Foreword

I am delighted to launch the process to establish new Institutes of Technology (IoT), which will lead to the development of high quality, prestigious institutions offering higher level technical education and training to young people and to those already in employment, delivering on the manifesto commitment to establish Institutes of Technology. IoTs are a key part of the skills revolution already underway in this country, helping to meet the productivity challenges set out in the government's Industrial Strategy and drive social mobility.

There are gaps in technical provision in this country, particularly in STEM (science, technology, engineering and mathematics) skills, which means that some people could be ending their education and training earlier than they need to, or pursuing a route less suited to their skills. Through our technical education reforms, such as the introduction of T levels and the expansion of apprenticeships, we are presenting young people with two world class choices after the age of 16: an equally valued and rigorous academic option and a technical option.

Through IoTs, we want to see an ambitious new type of collaboration between further education providers, higher education providers and employers, to capitalise on their different strengths and leverage their assets to produce a new and distinctive learning offer. We are looking to employers to be at the heart of each IoT, working in partnership to bring about a step-change in the provision of higher level technical skills that employers need.

IoTs will create more opportunities by providing clear routes into skilled employment and pathways for progression that are on a par with academic routes. They will widen participation of learners from all backgrounds, help to reduce inequality and improve social mobility through unlocking and enabling potential. And they will respond specifically to the skills needs of their areas, playing a role in generating economic growth and tackling disparities across regions, now and in the future.

The Rt Hon Justine Greening MP

Secretary of State for Education
and Minister for Women and Equalities

Context

Industrial Strategy: building a Britain fit for the future[1] sets out the government's ambition for a technical education system that rivals the best in the world. The Report of the Independent Panel on Technical Education (the Sainsbury Report) recommended a new system of technical education that would introduce a high quality technical option alongside an academic option for students aged 16–19. In the government's Post-16 Skills Plan[2] and the Technical and Further Education Act 2017, we committed to these recommendations and are now leading a major programme of reform to create strong and financially resilient colleges, able to produce the skilled workers that local businesses need.

There has been significant progress so far:

- Fifteen technical routes have been developed, grouping together occupations with related skills, knowledge and behaviour;
- A T level Action Plan[3] has been published providing information on how the new technical study programmes will be developed and implemented, in partnership with government, business and the education and training sector;
- We introduced the apprenticeship levy in April 2017[4]. We remain committed to delivering three million high quality apprenticeship starts by 2020 and have achieved over one million to date;
- We are reviewing level 4 and 5 education, focusing on how technical qualifications at this level can better address the needs of learners and employers;
- Four National Colleges are up and running, and will offer higher level technical training at levels 4 to 6 in industries crucial to economic growth: creative and cultural, digital, high speed rail and nuclear.

IoTs constitute a vital part of our reform programme, by facilitating the coming together of employers, further education (FE) providers and higher education (HE) providers[5] to create a new breed of prestigious institution capable of delivering higher level technical education and skills.

Why do we need Institutes of Technology?

There are gaps in technical provision in this country, particularly in STEM (science, technology, engineering and mathematics) skills, which means that some people could be ending their education and training earlier than they need to, or pursuing a route less suited to their skills. Others do not take technical routes, as they are not perceived to be valued as highly as academic routes. We expect all IoTs to meet the following objectives:

To significantly increase the number of learners with higher level technical skills, which are crucial to national, regional and local productivity growth

The UK has lower levels of productivity compared to other advanced economies, and we also have considerably lower uptake of higher level professional and technical education. We need to address this and increase opportunities for young people and those already in employment

1   https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future
2   https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536043/Post-16_Skills_Plan.pdf
3   https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/650969/T_level_Action_Plan.pdf
4   https://www.gov.uk/government/publications/apprenticeship-levy-how-it-will-work/apprenticeship-levy-how-it-will-work#pay-apprenticeship-levy
5   FE and HE providers are defined in the section "Who can bid to become an Institute of Technology?"

to access higher-wage employment, improve their standard of living and drive social mobility.

In particular, we have a shortage of technicians at levels 4 and 5 (in between A levels or equivalent, and graduate level) and not enough people undertaking training at this level[6]. Employers tell us that this is a vital skills gap that needs to be filled.

Whilst there are examples of excellent provision across the country, existing providers have largely failed to meet this need for a number of reasons. These include: the higher costs of some technical training; a lack of teachers and trainers with appropriate industry experience; and a tendency for providers to focus on delivering lower level qualifications. This has led to a limit in learners' choices due to the lack of a quality offer with a clear route to employment.

To attract a wide range of learners to maximise the social as well as the economic impact of this new type of institution

By developing a new, higher level offer, we can offer people a prestigious alternative to academic education. We are looking for IoTs to attract a variety of learners: young people, those already in the workforce including those who may previously have stopped their learning at level 3 (A level or equivalent), disadvantaged and under-represented groups. This will give them the chance to progress further in their current or future career, increasing their earning potential and social mobility.

