



Centre for
Research
Training



Science Foundation Ireland Centre for Research Training in Genomics Data Science

Framework for Industry Involvement

HOST INSTITUTION



PARTNER INSTITUTIONS



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



About

The SFI Centre for Research Training in Genomics Data Science is one of six Centres for Research Training (CRTs) funded under a €100M Science Foundation Ireland initiative. The first PhD training initiative of scale with an all-Ireland remit, the Genomics Data Science CRT will train 115 PhD students across the island of Ireland over the coming seven years, with 15 to be based in Northern Ireland and 100 in the Republic of Ireland. The CRT is a partnership between the National University of Ireland Galway, University College Dublin, Trinity College Dublin, the Royal College of Surgeons in Ireland, University College Cork and Queen's University Belfast.

Our vision is to produce highly trained scientists capable of engaging effectively with the data science challenges involved in realizing the transformative potential of genomics across the broad range of its applications. By involving Industry Partners with a focus on genomics at all stages we envisage a programme that will produce highly skilled adaptable graduates capable of responding to the rapidly changing needs of the dynamic genomics sector.

What we want to achieve

- Establishment of a Genomics Data Science research community across the host institutions and industry partners, promoting new interactions, ideas & opportunities.
- Intensive programme of PhD training, with a curriculum guided by the needs of industry, graduating highly skilled and adaptable individuals with skills directly relevant to future opportunities.
- Produce graduates capable of powering innovation in genomics & data science.
- Develop Ireland as a hub for genomics research with expertise across the seven research themes of the CRT:
 1. Methods, frameworks and infrastructure development for genomics
 2. Genomics of common and rare diseases
 3. Cancer genomics and precision medicine
 4. Agrigenomics, smart food and nutrigenomics
 5. Genomics for pathogen surveillance and control
 6. Biotechnological genomics, including metagenomics
 7. High-resolution population genomics

Models of involvement for Industry

Tier 1 Partner

Fully support a PhD project. This could be of direct benefit to the Industry partner as they would have a large say in the development of the project. The industry partner could identify a suitable supervisor from the 100 listed supervisors they are interested in supporting and work with the supervisor to develop a project proposal. Alternatively Industry partners would have access to the project proposals submitted by the supervisor group and use this information to select a project they are interested in supporting. The industry partner would have a high level of input into the project development and access to the results generated.

Cost for sponsoring a PhD project is outlined in table 1 below.

Benefits:

- Work with one (or more) of the 100 Named Supervisors associated with the CRT to develop a project that is of mutual interest to both parties and take a leading role in research direction. The student will work on a specific research project of direct interest to the Industry Partner with expert academic input into the project from the supervisor.
- Receive regular reports on progress
- Student may (if appropriate) be physically located with Partner Organization for some or all of the time
- At the end of the programme, the researcher will have gained workplace skills directly relevant to the Industry Partner and the Industry Partner will have the opportunity to recruit this talent.
- Ownership of IP to reside with University but IP will be assigned to the Industry Party (to be stipulated in agreement drawn up with Technology Transfer Office of the participating institution at which student is registered)
- Partial recovery of costs may be applicable via R&D Tax Credits, and the Knowledge Development Box (KDB) Corporation Tax (CT) reliefs on income from qualifying R and D activities.
- Being a Tier 1 Industry Partner also includes:
 - o Exposure to the research activities being carried out at the leading edge of Genomics Data Science in Ireland
 - o Tier 1 Industry partner staff can avail of 15 days of CRT training courses/year
 - o Industry partner staff can attend networking events and the annual research symposium
 - o Recognition as a partner and financial supporter of the CRT in web and promotional material of the CRT
 - o Participate in the CRT Partner Organization forum with input into the overall design and direction of genomics data science skills development

Tier 1 support may also provide a staff-development opportunity for existing staff at Partner Organizations to undertake a PhD-level qualification in genomics data science.

