



knowledge mobilization works
l'Atelier de la mobilisation des connaissances

Evolution of Knowledge Mobilization

Presentation by Peter Levesque
Queen's University, Robert Sutherland Hall
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Summary

1. Introductions
2. Definitions
3. History
4. Systems thinking
5. Grants success
6. Q & A



1. Introductions

- Peter Levesque
 - Director, **Knowledge Mobilization Works**, created in 2007 to assist organizations to improve their “knowledge bottom lines”.
 - Former Positions
 - Knowledge Exchange Specialist, Provincial Centre for Child and Youth Mental Health
 - Deputy-Director, Knowledge Products and Mobilization, SSHRC
 - Chairperson, Knowledge Mobilization, Ontario Neurotrauma Foundation



Examples of Clients

- Child and Youth Health Network of Eastern Ontario
- Early Years Hamilton
- FII-ON - Father Involvement Initiative Ontario Network
- FIRA - Father Involvement Research Alliance
- FPG Child Development Institute - The University of North Carolina at Chapel Hill
- Ontario Children's Health Network
- Canadian Alliance for Community Service-Learning
- Provincial Centre of Excellence for Child and Youth Mental Health
- Public Health Agency of Canada
- Carthy Foundation
- Carleton University
- Metropolis Centre
- Canadian Council on Learning
- Catholic Principals' Council of Ontario
- Council of Ontario Directors of Education
- National Association for the Education of Young Children
- Ottawa-Carleton District School Board
- Alzheimer Society of British Columbia
- Calgary Health Region
- Cancer Care Ontario
- Children's Hospital of Eastern Ontario
- Kingston General Hospital
- National Collaborating Centre for Health Public Policy
- NICE, the National Initiative for the Care of the Elderly
- Ontario Neurotrauma Foundation
- Ontario Injury Prevention Conference
- Société Santé en français



Contact Information



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Social Exercise

- 2 minutes
- Turn to your neighbor
- Introduce yourself
- Exchange cards if available
- Find a point of overlap in your work or interests



Technology Exercise

- A focus on acceleration and attenuation
- Two groundbreaking technologies
 - Paper
 - Pen
- During this session (or any session)
 - 3 people - **conversation**
 - 3 ideas - **concepts**
 - 3 projects or changes - **creation**



2. Definitions

A commonly cited definition:

Getting the right information to the right people in the right format at the right time so as to influence decision-making.

(Ontario Neurotrauma Foundation)

Easier said than done.

- How do we support doing this?
- What is a knowledge mobilization culture?

Knowledge Mobilization Works definition:

Knowledge Mobilization is the complex process of making what we know ready for service or action to build value.



SSHRC

- Public Outreach Grants

(http://www.sshrc-crsh.gc.ca/site/apply-demande/program_descriptions-descriptions_de_programmes/mbf_public_outreach-gaf_sensibilisation_public-eng.aspx)

- Knowledge mobilization is a core priority for SSHRC, one aimed at facilitating and enabling the mobilization of knowledge in the social sciences and humanities to various sectors of society to **inform discussion, and enhance understanding and decision-making.**
- SSHRC actively supports networking, disseminating, exchanging and co-creating knowledge to meet the needs of Canadian society. The aim is to ensure that people who stand to **benefit from research** results—policy-makers, business leaders, community groups, educators and the media, as well as academics in various **fields—have the knowledge they need, when they need it, in useful forms.**
- SSHRC encourages researchers to find effective ways to disseminate, transfer, synthesize and broker research results to wider audiences.



CIHR

- *About Knowledge Translation*

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

- At CIHR, knowledge translation (KT) is defined as 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.



NSERC

- Use of Grant Funds
(http://www.nserc-crsng.gc.ca/Institutions-Etablissements/CCIGuide-ICCGuide/UseofFunds-UtilisationdesSubs_eng.asp#knowledge)
- Knowledge and dissemination/sharing eligible expenses:
 - costs relating to **communications activities and networking**, including hosting technical lectures and workshops, and attending professional and technical conferences and lectures; and/or
 - activities aimed at **increasing awareness** of local industry of the applied research expertise available at the college, including literature, meetings and workshops; lectures; and meetings and workshops open to the local community to raise awareness of the college's work and to **share results that could have an economic, social and/or environmental impact.**
- **Research and technology transfer** support services



Value Creation

- Value
 - The worth, usefulness, or importance of a “thing”; relative merit or status according to the estimated utility of a “thing”
- Value-added
 - The amount by which the value of an article is increased at each stage of its production, exclusive of initial cost

(Canadian Oxford Dictionary, 2004)

- Value is always determined via exchange mechanisms.



