



Center on Knowledge Translation for Technology Transfer

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Welcome to the KT4TT newsletter!

You are invited to this and future issues because of your professional involvement with Knowledge Translation (KT).

But what does Knowledge Translation have to do with Technology Transfer (TT)?

KT is primarily concerned with translating the knowledge generated by scientific research into action by stakeholder audiences — what the CIHR authors coined "Knowledge to Action." The project team behind this newsletter is concerned with that subset of sponsored programs intending to generate beneficial socio-economic impacts through technology-based innovations. [See: Lane, J. P. (2010). [At the confluence of academic research and business development: Merging technology transfer with knowledge translation to deliver value.](#)

Assistive Technology Outcomes and Benefits, 6, 1-38.]

Such sponsored programs focused on applied research in support of technology-based innovations are increasingly common as nations embrace innovation as a means to achieve domestic quality of life and global competitiveness. For example, the U.S. National Science Foundation sponsors Engineering Research Centers and Industry/University Cooperative Research Centers; Canada's Natural

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*Click on the game board image below to check out the **Need to Knowledge Model***

Sciences and Engineering Research Council supports academic/industry collaborations, and the European Union supports the Research Framework Programme now in its seventh five-year funding cycle.

All of these programs share a common mission to apply knowledge in three states generated through three methods: 1) conceptual discovery from research; 2) prototype invention from development, and 3) commercial innovation from production. [See: Lane, J. P., & Flagg, J. L. (2010). [Translating three states of knowledge: discovery, invention and innovation](#). *Implementation Science*, 5, 9.]

Prior papers, presentations, & webcasts are a click away at the Center on KT4TT's [Publications page](#).

We hope you find the following summary of objectives relevant to your own Knowledge Translation endeavors, and the contents of future newsletters engaging.



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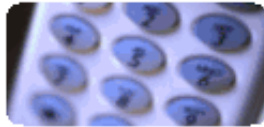
Objective 1. Create an Operational Framework for Transforming Science into Innovations with Impact.

The "[Need to Knowledge \(NtK\) Model](#)" links the three methods and the resulting three states of knowledge within a simple stage-gate framework, where the steps in each stage and the decisions at each gate, progress toward the intended outcomes and impacts. A [graphic game board version](#) is more visually comprehensible. A model is only as valid as the evidence underlying it, so the NtK Model is supported by excerpts drawn from a scoping review of hundreds of scholarly and practitioner articles. Supporting evidence is accessible under each stage/step/tip by clicking on magnifying glass icons in the table version of the NtK Model. A [related webcast](#) guides users through



navigation of the Model. All of the [supporting literature is also searchable](#). The model and the underlying evidence permit the planning, implementation, management and evaluation of projects intending to generate technology-based innovations.

Objective 2. Explore the Effectiveness of Alternative Methods of Communicating New Knowledge.



Investigators and sponsors are challenged to communicate their findings to a wider range of stakeholder audiences, and to do so in forms and language appropriate to each audience. One published study engaged national organizations as communication intermediaries and mapped each organization's knowledge values through a survey instrument. The study showed that national organizations do value research findings and offer a means to expedite the communication process. [See: Lane, J. P., & Rogers, J. (2011). [Engaging national organizations for knowledge translation: Comparative case studies in knowledge value mapping](#). *Implementation Science*, 6, 1, 106].

A Randomized Controlled Trial compared the level of knowledge use across three treatment conditions: 1) Tailored and Targeted Translation; 2) Targeted Dissemination; 3) Passive Diffusion. The manuscript is in preparation but a [recent webcast summarized the findings](#). The study concluded that both translation and dissemination are equally effective at changing level of use from non-awareness to awareness and/or interest, yet the decision to use the knowledge either as originally intended or in some modified way, rests with the recipient. These findings support the contention that the issue of relevance deserves parity with the issue of rigor in any discussion of knowledge use and potential contribution to society.

The above study created the "Level Of Knowledge Use Survey (LOKUS)" in order to measure and track levels of knowledge use, through an on-line self-reporting system, and then conducted a psychometric analysis of LOKUS. Manuscripts are in preparation but

conference presentations have already provided summary descriptions of the instrument and the validation process. [See: [Telang, Tomita, & Stone, RESNA 2011](#) and [V.I. Stone, NARRTC, April 27, 2011](#).]

Objective 3. Conduct Participatory Observation Projects to Demonstrate Best Practices to Sponsors and Grantees.

Investigators with specific expertise are selected for partnership with corporations involved in new product development as described in [Development Project 1](#). Although details on the products remain proprietary until their commercial release, the participants are providing [testimonials regarding the value of collaborating](#) and doing so under the requirements and constraints of the corporate partner. The projects will provide case-based evidence of the need for programs intending to generate technology-based innovations to target a validated need with a viable solution, with the corporate partner treated as the customer.



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