Overview

The side event titled **"Enhancing Global Collaboration through AI in Research Impact Evaluation"** was conducted on May 19, 2025, as part of the 13th Global Research Council (GRC) Annual Meeting held in Riyadh, Saudi Arabia. This session brought together research funders, AI experts, and impact assessment practitioners to explore the potential of Artificial Intelligence (AI) in revolutionizing research evaluation processes. The event served as a platform to present tools, methods, and experiences from various countries, with the overarching goal of improving efficiency, accuracy, and collaboration in research impact assessment globally.

Title: Enhancing Global Collaboration through AI in Research Impact Evaluation

The side event was organized by the Department of Science and Technology – Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD), in collaboration with the Global Research Council (GRC). Key speakers and contributors included representatives from the Research, Development and Innovation Authority (RDIA) of Saudi Arabia and the University of the Philippines Los Baños (UPLB). The Natural Science and Engineering Research Council of Canada (NSERC) and the Japan Science and Technology Agency (JST) further enriched the discussions by actively participating in the breakout sessions and representing their respective groups.

Abstract

The primary objective of the event was to introduce and discuss the use of AI in streamlining and enhancing the process of research impact evaluation. By showcasing proof-of-concept implementations, practical tools, and country-specific applications, the session aimed to encourage dialogue among funders and evaluators on ethical, operational, and collaborative dimensions of AI integration. Key goals included equipping participants with knowledge on AI-driven evaluation tools, raising awareness about risks and ethical concerns, and initiating partnerships to further develop and deploy AI solutions for global research impact assessment.

Side Event Agenda

The session began with opening remarks from Dr. Enrico C. Paringit, Executive Director of DOST-PCIEERD, who emphasized the need to rethink traditional evaluation methods through AI. Ms. Grace F. Estillore then presented an overview of DOST-PCIEERD's approach to impact assessment. This was followed by Engr. Rayan Khalid Alabsi of RDIA, who introduced two AI models developed to support proposal evaluation—Multi-Agent Solution (MAS) and Retrieval-Augmented Generation (RAG). He discussed how these tools help address high proposal volume, reviewer shortages, and evaluation delays. Dr. Rico C. Ancog of UPLB presented international and local case studies on AI applications in impact evaluation, covering tools such as automated data mining, natural language processing, and predictive analytics. He also facilitated two breakout groups to discuss participants' institutional experiences, skills needed, and funders' roles in shaping AI-based policies. Group discussions were facilitated and resulting outputs were presented by Dr. Osamu Kobayashi of JST and and Dr. Kori St-Cyr of Natural NSERC.

Attendees

The session was attended by representatives from member organizations of the Global Research Council. These included institutions from the **Philippines (DOST-PCIEERD), Saudi Arabia (RDIA), Japan (JST), Canada (NSERC), Qatar (**Qatar Research, Development, and Innovation

Council) **and Iran (**Iran National Science Foundation)**.** Participants included funders, policy makers, impact assessment professionals, and technical staff involved in AI research and development. Breakout group discussions ensured active engagement and peer exchange from a diverse audience

Outcomes and Recommendations

The event underscored the transformative potential of AI in research impact evaluation, particularly in enhancing the speed, objectivity, and scalability of processes. Participants agreed on the importance of combining AI tools with human expertise, especially qualitative assessments. Recommendations included adopting AI in early stages like pre-screening, building capacity for data management and prompt engineering, and developing a GRC-wide framework for AI-guided evaluation. There was strong support for piloting AI tools across organizations and sharing lessons learned through a collaborative platform.

