



Integrating Structural Biology

Instruct-ULTRA

WP5 – Reaching new user communities and industry

Lead Beneficiaries: 2-UOXF

Deliverable D5.3: Information campaign addressing SMEs

Contractual delivery date: 30 June 2019

Actual delivery date: 26 September 2019

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Project objective

Deliverable 5.3 (D5.3) aims to increase engagement with small- to medium-sized enterprises (SMEs) in the life science industry. A targeted information campaign will develop interactions with SMEs in order to increase awareness of the Instruct-ERIC Research Infrastructure (RI) and promote uptake by industry. The information campaign (designed to be replicable across the wider Instruct RI) aims to expand the current industrial user group and establish new collaborations that will advance innovation in structural biology.

Executive summary

Deliverable 5.3 presents a step-by-step approach to initiate and undertake an outreach event that promotes Instruct-ERIC services to life science SMEs. A pilot networking event hosted in the UK demonstrates the efficacy of a targeted campaign in establishing new contacts in industry and generating industrial users for Instruct Centres. Furthermore, the campaign highlights the importance of connecting with established industry networks in order to reach a broader and more receptive audience. A list of external, industry events attended by Instruct is also presented, and Instruct representatives are encouraged to pursue initiatives to engage with industry.





1. Introduction

1.1 Background

The life science sector has experienced record growth in recent years, driven by advances in technology and the need for improved healthcare outcomes. In 2019, the Global Life Sciences Outlook highlighted 'innovative partnerships' and 'collaborative approaches' as a key driver for future advances in the field.¹ As such, there is a strategic opportunity for Instruct-ERIC to engage with industry, who are a potentially large (and relatively untapped) user group.

Promotion to industry is an important priority of the Instruct-ULTRA project and is encompassed in Work Package 5 (WP5), which focusses on reaching new user communities. To increase industry engagement, WP5 recognises the need to expand Instruct's network of industry users by raising awareness of the technologies and services that are available through the RI. As such, Task 5.2 sets out the directive for an information campaign that publicises Instruct-ERIC services to SMEs.

At the pre-planning stage (February 2018) an industry roundtable meeting was convened, including ULTRA partners with industrial connections, and two external consultants: John Harris a biotechnology consultant from OBN, and Maria Flocco from AstraZeneca, a member of the Instruct ULTRA Scientific Advisory Board. In discussions regarding European industry networks, it became clear that such networks function at a national level, with no Europe-wide networks currently available as a channel to promote Instruct. As such, efforts would need to be tailored to each individual country and spearheaded by staff at each Instruct Centre.

Given that the success of Task 5.2 would depend on the active participation of all Instruct Centres, outreach to industry was the central theme of the Instruct-ULTRA General Assembly in May 2019. The meeting included presentations highlighting the benefits and opportunities of engaging with industry, and the requirements of D5.3. A workshop facilitated some interesting discussions about the capabilities of each Centre to host industry, and also their preferred industry access routes (i.e. pay per service *versus* collaboration).

¹<u>https://www2.deloitte.com/global/en/pages/life-sciences-and-healthcare/articles/global-life-sciences-sector-outlook.html</u>, accessed 6 August 2019.





1.2 Proposal to fulfil Deliverable 5.3

To meet D5.3, a national, industry-targeted networking event was conceived and a 7-point plan outlined:

- 1. Produce targeted, promotional material to disseminate the Instruct-ERIC services to industry clients, with the aim that this material can be used by all Instruct Centre staff and partners.
- 2. Undertake a landscape analysis of SMEs working in the life science industry.
- 3. Shortlist those companies with an incentive to use Instruct-ERIC services.
- 4. Plan an event targeted at industry and send invitations to a shortlist of companies.
- 5. Identify and engage with local industry networks to promote Instruct-ERIC and the industry event.
- 6. Host the networking event for industry.
- 7. Follow up with attendees after the event to encourage industry access.

