The UK government managed to take time out from negotiations to remove the country from the EU to publish a white paper laying out its industrial strategy. The Prime Minister, Theresa May, described the document, “Industrial Strategy—Building a Britain Fit for the Future,” as an attempt to begin the development of a modern industrial strategy that would help businesses to create high quality, well paid jobs right across the country.” As such the underlying rationale of the policy is to tackle the disparity in economic activity in different regions in the UK.

Research is a major component of the UK’s new industrial strategy. The white paper makes much of the increase in spending on R&D, building on the Autumn Budget announcement of what the government described as “the largest boost to R&D support for 40 years.” While other areas of government spending have seen constant cuts in recent years, spending on R&D will rise by £2.3 billion in 2021–2022, taking the total spent on R&D in that year to £12.5 billion.

The strategy also sets out to encourage business investment in R&D. One of the document’s three headline “ideas” in the strategy is “Raise total research and development (R&D) investment to 2.4 percent of GDP by 2027.” R&D investment in the UK currently stands at around 1.7 percent of GDP. Graeme Reid, professor of science and research policy at University College London and previously a senior civil servant in charge of research policy, says, “Realistically, R&D investment will grow by 50 percent only if business investment rises by about £10 billion per year and the government share rises well beyond the recent £2.3 billion increase. The government will not sustain its higher level R&D investment unless business keeps pace.”

When it comes to where the government will spend on R&D, the white paper sets broad ambitions rather than detailed plans for investment. It highlights five key concepts: ideas, people, infrastructure, business environment, and places. It then presents a strategy that will tackle these ideas through a series of “grand challenges”: artificial intelligence and big data, clean growth, the future of mobility, and plans to “harness the power of innovation to help meet the needs of an ageing society.” The aspiration of these grand challenges is “to put the United Kingdom at the forefront of the industries of the future.”

The new industrial strategy sets the scene for a major shift in the control of research spending. Last April a new body, UK Research and Innovation (UKRI), brought together the research councils that manage most government spending on academic research and Innovate UK (IUK) (see the August 2016 issue of MRS Bulletin, p. 584). IUK operates at the interface between academic and industrial R&D. Nick Cliffe, interim head of advanced materials research at IUK, sees the creation of UKRI as an opportunity to establish stronger connections between academic researchers and the businesses that can take their ideas and turn them into products and services. As he points out, one of the stated objectives of UKRI is to “promote stronger commercialisation, business and policy links and wider societal engagement with publicly funded research.”

The new industrial strategy adds to last year’s creation of the Industrial Strategy Challenge Fund. The white paper announced that the challenge fund will invest a further £725 million in new programs over the next four years “to capture the value of innovation.” This is in addition to an original challenge fund round of £1 billion.

The Industrial Strategy Challenge Fund works through a series of funding rounds that invite bids...
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