Key Takeaways, Recommendations or Outputs Resulting from the Discussion

From the group discussions, several critical insights emerged. Dr. Osamu Kobayashi – JST, Japan representing one group, emphasized AI's utility in alleviating administrative workload, especially by efficiently assigning unbiased reviewers. They also noted the need to build trust in AI through evidence-based results. Meanwhile, Dr. Kori St-Cyr of NSERC shared his group's perspectives by examples of AI use in proposal handling and project monitoring, reporting impressive improvements such as a 60% reduction in handling time and a 95% match accuracy for researcher CV-proposal alignment. Both groups stressed the importance of skilled human oversight, high-quality data input, and the development of international guidelines. Funders were encouraged to collaborate on frameworks and tools that reflect shared values and evaluation standards

Best Practices and Relevant Case Studies

The event highlighted several case studies showcasing AI in research evaluation. Engr. Rayan Khalid Alabsi of RDIA presented its use of the Multi-Agent Solution and Retrieval-Augmented Generation models, which enhanced evaluation accuracy while handling thousands of proposals. Dr. Rico C. Ancog of UPLB highlighted Tsinghua University's use of data mining to trace scholarly influence and research collaborations. He also cited the UK's Research Excellence Framework, which employs machine learning for predictive evaluation of impact case studies. Iran National Science Foundation introduced software that uses Technology Readiness Levels for proposal assessment, while atar Research, Development, and Innovation Counci shared success in using AI to align proposals with researcher profiles and track project performance.

Follow-Up Activities

Following the event, DOST-PCIEERD and RDIA plan to further pilot AI applications in proposal pre-screening, with the intent of eventually supporting peer review stages. There are calls to co-develop a shared platform or database where funders can exchange AI tools, training resources, and case studies. Dr. Paringit proposed the concept of an AI-powered assistant—tentatively named AIRA for Artificial Intelligence for Research Assessment or AIA for Artificial Intelligence for Impact Assessment —that could support researchers and administrators from proposal development to final impact evaluation. The session concluded with a shared commitment to continued dialogue, shared learning, and collaborative development of AI-enhanced impact assessment systems across GRC member organizations.

ANNEX: DETAILED SIDE EVENT REPORT

Side Event 8: Enhancing Global Collaboration through AI in Research Impact Evaluation

Date and Venue:
The side event was held on May 19, 2025, during the 13th Global Research Council (GRC) Annual Meeting in Riyadh, Saudi Arabia

Resource Speaker/s:
Eng. Rayan Khalid Alabsi, Grants Compliance and Oversight Expert, Research Grants & National Programs, The Research, Development and Innovation Authority, KSA
Dr. Rico C. Ancog, Impact Assessment Practitioner and Professor, University of the Philippines-School of Environmental Science and Management

Breakout Sessions Rapporteur/Moderator
Dr. Osamu Kobayashi, Director of the Department of International Affairs, Japan Science and Technology Agency (JST)
Dr. Kori St-Cyr, Director, Policy and Government Relations, Natural Sciences and Engineering Research Council of Canada (NSERC)

Event Organizers:
Dr. Enrico C. Paringit, DOST-PCIEERD Executive Director as Rapporteur
Ms. Grace F. Estillore, Chief, PCMD, DOST-PCIEERD as Speaker and Secretariat
Ms. Hannah Marie T. Mejia, PTS II, DOST-PCIEERD as Event Host and Secretariat
Ms. Dania Z. Laborte, PTS I, DOST-PCIEERD as Secretariat, Documenter and Technical Support

Opening Remarks:

Dr. Paringit of DOST-PCIEERD opened the event thanking the participants for their time. He acknowledged that the previous sessions have already put a spotlight on the various use cases and applications of AI in the research life cycle. For this side event, Dr. Paringit emphasized that it aims to inform research funders and IA practitioners with the available knowledge and tools necessary to harness Artificial Intelligence (AI) for more insightful, efficient, and impactful assessments. He added that the event will serve as a platform to foster dialogue, exchange ideas, raise concerns, and explore potential collaborations. In this era, he emphasized that we are actually called upon to re-examine the ways we evaluate the impacts of the work of our researchers.