Given the scale of the life science industries in Europe, it was proposed that the SME campaign be initiated with a focussed, pilot event based in the UK. As well as hosting the largest proportion of Life Science companies in the EU,² the UK is the location of the D5.3 lead (UOXF), offering a logistical advantage for event organisation. Nevertheless, the aim was to establish a general framework for an industry event, which could be replicated by any of the Instruct Centres in Europe (Appendix 1) Given that the UK pilot had no preliminaries, attendance by 10 - 20 SMEs was considered a realistic target.

2. Producing targeted promotional material

It was recognised that as part of the information campaign, targeted dissemination material would be required. Previously, promotional material for Instruct-ERIC had been largely tailored towards academic/general audiences, and thus some promoted aspects were not relevant for industrial users (e.g. funded research visits available for academic researchers). Equally, information that is relevant to industry (such as pricing, intellectual property and non-disclosure agreements) was not emphasised in the more generic material.

The communication strategy for industry consisted of three strands. Across all strands, branding and text was tailored to industry, using a straightforward, and professional style.

²<u>https://assets.kpmg/content/dam/kpmg/ch/pdf/site-selection-for-life-sciences-companies-</u> <u>europe-2018-en.pdf</u>, accessed 6 August 2019.





1. Website: updates to the content available at <u>https://instruct-eric.eu/industry/</u>, including information about services, legal agreements, and case studies from industrial collaborations (Figure 1).



Figure 1. A screenshot of the Instruct-ERIC webpage for services for industry.

 Social media: a dedicated Twitter page (@InstructIndust) was established in order to advertise the event and Instruct-ERIC services for industry (Figure 2).



Figure 2. A screenshot of the Instruct-ERIC industry Twitter page.





3. Brochure: a brochure was designed in-house and printed professionally (Figure 3 and Appendix 2).



Figure 3. The front cover of the Instruct-ERIC industry brochure.

The content of the brochure included:

- **Introduction to Instruct:** a brief overview of the infrastructure and its broad applicability to life science research.
- **Incentives for Industry**: namely that Instruct offers a single point of access to a variety of technologies, which can be arranged within the established legal frameworks of our Centres, at a competitive price.
- **Our Centres**: highlighting the distribution of Instruct facilities across Europe.
- **Technology Catalogue:** a visual description of the three strands of technologies offered by Instruct (sample preparation, biomolecular analysis, and 3D structural analysis, Figure 4).





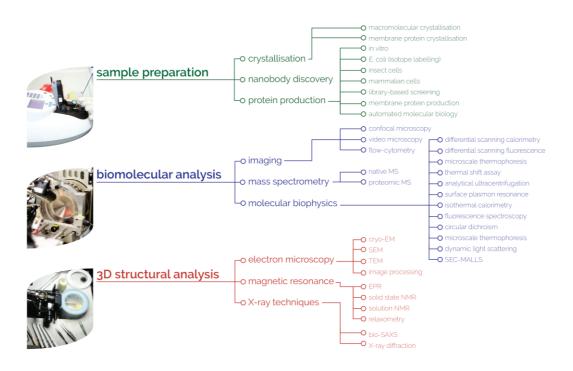


Figure 4. The catalogue of technologies offered by Instruct-ERIC.

- **Technology Highlights:** a summary of three of the most popular technologies that are accessed through Instruct (cryo-EM, NMR, bio-SAXS).
- **Case studies:** demonstrating the impact of industry access and collaboration with Instruct.
 - Glaxo-Smith-Kline: structure-based antigen design using NMR, leading to the development of a vaccine against Meningitis C.
 - Calixar: determining the structure of the KCC2 membrane protein by cryo-EM to develop new treatments for neurological diseases.
- **Testimonials:** third-party endorsement of Instruct-ERIC services from industry users.
- **Contact information:** for the dedicated industry liaison (industry@instruct-eric.eu).

