



Running a successful
secondment scheme –
a knowledge exchange
and commercialisation
practitioner's guide

Big innovation, small budget

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A note to knowledge exchange and technology transfer professionals

As a Knowledge Exchange and Commercialisation (KEC) practitioner, you translate research outcomes into products and services that have an economic and social impact, often with tight budget constraints. You know that this isn't always straightforward.

Gaining fresh perspectives and new approaches for research is at the heart of successful innovation.

This guide explains how temporary placement of academic, industrial, clinical and other collaborators on a shorter-term basis, with a small amount of resource, can lead to significant innovation and knowledge exchange outcomes.

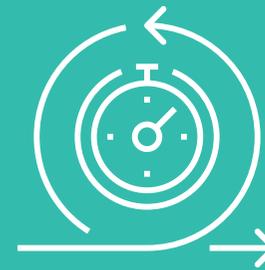
The second part of this guide is a case study of a successful secondment scheme, delivered through the HEFCE (now Office for Students) Catalyst-funded programme: Translate.

Since the secondment scheme launch in 2016, Translate has funded 45 secondments with destinations to academia, industry and healthcare settings.

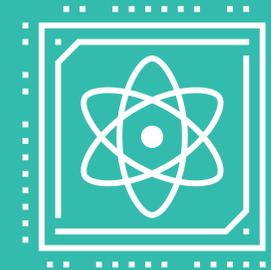
Five reasons for running an innovation secondment scheme:



Low budget



Tight timescale



Progress technologies



Develop people

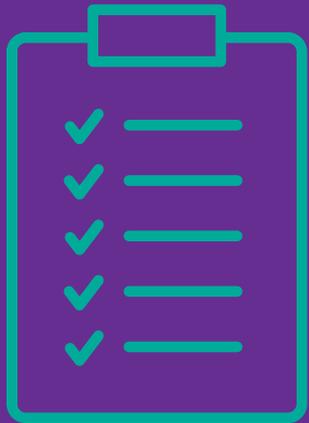


New collaborations

Running a successful secondment scheme – good practice guide

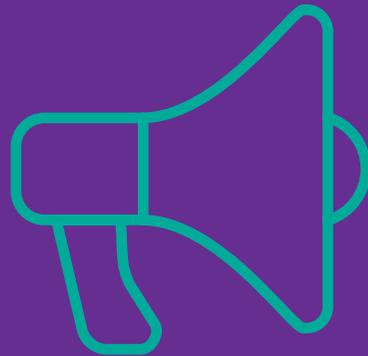
Prepare

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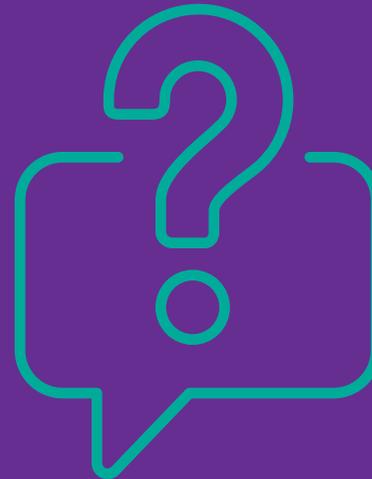
Publicise

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Support

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Evaluate

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1 Agree the aims and objectives of the scheme

Firstly you need to establish the aims and objectives of the scheme.

The aims of the secondments could:



**promote the progression
or transfer of technologies**



**promote business
development**



**promote capability
development**

The objectives might be to:

- increase knowledge and skills
- establish professional links and collaborations
- develop particular technologies
- identify new lines of research and innovation.

2 Identify who can take part

You need to identify the potential pool of participants. Bear in mind that there may be limitations on how your funding can be spent.

