



Integrated Knowledge Translation as a mechanism for moving knowledge to action



UNIVERSITY
OF MANITOBA

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Research Day
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Plan for today

- What is KT at CIHR and what is integrated KT research?
- Reviewing iKT research grants
(and, by implication, how to write a successful grant)
- Integrated Knowledge Translation Research funding opportunities
- KT Resources
- Evaluating iKT research at CIHR (if we have time)





What is Knowledge Translation?

KT is a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system.

This process takes place within a complex system of interactions between researchers and knowledge users which may vary in intensity, complexity and level of engagement depending on the nature of the research and the findings as well as the needs of the particular knowledge user.





What is Knowledge Translation?

Knowledge translation is about:

- Making users aware of knowledge and facilitating their use of it to improve health and health care systems
- Closing the gap between what we know and what we do (reducing the know-do gap)
- Moving knowledge into action

Knowledge translation research (KT Science) is about:

- Studying the determinants of knowledge use and effective methods of promoting the uptake of knowledge



Two kinds of KT

Integrated KT Research

- Research approaches that engage potential knowledge-users as partners in the research process.
- requires a collaborative or participatory approach to research that is action oriented and is solutions and impact focused (Mode 2).
- For example, the researcher(s) and knowledge-user partner(s) jointly define the research question, and are involved in interpreting and applying the findings

End of grant KT

- The researcher develops and implements a plan for making knowledge users aware of the knowledge generated through a research project





What is integrated KT research?

- a way of doing research
- collaborative, participatory, action-oriented, community based research, co-production of knowledge, mode 2 research
- involves engaging and integrating knowledge users into the research process
- Knowledge users can be:
 - Policy- and decision-makers from the community to the federal level, researchers, the public, industry, clinicians, the media
 - Investigators from different disciplines, teams, countries





What is integrated KT research?

Knowledge users and researchers (knowledge creators) work together to:

- ✓ shape the research questions
- ✓ interpret the study findings and craft messaging around them
- ✓ move the research results into practice

In our view – this is the minimum requirement for conducting integrated KT



What is integrated KT research?

In addition, knowledge users and researchers (knowledge creators) *can* work together to:

- ✓ shape the research questions
- ✓ decide on the methodology
- ✓ help with data collection, tools development, selection of outcome measures
- ✓ interpret the study findings and craft messaging around them
- ✓ move the research results into practice
- ✓ widespread dissemination and application



Why integrated KT research?

Through partnerships, the research is strengthened:

- research can be more solutions-based because there is an end-user involved in developing the research question
- research can have more impact because the end-user is engaged and interested, ready for results and willing to move those results into practice because they are of direct relevance to their day-to-day lives



What is integrated KT research?

- We commissioned Ann Macaulay to create an educational module on researcher and knowledge-user interaction
- Available on the CIHR website: <http://www.cihr-irsc.gc.ca/e/39128.html#Guide>
- Includes advice/discussion about how to manage research of this sort: negotiating roles and responsibilities ahead of time, dealing with IP, dealing with disagreements; guidance as to how to be mutually respectful, etc





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[CIHR](#) > [CIHR Online Tutorials](#) >

A Guide to Researcher and Knowledge-User Collaboration in Health Research

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Topic outline

	Preamble to the Integrated Knowledge Translation Tutorial	
	PDF Version	
1	Introduction	<input type="checkbox"/>
2	Identify and recruit research partners	<input type="checkbox"/>
3	Taking stock of barriers and facilitators	<input type="checkbox"/>
4	Engaging in collaborative research design	<input type="checkbox"/>
5	Governance	<input type="checkbox"/>
6	Ethics and partnership agreements	<input type="checkbox"/>
7	Maintaining partnerships over time	<input type="checkbox"/>
8	Identify IKT Funding Opportunities	<input type="checkbox"/>
9	Dissemination and Knowledge to Action	<input type="checkbox"/>
10	Epilogue	<input type="checkbox"/>
	Glossary of Terms	

Courses

- [A Guide to Researcher and Knowledge-User Collaboration in Health Research](#)
- [Introduction to Evidence-Informed Decision Making](#)
- [Critical Appraisal of Intervention Studies](#)

[All courses ...](#)

