



Department for  
Business, Energy  
& Industrial Strategy



中华人民共和国科学技术部  
Ministry of Science and Technology of the People's Republic of China



# UK-CHINA JOINT STRATEGY FOR SCIENCE, TECHNOLOGY AND INNOVATION COOPERATION



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## Forewords



### Jo Johnson

Minister of State, the Department of Business, Energy and Industrial Strategy

The United Kingdom of Great Britain and Northern Ireland

The UK continues to be at the forefront of excellence in scientific research and promoting innovation. Both are critical in unlocking new opportunities to ensure we are building a Britain fit for the future, and both help address global challenges to safeguard all our futures.

We are committed to strengthening our international partnerships. Science and research are global endeavours and we achieve more when collaborating with others. It's why we made international collaboration an important part of our new Industrial Strategy to ensure the UK remains the partner of choice for researchers and investors across the globe.

UK-China science and innovation cooperation is rooted in a partnership spanning nearly 40 years. If we are to maximise the opportunity of this partnership we need a jointly agreed strategic approach, and one that will stand the test of time. This is what this strategy aims to do, establishing the principles to harness our diverse talents and ambitions.

This joint strategy heralds a new chapter for UK-China cooperation. I am confident that its implementation will over time lead to many more important and transformational changes whose reach will be far wider than just our two countries.

A handwritten signature in black ink, appearing to read 'Jo Johnson', written in a cursive style.

## Forewords



### Wan Gang

Minister, Ministry of Science and Technology  
The People's Republic of China

Science, technology and innovation has become an important driving force for promoting economic growth and sustainable development in today's world. Facing global challenges such as climate change, food security, energy shortage, prevention and control of infectious diseases, no single country can stand alone. As a responsible developing country, China is willing to engage actively with global innovation network and deepen cooperation with all other countries, to jointly address major challenges and to build a community of shared future for mankind.

Throughout history, science, technology and innovation had profoundly changed the course of the world's development. Ancient China has created brilliant science and civilization, while the first modern industrial revolution took root in the UK - both nations have made important contributions to the human development.

At present, science, technology and innovation are highly active at a global scale. The next science and technology revolution and industrial transformation is under way, creating a major opportunity for the world's future prosperity. Seizing this opportunity, China and the UK issued joint strategy for science, technology and innovation cooperation. The strategy will further tap the potential of collaboration, enhance complementarity, and promote cooperation in more areas, deeper aspects and higher qualities. It signifies the start of a 'Golden Era' for China-UK science, technology and innovation cooperation. It also serves as a vivid example of the in-depth development of China-UK partnership.

There is a saying in China that 'No distance, not even great mountains and oceans, can separate people who share the same visions'. China-UK science, technology and innovation cooperation has gone through 40 years. I believe that on a equal and mutually beneficial basis, our cooperation will move towards a higher level, and both nations will contribute new wisdom and strength to the prosperity and development of the world.

A handwritten signature in black ink, consisting of stylized Chinese characters, located in the bottom right corner of the page.

# 1. Science, Technology and Innovation

## Cooperation is the Key to Prosperity of the UK and China

The governments of the United Kingdom of Great Britain and Northern Ireland and the People's Republic of China recognise the importance of international collaboration in science, research and innovation.

UK-China collaboration is entering the Golden Era. This has created new opportunities for both countries to join together to address a range of global challenges – including social, environmental and economic – with the potential to bring benefit to all of mankind.

Science and technology are fundamental building blocks, and innovation the realization of economic growth and prosperity. By deepening our cooperation, we will build our collective capacity to strengthen our economic competitiveness, and prepare and lead the way for future industrial revolutions.

The respective strengths of the UK and China are highly complementary, and are based on a long history of successful cooperation spanning nearly 40 years. The UK excels in basic science, research and innovation, and is a technological lead in a range of sectors; and China's particular strengths lie in the innovation of engineering technologies and in new, innovative business, with a deep pool of talent and unique infrastructure. Both countries have committed substantial additional funding to further strengthen research and innovation within new innovation strategies. This complementarity and shared ambition provides a strong base to deepen our bilateral collaboration in this Golden Era.

It is on this basis that the competent authorities on science and technology of our two governments have developed this joint strategy to further strengthen our cooperation for the long-term.

## 2. UK-China Collaboration is Entering a New Phase

After 40 years of collaborative working, UK-China science, technology and innovation cooperation is entering a new phase.

The UK-China Science & Technology Cooperation Agreement signed in 1978 marked the official start of bilateral Science & Technology cooperation. The regular UK-China Joint Commission meeting on STI Cooperation commenced in 1998. This was followed in 2009 when the United Kingdom of Great Britain and Northern Ireland published the UK-China Cooperation Framework. This Framework marked an important turning point in bilateral cooperation. In 2014, our two countries established the UK-China Research and Innovation Cooperation Partnership Fund.