But what is the goal?

Not just to know but to do the best for those we care about





Human Right?

10 December 1948,
UN Universal Declaration of Human Rights

Article 27.

- (1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to **share in scientific advancement and its benefits.**

<http://www.un.org/Overview/rights.html>



Quote: Richard Heinberg



Taking in traumatic information and transmuted it into life-affirming action may turn out to be the most advanced and meaningful spiritual practice of our time.

http://globalpublicmedia.com/how_do_you_like_the_collapse_so_far



You are Professionals

Some of
Your Tools:

- Data
- Information
- Evidence
- Knowledge
- Experience
- Experimentation
- Standards
- Ethics
- Practice
- Technology



Professional Revolution

- Knowledge Management
- Knowledge Transfer
- Knowledge Exchange
- Knowledge Mobilization
- Knowledge Translation
- Evidence-based practice
- Evidence-based decision-making
- Evidence-informed policy
- Evidence-informed practice



Emergence of Terms

Table 1: Knowledge Exchange Terms in Usage by an International Sample of Funding Agencies

Applied research	Knowledge cycle	Research mediation
Capacity building	Knowledge exchange	Research transfer
Co-optation, cooperation, competing	Knowledge management	Research translation
Diffusion	Knowledge translation	Science communication
Dissemination	Knowledge mobilization	Teaching
Getting knowledge into practice	Knowledge transfer	“Third mission”
Impact	Linkage and exchange	Translational research
Implementation	Popularization of research	Transmission
Knowledge communication	Research into practice	Utilization

Graham, I., et al. (2006) Lost in knowledge translation: time for a map?
 Journal of Continuing Education in the Health Professions, 26:1 13-24



Terminology and Models

- Common Terms
 - Data
 - Information
 - Knowledge
 - Tacit Knowledge
 - Explicit Knowledge
 - Community of practice
 - Knowledge brokering
 - Learning communities
 - Learning organizations
 - Knowledge Ecology
- Common Models (discussed in Systems Thinking section)
 - CIHR Knowledge to Action
 - SECI Model
 - BA Model
 - DKCU Model
 - DIKAR Model
 - Cynefin Model
 - CHSRF Self Assessment Tool



Data

- Simple observations of states of the world:
 - easily structured,
 - easily captured on machines,
 - often quantified,
 - easily transferred

Thomas Davenport: Information Ecology, Oxford, 1997



Information

- Data endowed with relevance and purpose:
 - requires unit of analysis,
 - need consensus on meaning
 - human mediation necessary

Thomas Davenport: Information Ecology, Oxford, 1997



Knowledge

- Valuable information from the human mind.
- Includes reflection, synthesis, context
 - hard to structure,
 - difficult to capture on machines
 - often tacit (rather than explicit)
 - hard to transfer

Thomas Davenport: Information Ecology, Oxford, 1997



Tacit Knowledge

- what is sub-consciously known by an individual and is extremely difficult to articulate or write down for use by; it includes know-how, rules of thumb, experience, insights, and intuitions.

Rumizen 2002 291



Explicit Knowledge

- knowledge that can be articulated in formal language and transmitted among individuals.

Leveraging Knowledge at the PSC 1998



Community of Practice

- a group of people who are brought together for professional as well as personal reasons by a desire to learn more about common opportunities and problems. It is formed with an intention to add value by directly collaborating, using one another and outside resource, to learn and teach each other. Its purpose is to develop a body of actionable knowledge through open non-competitive exchange; to learn and contribute through sharing information on challenges and best practices within an organization

Global Gateways 2002



Knowledge Brokering

- The strategic use of information, and the ability to influence others by presenting attractive models and ideas, have become central components of a nation's ability to exert political, economic or cultural influence

Lloyd Axworthy, 1996



Learning Communities

- refers to informal groups of people that cross organizational boundaries and come together to discuss best practices, issues, or skills that the groups want to learn about

Rumizen 2002 288



Learning Organizations

- an organization skilled at creating, acquiring and transferring knowledge, and modifying its behavior to reflect new knowledge and insights