Other On-line Learning Modules

- 1) Introduction to Evidence-Informed Decision Making
 - *Donna Ciliska, McMaster University*
- 2) Critical Appraisal of Intervention Studies
 - *Donna Ciliska, McMaster University*
- 3) A Guide to Knowledge Synthesis
 - *Jeremy Grimshaw, University of Ottawa*

Coming soon:

- 1) Deliberative Priority Setting
 - *Sandy Campbell*
- 2) Knowledge Translation in low and middle income countries
 - *Vic Neufeld*

Available at:

www.cihr-irsc.gc.ca/e/39128.html



Reviewing iKT research grants (and, by implication, how to write a successful grant)





Review implications of integrated KT research

By requiring both researchers and knowledge users to be part of the research team, integrated KT requires *merit review*:

- Both knowledge users and researchers on the review panel
- Each proposal scored on impact/relevance as well as scientific merit
- Panellists often need orientation materials explaining the process as well as worksheets to apply the criteria
- Both “types” of panel members have a voice





Merit Review Criteria for iKT research*

General headings:

Research question

Research approach

Feasibility

Outcomes

* these have been revised since Ian Graham spoke to the PRAM group in 2008



Research Question

Explanation of the research project and justification for the need to conduct the research:

- To what extent does the project respond to the objective(s) of the Funding Opportunity?
- To what extent does the research question respond to an important need identified by the knowledge-user(s) on the research team?



Research Question Criterion: What this means for you

- Be clear about what the question is right away
- Be clear about the origin of the research question: why it is interesting, who is interested in it and what the knowledge-user partners think about it



Research Approach

Detailed description of the research approach and justification for the proposed methods/strategies:

- To what extent is it likely that the proposed methods will address the research question(s)?
- To what extent is the study design appropriate and rigorous?
- To what extent are the knowledge-user team members meaningfully engaged where appropriate (e.g. in defining the research questions, informing the research plan, interpreting the findings, informing the end-of-grant KT plan)?
- To what extent does the end-of-grant KT plan detail strategies appropriate for its goals and target audiences?



Research Approach Criterion: What this means for you

- Be clear and specific about your proposed methods – the reviewers need to know that you know what you are doing
- Demonstrate the participation of and commitment to the project by the decision-makers – this can be written into the text or shown through letters of support
 - these letters are important – they need to show true iKT-style collaboration
 - they should not be “cookie cutter” – ensure that they are unique, and specific about what the knowledge user is expecting



Feasibility

Demonstration that the researcher-knowledge-user team has the requisite skills, experience and resources to complete the project in the proposed time frame:

- To what extent are the knowledge-users on the team committed to applying the findings when they become available and is their application achievable in the particular practice, program and/or policy context?
- To what extent does the researcher-knowledge-user team have the necessary expertise and track record to deliver on the project's objective(s), including the objectives of the end-of-grant KT plan?



Feasibility Criterion: What this means for you

- Be sure to demonstrate a “pull” for the results of this study on the part of your knowledge-user co-applicants
- Document the expertise of each team member and their role in the proposed study
- Demonstrate that this is this is a “doable” study – from both a scientific and a practical perspective
- Demonstrate willingness of the knowledge-user partner to use the results of the study



Results expected from the successful uptake of project findings:

- To what extent will the project have a substantive and sustainable impact on health outcomes, practice, programs and/or policy in the study context?
- To what extent will the project's findings be transferable to other practice, programs and/or policy contexts?
- To what extent is the evaluation plan appropriate to assess the project's impact?



Outcomes Criterion: What this means for you

- Consider the potential impact of your study and its generalizability
- If it is not generalizable, acknowledge and justify this
- Develop a reasonable evaluation plan to be able to measure the outcomes and impacts of your study





How to write a good grant

<http://www.cihr-irsc.gc.ca/e/27491.html>



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Canadian Institutes of Health Research
Institute of Genetics

Instituts de recherche en santé du Canada
L'Institut de génétique

Guidebook for New Principal Investigators

Advice on Applying for a Grant, Writing Papers, Setting up a Research Team and Managing Your Time

Institute of Genetics, CIHR

Roderick McInnes • Brenda Andrews • Richard Rachubinski

Generic tips for getting funded

- Have a clear, focused research question and plan
- Document why it is important to do the work and what its potential impact might be
- Show how the proposed work fits into the larger scheme of things
- Be clear about who the audience is for the research
- iKT research and KT Supplement: demonstrate a “pull” for your research results through strong knowledge-user engagement
- Link proposed KT activities to a thorough budget justification



