**CENTRE-TO-CENTRE PARTNERSHIPS WITHIN THE US-IRELAND R&D PARTNERSHIP PROGRAMME**

Under the US-Ireland R&D Partnership Programme, the National Science Foundation (US) together with Science Foundation Ireland (RoI) and the Department for Employment and Learning (NI) have expanded the existing opportunities for individual investigator-driven collaborations to include Research Centre-based collaborations between the United States, the Republic of Ireland and Northern Ireland. The NSF-Ireland R&D Partnership Memorandum of Understanding (MoU) has been updated to include reference to Centre-to-Centre collaborations, and funding decisions will be based upon a combination of the standard NSF Review Criteria and additional Centre-specific criteria in support of the vision, strategic plan, and ongoing activities within each Centre.  Criteria to be used in eliciting reviewer feedback on the proposed research programme are specified below.

It is expected that all partners will contribute to designing the research programme and to writing the tri-jurisdictional proposal. Equitable participation of all partners is critical to achieving a truly collaborative programme of scientifically excellent, impactful research that takes advantage of the scope, scale, synergy, multi-disciplinarity, equipment, and facilities that centres can provide.

The management of the relevant participating ERC will be responsible for submitting the joint proposal to NSF. This will undergo external peer review at the annual site visit of the respective Engineering Research Centre.

The proposal should comprise the following elements:

RESEARCH PROGRAMME (15 pages max. CVs, Budget, and Letters of Support not included in this limit):

* *Details of what is proposed i.e. the specific aims and objectives of the project, how it advances the current state of the art, how it is expected to have impact and how it fits with the objectives of each Centre involved*
* *An outline of the tasks to be undertaken by each partner and how the work proposed requires participation by the three partners*
* *Outline of the added value of the partnership outlining the strategic importance of the collaboration to all partners involved.*

CVs:

* *CVs of the applicants for each jurisdiction – (two page CV)*

BUDGET:

* *Separate budget request required for each partner along with full justification of the budget. Please use the template provide by your home funding agency.*
* *Budget templates for RoI and NI partners will be submitted as supplemental information.*

LETTERS of SUPPORT:

* *Letters of support from industry and/or practitioner partners from each jurisdiction who may intend to participate in trilateral industrial/practitioner advisory board that will be coordinated to the project.*
* *Letters of support from the funding bodies in Ireland and Northern Ireland, outlining their commitment to fund should the proposal be deemed fundable by the NSF peer review process.*
* *If the Centre Director is not the applicant/co-applicant, a letter of support from the Centre Director outlining their support for the partnership*

**CRITERIA FOR FEEDBACK/ANALAYSIS OF CENTRE-TO-CENTRE (C2C) PLAN**

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| **Significance: *What transformative progress envisioned by the Plan derives from C2C interactions?*** |
| *Transformation/Innovation*: What are Plan goals that will transform/impact industry, workforce, and society? What strengths/capacities of respective participants are leveraged to achieve novel outcomes?  |
| *Contribution/Quality*: What are responsibilities of respective centres/faculty? What anticipated outputs are publishable in high quality journals, patentable, transferable to industry, and/or add value in the field? |
| *Systems*: What new knowledge and technologies will be integrated in devices/system components? How do needs of an envisioned engineered system guide research plans? What are tests for proof of concept? |
| **Complementarity: *What interaction/activities of Plan align with/go beyond current center activities?*** |
| *Barriers:* What barriers or significant gaps are identified that could impede C2C goals or each centre vision? What prevents current projects from addressing them? How do C2C activities address them? |
| *Participants:* What are unique, necessary capabilities of faculty involved from respective centres? How is input from external advisors/reviews used to refine research/ interactions based on assessing progress?  |
| *Benchmarking:* What advances proposed in Plan are benchmarked vs. state-of-the-art? What achievable milestones on a realistic time-line to projects support? What metrics and deliverables are identified? |
| **Relevance/Quality: *What supports enduring results in knowledge, workforce, technology transfer?*** |
| *Project Selection:* What go/no-go criteria or decision points determine continued support for project aspects? What are contingency plans? How are projects pruned/refined based on progress and feedback? |
| *Methodology:* What approaches to address research barriers/gaps are competitive with/better than state-of-the-art? What are risks identified and mitigated by Plan? What extraordinary returns are possible?  |
| *Team Dynamics:* What makes centre-to-centre teams cohesive? What supports seamless interactions? What are plans for teleconferences, face-to-face meetings, information exchange, and mutual benefit?  |
| **Society:** ***What sustains interaction/exchanges between faculty/students during/beyond the Plan?*** |
| *Curricula:* What materials from interdisciplinary activities/research are integrated into courses, activities, professional training, or other curricular materials? What professional skills of students are developed? |
| *Assessment:* What are plan for assessment with defined metrics to gauge student development? Are progress and impacts assessed formatively and summatively by qualified evaluators external to the C2C? |
| *Student Experiences:* Which student participants perform research in foreign partners’ labs for at least 45 days? What supports interaction and communication between faculty/students across centres afterward? |
| *Diversity:* What actively cultivates and assesses a culture of inclusion? What supports diverse participation? Are faculty/students from underrepresented populations present at or above average? |
| **Innovation: *What real, tangible outcomes will result from interactions with industry/society?*** |
| *Leader training:* Who are academic and industry mentors of students in respective centers? What are hands-on experiences “building” technologies, integrating components, or testing systems for students?  |
| *Trilateral Industry/Practitioner Advisory Board:* What participants engage in innovation and entrepreneurship? How will I/PAB guide and translate research? When does an I/PAB SWOT guide research direction? |
| *Technology Transfer:* What are agreements to manage intellectual property and address conflicts of interest/ related issues? What are strategies to transfer technology to industry by C2C and its institutions? |
| **Infrastructure: *What resources support realization of Plan interactions within projected timelines?*** |
| *Administration:* What are management structures for participating students, faculty, and industry at each participating institution? What policies and personnel in place support interactions of faculty and students as well as promote mentoring, innovation, diversity, and technology translation to industry/practitioner partners? What are indications that participating institutions are committed to success of Plan?  |
| *Resources:* Are capital, equipment, and facilities sufficient, accessible, and allocated appropriately? What is evidence of strong, effective lab safety practices? What facilities/venues/plans support ongoing communication, assessment, and refinement between faculty/student/industry participants?  |