To improve the occupational competency of learners to meet the needs of employers now and in the future

The future of work, and the skill sets required, are facing major disruptive change driven by new technologies, business-model innovation and the emergence of completely new industries and jobs. We need to ensure businesses and individuals have the skills they need to meet the challenges this will bring. Demand for higher level technical skills will increase. This is intensified by the loss of skills as older workers retire, the changing mix of skills needed and their shorter 'shelf life'. At the same time, increased automation will exacerbate the need for people to retrain and upskill. Learners also need to develop the professional competencies and behaviours that are important in the workplace.

What is an Institute of Technology?

A prestigious and high quality employer-led institution delivering higher level technical education with a clear route to high skilled employment

IoTs will be a new type of institution, tailored to focus on the specific technical skills needs in their area. They will be created through innovative collaborations between employers and FE and HE providers; harnessing the teaching expertise of HE and FE, research expertise of HE, and industry knowledge and expertise from employers.

They will specialise in technical disciplines, particularly STEM (science, technology, engineering and mathematics) at levels 3 (up to a limit of 20% of overall provision) 4 and 5, but also extending to degree level and above (level 6+) to strengthen routes into higher levels of technical education, as well as directly into employment. The cohort of an IoT would include young people, but also older learners who may be in employment already.

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6   Of the 95,000 people participating in Advanced Learner Loans in 2015/16, only 6,300 were at level 4+. Source: SFA/DfE (March 2017) FE and Skills Statistical Release.

They will offer higher level technical skills on a par with more academic routes and will achieve the same level of prestige as universities. IoTs should offer a credible alternative to people who, in the past, may have been encouraged to take a more academic route when it was not suited to them.

The collaborative approach should extend to working with feeder institutions such as schools, other FE colleges and University Technical Colleges (UTCs), building on initiatives to boost the importance of technical education in learning and careers guidance, so students can develop career aspirations in this field.

They will operate at sufficient scale to make a demonstrable impact in meeting skills and productivity challenges today and in the future. This means operating at a regional or sub-regional level.

They will have a distinct physical identity that clearly identifies them as new and independent institutions. This could be created through a new build, or investment in existing estates and assets, but their identity should be separate and distinct from that of parent or partner institutions.

What will make a good Institute of Technology proposal?

In order to deliver on the objectives of the programme, we expect all IoTs to share the following critical success factors:

Strong employer engagement in governance and leadership as well as the design and delivery of the curriculum

The role of employers is crucial to the success of an IoT, and we expect them to be at the heart of an IoT's leadership and governance, to ensure the institution can focus on delivering a skilled workforce ready for employment both now and in the future. This should extend to the design and delivery of the IoT curriculum[7], resulting in direct links between teaching, learning and industry needs, and a learning offer that is agile and responsive to employer needs. A financial commitment will therefore be critical as this will demonstrate a key aspect of employers' commitment to the consortia. We do not intend to mandate the level of this commitment as it could include cash, resource and time to co-design and deliver the curriculum, support of leadership and management, or access to/loan of cutting edge equipment and facilities.

Specialise in teaching technical disciplines, particularly STEM, at level 4 and above, creating a clear technical education pathway to high skilled, high wage employment

IoTs should specialise in technical disciplines, particularly STEM, to meet the skills needs for the growing and diverse range of technology-enabled occupations in sectors such as advanced manufacturing, construction and the digital and creative sectors that are crucial to future national and regional growth.

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7 At level 4 and 5, we would expect an IoT to deliver a mix of some or all of the following: higher apprenticeships; courses for technical qualifications eligible for Advanced Learner Loans, courses for HE Qualifications i.e. HNC/HNDs; bespoke courses for local employers. At level 6 plus we would expect an IoT primarily to deliver a mix of: degree-level apprenticeships and technically-focused degree courses.

Offer high quality industry-relevant teaching, using industry standard facilities and equipment

IoTs will have a particular focus on teaching technical disciplines in demand by local employers who will help design and deliver the curriculum. Learners will have access to industry standard facilities and to industry professionals, who can provide real applied knowledge and business and employment skills to complement teaching expertise.

Be responsive and agile in meeting the current and future needs of local, regional and national industries, including upskilling the current workforce

IoTs will need to anticipate and innovate in response to industrial change. IoTs will develop their own research capability focused on applied research, working with employers to identify relevant funding streams and prepare for the workforce challenges of the future (e.g. industrial digitalisation, automated manufacturing). They will need to demonstrate ambition in using the applied research and innovation base to inform their curriculum and learning offer, for example through building links with centres of innovation such as Catapults[8].

Create a prestigious and distinct identity for both the institution and the offer to learners

IoTs should develop a learning offer that is new and distinctive, which complements and does not duplicate existing or proposed provision in the area. Quality and innovation in the provision of higher level technical skills training, offered in partnership with employers should be the hallmarks of these institutions and will be key to ensuring prestige and attracting learners.

Work collaboratively to harness the assets, resources and expertise of employers and FE and HE providers

IoTs will benefit from collaboration, which can add value and drive innovation by harnessing each partner's strengths, whether these are assets such as facilities and equipment, or relationships or resources, so that the overall delivery model is greater than the sum of its individual parts. Collaboration is key in developing the IoT bid, and working with other providers to ensure the IoT offer adds to high quality provision already available.

