RESEARCH IMPACT WORKING GROUP

Operational Priorities Plan

Develop Queen's University as an inspirational institution
that catalyzes ground-breaking research that aligns
with Queen's research priorities and leverages our talent, ideas and institutional
supports to impact society

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I.   INTRODUCTION AND CONTEXT

As an institution, Queen's mission is to attract and cultivate excellence and leadership to push the boundaries of knowledge through research – in service to an inclusive and sustainable society[1]. The university acknowledges that to achieve this mission it will require us to draw on all of our intellectual and material resources to address challenges identified in the past two years through the Principal's initiative, The Conversation. The landscape of challenges related to research impact is multifaceted and spans from a decline in research funding per faculty to the ongoing repercussions of a five-year hiring freeze.

II.   MANDATE

The working group on research impact was mandated "to identify operational priorities that would result in increasing the intensity and volume of exemplary, ground-breaking and interdisciplinary research, whether fundamental, applied, or driven through community partnership". The working group was asked to identify potential high-impact ideas that would be implementable in a relatively short period, and work within current resources and financial constraints.

III.   GOAL: DEVELOP QUEEN'S UNIVERSITY AS AN INSPIRATIONAL INSTITUTION THAT CATALYZES GROUND-BREAKING RESEARCH THAT ALIGNS WITH QUEEN'S RESEARCH PRIORITIES AND LEVERAGES OUR TALENT, IDEAS AND INSTITUTIONAL SUPPORTS TO IMPACT SOCIETY

We believe it is imperative to recognize the varied approaches, impact mechanisms and evaluation metrics for research at Queen's, given the diversity of the research fields afforded to academics and faculty.

The working group proposes that for Queen's to achieve the aspirations of an institution with a high intensity and volume of groundbreaking research, it should embrace and implement four interrelated building blocks. The attached figures show the relationships between these blocks, and how investments and changes in one would have a positive cascading effect on others.

1. **Talent:** recruit, nurture and develop outstanding research teams and researchers, at every level from students to faculty members.
2. **Grand Challenges and Ideas:** anticipate grand challenges aligned with Queen's research priority areas (e.g. the UN SDGs), catalyze interdisciplinary teams to generate ideas and solutions to challenges, and recruit and train talent to address grand challenges.
3. **Supports:** Provide support, time protection and research infrastructure to enable talent to develop and pursue ambitious research agendas.
4. **Celebration:** Promote and celebrate scholarship and research accomplishments, build the Queen's research brand, and pursue international and national awards and recognitions.

Within and across these four building blocks, the University should:

- **Talent:**
  - **Acquire talent and build ecosystems of researchers in strategic priorities areas.** Researchers recruited to Queen's will be better poised for success and international competitiveness, when embedded in synergistic teams. The word "researcher" here encompasses all levels of researchers including undergraduate and graduate students, post-doctoral fellows, research staff, and faculty members.

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[1] Queen's Strategy

- **Recognize and nurture** talent through internal prizes (e.g. internal Killam awards). Establish permanent and termed endowed Chairs to provide teaching relief to faculty members focused on high intensity research.
- **Develop talent and sustain research prominence** through the creation of advisory councils of emeriti, CRCs and other senior researchers, to formalize processes and paths to maintain the legacies of successful research teams.
- **Sustain and retain excellence** by putting in place long-term sustainability and succession plans for CRCs, CFREFs, and other chairs, in order to maintain research momentum and retain high intensity researchers.
- **Build legacies through formalized mentorship programs** that span generations from emeriti/senior faculty to mid-career and early career researchers, to postdoctoral fellows and students.
- **Develop leadership initiatives and collaboration opportunities for mid-career faculty, through** inter-faculty/university co-leadership of large initiatives and grants.
- **Recruit** mid-career research-intensive faculty in areas of strategic research importance.
- **Attract and retain outstanding postdoctoral and clinical fellows, and graduate students,** through prizes and named fellowships/awards. Facilitate growth through targeted early career research grants.

Several operational items above can also be supported **via targeted Advancement campaigns** for termed, endowed chairs that can provide protected research time to faculty, promote excellence, allow development of world-leading researchers, and attract new talent.