UK-China collaboration has already greatly benefited both countries and this collaboration and its outputs are clear. Personnel exchange continues to increase, with a range of joint research, academic exchanges and training initiatives. The UK-China Research and Innovation Partnership Fund has supported over 460 projects and partnerships across more than 40 funding initiatives and has reached 240 institutions across the UK and China. We are also benefiting from existing joint innovation platforms.



## 3. Strategic Goals and Principles

### 3.1 Strategic Goals

Our two governments will work jointly to enrich the UK-China collaboration, working with and through a range of local, academic, research, innovative businesses and investors, policy and regulatory bodies to support the long term delivery of the strategy.

This strategy encompasses the full breadth of potential links between our two countries from research through to the commercialisation of new technologies. It will seek to deepen the personnel, economic and cultural exchanges between our two countries. It will improve our joint scientific and technological innovation capability and competitiveness. It will support cooperation, including on policies and regulations to drive research and innovation so that new ideas generate economic and social value and enhance the competitiveness of both countries.

Together we will recognise excellence in the pursuit of the highest quality collaboration in science and thereby lead the way in international cooperation. Finally, we will work together and lead others to address the global challenges the world is facing.

### 3.2 Principles

This strategy will have three principles that will guide its implementation.

#### **Intellectual Property Rights**

Both countries will respect intellectual property rights. Effective protection of intellectual property rights will promote collaboration in innovation, commercialisation and trade, as well as protecting the interests of both countries. We will actively collaborate to lead and participate in




the development of global regulations and standards to enhance the international voice of both countries. We recognise the importance of flexibility for innovators and researchers to understand and negotiate their intellectual property outcomes. Both countries intend to further improve the intellectual property rights through a set of shared principles.

### **Project-focused bilateral cooperation**

Through our partner organisations we will focus on project-based cooperation. Priority areas of common interest will be identified to support and enhance our existing joint research and innovation activities, including through Flagship Challenge Programmes. This focused approach to collaboration will support the countries' shared ambition to be global leaders in addressing global challenges and driving socio-economic development.

### **Engaging research and innovation communities**

Although both governments will set the strategy and the supporting policy and regulatory framework, the implementation will rest with the participation of a range of local organisations and institutions, and talented individual researchers and innovators. These organisations will work together with their bilateral partners, and with businesses, to ensure the effective implementation of the strategy, making the most of our individuals' talents and capabilities.



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## 4. Strategic Areas of Focus

We will structure our collaboration across three areas: in Basic Research, in Innovation and in UK-China Global Partnerships. We will also work jointly on governance and policy implications to support this strategy.


### 4.1 Basic Research

Both countries will facilitate open access to each other's research infrastructure and promote academic exchange and cooperation on major science projects between researchers from the two sides. The priority areas will include life science, medicine, physics, mathematics, astronomy, meteorology and climate, arts and humanities.

### 4.2 Innovation

To meet the needs of the UK and China for economic growth and to address global challenges, the two countries will select priority areas and topics and work together to achieve breakthroughs and jointly commercialise new technologies in these areas.

To address challenges such as food security, sustainable energy, major diseases and environmental issues, both countries will work together on a number of technologies, that will include but not be limited to: seed, water and soil conservation, offshore renewable energy, smart technologies and energy storage, the heating, cooling and efficiency of buildings, urbanisation, mobility (including batteries), air pollution and human health, advanced therapies (such as cell and gene therapies), antimicrobial resistance, ageing population, and resilience to natural hazards. These are all major challenges facing our two countries and globally.



To drive economic growth, the UK and China will work together in complementary areas that may include but are not be limited to: low carbon and green manufacturing, robotics, satellite applications such as remote sensing, and engineering programmes and projects. We will also collaborate on the creative economy, and in areas such as financial risk management, so as to boost economic cooperation and to create more good quality employment.

Both countries will support our enterprises and research institutes to strengthen innovation cooperation and to promote joint technology development and application.

On basic research and on innovation, both sides will explore further opportunities to establish joint research, and innovation, centres, and other collaborative bases and aim to continue to increase, on a year-on-year basis, the number of high impact internationally-cited joint research papers.

Both countries will carry out a process of technology foresight to identify and prioritise the focus of this collaboration. To support this process the two sides will seek to involve consultation between think-tanks of both countries, facilitating dialogues and exchanges between Academies, universities, research institutes and enterprises from both countries, to identify potential barriers to progress.

### **4.3 UK-China Global Partnerships**

In addressing the scale and range of global challenges, UK-China cooperation may also consider jointly inviting third countries or international organisations to provide expertise and capacity to combat complex questions. This may enable access to unique scientific expertise in clusters of world-class researchers and hi-tech businesses. It will enable both countries to work jointly with third countries and in other parts of the world on global challenges.



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## **5. Actions and Measures to Deepen Our Cooperation**

The two countries will continue to explore ways to enhance the effectiveness and diversity of our bilateral cooperation, at multiple levels and by engaging wider communities. This will ensure a continuous strengthening of UK-China cooperation to maintain our global leadership in science, technology and innovation activities for the long-term.