Skyrme 1997 21

- an organization that is continually expanding its capacity to **create its future. Adaptive learning** (survival) is joined with **generative learning** (creation)

Peter Senge, The Fifth Discipline, New York, 1990



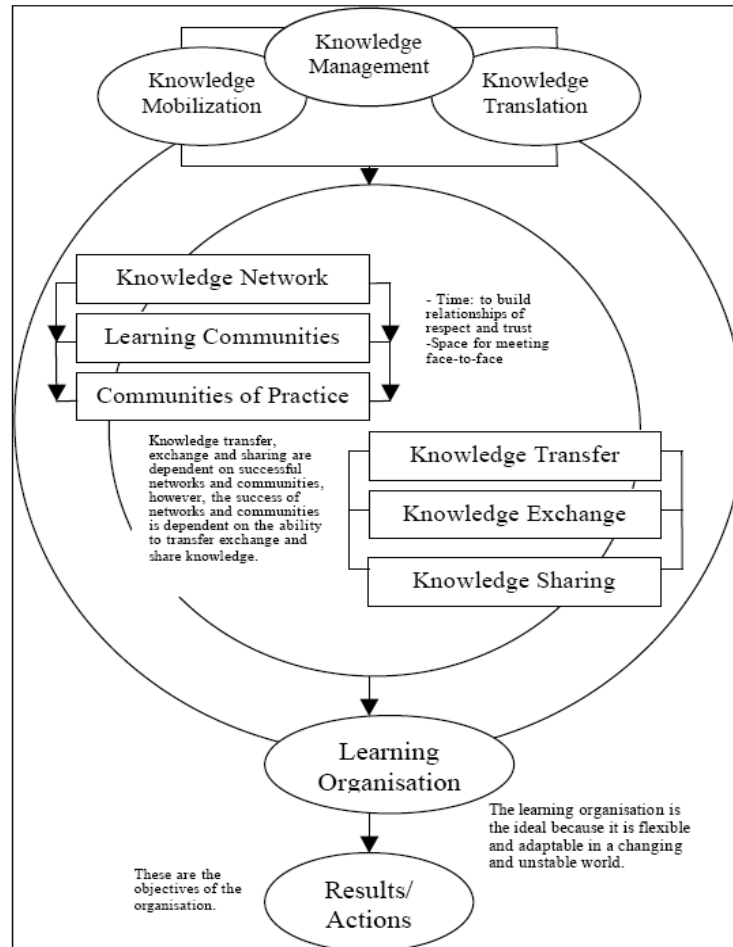
Knowledge Ecology

- emphasis is on an organization's entire knowledge environment. It addresses all values and beliefs about knowledge; how people actually use knowledge and what they do with it; the pit falls that can interfere with knowledge sharing; and what knowledge systems are already in place

Leveraging Knowledge at the PSC 1998



Relationships



Knowledge mobilisation and knowledge translation are cultural variables of knowledge management, and not subsets of the other— all are working towards the same objective: to produce benefits from harnessing intellectual capital.

Networks and communities, when nurtured through support and time, develop trust and respect and can ultimately improve a company's innovative capacity.

Knowledge sharing, exchange and transfer are similar; they are the result of the respect and trust developed by networks and communities; essentially, they determine the overall success of an organisation.



Relationships

- Hierarchy of Knowledge, Dave Sackett:
 - Systematic reviews/ meta-analyses
 - RCTs
 - Experimental designs
 - Cohort control studies
 - Case-control studies
 - Consensus conference
 - Expert opinion
 - Observational study
 - Other types of study e.g.. Interview based, local audit
 - Quasi-experimental, qualitative design
 - Personal communication



3. History

- We engage first in **personal communication**.
 - How do we get the most credible forms of knowledge into our day to day conversations
 - Collectively, we know what to do on many topics but do we have the **wisdom or capacity** to do it.
 - We are **more connected** than ever before but are we more connectable?
 - **It's mostly about people** – not technology - suggested formula is 10% technology/90% social (CEFRIO)



The Future of Organizations?

- The typical large business 20 years hence ...will bear little resemblance to the typical manufacturing company, circa 1950...it is far more likely to resemble organizations (like the hospital, the university, the symphony orchestra...an organization composed largely of **specialists** who direct and discipline their own performance through **organized feedback**

Drucker, P., (1988). The coming of the new organization.
Boston: Harvard Business Review



Obesity?