Generic tips for getting funded

- Be very specific about your methods – don't assume that committee members will read between the lines
- Demonstrate the strength of the team and how they are able to do the work
- Be clear why each of your co-investigators are on the team
- Justify your methodological/theoretical approach – someone on the committee is bound to disagree with you
- **Have a trusted colleague read it over – it might not be as clear as you think**
- Have a clear evaluation plan (where required)
- Have a clear, feasible end of grant KT plan



Beware of the “KT Imperative”

The importance of **Synthesis**

- results from a single research study should be contextualized within a synthesis of global research results before **extra-ordinary** dissemination or implementation efforts are undertaken
- need to bring common sense as well as academic rigour to bear on decisions about the degree and intensity of KT activities warranted by a single research study





Key word: Appropriateness

For all KT grants and activities the most important consideration is *appropriateness*. Each discipline, research project, and knowledge-user community is different. When there are limitations on the validity or generalizability of the results with few potential knowledge-users, a modest approach is most appropriate. The key to a successful grant is to ensure that there is a match between the expected research findings, the targeted knowledge-users and the KT strategies selected.





Another key word: Engagement

For all iKT activities another important consideration is *engagement*. By engaging in partnerships, knowledge-users and researchers can benefit from the expertise each offer to participate in research with a high potential for impact and to move high quality, locally adapted evidence into practice.





Integrated Knowledge Translation Research funding opportunities



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Knowledge Synthesis

Objective: To increase the uptake/application of synthesized knowledge in decision-making by supporting partnerships between researchers and knowledge users to produce scoping reviews and syntheses that respond to the information needs of knowledge users in all areas of health

Maximum amount per grant: \$100,000 for a synthesis for one year, \$50,000 for a scoping review for one year

Eligibility: The team must include both an independent researcher and a knowledge user listed as a Principal Applicant

Next application deadline: April, 2011

Funding start date: September, 2011

Launch: Twice a year in the Summer and Winter



Knowledge to Action

Objective: To accelerate translation of knowledge by linking researchers and knowledge-users to bridge a knowledge to action gap, and increase the understanding of knowledge application through the process

Funding: The maximum amount per grant is \$100,000 per annum for up to 2 years.

Eligibility: The team must include both an independent researcher and a knowledge user listed as a Principal Applicant.

Next application deadline: October, 2011

Funding start date: April, 2012





(PHSI) Partnerships for Health System Improvement

- **What is eligible?** Any applied health systems and/or services research question that is deemed useful to health system managers/policy makers
 - **Team composition:** Teams must include researchers and decision makers
 - **Length of grant:** Up to 3-years
 - **Sources of funding:** A mix of CIHR and partnership support – CIHR provides most of the funding (\$350K or \$400K, depending on province) and partners provide the rest (20% or 30% of the total grant budget, depending on province)
 - **KT requirement:** Comprehensive knowledge translation plan required
- Next application deadline:** Nov 2011, funding April 2012





You can apply for a planning grant to support your iKT research, or other application

Purpose:

Provide support for planning activities, partnership development and/or increasing the team's understanding of the health research landscape that will contribute to the advancement of research consistent with the mandate of CIHR.

Examples of eligible activities:

- Planning and partnership development meetings
- Activities that assist potential teams to identify research questions or emerging issues that could form the basis of a CIHR application

Funding:

Up to \$25,000 for up to 1 year

Applications accepted 3 times per year in October, February and June





Dissemination events grants

Purpose:

Provide support for dissemination events

Examples of eligible activities:

- Knowledge exchange meetings
- To provide funding for knowledge translation events focusing on either integrated KT/KT science or dissemination/end-of-grant KT
- Education of groups such as health professionals, community organizations, the general public
- Knowledge dissemination that will inform practice, clinical care, policy
- Release of knowledge to relevant stakeholders prior to publication

Funding:

Up to \$25,000 for up to 1 year





KT Supplement grants

Purpose:

To provide supplemental funding for KT activities following the completion of a peer reviewed grant/award, or component of a grant/award, when it is appropriate to disseminate the results of the research beyond the traditional scientific community and using methods supplementary to publication in peer reviewed journals.