Annual costs

	Year 1	Year 2	Year 3	Year 4	Total
	€	€	€	€	€
Total	39,000	39,100	43,100	34,100	155,300

Tier 2 Partner

Partially support a CRT PhD student. Industry partner contributes funds that can be used to co-fund a PhD student. The industry partner benefits by their inclusion as a partner in the CRT with access to world class academic researchers and the opportunity to attend their students annual progress review meeting attend CRT training events and see and contribute to project development.

Cost is negotiable but is typically between 0.25 and 0.5 of the student costs.

Cost: €40,000 - €80,000 (depending on level of involvement), spread over 4 years

Benefits:

- Collaborate with the named supervisor to develop the direction of the research project
- Receive regular reports on progress
- Student may (if appropriate) spend part of the PhD at the Industry Partners Organization
- Option to negotiate a commercial license to research output
- Being a Tier 2 Industry Partner also includes:
 - o Exposure to the research activities being carried out at the leading edge of Genomics Data Science in Ireland
 - o Tier 2 Industry partner staff can avail of 10 days of CRT training courses/year
 - o Industry partner staff can attend networking events and the annual research symposium
 - o Recognition as a partner and financial supporter of the CRT in web and promotional material of the CRT
 - o Participate in the CRT Partner Organization forum with input into the overall design and direction of genomics data science skills development

Indicative annual costs

	Year 1	Year 2	Year 3	Year 4	Total
	€	€	€	€	€
Total	10,000	10,000	10,000	10,000	40,000

Tier 3 member

Membership. Companies can become members of the CRT with an annual financial contribution that will be used to support the overall objectives of the CRT.

Cost: Minimum of €5000 per year.

Benefits:

- Exposure to the research activities being carried out at the leading edge of Genomics Data Science in Ireland
- Industry partner staff can avail of 5 days of CRT training courses/year
- Industry partner staff can attend networking events and the annual research symposium
- Recognition as a partner and financial supporter of the CRT in web and promotional material of the CRT
- Membership of the CRT Partner Organization forum and input into the overall design and direction of genomics data science skills development

Annual costs over a 6 year period

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Total	€ 5,000	€ 5,000	€ 5,000	€ 5,000	€ 5,000	€ 5,000	€ 30,000

Additional benefits to engaging with the CRT.

- Industry Partners/members have the opportunity to join a collaborative network and can benefit from the expertise of this network to develop new technologies and processes
- Co-funding represents a flexible mechanism for Industry Partners to engage with world-class academic researchers in the CRT, and have access to infrastructure and generate intellectual property.
- The CRT currently has more than 100 supervisors across the 5 institutions. All members will have access to the project summaries submitted by the supervisor group each year providing them with an excellent insight into the national research landscape in Genomics Data Science.
- Co-funding provides the opportunity to seed an initial engagement with academic groups in the CRT which can lead to large-scale collaborative research endeavours down the line, for example through EU-funded consortia.
- All partners/members can host placements of PhD students with benefits for both sides.
- Partners/Members can have input into the curriculum development to ensure it will meet industry needs

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- Support from the CRT in terms of expertise available and data generation for projects in areas of interest to the Industry Partner

Note: In exceptional circumstances it may be possible to add industry members who don't contribute financially on the basis of specific non-financial contributions to the CRT in areas that are not well met by existing industry Partners and members.

For more information on the SFI Centre for Research Training in Genomics Data Science see www.genomicsdatascience.ie

Table 1: Cost of fully supported PhD student

Total Costs	Year 1	Year 2	Year 3	Year 4	Total
Staff Costs	€ 24,000	€ 24,000	€ 24,000	€ 24,000	€ 96,000
Equipment Costs	€ 1,500	€ -	€ -	€ -	€ 1,500
Materials Costs	€ 5,000	€ 12,100	€ 12,100	€ 7,100	€ 36,300
Training Costs	€ 8,000	€ 500	€ 5,000	€ 500	€ 14,000
Travel Costs	€ 500	€ 2,500	€ 2,000	€ 2,500	€ 7,500
Total Student Cost	€ 39,000	€ 39,100	€ 43,100	€ 34,100	€ 155,300

Note: Overheads may be applicable