- Never in human history have we **hunted** for so much data, information and knowledge.
- Never in human history have we **gathered** so much that is useful but not used.
- Growing feeling of being **overfed** with information?
- Are we suffering from data **obesity or infoglut**?



Plain language

New Yorker: Dana Fradon 1975



“I can’t put it into layman’s language for you. I don’t know any layman’s language.”



Publish or Perish

New Yorker: Mischa Richter 1966



"It's publish or perish, and he hasn't published."



Use of evidence

New Yorker: Mick Stevens 1989





Impact

New Yorker: Sam Gross 1991



"My question is: Are we making an impact?"



Access

New Yorker: John Caldwell 2000



"Go ask your search engine."



SSHRC Story

- 2001: Evaluation of CURA program, positive externalities, creation of division of KMB
- started from two premises:
 - that leading edge information is not enough to ensure Canada's place in a rapidly changing world
 - information has more power and value when combined with analysis and action to create knowledge.
 - conclusion is that this translates into economic, social, and cultural benefits for Canadians



Intellectual Roots

- **religion and philosophy** (e.g. epistemology) to understand the role of and nature of knowledge and the permission of individuals to think for themselves
- **psychology** to understand the role of knowledge in human behavior
- **economics and social sciences** to understand the role of knowledge in society
- **business theory** to understand work, its organization and, 20th century efforts to improve effectiveness
- rationalization of work (Taylorism), total quality management, and **management sciences** to improve effectiveness
- **cognitive sciences, artificial intelligence, and the learning organization** to learn faster than the competition and provide a foundation for making people more effective (Despres 2000)



Evolution

First generation of KMb

- prior to 1995
- 1986 Karl Wiig coined the term “knowledge management” in 1986 at a Swiss Conference sponsored by the United Nations; Wiig is often referred to as the founder of KM (Navaretti 1998)
- was focused primarily on BPR initiatives and Information Technology (IT)



Evolution

Second generation of KM

- 1995-2001
- broad exploration of the relationship between tacit and explicit knowledge (Polanyi 1958)
- knowledge as a thing – intangible but real
- focused on the SECI model
- KM—a useful buzzword, only beginning to be taken seriously



Evolution

Third generation of KMb

- 2001- unknown
- focused on the growth beyond knowledge as a thing to knowledge as a flow; and knowledge management as a collaboration or synthesis of many concepts
- understood that knowledge management initiatives need to be incorporated in jobs and not implemented as an addition to the current work load of employees
- importance of intellectual capital recognized as an important concept
- knowledge management referred to under other terms: learning corporation, knowledge mobilization, knowledge transfer, knowledge translation
- issue that is being taken seriously and is considered by a majority of organizations to be their number one priority



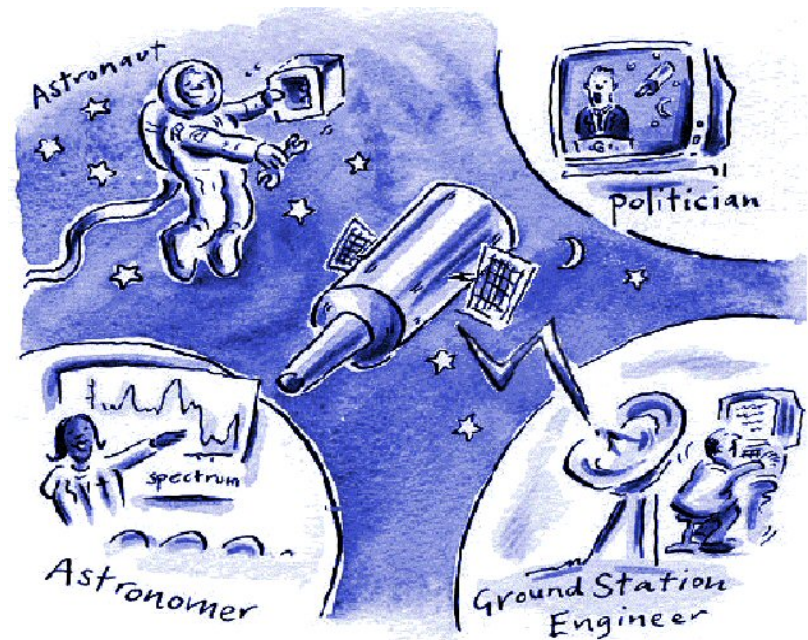
Where are we now?