Participants could include:

- Students (what level?)
- Postdoctoral researchers
- University research and other staff
- Clinical staff in health care organisations
- Staff in technology businesses
- Staff at innovation enabling/intermediary organisations

You will also need to identify who will assess the applications. Your panel might include:

- Academics
- KEC practitioners
- Researcher development professionals
- Industry representatives

3 Allocate the budget and timeframe

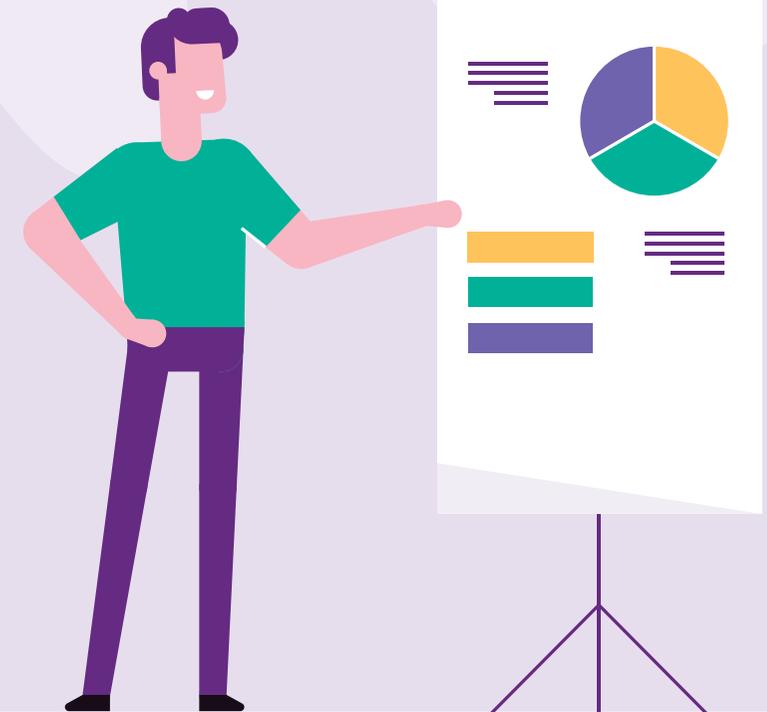
The way that the scheme is delivered will depend on the size of the budget and how you choose to spend it.

1. **Approve the total budget and the period it will be available.**
2. **Decide how to allocate the budget: lots of small grants, a few larger ones or a mix of the two.**
3. **Define the terms of funding:**
 - what can be paid for e.g. travel, salaries, consumables
 - who can receive funding e.g. individuals, educational organisations, businesses
 - period that funds must be spent by

Tip: Flexibility will be crucial to the success of the scheme. Think about allowing your participants to take part on a full or part-time basis, and the opportunity to apply more than once.

4 Outline how you will measure success

To run a successful secondment scheme you need to consider 'success' and how you will measure it. Metrics could include the number of secondments carried out, types of secondments, spread/diversity of participants and outcomes of the secondments.



To ensure the scheme is a success it must be advertised in a way that captures the attention of your chosen participant groups.

1. Create an accessible point of information

Having everything an applicant needs in one easy-to-find webpage not only helps potential participants but will reduce the burden of responding to enquiries.

Two key documents are required to run a simple and efficient scheme:

1. A comprehensive guidance document with clear section headings outlining everything an applicant needs to know:
 - **Types of opportunity available / scope of the scheme**
 - **Funding available**
 - **Duration of the scheme / opportunity**
 - **Key dates**
 - **How to apply**
 - **Assessment process**
 - **Conditions of award**
 - **Contact details**

2. A form that collects everything required to assess the application, report to funders on key metrics, and allow follow-up with all parties. The form should also be light touch and simple for the applicant – remember that the sums of money available might be quite small, and the application process should be proportionate.
 - **Biographical and contact details**
 - **Seconded and organisation host (inc letter of support)**
 - **Applicant objectives and purpose of secondment**
 - **Justification of funds**

Tip: Forms can be created online using tools like OnlineSurveys (BOS). If these are used, ensure applicants can see all questions so their responses can be prepared in advance.