Key Content Highlights:

1. **Overview of the Impact Assessment by Ms. Grace F. Estillore**

The first presentation was delivered by Ms. Grace F. Estillore, Chief of the Policy Coordination and Monitoring Division (PCMD) at DOST-PCIEERD. One of the key functions of the Policy Unit of PCMD is to oversee the monitoring and implementation of impact assessment projects. As head of the division, Ms. Estillore provided an overview of the Council's current approach to impact assessment.

Ms. Estillore emphasized that Impact assessment at DOST-PCIEERD is a lengthy process, often taking up to two years, thus, there is a potential to leverage artificial intelligence (AI) to streamline this process while maintaining quality and adhering to ethical standards.

She also highlighted that DOST-PCIEERD funds projects across more than 20 sectors, including advanced manufacturing, energy, artificial intelligence, and disaster resilience.

In terms of Impact assessment, she discussed the following:

- It is a structured approach to understanding a project's effects—both intended and unintended, positive and negative. The process includes defining evaluation questions, designing data collection and analysis plans, building sampling frameworks, gathering evidence, analyzing data, interpreting results, and using findings to inform decision-making and improve future projects.

- A foundational element of impact assessment, the Theory of Change (TOC), maps the progression from inputs to activities, outputs, outcomes, and impacts. It incorporates assumptions and external factors, fostering a shared understanding among stakeholders—funders, researchers, and partners.
- Impact assessment is vital for effective R&D management. It validates whether research efforts are impactful, guides better funding decisions, optimizes resource allocation, aligns projects with national priorities, and provides evidence for continuous improvement.

Ms. Estillore concluded her presentation by presenting the event agenda.

2. Exploring AI-Driven Proposal Evaluation: A Proof-of-Concept for Automated Impact Assessment and Funding Recommendation by Engr. Rayan Khalid Alabsi

The second presentation, delivered by Engr. Rayan Khalid Alabsi, showcased an AI-driven approach to proposal evaluation. Engr. Alabsi is affiliated with the Research, Development, and Innovation Authority (RDIA) of Saudi Arabia, which advances national priorities in health, sustainability, energy leadership, and future-oriented economies. RDIA is committed to transforming research management through digital innovation and the integration of artificial intelligence.

Engr. Alabsi shared RDIA's experience in developing a proof-of-concept AI model aimed at streamlining research management processes, including proposal submission, evaluation, and funding decisions, making operations faster, more accurate, and efficient. The details of RDIA's efforts are outlined below:

- To address operational delays and high costs caused by a growing volume of over 6,000 research proposals and limited expert reviewer capacity, RDIA sought to leverage AI to reduce processing time and improve evaluation quality.
- Focusing on the three key stages of the proposal review process—pre-screening (completeness and eligibility), screening (scientific merit and visibility), and peer review (detailed scientific assessment)—RDIA aimed to develop AI tools that could support human reviewers while ensuring data integrity.
- Through collaborations with experts, RDIA developed two innovative approaches: the Multi-Agent Solution and Retrieval-Augmented Generation (RAG).

Engr. Rayan discussed the **Multi-Agent Solution** (MAS) which leverages parallel AI bots, each tuned to format content or scientific review from live research data. This approach uniquely mimics their evaluation process, offering a rapid modular evaluation that reduces bias and brings deeper scientific evaluations to each proposal. For the multi-agent approach, the entire model architecture and interface were set up separately to support the evaluation based on the team's needs.

Moreover, Engr. Rayan introduced the **Retrieval Augmented Generation (RAG)** as a linear, cost-efficient model that leverages historical data for routine evaluations. This model is designed with high explainability and interactive features, making it user-friendly and transparent. RAG processes PDF proposals and feeds the extracted information into a single Visual LLM (Large Language Model), enabling: Cost-efficient evaluations; High explainability; Full traceability.

