DPS FRAMEWORK SCHEDULE 4: LETTER OF APPOINTMENT AND CONTRACT TERMS

Part 1: Letter of Appointment

To whom it may concern

Letter of Appointment

This letter of Appointment dated Thursday 15th July 2021, is issued in accordance with the provisions of the DPS Agreement (RM6018) between CCS and the Supplier.

Capitalised terms and expressions used in this letter have the same meanings as in the Contract Terms unless the context otherwise requires.

Order Number:	CR21015 – The role of Standardisation in Support of Emerging Technologies in the UK
From:	Department for Business, Energy & Industrial Strategy (BEIS) of 1 Victoria Street Westminster, London SW1H 0ET ("Customer")
To:	Technopolis Limited, 3 Pavilion Buildings, Brighton BN1 1EE ("Supplier")

Effective Date:	Monday 19th July 2021
Expiry Date:	Wednesday 15th December 2021

Services required:	Set out in Section 2, Part B (Specification) of the DPS Agreement and refined by: · the Customer's Project Specification attached at Annex A and the Supplier's Proposal attached at Annex B;

Key Individuals:	[redacted]

Contract Charges (including any applicable discount(s), but excluding VAT):	The customer shall pay the Supplier the sum of £73,200.00 excluding VAT for delivery of these services in alignment with the price schedule at Annex C. For the avoidance of doubt, the Contract Charges shall be inclusive of all third-party costs. 
Insurance Requirements	Additional public liability insurance to cover all risks in the performance of the Contract, with a minimum limit of £5 million for each individual claim Additional employers' liability insurance with a minimum limit of £5 million indemnity Additional professional indemnity insurance adequate to cover all risks in the performance of the Contract with a minimum limit of indemnity of £1 million for each individual claim. Product liability insurance cover all risks in the provision of Deliverables under the Contract, with a minimum limit of £5 million for each individual claim.
Liability Requirements	**Suppliers limitation of Liability** (Clause 18.2 of the Contract Terms);
Customer billing address for invoicing:	All invoices should be sent to should be sent to: finance@services.uksbs.co.uk or Billingham (UKSBS, Queensway House, West Precinct, Billingham, TS23 2NF).

GDPR	As per Contract Terms Schedule 7 (Processing, Personal Data and Data Subjects)

FORMATION OF CONTRACT

BY SIGNING AND RETURNING THIS LETTER OF APPOINTMENT (which may be done by electronic means) the Supplier agrees to enter a Contract with the Customer to provide the Services in accordance with the terms of this letter and the Contract Terms.

The Parties hereby acknowledge and agree that they have read this letter and the Contract Terms.

The Parties hereby acknowledge and agree that this Contract shall be formed when the Customer acknowledges (which may be done by electronic means) the receipt of the signed copy of this letter from the Supplier within two (2) Working Days from such receipt

For and on behalf of the Supplier: **For and on behalf of the Customer:**

ANNEX A

Customer Project Specification

1. Background

STRATEGIC CONTEXT

Standards are widely seen as a tool to support commercialisation of innovation by facilitating network effects between innovators, acting as a means of knowledge transfer, and fostering interoperability and confidence with consumers along the supply chain.

The White Paper on Regulation for the Fourth Industrial Revolution had asked the British Standards Institution (BSI), the National Physical Laboratory (NPL) and the UK Accreditation Service (UKAS) to set out their vision on how standardisation needs to evolve to effectively support the commercialisation of innovation and complement outcome-focused regulation. They were also asked to express their views on the role Government could play to support this. The National Quality Infrastructure (NQI) partners have individually responded to the R&D Roadmap to set out the role they can play.

Over the last few months, officials from the Better Regulation Executive and the Office for Product Safety and Standards have been working with the BSI, NPL and UKAS to explore their proposals to unlock the potential of standards, measurement and accreditation to support innovation. We are now looking to translate these insights into a joint action plan.

HOW OUTPUTS OF THIS RESEARCH PROJECT WILL BE USED

This research project will seek to identify where the current standards framework can be improved and so will directly inform the delivery of the joint BEIS / NQI action plan, and specifically it will help BEIS determine what future role it should have in shaping the standards framework.

By illuminating how the current standards framework (alongside other ecosystem factors) supports the innovation process, it will help inform longer term policy development of NQI members, Innovate UK (IUK) and other BEIS teams involved in supporting emerging technologies.

