Dr Megan Jobson is a Reader in the School of Chemical Engineering and Analytical Science at the University of Manchester. She held a Royal Academy of Engineering Industrial Fellowship between 2015 and 2016, which enabled her to work with Process Integration Ltd to investigate ways of improving low-temperature chemical separation processes.
RESEARCH
Dr Jobson's research interests are in the development of designs for separation processes, many of which are fundamental to chemical industries such as oil and gas. This research provides valuable insights for these industries as it aims to create methods for developing, integrating and optimising processes that are efficient in terms of energy use, materials consumption and waste production.

A Royal Academy of Engineering Industrial Fellowship supported Dr Jobson to investigate this field with Process Integration Ltd, a University of Manchester spin-out that provides innovative process improvement technologies for industries such as oil and gas, among others. Its technologies help companies to lower costs and maximise profits by highlighting novel ways to make their processes more efficient.

The Fellowship built on an existing collaboration. “Our similar interests made us an excellent match for each other,” explains Dr Jobson. “During the Fellowship, we focused on further developing methods we had previously worked on together and explored how these could be applied to a different process engineering context.”

IMPACT
The Industrial Fellowship provided Dr Jobson with more time to engage with an existing Knowledge Transfer Partnership (KTP), while developing technical skills in areas relating to her research. This consolidated the working relationship with Process Integration Ltd and resulted in a successful proposal for a new, follow-on KTP.

Dr Jobson was also able to contribute to emerging areas of work. “The company benefited from my technical contributions, insights and communication of results for a complex live consultancy project,” she explains. “My experiences and understanding of the complex problems faced by process engineers are already enhancing the quality of my teaching in process engineering and my supervision of research students.”

The collaborators' research was sufficiently ambitious and complex that several opportunities for ongoing work have emerged. These include plans to work together in supporting PhD students to further some of the research.

PROFESSIONAL DEVELOPMENT
Engaging with industry provided Dr Jobson with opportunities to develop technical and software skills that would not have been possible as part of her normal activities. This has enhanced her teaching and Dr Jobson has been promoted to Reader since applying for the Fellowship.

In addition, research arising from the collaboration and associated KTP has been shared in joint publications and presentations, and there are several confirmed plans for the formal collaboration to continue.

ROYAL ACADEMY OF ENGINEERING INDUSTRIAL FELLOWSHIP SCHEME
The Industrial Fellowship scheme provides an invaluable opportunity for early- to mid-career academics to undertake a collaborative research project in an industrial environment. The scheme aims to strengthen the strategic relationship between the university and the industry host by providing an opportunity to establish or enhance collaborative research between the two parties and enhance the quality of teaching.