The following are RDIA's experiences and outcomes from implementing the two approaches (MAS and RAG):

- In terms of the correspondence accuracy of the proposal evaluation, both approaches scored high accuracy rates, with the multi-agent approach being the closest to 100 in the pre-screening, which is expected and desired, as this evaluation stage is objective in nature.
- Both approaches can be significantly improved by the integration of a more powerful scientific database, and the additional parallel execution of tasks to expedite process and reduce bias.
- The RAG approach is a linear and much simpler approach, which requires less computing power and cost, and is much simpler to maintain, and is suitable for high-volume, routine, and less involved evaluation. If the goal is a more in-depth evaluation, the multi-agent approach has proven to achieve high accuracy rates for both objective and subjective evaluation stages.

Although the use of parallel tasks expedites its throughput, it does come at a higher computing cost, and it tends to be more complex to maintain. However, it is most powerful in providing deep scientific and less biased evaluations that are more suitable for peer review evaluation.

Engr. Alabsi emphasized that the effectiveness of the model depends heavily on the quality of the data it is trained on. To further enhance its capabilities, RDIA invites collaboration on a variety of use cases, including:

- Intellectual property (IP) infringement detection in submitted proposals
- Plagiarism checks
- Identification of duplicate grant funding requests across different funding entities
- Generation of tailored responses to applicants to increase transparency and improve proposal quality
- Recommendations for updating evaluation criteria based on emerging trends

These use cases aim to make funding applications more robust, transparent, and aligned with current research and innovation standards.

For their team, before fully adopting and integrating the solution into their operations, they plan to further fine-tune the model through their second grant cycle to improve the activity. They aim to pilot the integration of the model for pre-screening by next year. At a later stage, they want to assess the fitness of the model to support their human experts, reviewers, through screening and IP review evaluation stages.

Engr. Alabsi concluded his presentation with a brief video highlighting the PoC evaluation accuracy and other potential of AI in proposal evaluation.

3. **The Potential of Artificial Intelligence in Improving Impact Assessment: Methods, Analysis and Other Ethical Imperatives by Dr. Rico C. Ancog**

Dr. Rico C. Ancog, a professor at University of the Philippines Los Banos and Impact Assessment expert, discussed how Artificial Intelligence (AI) can enhance the evaluation of research outcomes and societal impacts. Citing global and local case studies, he highlighted the use of AI tools such as automated data mining, natural language processing, and predictive analytics to improve the speed and depth of impact assessments. He also addressed ethical concerns and risks, including bias and transparency. To foster discussion, Dr. Ancog also led the breakout session on AI tools, necessary practitioner skills, and the role of funders in shaping global impact assessment policies.

Dr. Ancog's presentation focused on three key areas:

- The context and challenges of conducting impact research evaluation.
- AI tools and global case studies that demonstrate how AI can support impact assessment.
- Risks and challenges in AI-driven research collaboration, highlighting the need to balance these concerns with the potential of AI to improve impact assessment.

He explained that using AI for impact assessment comes with several challenges. These include inconsistent frameworks across countries, difficulty in measuring long-term societal outcomes, reliance on outdated methods, and the need for transparent and unified systems. These issues make effective evaluation difficult, especially in international and long-term contexts

Furthermore, he added that AI has huge potential to improve the way impact assessments are conducted. He mentioned that AI could provide tools, techniques, and approaches to automate complex analysis and processes, particularly involving large volume of data.

According to Dr. Ancog, there are tools by which AI capabilities can be leveraged and utilized in research impact evaluation, such as:

1. Automated data mining where AI can scan vast data sets from publications, patents, including policy briefs and media to detect relevant signals of impact and including knowledge diffusion,

2. Natural language processing where AI, particularly NLP algorithms, could then help in identifying emerging themes, sentiments, shifts, and discourse trends across time and languages. In the global perspective on the use of AI in IA, NLP will be a very important tool, and
3. Predictive analytics can be utilized through machine learning models forecast. This could show potential uptake and influence of research outputs offering evidence-based support for funding or scaling decisions.

In a specific context, case studies from different countries were presented.