The brochure primarily serves as a catalogue of the services that are offered through Instruct, with technology highlights drawing attention to techniques that are highly sought-after but often less accessible (due to cost or location, for example). Such technologies were considered to be of particular interest to SMEs, as Instruct provides access to both equipment and expertise, mitigating the investment of time and funds in





in-house facilities. Case studies and testimonials were considered a crucial part of the promotional literature, with third-party endorsements legitimising Instruct services.

All Instruct Centres were invited to contribute content for the industry brochure. Instruct Centres IT and FR2 provided case studies and testimonials (from GSK and Calixar, respectively), and information sheets from Instruct Centre IT were used to produce the NMR technology highlight. Significantly, the brochure was designed as a resource for all Instruct Centres and has been distributed as such.

The industry brochure has proved a popular resource amongst both the Instruct facilities and industry recipients. Since its launch at the Instruct Ultra General Assembly in May 2019, over 300 copies of the industry brochure have been distributed.

3. UK Landscape Analysis

The UK government has undertaken a survey of the Health and Life Science Industries in the UK. These data, which are available online,³ reported 5,649 Life Science businesses in the UK in 2017. Among the largest segments in the Life Science sector are companies focused on the discovery and development of Novel Chemical Entities (NCEs) and Novel Biological Entities (NBEs) as new therapeutics for the treatment of human diseases. Research in these areas is considered to most likely to benefit from access to Instruct-ERIC services. See Figure 5 for a summary of the survey. As part of the survey, the UK government compiled a Bioscience and Health Technology Database (2017), with details of all the companies working in the sector, including their segment, location, and contact details.

A number of other sources were also identified during the landscape analysis, including Companies House,⁴ the OBN Network,⁵ and the UK Biotech Database.⁶ Other websites, such as the BioPharmGuy⁷ and the Science Park Associations,⁸ were identified as more applicable to the wider Instruct RI.

³<u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/</u> <u>file/707076/life-sciences-infographic-2017.pdf</u>. Accessed 7 August 2019.

⁴ <u>https://www.gov.uk/government/organisations/companies-house</u>. Accessed 7 August 2019.

⁵ <u>http://obn.org.uk</u>. Accessed 7 August 2019.

⁶ <u>https://www.ukbiotech.com/uk/portal/index.php</u>. Accessed 7 August 2019.

⁷ <u>https://biopharmguy.com</u>. Accessed 7 August 2019.

⁸ http://www.unesco.org/new/en/natural-sciences/science-technology/university-industry-

partnerships/science-parks-around-the-world/science-parks-in-europe/. Accessed 7 August 2019.





UK Life Sciences Strength & Opportunity 2017 Office for Life Sciences θ 5,649 £70.3bn Businesses 240.900 6,340 Employees Sites Turnove - 2 sectors What is the Life Sciences Industry? Biopharmaceuticals Medical Technology ses involved in developing and/or producing their own Busines pharmaceutical or medtech products, including digital health, 51% industry employment 49% industry employment for human health purposes. Includes supply chain and specialist rvice sector 68% industry 32% industry Total greater than 100% due to rounding 6% North Eas 3% have operations in the UK. Together these businesses employ 24% of industry total and account for 38% of turnover 7% **Industry Employment Industry Turnover** 76% 89% 5% East of England Large Companies Large Companies 16% 23% South 9% 24% 11% ear-O wth - 2016 to SMEs **SMEs** Overall the life science +2.4% Largest Segments by Employment industry increased Employment employment by 5,700, Top 3 segments Small Molecules +9.3% turnover by £5.9bn and account for Turnover created 446 new businesses 29% **Digital Health** 2 ervice and Supply Chain of all employment in the Core life An essential cluster of specialist suppliers supports the Life Science Industry in the UK. Does not include non-life science businesses. Single Use Technology science industry 1 2,373 businesses st Segments by Turnove **Small Molecules # 79,450** employees Top 3 segments account for £19.2bn turnover Single Use 44% 2 Technology of all turnover in the Core life 33% of industry employment 27% Therapeutic Proteins science industry For More Information https://v