This research will provide evidence which supports the ongoing development / refresh of the Industrial Strategy (standards are a key part of framework conditions) and follow-on work from the 'Regulation for the Fourth Industrial Revolution' White Paper last year.
Key policy paper:

https://www.gov.uk/government/publications/regulation-for-the-fourth-industrial-revolution

2. Aims and Objectives of the Project

PROPOSED WORK

The overarching aim of this research project is to explore and analyse:

- the role of standards in supporting the innovation / commercialisation process. [by conducting a comprehensive lit review of links between standards and innovation]
- how the current UK standards framework (operating through the National Quality Infrastructure (NQI)) supports the development and commercialisation of emerging

technology [based on existing literature, data, documents and interviews with ecosystem stakeholders]

- the experiences of very innovative firms (working in emerging industries) in terms of their interactions with standards. [based on semi-structured interviews with innovators at all stages of the innovation / commercialisation pipeline]
- what the Government's role could be in shaping the standards landscape so that it works for those firms most important to the future economy / society. [the research report will make recommendations]

Note: Further detail on project aims / methods is provided in the 'suggested methodology' section.

This project will produce a final report (to be published) and presentation to key stakeholders. The content will be based on lit review; review of UK standards framework; interviews with businesses and recommendations.

The findings will directly inform the delivery of the joint BRE / NQI action plan, and specifically it will help BEIS determine what future role it could have in shaping the standards framework.

EXISTING EVIDENCE / ANALYSIS / RESEARCH

It is helpful for potential bidders to note some of the existing research that has helped shape the design of this project.

There have been some comprehensive evidence summaries in the past establishing a theoretical framework for understanding the role of standardisation in supporting innovation (Blind, Knut (2013) The Impact of Standardization and Standards on Innovation). They usefully draw on what is a quite fragmented evidence base and make good use of international as well as UK experiences. But these papers are now quite old and don't represent the 'state of the art'. They also acknowledge the limited amount of empirical work in this area. Standards are recognised as a multidimensional concept and so these papers are light on concrete conclusions. Our aim is to focus on strategically important emerging technologies and areas of innovation and speak to firms/researchers working at the very frontiers of innovation where we hope to be able to generate actionable insights.

There are a few other notable papers of direct relevance to this study.

- A paper setting out a framework for anticipating the standardisation needed to support emerging tech (Featherston, C., Ho, J., Brévignon-Dodin, L., & O'Sullivan, E. (2015). Mediating and catalysing innovation: A framework for anticipating the standardisation needs of emerging technologies. Technovation, 48–49 25-40) which tells part of the story of what good looks like in terms of agile standards.
- A BEIS / BSI paper comparing the German and US standards frameworks in terms of how they support emerging technologies (O'Sullivan, E., Brévignon-Dodin, L. (2012). Role of Standardisation in support of Emerging Technologies) and looks closely at 4 technologies. Our proposed research is similar in scope/purpose but will focus on the UK system and pick technologies which are of most strategic importance to the UK.
- An empirical analysis of the impact of formal standards (and regulation) on firms' innovation efficiency, considering different levels of market uncertainty, based on the German Community Innovation Survey (CIS). (Blind et al, 2016. The impact of standards and regulation on innovation in uncertain markets)

3. Suggested Methodology	
If applicable:	**Insert numbers:**
Total number of Participants (experimental design)	**0**
Total number of Interviews (survey)	**0**
Total number of Interviews (qualitative)	**c50**
Total number of Focus Groups	**0**
Total number of Case Studies	**1**
Any other specific requirements	Literature review.

We are anticipating that this research project will have **four parts**:

One – Literature review on role of standards in supporting innovation

- Undertake a comprehensive literature review drawing on domestic / international examples, academic literature, working papers, policy documents and published research by key stakeholders (e.g. NQI members). [Taking the Blind 2012 paper ("The Impact of Regulation on Innovation") as a starting point and updating with developments since then may be an elegant approach.]