- Greater complexity
- More relationships with more diversity
- More emphasis on production chains
- Outputs are inputs for other systems/sectors
- Emergence and awareness of opportunities
- Changes in role of experts



4. Systems Thinking

- **Conceptual framework** – knowledge and tools that help make **full patterns** clearer and see how to make change effectively





Ecological Perspective

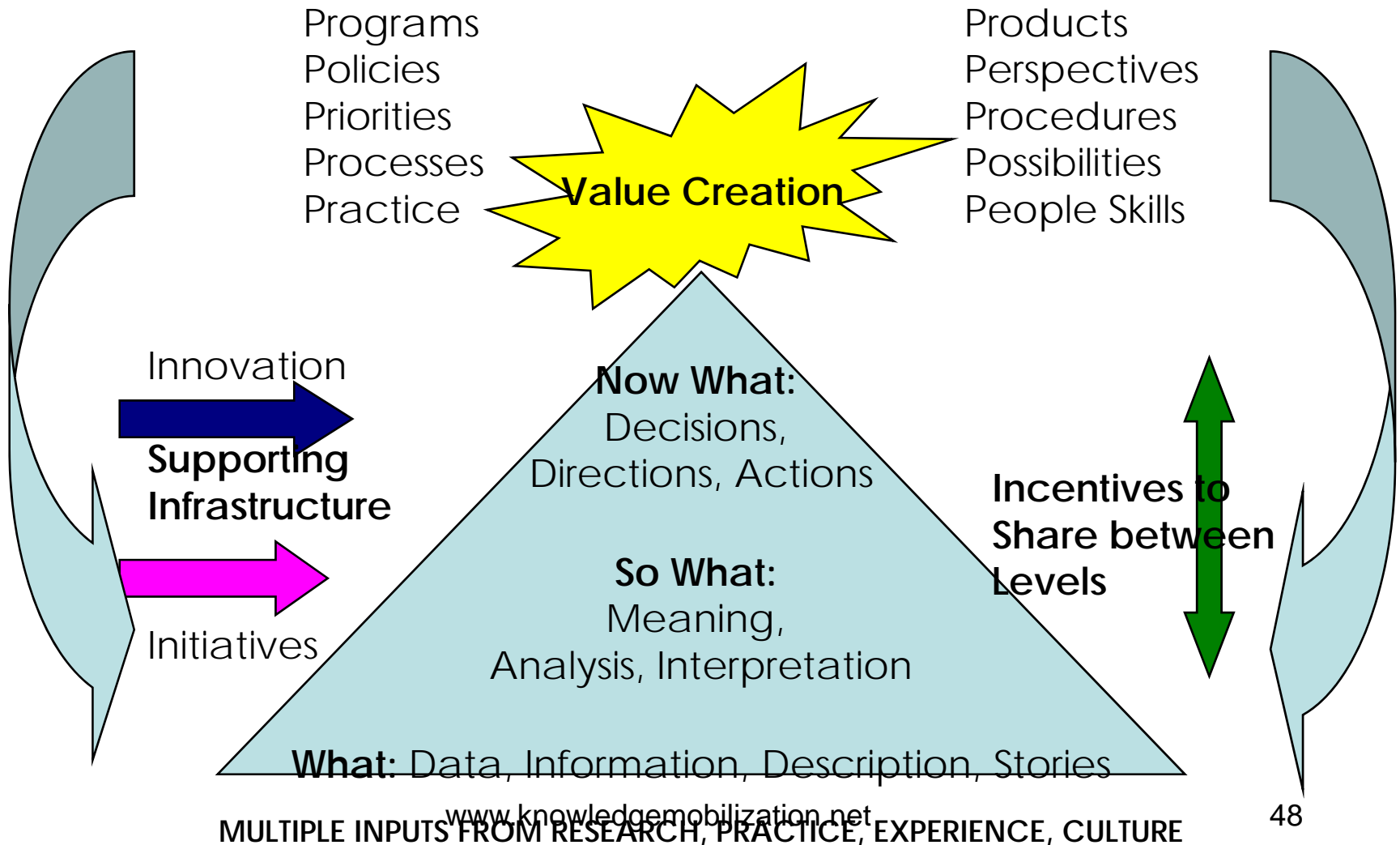
- the relations of organisms to one another and their physical surroundings

(Canadian Oxford Dictionary, 2004)

- suggest that we also add relations to our conceptual surroundings: data, information, culture, behavior, work, politics, processes, technology...

