcome is possible, with multiple government goals and other public goods being delivered from the same resources. This will require a very considerable execution competence in bringing government departments together frequently to tackle specific challenges/opportunities.

22) The clearer the strategy and the higher its prominence within government, the less the tension. There needs to be a lead at a very senior level (PM or Head of Civil Service) with an explicit and active role to seek-out and remove unintended consequences from non-business legislation (See the role of Japan’s METI and Singapore’s PEP).

23) The success of the strategy against the deliverable targets needs to be reported by an independent body (analogous to the Office for Budgetary Responsibility) to increase the credibility of the strategy. This should be coordinated with agencies such as, EPSRC and the catapults and have the buy-in of Local Enterprise Partnerships etc. The government has the responsibility to monitor and adapt to what will be continual change for many years to come in order to mitigate tensions.

24) The free movement of skilled people is generally very helpful to higher-tech industries and policies should not obstruct or hinder such movement if maximum benefit is to accrue to the UK. Although there may be no intention to hinder movement of people, experience with the existing non-EU points system suggests that the danger of placing bureaucratic hurdles in the way does exist. Some sort of fast-track procedure might be helpful.

5. What are the pros and cons of an industrial strategy adopting a sectoral approach?

25) The government should not become the 'sector central planner'. Rather, it would be of great assistance to investors, businesses and entrepreneurs for the government to work with the sector to provide a "sense of direction" for each sector that is facing significant change.

26) This might be achieved by government setting out its sector strategy in the form of a 'roadmap'. The roadmap could have short, medium, and long-term
messages, and be revised periodically. Importantly, government would ensure
that the short-term horizon remains stable and that any directional changes
are introduced through medium and long term messages as the road map rolls
forward.

27) In some cases where businesses cluster in particular locations it can be
appropriate to build on this and work with those particular businesses and
local players. The criteria for choice of priority sectors should include the
ability to bring together appropriate partnerships of public and private sector
as well as the ability to deliver impact. These could be measured in terms of
productivity improvement or other metrics - such as the achievement of
particular technical milestones. This then implies a stronger need for central
and regional or local government to work together in facilitating and enabling
desired regional outcomes.

• Should the Government proactively seek to ‘pick winners’?

28) Rather than picking winning technologies or winning organisations,
government should pick winning issues: i.e. important areas of strategic
strength and clear potential, then set in place a framework to allow innovators
to flourish. Though not strictly ‘picking winners’, the focused efforts to develop
shared strategies for specific sectors can work e.g. automotive, aerospace,
defense.

29) Existing mechanisms for supporting new technologies – such as the research
councils and InnovateUK are highly capable in finding and encouraging
innovation. There is a need for a more clear system of support that allows the
already proven technologies to be become business winners.

• What criteria should be used to identify which sectors are supported?

30) The question appears to suppose that ‘support’ must be rationed, with some
sectors losing out entirely. A better approach would be nuanced, for example
with some sectors getting primarily support in developing export expertise,
while other sectors or technologies would benefit from research prioritization.
Supporting all sectors equally is poor prioritisation, supporting many sectors
appropriately is more effective and can be cost-effective.

31) The key performance indicators derived at the scoping stage of the strategy
must be used to provide some (albeit qualitative) assessment of contribution
to the identified national objectives.

32) There also needs a periodic programme of reviews to assess sectoral
progress and determine whether new sectors should be added or old
removed. This should include national and local sectoral bodies and sources
of expert advice (as independent as possible); from Professional Engineering
Institutions and Academies, industrially connected universities, and official
reviews of the state of play in overseas economies (the HMG SIN network
should be systematically invoked to help with this).
• Should the Government prop up traditional industries that it considers to be in the national interest?

33) “Propping up” is inevitably a short term response with only short term positives. National interest is rarely concerned with maintaining poor performing industry – though it may well be in the local, public interest. Such goals can be better resolved by early intervention that seeks to re-align skills and potentially facilitate investments into areas of future growth. Therefore government must work more precisely to identify situations, such as prolonged under-investment, which will eventually lead to a non-competitive sector/region; and to identify and act as early as possible where better and cheaper interventions are possible.