- The first case study involves **data mining**, as implemented by Tsinghua University in China. In this instance, data mining was applied to vast research databases to map scholarly influence and collaborations.
- The second case study focuses on **Natural Language Processing (NLP)**. NLP helps overcome the cost and time barriers associated with structuring qualitative data, which often hinder its widespread use and the realization of its benefits. It utilizes various qualitative indicators and data, which are essential for conducting impact assessments. By making qualitative data and analyses more accessible to project developers, NLP reduces the time and resources required for impact assessment. This technique has been applied in several research projects and demonstrates significant potential for improving impact assessment processes.
- The third case study highlights the use of **machine learning**, which shows great promise for impact quantification. In this example, machine learning was employed for predictive analysis using publicly available impact case study data from the UK Research Excellence Framework database. Machine learning models have shown the ability to predict expert evaluations of research impacts, indicating that such methods could complement traditional peer review processes. This case study illustrates how AI-driven predictive analytics can be used to assess research impact, potentially enhancing the efficiency and consistency of evaluations.

Dr. Ancog pointed out that from an impact assessment perspective, machine learning provides huge potential in streamlining management of complex data systems. In detail he mentioned that:

- In the Philippines so far, there are some of the initiatives that really geared towards some of the utilization of AI. DOST-PCIEERD has been leveraging AI to enhance research and development, governance, and visibility.
- AI facilitates global research collaboration by standardizing analysis, bridging language and cultural gaps, and providing scalable evaluation platforms. Key points include shared AI-powered tools for joint impact assessment, multilingual and cross-cultural data analysis through NLP and machine translation, and reducing biases in global rankings to promote fairer, more transparent research evaluations.

  Before ending his presentation, Dr. Ancog emphasized that with the potential of AI there are also risks and challenges in AI-driven research collaboration. Key issues include data privacy and ethical concerns, bias in AI models affecting fairness and accuracy, over-reliance on AI reducing human oversight, and difficulties in transparency and interpretability of AI models. These challenges highlight the need for careful handling of data, addressing biases, and ensuring clear understanding of AI decisions to promote fair and effective research collaboration.

To gauge the participant’s current level of AI utilization in impact assessment and research management, Dr. Ancog facilitated the breakout session by dividing the participants into two groups. Each group was given 10–15 minutes to discuss the following three questions:

- What are the AI tools for impact assessment that your organization has explored or implemented? And in the context of impact assessment, where do you use these tools?
- What skills and competencies are essential for impact assessment practitioners to work effectively with AI?
- From the perspective of the members of the GRC specifically, what will be the roles of the funders in shaping international IA policies?

4. Breakout Session Results

For Group 1, Dr. Enrico Paringit served as the rapporteur and Ms. Hannah Marie Mejia as the secretariat while Dr. Osamu Kobayashi, the Director of the Department of International Affairs at the Japan Science and Technology Agency (JST) was elected as the representative to present the summary of the group’s discussions.

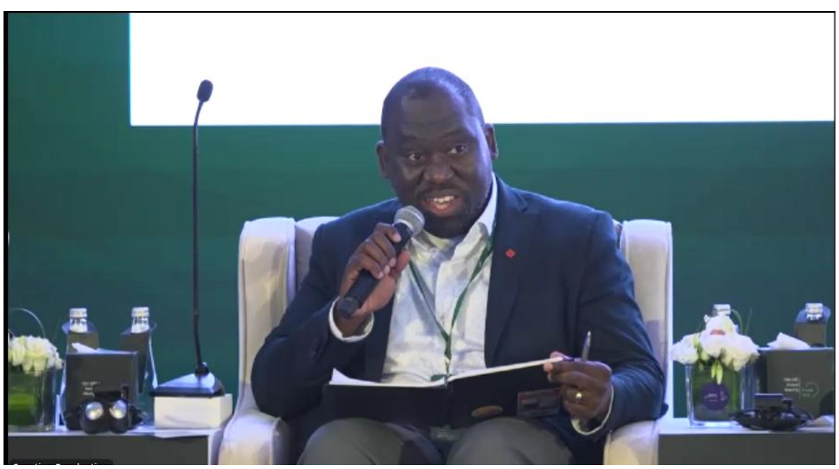
For Group 2, Dr. Kori St-Cyr, the Director, Policy and Government Relations at the Natural Sciences and Engineering Research Council of Canada (NSERC) served as the Rapporteur as well as the representative to present the summary of the group’s discussions. Ms. Estillore served as the secretariat.