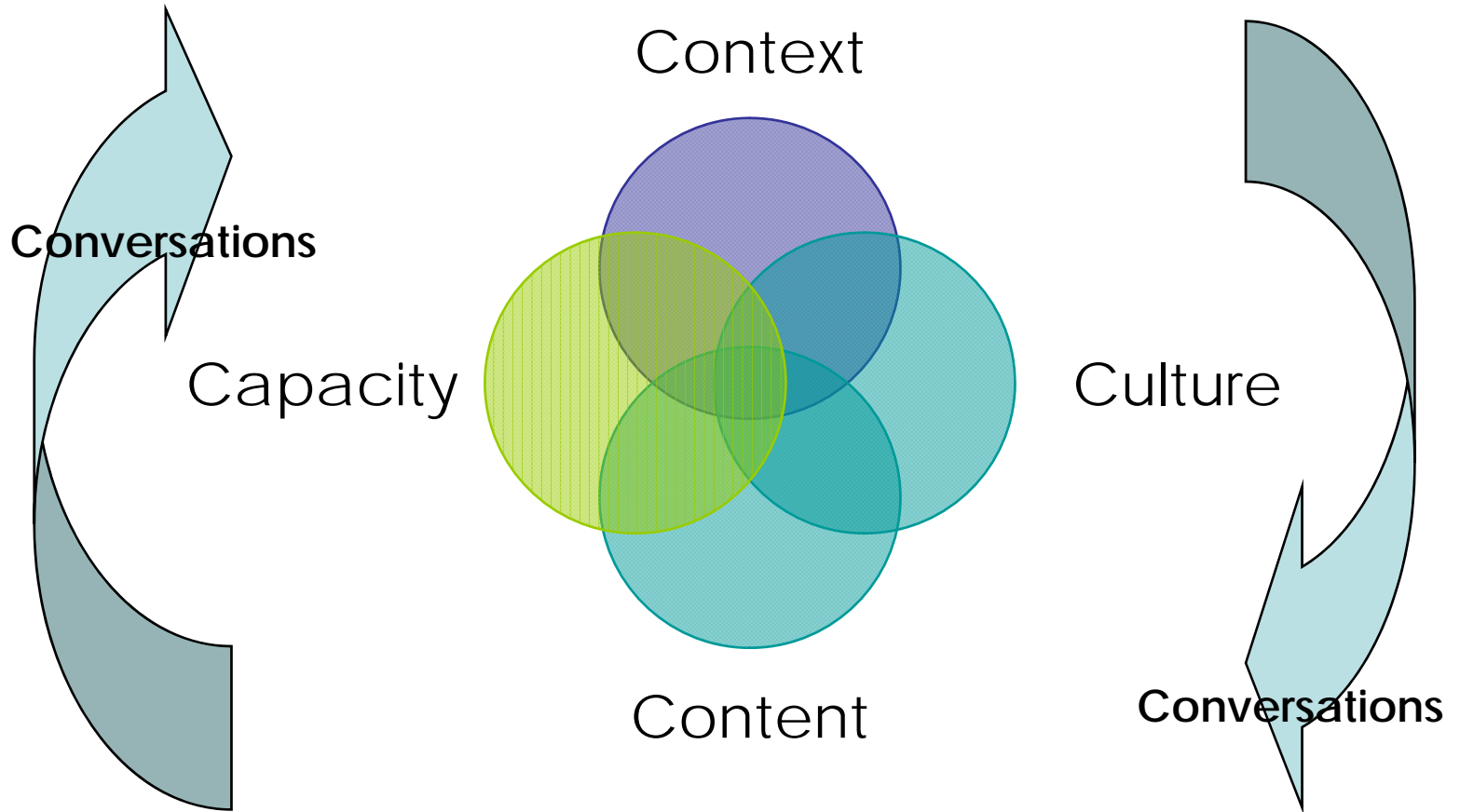


What? So What? Now What?