- **Grand Challenges and Ideas:**
  - **Foster and catalyze research partnerships and interdisciplinary collaborations**. Support identification of Grand Challenges aligned with Queen's research priority areas by catalyzing research partnerships and clusters of excellence.
  - **Engage with industry through research clusters, centres, and institutes.** Target industry through the branding and promotion of strategic research clusters and institutes that are related to Grand Challenges.
  - **Incentivize and support** faculty to apply for/participate in large initiatives and leadership roles by providing teams with technical and project management support, and teaching release.

Providing researchers the time and support (project management, technical, administrative, and infrastructural) for building partnerships and formulating ideas is key to long-term success and impact, and to the submission of competitive funding applications. It is imperative to prepare proactively for major national and international funding calls by anticipating topic areas and fostering the growth of research clusters, so that Queen's researchers will be poised for success in these funding competitions. Departments and units should also be encouraged to identify strategic research priorities and develop operational plans to achieve them.

- **Support**
  - **Optimize resources by** identifying and publicizing facilities that serve as hubs for interdisciplinary partnerships including the provision of marketing services to promote these initiatives/facilities. Implement pan-university consultations when establishing/acquiring new resources and facilities to build collaborations and joint initiatives.

- o **Increase administrative and technical support to sustain core research services** (e.g. lab and other equipment, data, computing, statistical services, etc.). Identify and anticipate critical areas where replacement and growth are needed and develop innovative approaches to staff, maintain, and share such facilities.
- o **Provide University Research Services with support** for collaborative and informed initiative generation through advisory groups (of faculty and researchers) beyond senior administration. Better promote the services available to faculty members and researchers across university.
- o **Support faculty to leverage optimal value for time.** Provide substantive grant writing assistance (e.g., soft elements of large-scale grants, graphics, budgeting, knowledge mobilization planning), technical and project management support, teaching relief when pursuing intensive research, and resources for graduate student training (e.g. dedicated resources for scientific writing and editing), and preparation of applications for major awards for students and postdoctoral fellows.
- o **Establish** and strengthen internal peer-review processes that encourage critical growth of research proposals and program development. This could include embedding specific staff positions for research support at departmental level.
- o In partnership with all stakeholders, **adopt a flexible and equitable workload determination that supports and prioritizes research intensity.** The workload model can be generalized and evaluated as a departmental (unit) deliverable rather than an individual faculty deliverable, in order to allow for prioritizing research. Elements of a flexible workload model could include flexibility for targeted teaching relief during periods of research intensity (i.e., major grant writing); termed and endowed Chairs or internal awards that provide periodic teaching relief; meaningful sheltering of junior faculty from administrative responsibilities (focused on a research context); talent acquisition at all career levels to address imbalance in administrative loads. This does not mean that in providing relief to some, others will be overburdened. Departments should be encouraged to collaborate and share best practices to ensure that similar and equitable decisions are being taken across the university.

- **Celebrate Research and Scholarship**
  - o **Pursue and sustain a more robust brand-building and promotion strategy**. Enhance the strategy to aggressively promote research excellence to include not only external but also internal stakeholders. Provide awareness and visibility of Queen's unique facilities (research clusters, infrastructure, etc.) and expertise (staff, students, and faculty). Sustain current efforts over long term to change perceptions and to build pride and confidence in Queen's from within.
  - o **Celebrate research accomplishments internally.** Build brand and pride through community presentations and celebrations of research accomplishments of students, postdoctoral fellows and faculty members.
  - o **Identify and forcefully pursue** international **awards** and other recognitions for Queen's researchers.
  - o **Develop new internal awards and recognitions for knowledge mobilization.** Awards for research accomplishments within units and at the university level should embrace all areas of scholarship, including non-traditional research methods and perspectives.

CONCLUSION

Queen's university could unmistakably be a front runner in the groundbreaking research realm, the Nobel prize in physics demonstrating this as an embodiment of excellence in talent, ideas and support. The working group hopes that the university will take advantage of its current position and willingness, and further advance the research impact starting with the ideas highlighted in this document. The working group also acknowledges the contributions, feedback, and engagement of the university community during the process of forming this document.