2. Planning audience-friendly channels

The scheme should be advertised in places that are likely to reach your intended applicants and participants. Consider:



Web news items and intranets



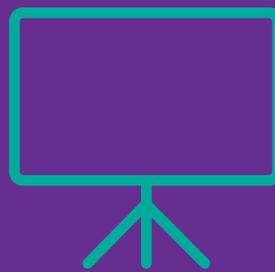
Email



Social media



Events and meetings



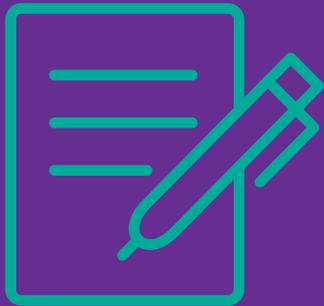
Staff presentations



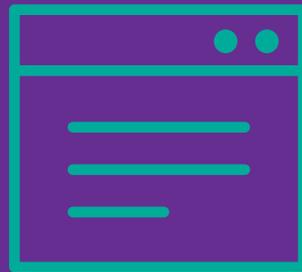
Partner channels

3. Showcasing outputs

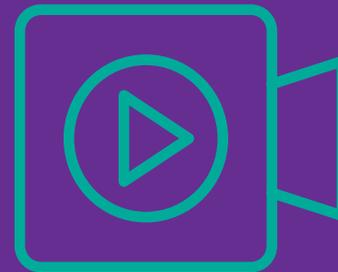
For schemes that are ongoing or run in more than one round, showcasing the outputs of earlier schemes will help prospective applicants to grasp the potential benefits of being involved. Consider:



Case studies



Blogs written
by participants



Videos



Encouraging
social media
engagement

A successful scheme will provide a high level of support to both applicants and hosts:

1 Prompt feedback

This helps potential participants to ensure that their applications are in scope and have clearly defined objectives.

You'll also need to provide ongoing support for secondees whilst they are on their secondments, at least to answer any questions.



2 Brokering relationships

There will be a large pool of prospective applicants that want to spend time in a different setting to build their capabilities but who may not have a host organisation in mind.

As a KEC practitioner you can broker new relationships through the scheme.



3 Targeted opportunities

As a KEC practitioner you are likely to know some of the challenges your partner organisations face and where an academic expert could help.

By offering this as a specific opportunity – like a short term job advertisement – it can take some of the guesswork out of scoping for many potential applicants. Short term secondments can also make a great introduction to Knowledge Transfer Partnerships.

“The best piece of advice I can give to anyone considering a secondment is to ask members of staff for their ideas on potential secondment opportunities, including whether they think you would be suitable for one of the pre-organised secondment opportunities.”

James Warren,
University of Leeds;
seconded to Appleyard Lees



4 Post-secondment support

The secondment scheme will help you to identify promising technologies that as a KEC practitioner you can support going forward.

What are the next steps, are there any follow-on interventions you could facilitate or support?



3. Showcasing outputs

Remember considering what ‘success’ for the scheme looks like (see page 6)?
Evaluation of success needs to be monitored continually for ongoing improvement.

The best feedback comes from participants and hosts.