Figure 5. Infographic produced by the UK Office for Life Sciences, summarising the UK Life Science Industry in 2017.⁴





4. Shortlisting

When shortlisting UK Life Science companies for invitation, a number of criteria were considered, including research area and company size. It was concluded that attendance at the event might be maximised by targeting industries in the South East of England, where there is the highest concentration of Life Science companies (Figure 5) and the Instruct UK facilities in Oxfordshire are more accessible. In doing so, the Life Science companies were shortlisted from > 5600 to just over 270 in the Oxfordshire area. A final shortlist of approximately 50 invitees was obtained on refining by research programmes, which included:

- Vaccines
- Therapeutic antibodies
- Assay development
- Pest control
- Immunooncology
- Drug discovery
- Peptide display
- 3D printing of tissues
- Fibres and scaffolds
- Therapeutic proteins
- Recombinant protein expression
- Bacterial antigens

5. Event preparation

5.1 Event location

The criteria for choosing the location were accessibility, prestigious scientific location, proximity to Instruct facilities, support of on-site staff to help with logistics and promotion. Having targeted SMEs located in the Oxfordshire area, it was proposed that the event be hosted locally, at the Research Complex on the Harwell Campus. The Harwell Campus is home to a number of central research facilities, and the Research Complex itself home to the Membrane Protein Laboratory, one of the facilities offering research visits through Instruct-UK.

5.2 Event format

The industry event was planned as an informal occasion, with a focus on networking to allow SME representatives to connect with each other and the Instruct-ERIC team.





Nonetheless, to familiarise the attendees with Instruct-ERIC services and RIs in general, two short presentations were scheduled:

- an overview of Instruct-ERIC services to industry, presented by a member of the Instruct hub team;
- an outlook for structural biology and RIs, presented by Professor Jim Naismith, the Director of the Rosalind Franklin Institute, a leading expert in structural biology and a continued advocate of Instruct-ERIC.

In addition, it was proposed that posters disseminating research undertaken at the Instruct Centres would be displayed in order to facilitate discussions about Instruct's services for industry.

To minimise disruption to attendees' schedules, it was decided that the industry event would be three-hours in duration and held in the afternoon of a workday. On this basis, an informal programme was outlined:

15:00 - 15:30	Refreshments and Networking
15:30 - 15:40	An Introduction to Instruct
15:40 - 16:15	Talk from Prof Jim Naismith
16:15 - 17:00	Finger Buffet and Networking
16:30 - 17:00	Optional Tour of the Research Complex

To facilitate both presentations and networking, the event was hosted across two adjoining rooms in the Research Complex: a conference room (with projector) and the entrance foyer (with poster boards), respectively.

5.3 Event invitations

Having shortlisted SMEs for invitation, appropriate contact persons were identified using company websites, LinkedIn, and web searches. These contacts, which included Chief Scientific Officers, Scientific Project Manges, and Chief Operating Officers, were each sent a personalised e-mail invitation. On the advice of the industrial liaison for CERIC (the Central European Research Infrastructure Consortium), the invitations made a particular effort to emphasise the exclusivity of the event.

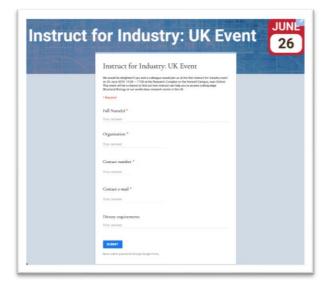
Following e-mail invitation, each contact was sent a postal invite (Figure 6) and a copy of the industry brochure. Finally, a phone call was made to each of the invitees.







Figure 6. The postal invitation for the Instruct industry event.



Alongside the invitations, a webpage was produced for the event:

https://instruct-eric.eu/content/instructopen-for-industry-uk-launch

The webpage included information about Instruct-ERIC, the event programme, directions to the Harwell Campus, and a link to the registration form (

Figure 7)





Figure 7. A screenshot of the Google form used to register attendees for the industry event.