Two – Review of UK approach to standards development in support of emerging technology

- This would build on the previous research carried out which looked at the US and German frameworks (2012, Role of Standardisation in support of Emerging Technologies). The study would review the standards landscape in the UK, paying special attention to the different roles, practices, support programmes and engagement models of standards development organisations at the earlier stages in the lifetime of a novel technology. It would try to highlight those factors which may have implications for standards development "business models".
- The review would be primarily based on desk research and underpinned by a framework developed from the findings of the literature review. It will be further informed by a small number (circa 10) of interviews conducted with scientific experts, regulators, academic researchers and experts from standards development organisations. List of interviewees to be discussed / agreed with BEIS after the lit review. Key themes of the review are likely to include:
  - Types of standards and phases of emergence: Different types of standards will be appropriate at different phases in the emergence of a new technology and this evolving character of standardisation raises issues in terms of timing and "standardisation readiness level".
  - National innovation system: Who are the key national innovation system actors engaged in standards development? We can also look at their configuration, culture and mission, the scale and scope of their activities, and the quality and nature of their interconnectedness.
  - Technology and industry sector variations: What are the range of factors that influence the different trajectories of new technology emergence and associated evolving standards development needs?
  - Government's modes of engagement: What are the modes of engagement adopted by UK government in support of standards development? [e.g. direct participation of governmental experts in standards-setting activities, etc]
  - Convening the emerging technology stakeholder community: How joined up and engaged are the various stakeholder groups involved in innovation and standards processes (standards bodies, innovators, government,)?
  - Standards development and 'roadmaps': Could look at the use and role of foresight, horizon scanning, road-mapping in identifying standards development needs.
  - Government (emerging) technology procurement: Does the UK's government emerging technology procurement practices offer potential stimulus (and sources of funding) for standards development?

- Standards development and the national research base: What contribution do public sector researchers make to standards development for emerging technologies, both at the earliest stages in a technology's maturity but also later in the industrial lifecycle?
- Interactions with regulation: What role do standards play relative to regulation in the innovation process? How do they support / complement each other?

Three – Understanding the experiences of innovators (i.e. the users of standards)

- This would involve semi-structured interviews with c40 innovators in order to hear their direct experiences of how standards help, hinder or halt their attempts at innovation. BEIS will work with the contractor to agree the topic guide. However it is broadly expected to:
    - Consider the full spectrum of standards from formal standards (created by standards committees, i.e. through BSI or relevant international bodies) through to informal standards (determined by the market and/or other standards development organisations).
    - Explore what 'standards' mean to them, the role of standards in their work, and how they impact on firms innovation activities.
    - Consider the full 'user journey' of firms (developing standards, navigating the standards landscape, complying with standards, etc).
    - Investigate what is good / bad about the current standards landscape and what can be done to improve it.
- The interviews would target start-ups, established firms and applied researchers working at the frontier of innovation. **Important note: the contractor will not be expected to recruit the interviewees themselves**. In the first instance, BEIS will work closely with Innovate UK to identify/engage appropriate organisations/individuals at an early stage in the commercialisation pipeline. The list of interviewees can be discussed and finalised with the contractor at project inception stage.
- We can't consider all areas of emerging technology in this study so we propose structuring the interviews around 4 innovations (giving us roughly 10 interviews per innovation) at different stages of technological readiness. For example, we could consider an emerging technology which is already in the process of being commercialised (e.g. drones). As well as an innovation which is still some way from being in widespread use (e.g. quantum computing). We will agree the 4 innovation areas with the contractor at project inception.
- Notes:
    - Given current circumstances, all interviews will be conducted virtually.
    - Findings from interviews will be reported back anonymously and in line with GDPR regulations. The final report will not contain the names of individuals/firms involved.

Four – Synthesis and recommendations

- Based on the findings of the first 3 phases of the research, the study will seek to identify opportunities where government could act to improve the functioning of the system to support those firms most important to the future economy / society.

4. Deliverables

Interim reports:
The contractor should produce an interim report at each stage of the research project (both to review progress made so far and to inform later stages of the project). This is expected to include:

- Literature Review (interim report):
- Review of the UK Approach to standards development (interim report)
- Understanding the experiences of innovators (interim report)
- Synthesis and recommendations (interim report)

Note: There may be other interim products which are appropriate for the contractor to produce and BEIS to review, including:

- Search strategy for identifying relevant literature, evidence and regulatory documents
- A list of evidence sources that have been identified through the search strategy
- Topic guides for interviews with innovators and with standards ecosystem stakeholders / experts