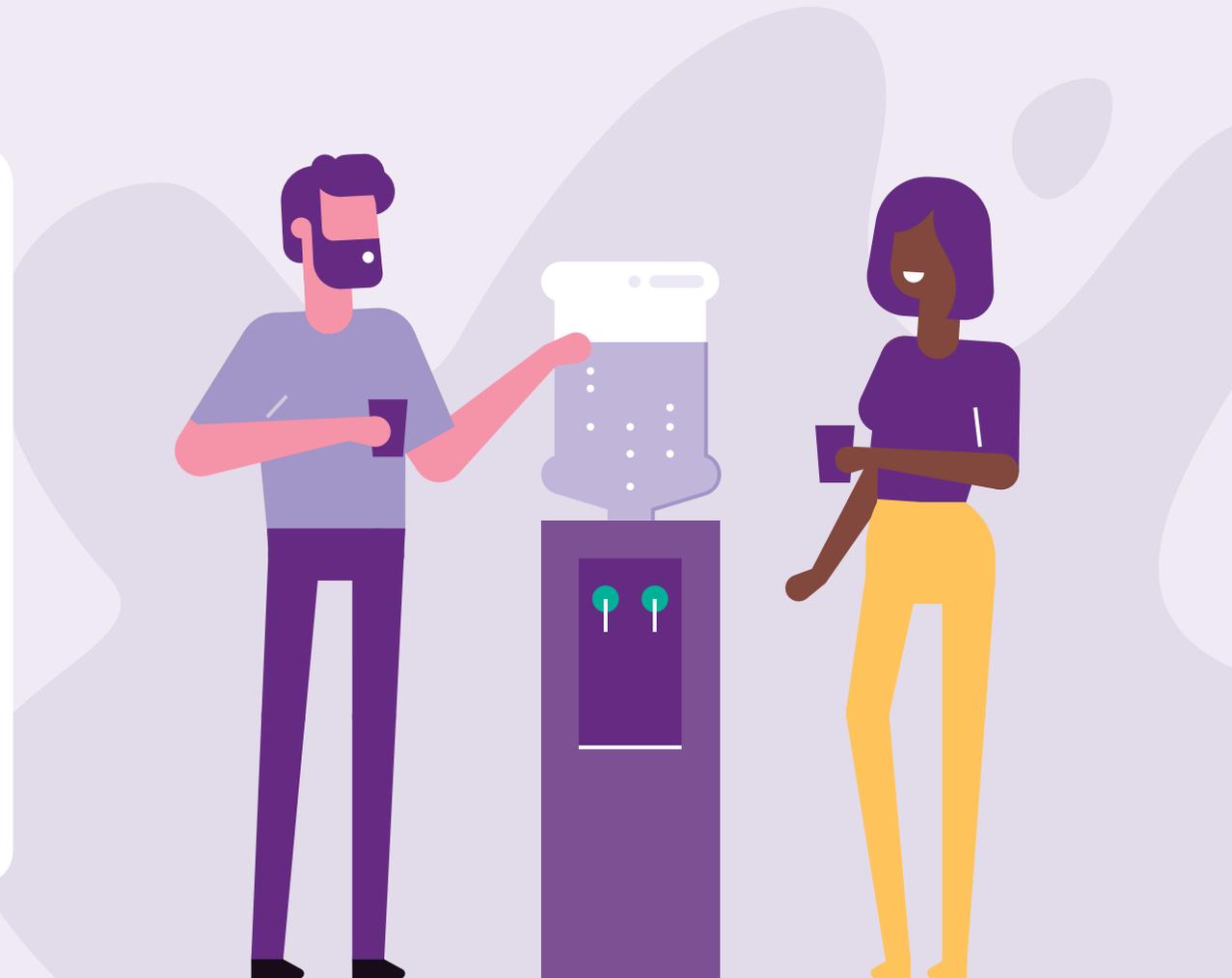
Tip:

Include a condition as part of the terms for funding that participants must produce a “communications-friendly” report on their secondment.

It might include: writing blogs; creating videos; using a social media feed, etc.

This approach to the reporting process has three uses:

- As publicity about the scheme, highlighting success of the scheme in first-person testimonials
- As a useful reflection tool on what participants wanted to achieve, and have achieved
- As a monitoring tactic for KEC practitioners supporting technology progression projects



Translate:

A successful secondment scheme case study

Translate is a partnership between the universities of Leeds, Bradford, Huddersfield, Leeds Beckett and York that works to improve health and wealth by translating early-stage ideas into new medical technologies.

Funded by HEFCE (now Office for Students), the programme provides researchers at the partner universities with access to a dedicated innovation team experienced in progressing technologies to market. It also provides a model for successful innovation, innovation training and development, and collaboration within the higher education sector.