6. Connecting with local industry networks

At the outset of the SME engagement project, Instruct-ERIC had a limited number of preexisting connections with UK industries. As such, a focus of D5.3 was establishing links with local and regional industry networks that would provide a channel to promote Instruct services, as well as the industry event. Research into the UK life science and biotech networks revealed a surprising number of well-established organisations, with which a number of new connections were made (Figure 8).

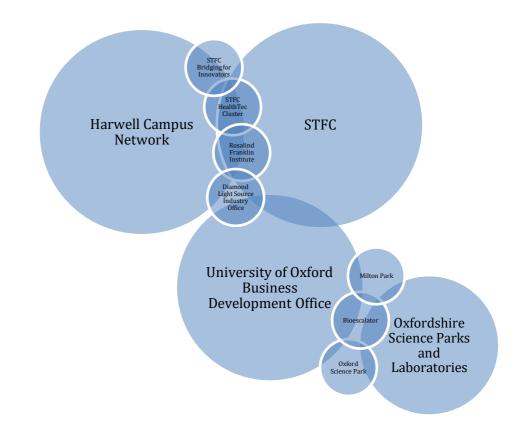


Figure 8. A graphic showing the relationship between the industry networks in the South East England / Oxfordshire area that Instruct-ERIC connected with during the pilot project.

Thus, in addition to sending personalised invitations, another strategy for outreach to SMEs was to exploit pre-existing networks that already engage with industry. Networks including the Industrial Liaison Office for the Diamond Light Source, the Harwell Campus network, the STFC HealthTec Cluster, and the Rosalind Franklin Institute were invited to





advertise the industry event and were provided with a short news item and a generic invitation for dissemination. As a result, more attendees were registered for the event - albeit from a wider background, including product design, business development and public policy. In analysing the audience at the industry event, it was clear that the most effective invitation strategy was advertisement through pre-existing networks. Thus, it appears that Industry scientists respond more favourably to events publicised through trusted networks, although there is still a need for personalised emails sent to cold contacts. Therefore, for future events it will be important to connect with relevant networks in a given country or industrial segment, and craft promotional material for enewsletters collated by other organisations. Typically, it will be necessary to meet network representatives in person, before these third parties will include Instruct events in their materials.

From the invitations and advertisements that were circulated for one month prior to the industry event, 21 attendees were registered. The Industry Liaison Officer for CERIC indicated a 10% response rate on invitations, which aligned with the response for the Instruct industry event. Irrespective of the number of attendees, the process of engaging with industries and networks was invaluable in establishing new contacts and raising awareness of the role of Instruct-ERIC in structural biology and its services for industry.

7. The UK Instruct for Industry event

The inaugural Instruct for Industry event was hosted on 26 June 2019 at the Research Complex on the Harwell Campus. On the day of the event, posters highlighting research from the Instruct Centres were displayed in the foyer of the Research Complex, and promotional material (including pens, mugs, notebooks leaflets and industry brochures) was provided in the conference room. Due to on-site security, attendees were first registered at the Main Gate of the Harwell Campus, before being directed towards the Research Complex. On arrival at the Research Complex, attendance was registered, photo permissions requested, and personalised lanyards (with name and organisation) were provided. Refreshments (tea, coffee and biscuits) were available on arrival, and posters proved of interest to the attendees during the first networking period. Of the 21 registered attendees, 11 arrived for the event.

Following two presentations in the conference room, attendees returned to the foyer for a second networking session and finger buffet. An optional tour of the Research Complex was well received by attendees.





8. Follow-up

In the week following the event, a personalised thank you e-mail was sent to the attendees and all those who had supported the event. In particular, the follow-up e-mail to SMEs aimed to initiate and encourage access to Instruct services.