Funding:

Up to \$100,000 for up to 1 year



KT Supplement grants

Examples of eligible activities:

- Dissemination of research results through specialized publications
- Development/maintenance/updating of websites
- Production and distribution of written materials in various formats
- Travel costs for a series of meetings/presentations (linkage and exchange activities)
- Hiring of a knowledge broker or implementation facilitator/change agent
- Development of plain language summaries
- Development of knowledge exchange tools (e.g. educational CD- ROMs, decision support tools)





KT Resources



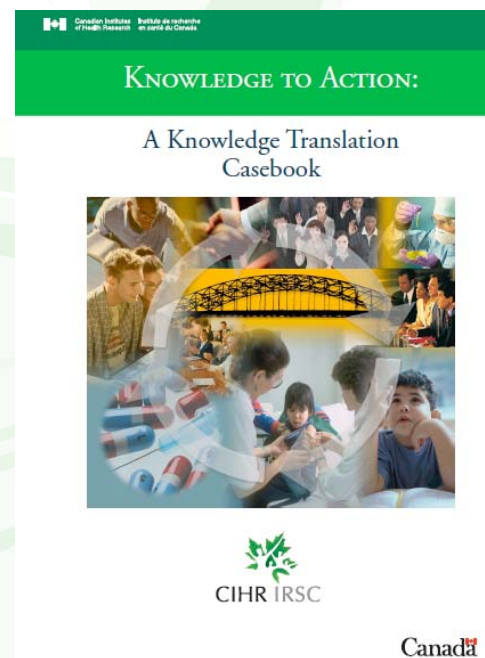
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Knowledge to Action: A KT Casebook

- Provides insight into the real world of researchers and knowledge users
- Presents important lessons about successful EGKT and iKT research
- Published early 2009

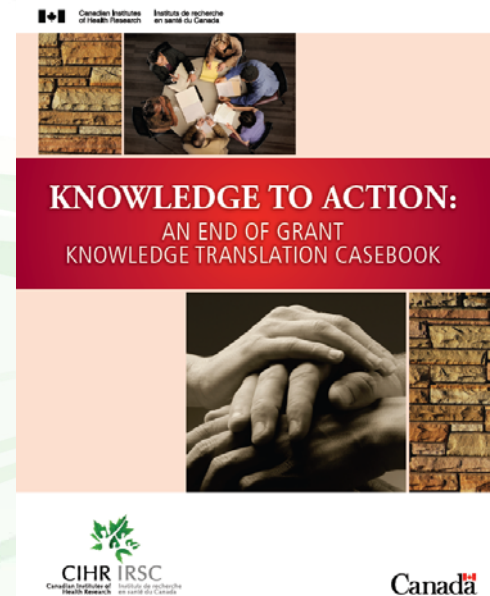
www.cihr-irsc.gc.ca/e/29484.html



Knowledge to Action: An EoG KT Casebook

- Features end-of-grant (EoG) KT activities supported by CIHR's KT Supplement Grant program
- Showcases unique and effective ways to share research results covering a broad spectrum of research
- Published 2010

www.cihr-irsc.gc.ca/e/29484.html





KT in Health Care - Moving from Evidence to Practice: A KT Handbook

Chapters cover:

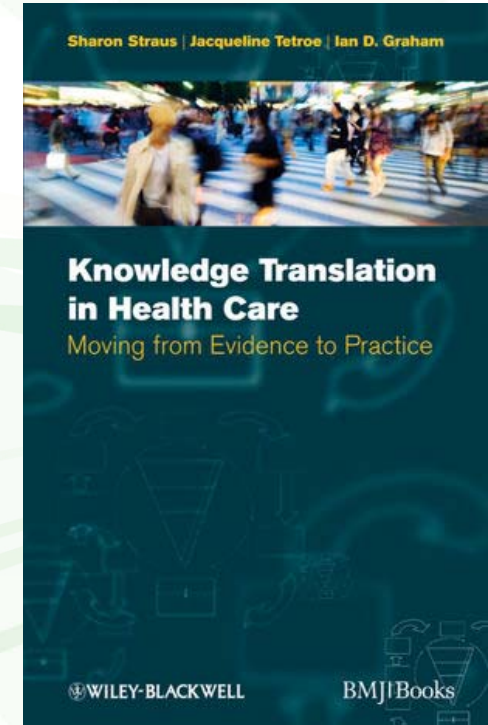
- Knowledge creation
- Knowledge-to-Action cycle
- Theories and Models of Knowledge-to-Action
- Knowledge exchange
- Evaluation of Knowledge-to-Action