Be financially viable and resilient

IoTs may benefit from a diverse range of funding streams, such as the apprenticeship levy[9], relevant funding through the ESFA and the Office for Students (OfS), tuition fees and Advanced Learner Loans and we expect bids to show how they intend to ensure financial viability. This can be supplemented by commercial income such as bespoke courses for local employers.

We expect that, if an IoT is seeking to receive grant funding for taught HE provision directly (rather than as a franchised agreement), it will need to register with the OfS in the Approved (Fee Cap) category. More information on the proposed OfS regulatory framework is available from here: https://consult.education.gov.uk/higher-education/higher-education-regulatory-framework/.

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8   https://catapult.org.uk/
9   If a levy-paying employer chooses to deliver training to its apprentices through an IoT.

Who can bid to become an Institute of Technology?

We would expect to see collaborative approaches between employers and FE and HE providers, where the assets and resources of each combine to maximise their relative strengths. We would expect FE colleges to play a major part in these collaborations to ensure quality and continuity by building on the partnerships they have established with employers, Local Enterprise Partnerships (LEPs) and Combined Authorities through the Area Review[10] process. IoT partnerships should demonstrate in their application that they have consulted their LEP or Combined Authority to ensure that the bid is aligned with their strategic priorities.

In summary, proposals would need to include a collaboration between at least:

- One FE provider (FE College or independent training provider); and
- One HE provider[11] (Higher Education Institution (HEI) or Alternative Provider); and
- At least two employers in the sectors relevant to the IoT's technical specialisms.

The IoT could take a range of legal forms permitted by HE or FE law provided that it fulfilled the applicable criteria, legislation, regulations and conditions for FE and/or HE provision, and relevant grant funding and student support to support a financially viable model[12].

What will Institutes of Technology offer to learners, employers and the economy?

Benefits for learners
Learners will benefit from having a new and credible alternative, at a prestigious institution that becomes known for delivering high quality, higher level technical skills. An enhanced and more accessible offer at levels 4 and 5, and the chance to continue to level 6 and beyond, will improve learners' chances of securing jobs that offer higher wages and increased opportunities. The pathway from learning to employment will be clearly set out.

Benefits for employers
'Anchor employers' (employers leading the IoT) can 'home-grow' their future workforce and upskill their current one, shaping the curriculum to best suit their needs, adopting agile approaches to ensure industry trends are quickly translated into the classroom. Employers not directly involved in the IoT can still benefit, by using it to train their current and future workforce. This applies equally to small business as it does to larger employers.

Benefits for the local, regional and national economy
The IoT will result in more people in the labour market with higher level skills, who are likely to have the ambition that comes from achieving highly valued qualifications that lead directly into employment. This will make them ideally placed to help boost the local, regional and national economy and productivity levels. IoTs will attract a wide range of learners, which will maximise the economic impact.

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10   https://www.gov.uk/government/collections/post-16-education-and-training-area-reviews
11   If the HE provider does not have relevant applied research capabilities, the collaboration must also involve an Applied Research and Innovation institution.
12   Depending on the model adopted, bidders will need to ensure that HE provision is aligned to the new OfS regulatory framework (the consultation on the proposed approach to the regulatory framework can be found here: https://consult.education.gov.uk/higher-education/higher-education-regulatory-framework/)

Where will Institutes of Technology be located?

Our aim is to achieve a network of IoTs spread across the country, sited in regional locations where the conditions for their success are supportive. In most cases, we would expect an IoT to operate as a regional or sub-regional hub. This will enable an IoT to create the necessary economies of scale to play a significant role in driving inclusive economic growth across the country.

The Institutes of Technology call for proposals

There are two assessment stages, detailed below:

Stage 1 will be an assessment of readiness to develop an IoT. Proposals that pass the assessment of readiness will be eligible to progress to Stage 2. Eligibility to progress may be subject to bidders addressing certain aspects of the proposals.

- The call for proposals will formally open before the end of December 2017
- A bidders conference will be held in early January 2018
- The call for proposals will close in March 2018, allowing bidders a minimum of 8 working weeks before the call closes
- We expect applicants will be notified of the outcome of the readiness assessment in May 2018

Stage 2 will be launched in summer 2018. We expect the first IoTs will be open in 2019.

How bids will be assessed

At Stage 1, proposals will first be checked to see whether they meet the eligibility requirements. The proposals will then be evaluated against assessment criteria relating to the core objectives and critical success factors of the IoT programme. An expert panel will make recommendations to the Secretary of State for Education on the proposals that should proceed to Stage 2.

Stage 2 of the competition will require a full business case and the application for capital funding. This will confirm viability and funding required together with the detailed arrangements for successful delivery.

Awarding IoT status

Successful bidders will receive the right to call themselves Institutes of Technology[13]. We will grant this right to a single legal person representing all parties to the bid.

Capital funding

There is a capital fund of £170m available for the whole IoT programme, which bidders can apply for, to refurbish or upgrade existing facilities, purchase equipment or invest in a new build if that is required.

We reserve the right not to spend the entire budget and consider a further bidding round in the event that there are insufficient bids of the required quality standard and/or to ensure geographical coverage.

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13   Precise branding arrangements to be confirmed.