9. Outcomes

Following the Instruct for Industry event, two new industry collaborations were established with Instruct-UK facilities: OMass Therapeutics initiated access to the Diamond Light Source, and Immuncore were connected with the NMR facility at the Astbury Biostructure Laboratory in Leeds. This was a significant achievement, as it represented the first two industry referrals through the Instruct Hub. Both companies have since proceeded to sign confidentiality agreements and take steps towards setting up service agreements. Such referrals demonstrate the effectiveness of the particular SME marketing campaign designed and executed through Instruct-ULTRA.

10. Schedule of attendance at industry conferences and meetings

The pilot event is one element of the promotional campaign targeting European SMEs. Another aspect of industry outreach is maximising networking opportunities and increasing the visibility of Instruct by attending relevant meetings and conferences. For this reason, a schedule of industry events (Table 1) was established with the Instruct-ULTRA project. ULTRA project funding has been used for such meeting attendance, with a view to determining which meetings and conferences to recommend that Instruct-ERIC focus on in future.

Recently (9 - 12 September 2019), the Instruct Hub hosted a booth at the MipTec Exhibition at the BASEL LIFE, Switzerland. The MipTec exhibition offered a valuable opportunity to network with the representatives from Life Science industries from across Europe, increasing awareness of Instruct's services and promoting industry access.

All Instruct Centres are encouraged to identify and attend national events in order to maximise opportunities to network with industry.





Table 1. List of conferences past and future conferences with industrial interest.

Conference	Theme	Attendee (Instruct Centre)	Role	Location	Date
BioProNet	Academia-Industry networking in Bioprocessing	Ray Owens (UK/Hub)	Invited speaker	Warwick, UK	10 - 11 Oct 17
PSDI 2017	Protein Structure Determination in Industry	Ray Owens (UK/Hub)	Delegate	Cambridge, UK	12 - 14 Nov 17
BioProNet	Academia-Industry networking in Bioprocessing	Ray Owens (UK/Hub)	Delegate	London, UK	10 Oct-18
ELRIG 2018	European Laboratory Research & Innovation Group, a non-profit organisation serving the life science & drug discovery communities	Ray Owens (UK/Hub) and Naomi Gray (Hub)	Poster presentation	London, UK	9 - 10 Oct 18
PSDI 2018	Protein Structure Determination in Industry	Ludo Renault (NL)	Speaker	Versailles, France	11 - 13 Nov 18
PEGS Europe	Industry-Academia Protein & Antibody Engineering	Ray Owens (UK/Hub)	Invited speaker	Lisbon, Portugal	14 - 16 Nov 18
ELRIG Research & Innovation 2019	Innovations to drive future drug discovery	Ray Owens (UK/Hub)	Delegate	Cambridge, UK	2 -3 April 2019
PARI 2019	Public Awareness of Research Infrastructures	Naomi Gray and Stephanie Chapman (Hub)	Participant	Harwell Campus, UK	8 - 10 Apr 19





Table 2 continued. List of conferences past and future conferences with industrial interest.

Conference	Theme	Attendee (Instruct Centre)	Role	Location	Date
Women in Biotech	Engaging with the entrepreneur community in Oxford to inspire more women to take up founding roles and support those that have embarked on that mission.	Naomi Gray and Stephanie Chapman (Hub)	Participant	Oxford, UK	13 Jun 19
ICE	Interfaces in Cryo-EM: building a community of academic and industry researchers around Oxfordshire who are interested in cryo-EM.	Ray Owens (UK/Hub) and Claudia Alen Amaro (Hub)	Invited speaker (RJO)	Diamond Light Source, UK	3 Jul 19
MipTec (Basel Life)	A platform to get informed about the latest Life Sciences technologies and services for those active in the field of industrially relevant, translational, basic and applied research and development.	Naomi Gray and Stephanie Chapman (Hub)	Hosting a conference booth	Basel, Switzerland	9 - 12 Sep 19
PSDI	Protein Structure Determination in Industry	Andrew Quigley (UK)		Cambridge, UK	3 - 5 Nov 19
PEGS Europe	Industry-Academia Protein & Antibody Engineering	Ray Owens (UK/Hub)	Invited speaker	Lisbon, Portugal	19 - 21 Nov 18