Translate aims to:

- identify and progress technology opportunities
- increase innovation capability among Leeds City Region academics
- foster and facilitate research that is better aligned to clinical, patient and public drivers.

The first phase of the Translate secondment scheme was launched in October 2016. Our aims were:

1. To develop specific translational skills
2. To progress technologies towards clinical application



45 secondments funded, through



4 open calls and



a series of targeted opportunities.

Watch a short video on the secondment scheme:



Host organisations included:



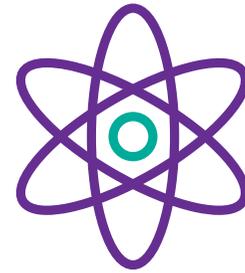
Hospitals and healthcare providers

supporting insight into clinical needs



Industrial companies and enterprises

providing appreciation of commercial priorities, market drivers, health economics, manufacturing constraints



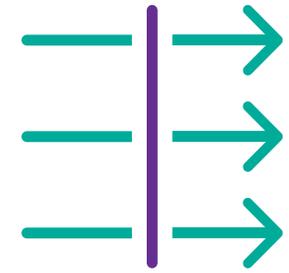
Innovation teams

offering knowledge and expertise in progressing medical technology opportunities



UK or international laboratories

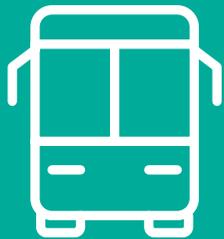
providing training, access to equipment, and opportunities to develop collaborations



Technology intermediaries

including regulatory bodies

Funding was available up to a maximum of £2.5K to cover:

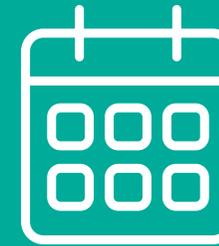


Travel
to and from the host organisation



Accommodation and subsistence costs for the duration of the secondment

Secondments were up to a maximum of three months duration



with flexibility in terms of full or part-time, with several visits over the duration. Many secondments used less than the full amount of funding, meaning money could be stretched even further.

Applications were assessed using the criteria:



Acquisition of new knowledge and skills



Impact on career development



Benefits for the host organisation



Development of new collaborations



Opportunities to progress medical technologies towards commercialisation or clinical application

As a condition of award, candidates were required to:

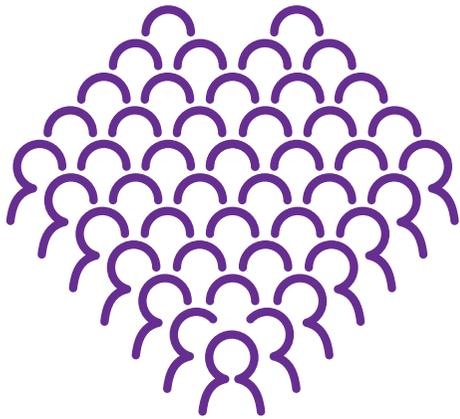


Attend two Translate workshops

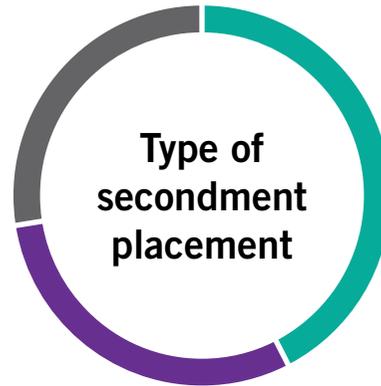


Write three blog posts about their secondment for the Translate website

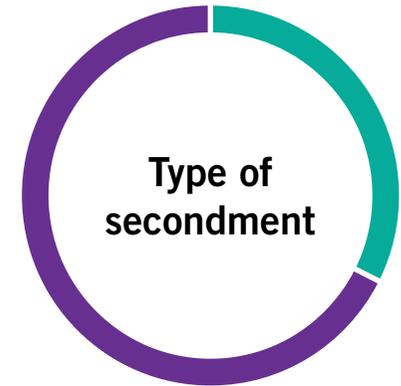
Success of the Translate secondment scheme