Figure 1

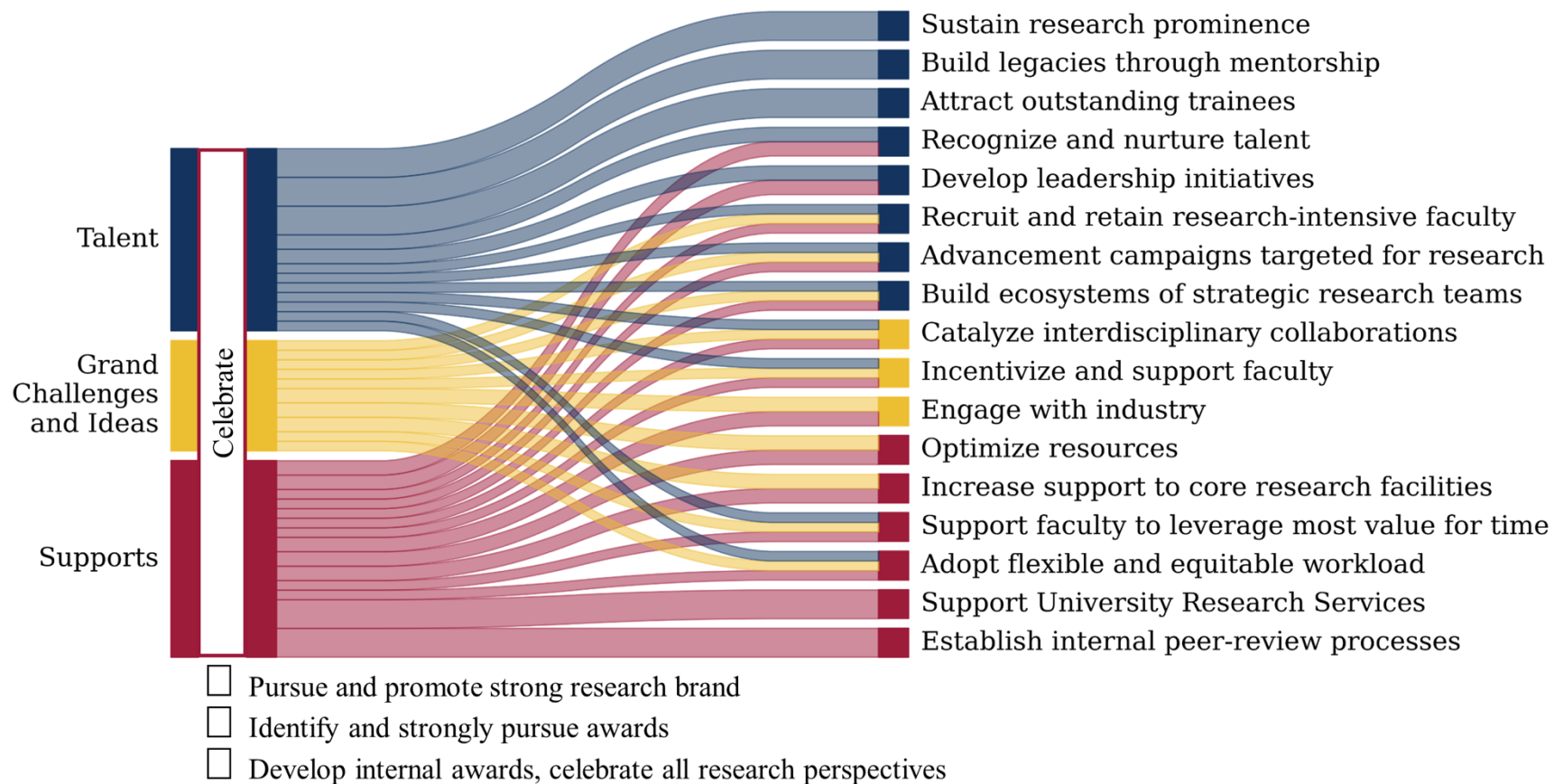**Interrelationship between proposed operational initiatives**

Figure 2
Interrelationship between proposed operational initiatives

- Sustain research prominence
- Build legacies through mentorship
- Attract outstanding trainees
- Recognize and nurture talent
- Develop leadership initiatives
- Recruit and retain research-intensive faculty
- Advancement campaigns targeted for research
- Build ecosystems of strategic research teams
- Catalyze interdisciplinary collaborations
- Incentivize and support faculty
- Engage with industry
- Optimize resources
- Increase support to core research facilities
- Support faculty to leverage most value for time
- Adopt flexible and equitable workload
- Support University Research Services
- Establish internal peer-review processes
- Pursue and promote strong research brand
- Identify and strongly pursue awards
- Develop internal awards, celebrate all research perspectives