Group 1 Presentation by Dr. Kobayashi:

Dr. Kobayashi emphasized the value of AI in reducing administrative burdens faced by the members of their group. He provided an example related to their projects, where traditionally they ask multiple experts for review, which sometimes leads to repeated rejections and significant time consumption. By utilizing AI, they can identify the appropriate, unbiased reviewer from the outset, streamlining the process and saving time.

He acknowledged that introducing new technology like AI requires convincing conservative stakeholders, such as faculty members, by demonstrating strong, reliable evidence of AI’s effectiveness and accuracy. While AI can handle faster, repetitive tasks, he emphasized that human judgment remains essential for final evaluations, highlighting the importance of collaboration between AI and humans to achieve optimal results.

Group 2 Presentation by Dr. Kori:



The discussion of Group Two explored how organizations are utilizing AI tools across various functions. Colleagues from RDIA shared that AI in their grants management process significantly reduced application handling time by nearly 60% and helped in assigning reviewers more efficiently. Similarly, representatives from Qatar highlighted AI's effectiveness in matching researcher CVs with proposals, achieving a 95% alignment rate, and in monitoring project progress over time, providing insights into both short-term and long-term impacts.

A colleague from Iran talks about developing a software tool that evaluates applications based on Technology Readiness Levels (TRL), aiding funders in identifying proposals with higher potential for technological output.

The group identified key skills necessary for leveraging AI effectively: ensuring high-quality data input, mastering prompt engineering techniques, and understanding the research context to preserve the human touch in evaluations.

In terms of policy, suggestions included the establishment of an impact assessment framework by the Global Research Council, leveraging their existing principles, and developing practical models to facilitate collaboration in proposal evaluation and impact measurement, aligning with GRC's guidance.

Workshop Synthesis:

Dr. Ancog provided insightful reflections on the group presentations, expressing appreciation for the contributions made. He highlighted a growing trend among countries adopting AI tools for proposal evaluation, recognizing this as a positive shift that significantly enhances efficiency.

Looking ahead, Dr. Ancog emphasized the potential to extend AI applications to impact assessments, both ex ante (before implementation) and ex post (after implementation). He underscored the importance of preparing for this transition by developing the necessary skills, frameworks, experience, guidelines, and policies to support effective AI integration.

A key point in his remarks was the critical role of funders in enabling and guiding this transformation. He advocated for greater collaboration among organizations, encouraging the sharing of tools and test cases through a common database. This, he noted, would foster collective learning and progress in applying AI to impact assessments.

In conclusion, Dr. Ancog called for continued cooperation and shared efforts to deepen understanding and implementation of AI in research evaluation, paving the way for more robust and efficient assessment practices.

Closing remarks

Dr. Paringit expressed deep appreciation for the participants' time and contributions to the Side Event, emphasizing the enormous challenge of evaluating thousands of proposals with limited staff. The event highlighted the significant opportunity for AI to support and enhance research management by making processes more efficient, transparent, and productive. The idea of developing a joint framework for AI tool utilization was welcomed, suggesting that collaboration could reduce costs and improve effectiveness. A humorous vision was shared about creating an AI-powered research assistant, named AIRA or AIA, to streamline tasks from proposal preparation to impact assessment, envisioning a future of greater productivity and impact. Dr. Paringit concluded by thanking attendees, expressing optimism about AI shaping research processes.