



# Science and Technology Committee

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From Rt Hon Greg Clark MP, Chair

Sir Patrick Vallance  
Government Chief Scientific Adviser  
(By e-mail)

19 May 2021

Dear Patrick,

## Critical and emerging technologies

In my Committee's '5G market diversification and wider lessons for critical and emerging technologies' Report, we highlighted the growing risk of global technological divergence, and recommended that the Government assess this risk and develop measures to address any related challenges.<sup>1</sup> This included the need to: identify the technologies that are likely to be of critical importance to the UK's prosperity and security over the next ten to twenty years; assess the potential opportunities and risks associated with those technologies; and propose measures to seize those opportunities and mitigate those risks.

In its response, the Government told us that a "critical new function will be instituted in the Government Office for Science providing information, analysis, and insights to inform strategic decisions across Government Departments" to address the issues we identified.<sup>2</sup> In relation to this new 'critical function', I would be grateful if you could provide some further information on this new function, including:

- when this new critical function is expected to be operational;
- what resources (staff and budget) the new function will have, and if the Government Office for Science has been allocated additional funding to cover the entirety of this new work;
- how the new function will identify critical and emerging technology areas, as well as the potential threats, opportunities and means for dealing with them; and
- what powers the Government Office for Science will have to instigate work across Government to implement any necessary measures identified by the new function.

I would be grateful if you could provide us with this information by Friday 11 June. As is usual with the Committee's correspondence, I will place this letter and your response in the public domain.

With best wishes,

**Rt Hon Greg Clark MP**  
*Chair*

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<sup>1</sup> [Second Report](#) of the House of Commons Science and Technology Committee, HC 450, published 4 February 2021, paras 82–109

<sup>2</sup> [Fifth Special Report](#) of the House of Commons Science and Technology Committee, HC 1377, published 29 April 2021, pp 11–16



Government  
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Rt Hon Greg Clark MP  
Chair, Science and Technology Committee

By email only

08 June 2021

Dear RT Hon Greg Clark MP,

### **Critical and emerging technologies**

Thank you for your letter dated 19 May regarding the new capability being established in the Government Office for Science. As requested, I am writing to provide further information on this.

A core ambition of the Integrated Review is to secure the UK's status as a **Science and Technology Superpower** by 2030. As noted in your report, this will require us to identify and lead on critical and emerging technology areas of strategic importance to the UK's prosperity and security over the next decade and beyond. To achieve this ambition, Government is establishing new science & technology (S&T) horizon-scanning, assessment and policy capabilities, to anticipate and assess priorities as we pursue strategic advantage.

To deliver the assessment and horizon-scanning functions, the Government Office for Science is establishing scanning and analytical capabilities that will produce insights on a broad spectrum of S&T activities. This will provide an independent and objective evidence base to inform Government's strategic choices on the critical and emerging technologies; improve Government's understanding of where S&T can help tackle national and global challenges; and provide useful information to help strengthen collaboration and engagement with industry, academia and international partners.

I have addressed your specific points from your letter below:

- *How the new function will identify critical and emerging technology areas, as well as the potential threats, opportunities and means for dealing with them*

The Government Office for Science is expanding its capabilities and will look at a broad range of S&T questions related to Government strategy and policy. It will collect data and insights across the life-cycle of S&T, from basic science to application; considering both individual technologies and where multiple technologies converge. This will include expert knowledge and insights as well as the use of data such as publications, patents, early stage technology investment trends, and industrial activities. As recommended in your report, the new capability will draw on information from government, academia and businesses, and use analytical techniques and experts to understand the breadth of opportunities and risks for the UK. This will be supported by a centralised scanning service for Government that will scan primary data sources and aggregate existing scans from across Government and outside to help identify and profile critical S&T areas. We will also make greater use of data and analysis by developing tools that will provide quantitative data on technology issues, supplementing existing work taking place across Government. The Government Office for Science will facilitate information sharing and joint working between multiple S&T policy

teams across Government, minimising duplication of effort and promoting a coherent approach to policymaking.

- *What powers the Government Office for Science will have to instigate work across Government to implement any necessary measures identified by the new function*

The Government Office for Science's role is to ensure that government policies and decisions are informed by the best scientific evidence. It will provide analysis and insight to inform policy recommendations. Its key customer will be the S&T Strategy Unit<sup>1</sup> that is being established at the centre of Government, but its outputs will be available to Departments. The S&T Strategy Unit's purpose will be to support Ministers to develop and use the UK's Science and Technology in a strategic way and at the pace required to tackle global and national challenges. Its vision is that Government uses objective assessment and the best of the UK's strategic thinking to understand, shape and use Science and Technology for national and global good. Functions are still being developed but it is envisaged that it will be able to support Ministers taking strategic decisions; engage with Departments, Agencies, Devolved Administrations (where relevant), international partners and external stakeholders on strategic issues; and monitor and evaluate the Government's collective progress against the ambitions set out in the Government's manifesto, Integrated Review and Plan for Growth.

- *What resources (staff and budget) the new function will have; and if the Government Office for Science has been allocated additional funding to cover the entirety of this new work*

The Government Office for Science has been allocated a further £2 million from Budget 2020 and £1 million from SR20 to expand its cross-cutting strategic science capabilities, which has been used to enhance our emerging technology scanning capabilities, and to build initial assessment and analytical capabilities. We are currently in the process of expanding to approximately 30 staff members that will be a mix of civil servants and external experts. We also plan to commission work from outside expert bodies.

- *When this new critical function is expected to be operational*

The initial operating capability is expected in autumn 2021, and we expect to expand this in 2022.

I believe that expansion of the Government Office for Science's capabilities in parallel with the establishment of a centralised S&T Strategy Unit will provide Government with insights and mechanisms to help make choices that will help develop the UK's position as a S&T Superpower. I would be happy to provide you an update as our new capabilities become fully operational.

I am copying this letter to the Secretary of State for Business Energy and Industrial Strategy, the Secretary of State for the Department for Digital, Culture, Media & Sport, and the Permanent Secretary for the Cabinet Office.

Yours sincerely,



**Patrick Vallance**

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<sup>1</sup> The name of the S&T Strategy Unit is yet to be determined.