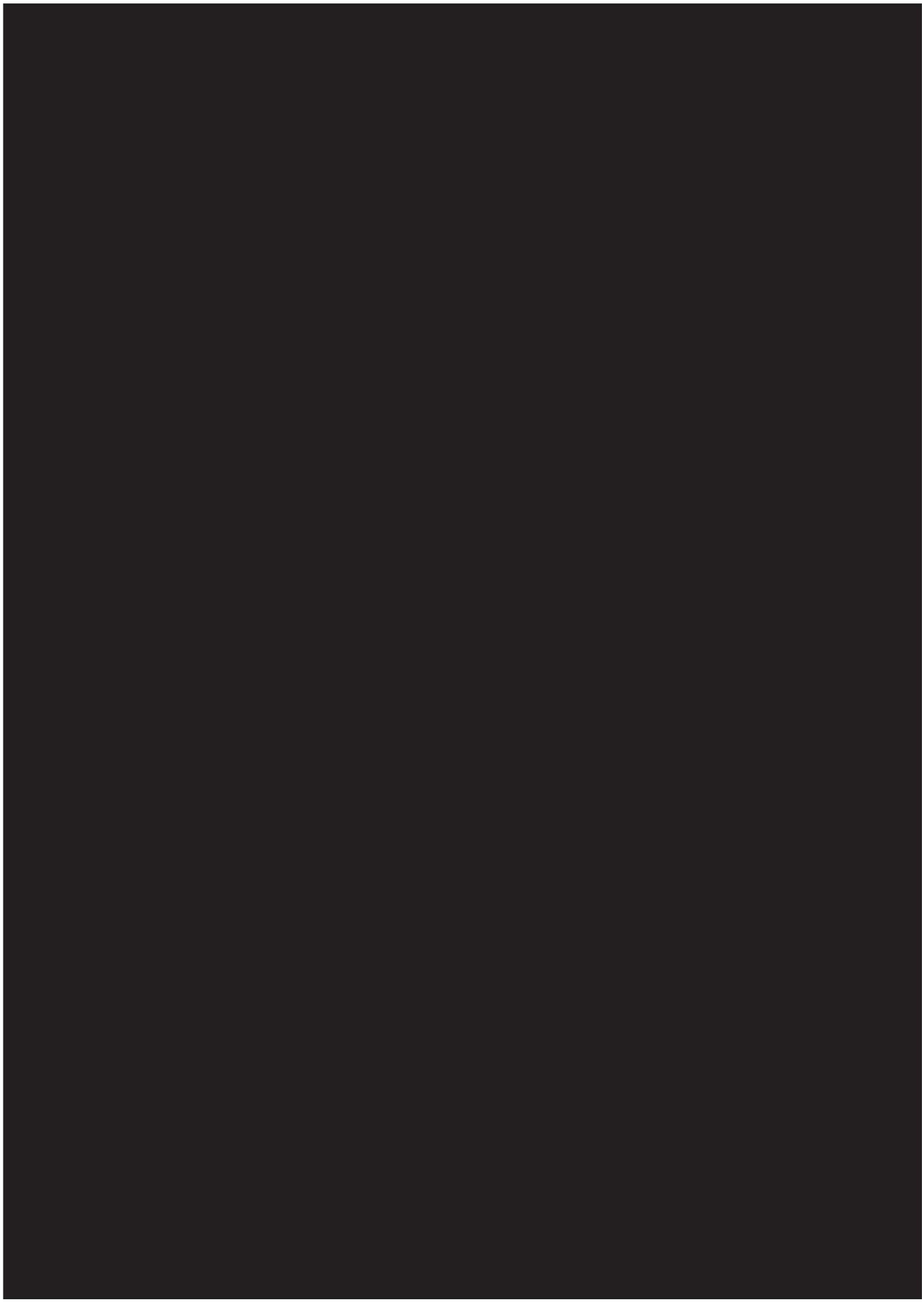
Final report:
At the end of the project, the contractor should deliver a final report of publishable quality containing the findings from all stages of the project and with appropriate technical annexes.

Slide deck and presentation:
At the end of the project, the contractor should produce a slide deck summarising the main findings from the report and give a presentation to key stakeholders (BEIS policy team / NQI).

Project communications:
The BEIS team is flexible with regards to communication with the contractor during the course of the project. There will be an expectation of a bi-weekly update in the form of an email or call to measure progress, as well as more formal meetings at key stages in order to discuss steps moving forward. These meetings will be held remotely. The project manager will be on call whenever needed to answer queries or requests.

ANNEX B

Supplier Proposal



Annex C

55	**TOTAL STAFF COSTS**	**€ 73,200.00**	€ 73,200.00
56	**Notes:**		
57	Day rate is for 8 hr day.		
58	Half day rate is for 4 hrs.		
59			

Part 2: Contract Terms