Document Analysis of Peer Review Process in Science Foundation Ireland

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Introduction

We present one initial phase of a three-year study of peer review processes at Science Foundation Ireland (SFI), the Republic of Ireland's largest scientific funding agency, focusing on analysing the background and requirements of the two SFI programmes using publicly available reports, grantee data, and materials provided by SFI. The findings will form the basis of qualitative studies and will work as preliminary frameworks for constructing Agent-Based Models in subsequent stages of the project.
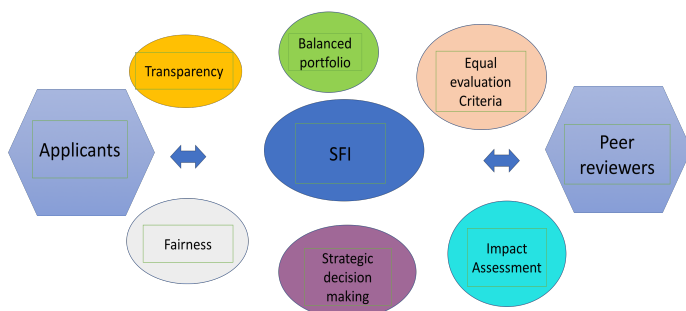
Overall Research Aims

1. To understand the experiences and perceptions of key stakeholders (recipients, non-recipients, reviewers, industry partners, and staff) in peer review process at SFI

2. To examine consideration and process of SFI's funding decision making based on review results and the impact towards the peer review criteria and process dynamically

3. To integrate findings into specific policy recommendations for the peer review process at SFI, including evaluation criteria, workflow processes, and equity and transparency
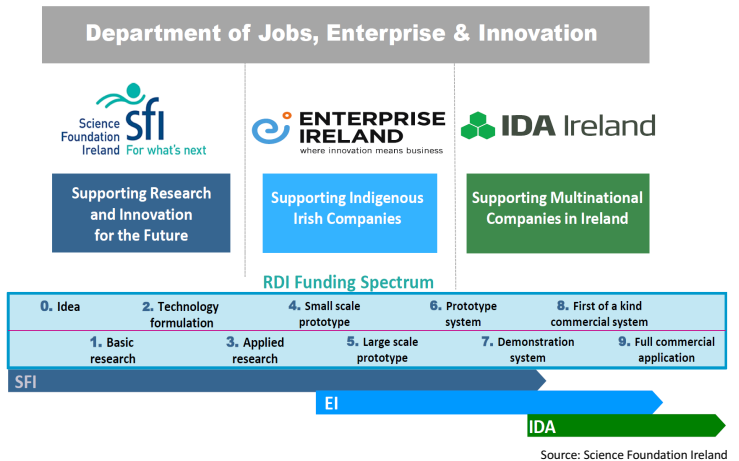
Methods

Statistical analysis of grantees and anonymised reviewers, modelling review process, documentary analysis of guidelines and decision letters, focus groups and interviews with various stakeholders, agent-based modelling of alternative peer review strategies.

Preliminary findings in the first three months

- Strong emphasis on impact as a peer review criterion – although impact is broadly defined, economic and societal impacts most emphasized.

- Criteria are set as high-level concepts including quality, significance and relevance. It is unclear as to what constitutes these criteria, meaning that reviewers could interpret the requirements differently and inconsistently.

- International reviewers are recruited for all applications. However, it is unclear as to how these international reviewers are informed about potential economic and societal impact, including relevant beneficiaries and needs of the sectors in Irish context.
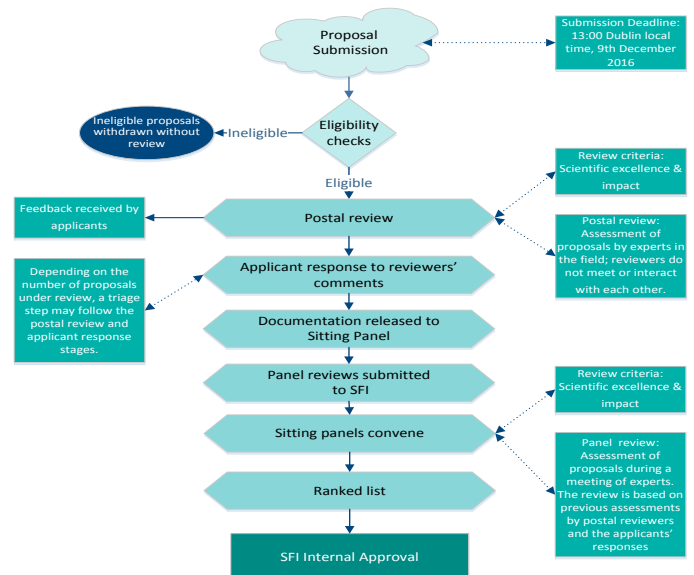
Irish Research Landscape

Source: Science Foundation Ireland

Sample Peer Review Process

Source: Science Foundation Ireland

Next steps

- To conduct focus groups and semi-structured interviews with SFI officials, peer reviewers, grant applicants, grantees and other stakeholders.

- To build conceptual model and actual workflow of the SFI peer review processes.

- Agent-based Modelling to identify and externalise some critical conditions of SFI peer review processes and to test scenarios of interest to provide further insights such as alternative peer review strategies and/or workflows.