Core Concepts





Example for Content: Relationships between all sources

Factors Influencing Policy Making in Government



Philip Davies, *Is Evidence-Based Government Possible?*
Jerry Lee Lecture 2004, Washington, DC



Stakeholder

Ongoing Feedback
Synthesis, KT methods

Method 1

Method 2

Method 3

Stakeholder

Stakeholder

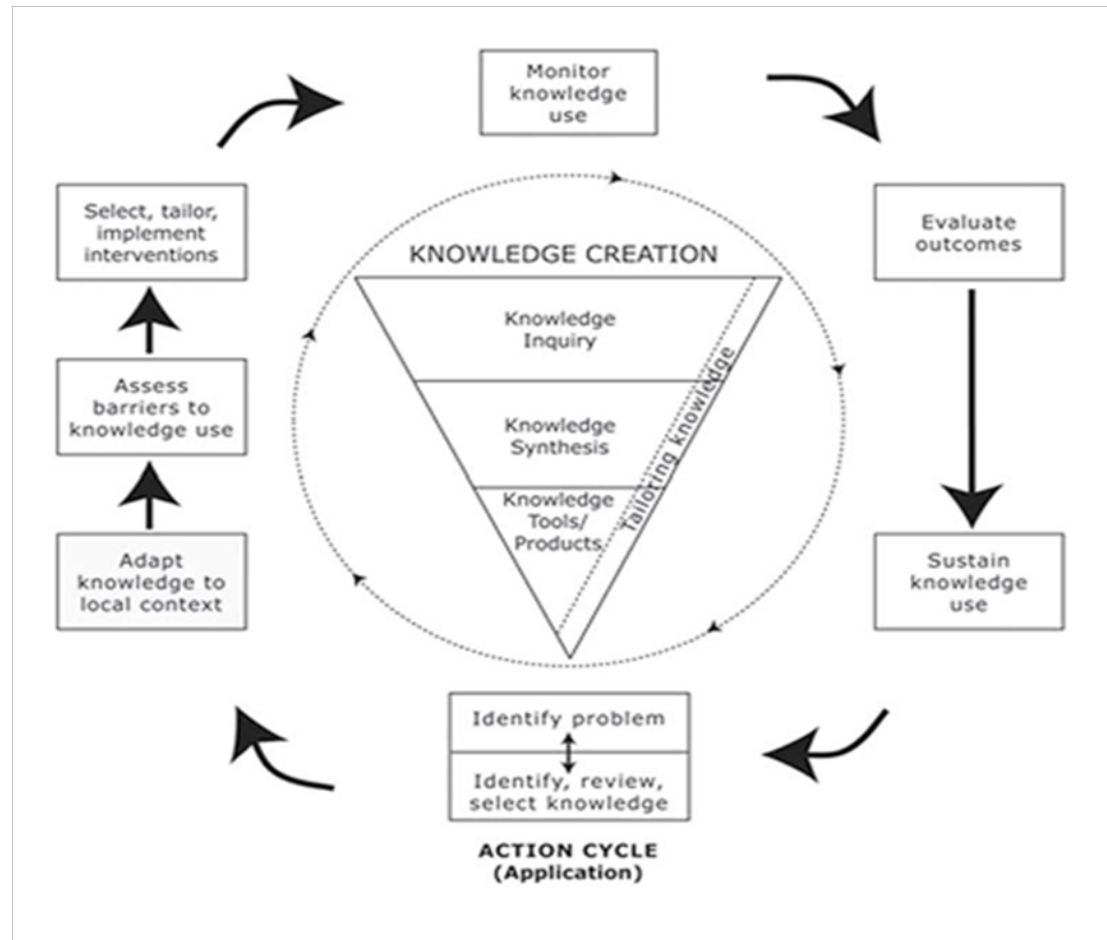
Research Community

Stakeholder

Ongoing
Feedback on
needs, data, &
opportunities



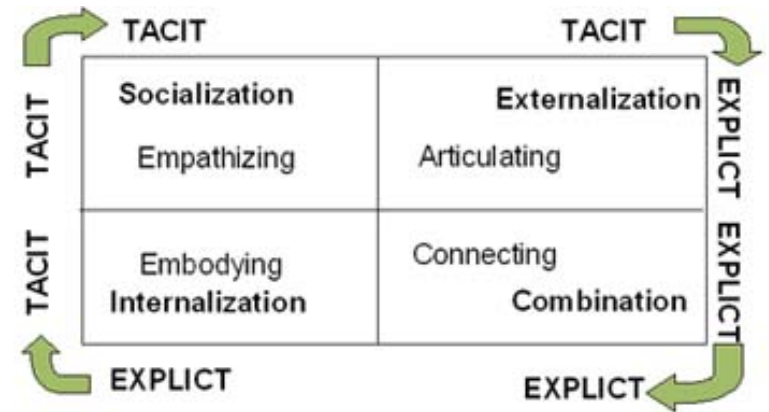
CIHR Knowledge to Action





SECI Model

- Two forms of knowledge (tacit and explicit)
- An interaction dynamic (transfer)
- Three levels of social aggregation (individual, group, and context)
- Four knowledge-creating processes
 - **s**ocialization,
 - **e**xternalization,
 - **c**ombination and
 - **i**nternalization



Ikujiro Nonaka, 1991



Ba Model

- knowledge is context dependent; it cannot be separated from its place if it is to be meaningful. As a result, each knowledge-creating process requires a **Ba** (place):