### **5.1 Enhanced Cooperative Mechanisms**

Both countries will explore how to optimise the formal bilateral collaboration mechanisms, building on the UK-China Joint Commission Meeting on Science, Technology and Innovation Cooperation. This will include establishing the UK-China Science and Innovation Dialogue to provide overall strategic direction. The Dialogue will be supported and advised by an Expert Group.

### **5.2 UK-China Joint Innovation Funding**

The UK and Chinese governments have jointly committed funding worth over £200 million since the UK-China Research and Innovation Partnership Fund was first announced in 2014. Both countries will work together to identify opportunities jointly to support the long-term implementation of the strategy, if possible, through channeling more financial support for the Partnership Fund.



### **5.3 Implement Flagship Challenge Programme**

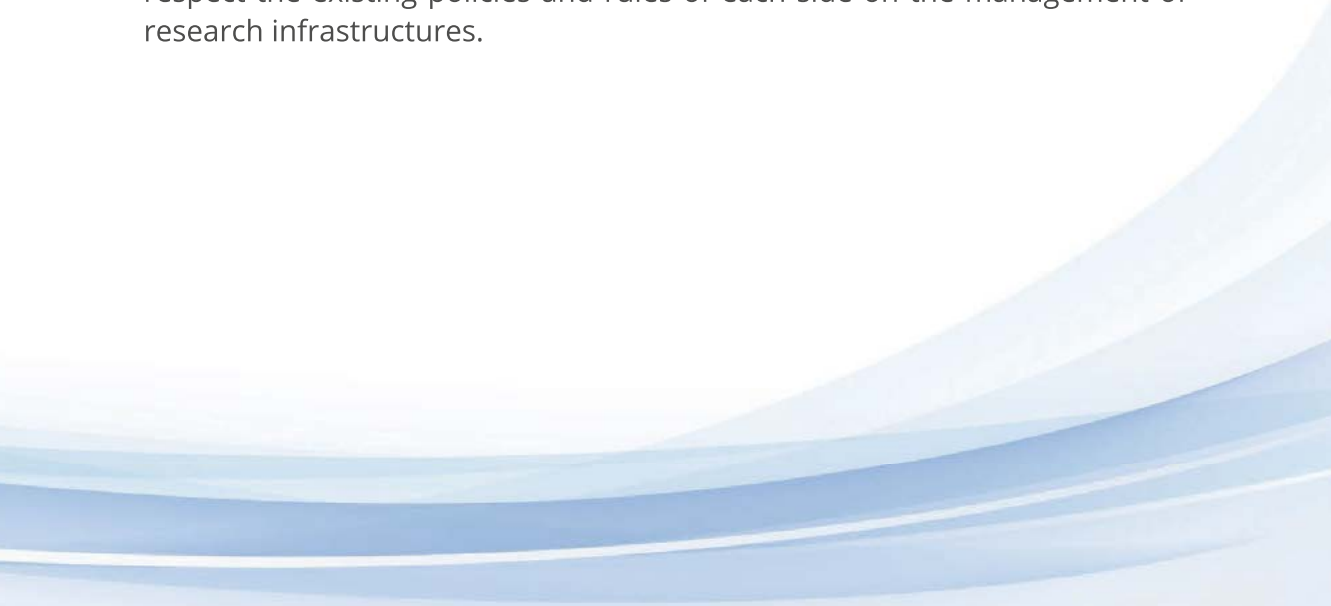
To address common challenges and the need for economic growth, the two sides intend jointly to identify priority areas and launch annual Flagship Challenge Programmes, guided by the decisions of the cooperation mechanisms, as set out above. The first Flagship Challenge in 2018 will focus on agricultural technologies.

### **5.4 Establish Innovation Platforms**

Building on the existing joint research centres, the two countries will explore opportunities to establish new joint laboratories and research centres so as to combine our respective strengths in priority areas. UK and Chinese local organisations and industry will consider jointly developing a number of international industrial innovation parks, or equivalent virtual platforms, to accelerate the transition of research and technology development and demonstration into commercial propositions.

### **5.5 Mutual Access to Research Infrastructure**

The two sides will explore establishing mechanisms to ensure mutual access to research infrastructure in both countries. This could include mechanisms to give priority access to UK-China partnerships. We will respect the existing policies and rules of each side on the management of research infrastructures.



## **5.6 Open Access to Data**

The two sides will jointly work together to facilitate the free and open exchange of non-proprietary data and the sharing of scientific research and technological information of non-proprietary nature derived from the cooperative activities under this strategy.

## **5.7 Intellectual Property Rights Protection and Application**

The cooperation and exchange between the two countries' intellectual property institutions will be strengthened. Improved intellectual property policies and service mechanisms will be established to enhance the protection of intellectual property rights which in turn support innovation and trade in both countries. We will support financial institutions, researchers and businesses in both countries to enhance IP collaboration, particularly in the field of research and innovation.