Available at:

http://ca.wiley.com/WileyCDA/WileyTitle/productCd-1405181060_descCd-description.html

Presentations based on chapters available at:

<http://www.cihr-irsc.gc.ca/e/40618.html>



***All royalties go into a
CIHR fund for students***



The KT Clearinghouse website

- funded by (CIHR) to serve as the repository of Knowledge Translation resources for individuals who want to learn about the science and practice of KT, and access tools that facilitate their own KT research and practices.
- The service and material of the website are provided by staff of the [Joint Program in Knowledge Translation](#), a collaborative effort between St. Michael's Hospital and the University of Toronto, Faculty of Medicine.
- The goal of the program is to improve the quality of care by developing, implementing and evaluating strategies that bridge the knowledge-to-practice gap, and to research the most effective ways to translate knowledge into action.



user

pass

[KTCH Home](#)[KT Canada](#)[Knowledge Base](#)[Centre for Evidence-Based Medicine](#)[KT Tools](#)[Consultation Service](#)[KT Trainee Collaborative](#)[Community Forum](#)[Home](#)[News](#)[Contact](#)

Welcome to the KT Clearinghouse

The KT Clearinghouse website is funded by the Canadian Institute of Health Research (CIHR) to serve as the repository of Knowledge Translation resources for individuals who want to learn about the science and practice of KT, and access tools that facilitate their own KT research and practices. The service and material of the website are provided by staff of the [Joint Program in Knowledge Translation](#), a collaborative effort between St. Michael's Hospital and the University of Toronto, Faculty of Medicine. The goal of the program is to improve the quality of care by developing, implementing and evaluating strategies that bridge the knowledge-to-practice gap, and to research the most effective ways to translate knowledge into action.

Specific services that the Program offers over the KT Clearinghouse website include:

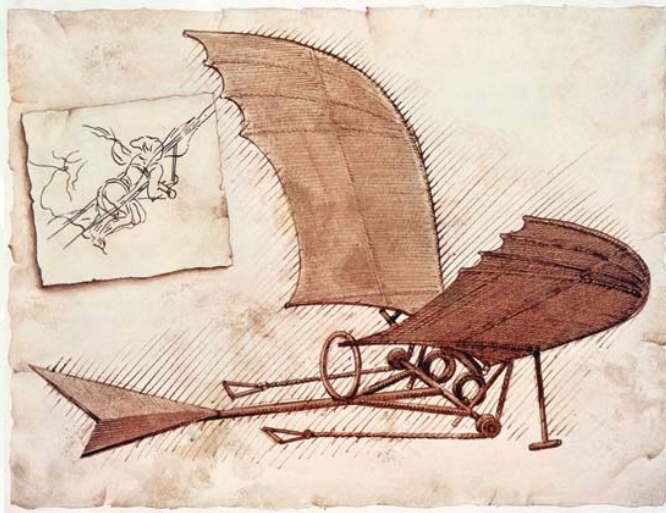
- [KT Canada](#), a CIHR-funded research network and training initiative.
- The [Knowledge Base](#), an information repository and short 'primer' course on knowledge translation, designed for individuals who want to learn the basics of 'doing knowledge translation.'
- The [Centre for Evidence-Based Medicine](#), whose goal is to help develop, disseminate, and evaluate resources that can be used to practise and teach EBM for undergraduate, postgraduate and continuing education for health care professionals from a variety of clinical disciplines.
- A [list of KT tools](#) that facilitate the practice or the science of knowledge translation.
- A [Knowledge Translation Consultation Service](#) for supporting different clinical units at St. Michael's Hospital and researchers from the University of Toronto to research, develop, implement and/or evaluate knowledge translation strategies.