• If not a sectoral approach, should the industrial strategy have a broader objective, such as improving productivity?

34) Yes, improving productivity is a key goal that is shared across all sectors. We should also be seeking ‘innovation in process’ as well as in products and services. In particular, hyper-automated local production close to points of consumption is worthy considering, as is how bespoke products and services (with appropriate risk characteristics) can be realised through highly adaptable/adaptive manufacturing processes (e.g. additive manufacture, personalised medicine).

6. Should the industrial strategy have a geographical emphasis?
   • How should an industrial strategy link with devolution initiatives aimed at devolving taxation and decision making away from Westminster?

35) Promoting a “national” industrial strategy cannot be divorced from allied initiatives in devolved regions. Non-devolved regions also have specific industrial characteristics which should be recognised.

36) Some infrastructure development in relation to IT can be geographically neutral; for instance cloud computing. Most physical infrastructure investment, however, is inevitably geographically specific and will tend to favour some nations, regions or districts more than others. As Government at all levels seeks to promote economic growth, political decisions particularly in relation to the funding of infrastructure takes on added significance.

37) Consideration must also be given to where a “national industrial strategy” fits in with the economic strategy already set out by the different regions. The Government of Scotland has set out a mix of policies in relation to innovation, education and skills development and trade in relation to its economic strategy. The policy mix in Wales and Northern Ireland is not dissimilar. Deciding which areas fall within the competence of the UK Government and what is within the devolved domain is not as straightforward as it sounds. Although in Scotland powers in an area such as energy may be a “national”, the siting of power installations will have local input, so in effect this is a shared area of responsibility.
• What examples are there of interventions from central Government that have successfully supported economic growth away from London and the South East of England?

38) Nissan’s expansion into the UK in Sunderland is a key case study. The plant was successful for several reasons; land was offered to the company at a low price - the site chosen was a former airfield and there was scope for expansion at the site. Other attractions included a workforce with a long tradition of engineering and the proximity of good port facilities coupled with access to a good road network. While Nissan is obviously a major private sector investment, Government support was a key factor. Over the last 30 years government support for Nissan has had to change from supporting a ‘start up’ to providing incentives for Nissan to remain in the UK.

• How should the industrial strategy work with local authorities and Local Economic Partnerships, reconciling a U.K.-wide strategy and local, regional and devolved nations’ priorities?

39) By ensuring that the industrial strategy remains focused on the objectives for the national economy, the strategy can provide the architecture within which local, regional and devolved nations’ use their own discrete policies to deliver the national strategic objectives.

40) National strategies therefore need to engage with a wide range of local and regional bodies including local authorities, LEPs, devolved administrations as well as universities and regional and local business organisations. Successful strategies will embrace contributions from a wide range of different bodies depending on what they can bring to the party.

41) A hierarchical strategy and structure involving Whitehall, LEPs and Local Authorities needs to be established to translate national goals into regional and district objectives. LEPs need to become legal entities, for fund-holding and other purposes.

42) In a situation where the process of devolution is on-going some areas of industrial strategy clearly fall within the remit of national government. Takeovers and mergers in strategically sensitive technology areas are a case in point. Controversy about the takeover of ARM by a Japanese company can be seen in the context of wider European concerns particularly in relation to takeovers in strategically sensitive areas.

43) An area with considerable potential to benefit from clarity of government strategy is decentralisation, including opportunities for Community Energy, Smart Cities and the Internet of Things. These are entirely new developments that hold considerable potential, but developers and entrepreneurs are held back where there is lack of clarity in the government's intent. There is opportunity here to harness a changing public mood, combined with social media tools, Apps and Peer-to-Peer interactions and local markets.
44) A shift to a more localised energy system offers many benefits, but for it to become a reality there is organisational and institutional inertia that must be overcome, especially where first-of-a-kind ideas are involved that may include elements of learning by doing / experimentation. Central government strategy should not be to micromanage these changes but to allow flexibility (including acceptable sub-optimality) in the regulation of previously separate organisations and to create an expectation that new approaches are welcome.

45) Some individual new ventures may not work but we need to create conditions where they can be tried or we will stifle innovation. Government strategy includes an important dimension of building confidence and giving impetus to innovation and change.