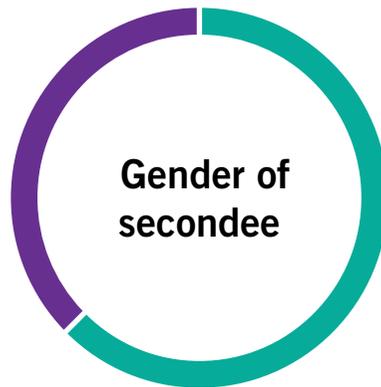
45 secondments funded



Clinical 42.5%
Academic 30%
Industry 27.5%



Incoming 32.5%
Outgoing 67.5%



Female 62.5%
Male 37.5%



PhD Student 27.5%
Early Career Researcher 20%
Senior Lecturer 27.5%
Reader 20%
Professor 5%

Dr Sareen Galbraith

Leeds Beckett University

Sareen is a molecular virologist who leads the Neurological Infections and Disease Group at Leeds Beckett University, is developing glove sensors to monitor patients with neurological conditions such as Parkinson's disease.

Viruses that infect the brain cause neurological symptoms very similar to Parkinson's disease.

Although disease progression is inevitable, patients have six-monthly or annual neurology assessments to monitor their symptoms and adjust their treatments. This regime can be frustrating for patients and clinicians, because disease progression fluctuates and can be different in each patient.

Neurologists use motor skill tests for patient assessment, such as moving objects and drawing shapes. These skills can be measured regularly and remotely in the patient's home using glove sensors, allowing clinicians to respond to patients' needs more quickly.

A Translate secondment brought Dr Walled Mowafi, a consultant neurologist at Calderdale and Huddersfield NHS Foundation Trust, to Leeds Beckett to identify movement tasks to measure with glove sensors that could chart disease progression.

A second Translate secondment brought Mr Sumit Sharma, Chief Medical Technology Officer at Axxonet System Technologies, India, to Leeds Beckett to further develop the glove sensors. The company, which has a satellite base in Bradford, has manufactured the prototype 'Clasp' glove and is confident the resulting device could be manufactured inexpensively in the UK.

Watch Sareen's
secondment video



Without Translate, I wouldn't have been able to get so far this quickly. Funding for collaborator secondments absolutely made the difference."

Dr Elena Mancuso

University of Leeds

Elena is a biomedical engineer, who is now Lecturer in Biomaterials at Ulster University. She has been developing an implantable device to treat female patients with incontinence and related problems caused by pelvic organ prolapse.

Polypropylene mesh devices currently used to treat this condition can cut into the tissues causing great pain and distress for some patients, so there is a real clinical need for improvement. Electrospinning technology can be used to create a softer textured material with structural and biomechanical properties that should integrate into host tissues better. It is also possible to alter the fibre distribution to tailor the mesh for different clinical uses and incorporate antibacterial agents.

Realising her research would generate intellectual property, Elena Mancuso wanted to learn more about IP protection. She completed a three month secondment to NHS healthcare innovation hub, Medipex, in 2017 (brokered by Translate) – attending meetings with industry and NHS clinical teams, and helping to review and evaluate new product ideas.

Watch Elena's
secondment video



I've gained insights into commercialisation and have new skills that I can apply not just to translating this research into a commercial product, but throughout my research career.

We're testing and evaluating the structural, mechanical and physical properties of the device in vitro, before beginning tests with animal models. It's a very long road to reach the clinic for implantable medical devices – and rightly so. We're at an early stage, but thanks to the secondment, I've learned to look at my research with different eyes, in terms of what I need to do at each stage to progress ideas from concept development to market readiness."

Viswadeep Sarangi

University of York

Viswadeep is developing a medtech device that uses artificial intelligence (AI) and virtual reality to enhance and evaluate the rehabilitation of patients with impaired mobility caused by diseases such as Parkinson's, osteoarthritis and stroke.