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I have been impressed with the urgency of doing.
Knowing is not enough; we must apply.
Being willing is not enough; we must do



Leonardo da Vinci

Knowledge
to action

Des connaissances
à la pratique

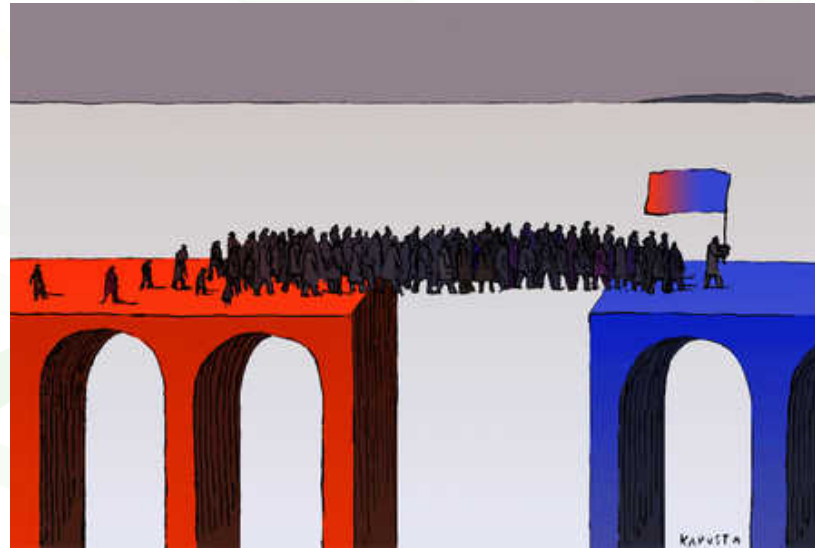
For more information, visit our web page:

<http://www.cihr-irsc.gc.ca/e/29418.html>

<http://www.cihr-irsc.gc.ca/f/29418.html>



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Thank you

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Evaluating iKT research at CIHR



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Evaluating iKT @ CIHR

- Two studies were conducted over the summer of 2010 to evaluate different components of our iKT funding opportunities
- Results have not been completely analyzed as yet
- Study 1: a survey of all funded iKT grant holders (one researcher and one knowledge-user from each grant)
 - focus on the nature of the required partnership
 - assess the impact of iKT grants
- Study 2: “chart review” of a sample of funded and unfunded iKT grants
 - focus on why more applications are not deemed to be in the fundable range



iKT Study one*

Literature search on partnerships conducted by a CIHR-CHSRF post doctoral fellow (Shannon Sibbald)

Surveys developed based on literature search and in collaboration with Shannon

Survey posted on-line and full Dillman methodology used to encourage researchers and knowledge-users to respond

Semi-structured interviews conducted with 50 survey respondents



*For more information, go to the KT Canada website

<http://ktclearinghouse.ca/ktcanada/education/seminarseries/2011/20110210>

The Survey

Questions created from the literature review:

41 questions in 8 categories

1. Partnership details
2. Study Design
3. Partnership Outcomes (impact)
4. Required Partnerships
5. Partnership Process (barriers)
6. Information Sharing
7. Next Steps (for the partnership) (sustainability)
8. Facilitating partnerships



Main conclusions

- The required partnerships that are integral to our integrated funding opportunities generally work well
- The grants provide a means for existing partners to work together (which is a good thing)
- Most respondents did not experience the barriers to partnering reported in the literature
- Most felt that their study would eventually have an impact and attributed this to the partnership
- Most intend to keep on working with their partners and value the “iKT way” – although it is not without its challenges



Main Conclusions

- Communication with team members was seen to be important – some teams used blogs, WebEx, Wiki pages, etc.
- A common theme in successful teams was a strong, energetic team leader with partnership facilitation skills
- Despite calls for CIHR to play a matchmaker role, researchers and k-us tended to network within their own professional relationships to find partners
- Some suggested that CIHR could support partnerships, not just projects - and perhaps partnerships with organizations, not individuals given the fluidity of the k-u work experience

iKT Study two

- traced scientific merit and potential impact scores assigned to a specific grant
- looked at initial scores by type of reviewer
- compared these to consensus scores to determine:
 - whether or not applications were deemed “unfundable” based more on science or impact
 - if there was a difference in scoring between knowledge-user and researcher reviewers
- also examined written reviews, letters of support and the scientific officers’ notes and interviewed past merit review committee chairs
 - these data provide additional insights as to what distinguishes funded and unfunded grants



iKT Study two

Preliminary conclusions:

- unfunded iKT applications are typically brought down by their scientific merit scores
- researcher reviewers tend to rate the science higher than knowledge-user reviewers
- knowledge-user reviewers tend to rate the impact higher than the researcher reviewers
- knowledge-user reviewers often lack confidence at first to “stand behind” the scores they assign – and tend to slightly adjust their scores during the review committee meeting to be more in line with the researcher reviewer's score