11. Conclusions and future plans

The Instruct for Industry networking event was undertaken as a pilot project in the UK, with the intention that it could be replicated across the wider Instruct membership (Appendix 1). After completing a landscape analysis of the health and life science companies in the UK, it was decided that the industry event would target the relatively high density of SMEs in Oxfordshire, located near to Instruct-UK facilities. Potential invitees were identified using online resources, however known contacts and existing networks proved most effective in boosting registrations. Whilst the event was not attended by all registered participants, the general feedback from attendees was positive. Significantly, the event has facilitated two, new industry collaborations within Instruct-UK. Future events might seek to increase attendance by hosting in a location that is more accessible to SMEs from across the UK (e.g. London).

As part of the information campaign addressing SMEs, a new industry brochure was produced. The brochure, which has since been distributed to the Instruct Centres, details Instruct's services for industry. The brochure has also proven to be a useful resource when describing Instruct-ERIC services to industry representatives at conferences.

An important outcome of the pilot event has been the development of new contacts with industry networks. Some of these contacts were suggested by members of the Instruct team, and others obtained by networking at conferences (Table 1), meetings (Women in Biotech at the BioEscalator) and training courses (OBN Social Media Course).

Amongst the new connections with industry networks is the Business Development and Partnering Office of the Medical Sciences Division at the University of Oxford, who support research alliances between industry and academia. The Business Development and Partnering Office recently hosted an Interfaces in Cryo-EM Network Launch Event, and regularly arrange Academic Industry Meeting Days (AIMdays) – themed networking days to that offer an academic perspective on industry challenges. It is intended that Instruct will be involved in similar, joint events with the Business Development and Partnering Office in the near future.

Instruct has also developed its links with the Industrial Liaison Office at the Diamond Light Source. As a result, plans are in place for a Life Science Industry event, jointly funded by Instruct-ULTRA and Calipso (which coordinates European synchrotrons and free-electron lasers). The Life Science event, to be held in London in Spring 2020, will be targeted at the pharmaceutical industry, with presentations highlighting methods and developments in drug discovery.

To ensure the sustainability of the SME outreach project, industry engagement will be a central theme of the Instruct Managers Meeting in Amsterdam in 2020, with an external, industry consultant invited as speaker.





Appendix 1: SME Outreach Checklist

Task 1. LANDSCAPE ANALYSIS	
1.1 Web search	
1.1.1 BioPharmGuy	
1.1.2 LinkedIn	
1.1.3 Science Parks	
1.2 National industry networks	
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2. SHORTLIST COMPANIES	
2.1 Segment	
2.2 Size	
2.3 Location	
3. IDENTIFY INVITEES	
3.1 Shortlisted companies	
3.1.1 LinkedIn	
3.1.2 Web search	
3.2 Known contacts	
3.3 Industry networks	
3. EVENT PLANNING	
3.1 Event location	
3.1.1 Audience location	
3.1.2 Audience size	
3.1.3 Local scientific infrastructure	
3.1.4 Accessibility (transport links)	
3.1.5 Venue capabilities	
3.2 Event invitations	
3.2.1 Send personalised e-mail	
3.2.2 Send Postal invite	
3.2.3 Advertise through industry networks	
3.3 Promotional material	
3.3.1 Request promotional material from Instruct Hub	
4. HOST EVENT	
5. FOLLOW-UP AFTER EVENT	
5.1 E-mail thanks to supporters	
5.2 E-mail thanks to attendees	
5.2.1 Promote access to Instruct-ERIC services	
6. REPORTING	
6.1 Attendance	
6.2 Industry networks	
6.3 Industry access	





Appendix 2: Industry Brochure