Patients affected by these diseases show certain subtle differences in the way they walk that can only be spotted by highly trained clinicians who are experts in analysing gait. These changes can be used to both diagnose the patient and monitor their treatment.

Mobility problems can sometimes be reversed if addressed early enough, but there are not enough experts in clinical gait analysis. Viswadeep Sarangi's AI system aims to emulate how clinicians diagnose and assess their patients.

Viswadeep Sarangi went on secondment to Addenbrooke's Hospital to observe and learn from the way doctors diagnose and monitor patients afflicted with gait-impairing diseases; and Florida Atlantic University's Center for Complex Systems & Brain Sciences, a recognised centre of excellence in machine learning, to refine and extend the artificial intelligence capabilities under development at York.

Watch Viswadeep's
secondment video



Without Translate, my research would never have progressed so quickly. I had the AI skills but without the contacts and exposure to medical experts or the insights gained from observing patients first hand, I would not have been able to accomplish nearly as much in the first year of my PhD.

Feedback from clinical experts has been fantastic, and I'm so motivated to drive the project forward. I feel very privileged to have had these opportunities so early in my research career, and to see how my research could impact on clinical outcomes and the lives of real people is amazing."

Prof Stephen Smith

University of York

Steve's spin-out company, ClearSky Medical Diagnostics, has developed a monitoring system that tracks the movement of people with Parkinson's, using the information to fine tune patients' treatment regimes.

ClearSky's LID-Monitor has already been adopted by hospitals in Leeds and Harrogate. Through Translate, Steve has also been able to develop a partnership with Rui Jin Hospital in Shanghai, China.

Translate funded an incoming secondment for Dr Shengdi Chen, a consultant neurologist at the hospital to visit the UK and explore how the LID-Monitor can be developed for the Chinese market.

Watch Stephen's secondment video



The potential market in China is huge and it was really valuable to spend time with Dr Chen discussing approaches to getting the system adopted within Chinese clinical practices and culture.”

Following the secondment, Steve also visited Shanghai, along with Dr Stuart Jamieson, a Leeds-based consultant neurologist who is helping him trial the device in the UK.

It is clear that the technology could be of enormous benefit to patients in China. Most are cared for at home, so there's a real need to find ways to deliver appropriate medication and manage dyskinesia to help carers cope.”

A second Translate secondment – this time an outgoing one – enabled Steve to work with five UK hospitals, trialling a second device to help clinicians diagnose and monitor the progression of Parkinson's. Patients wear sensors on their forefinger and thumb, and are monitored while performing routine finger-tapping exercises. The five hospitals are using the system as part of a large scale trial looking at statins as a potential Parkinson's treatment, and through the secondment Smith was able to install the equipment and train clinicians in its use.

If it proves successful we could see it adopted in routine assessments of patients with suspected Parkinson's symptoms. Because the system is both objective and fast, clinicians can use more of the consultation time to focus on other issues important to patients such as managing treatment and side effects.

The partnerships I developed through the secondments would have been difficult without Translate's support, and have really helped to progress and accelerate the commercialisation and adoption of my technology.”

In terms of capability development, participants said they:

- 1 Expanded knowledge about the healthcare products innovation cycle and how to translate their research interests into a commercial solution.
- 2 Evaluated early stage projects, including everything from doing patent searches to understanding the market landscape where the innovation might fit.
- 3 Developed a broader understanding of medical device development, different roles in laboratories including good practice in clean rooms and project management.
- 4 Learnt about how charity research is funded, including the application and selection processes for funding.
- 5 Learnt about intellectual property and its application.
- 6 Learnt how to communicate more effectively with a range of audiences, including writing for non-academic audiences.
- 7 Developed a better understanding the general processes of translating research into commercial projects across a portfolio of products.
- 8 Gained insights into the role of an innovation officer, with a view to testing the water for a potential future career change.

Blogs: To read about more participants' experiences, in their own words, go to: <http://www.translate-medtech.ac.uk/blog/>

The successful secondment scheme toolkit

To help you to quickly set up your next scheme, download secondment scheme templates and forms from our website.

www.translate-medtech.ac.uk/case-studies/big-innovation-small-budget

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- increase innovation capability among Leeds City Region academics
- foster and facilitate research that is better aligned to clinical, patient and public drivers.

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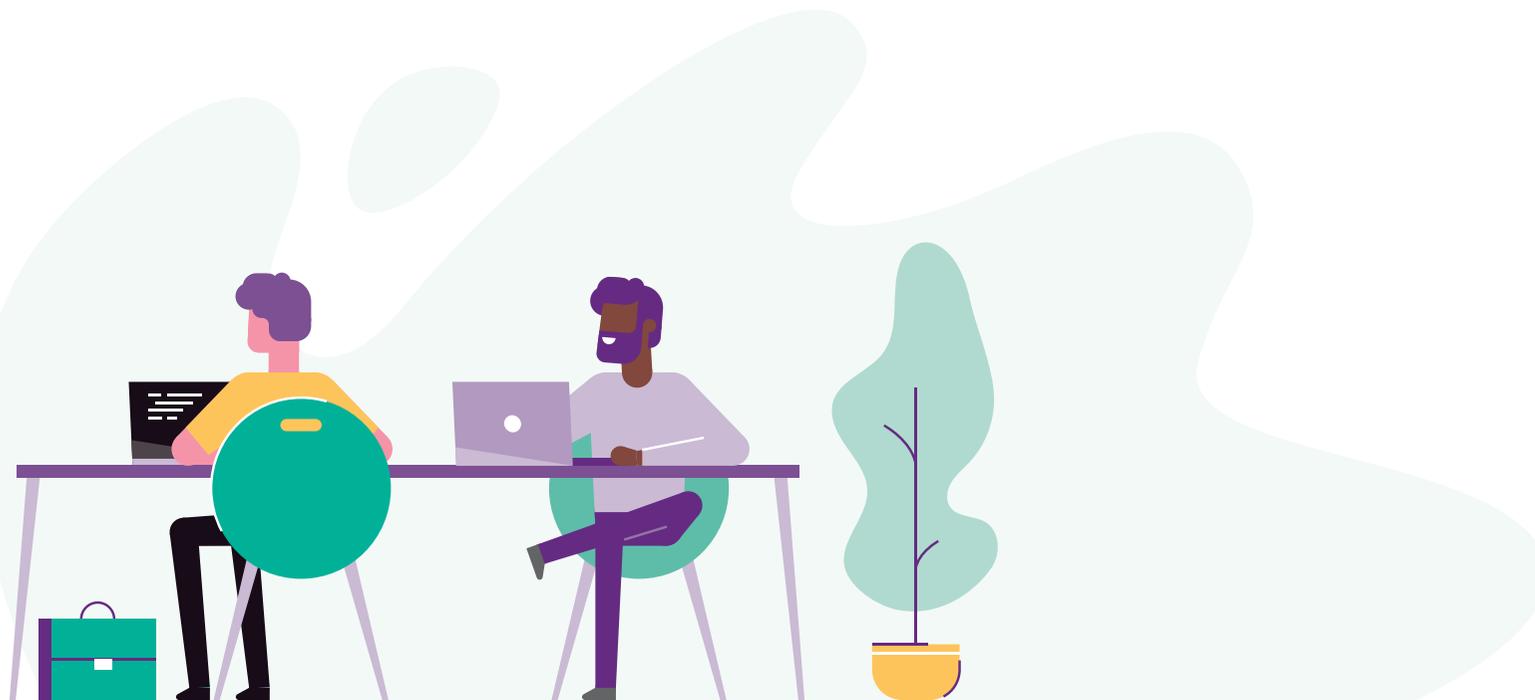
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Translate:

Realising medical technologies
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