 - **Originating Ba**: a space where individuals share feelings, emotions, experiences, and mental models.
 - **Interacting Ba**: a space where tacit knowledge is made explicit. Two key factors are dialogue and metaphors.
 - **Cyber Ba**: a space of interaction in a virtual world. Implicates the combination of new and existing explicit knowledge to generate new explicit knowledge throughout the organization.
 - **Exercising Ba**: a space that facilitates the conversion of explicit knowledge into tacit knowledge.

Nonaka, Konno, 1998



DKCU Model

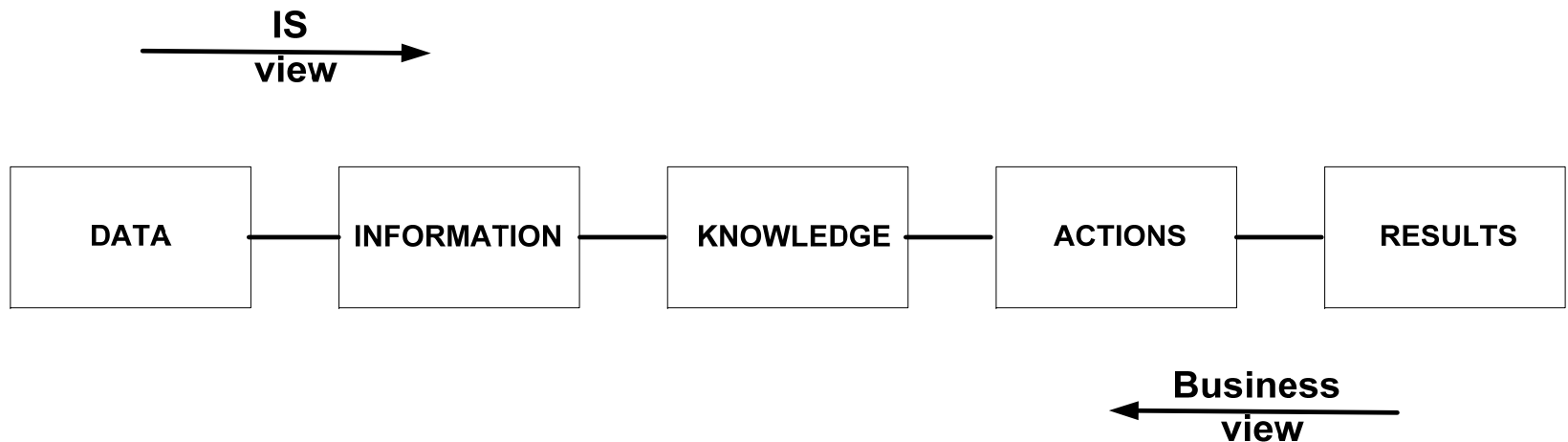
- **Dynamic systems for knowledge creation and utilization**
- promote the spiral of the SECI process
- establish a dynamic balance on the fine line between exploration and exploitation
- integrate changing contexts and creative routines
- synchronically and diachronically create and utilize knowledge in everyday organizational practice
- juxtapose structural (hard) and process (soft) components to create context in motion (Ba)

Despres 2002 90



The DIKAR Model

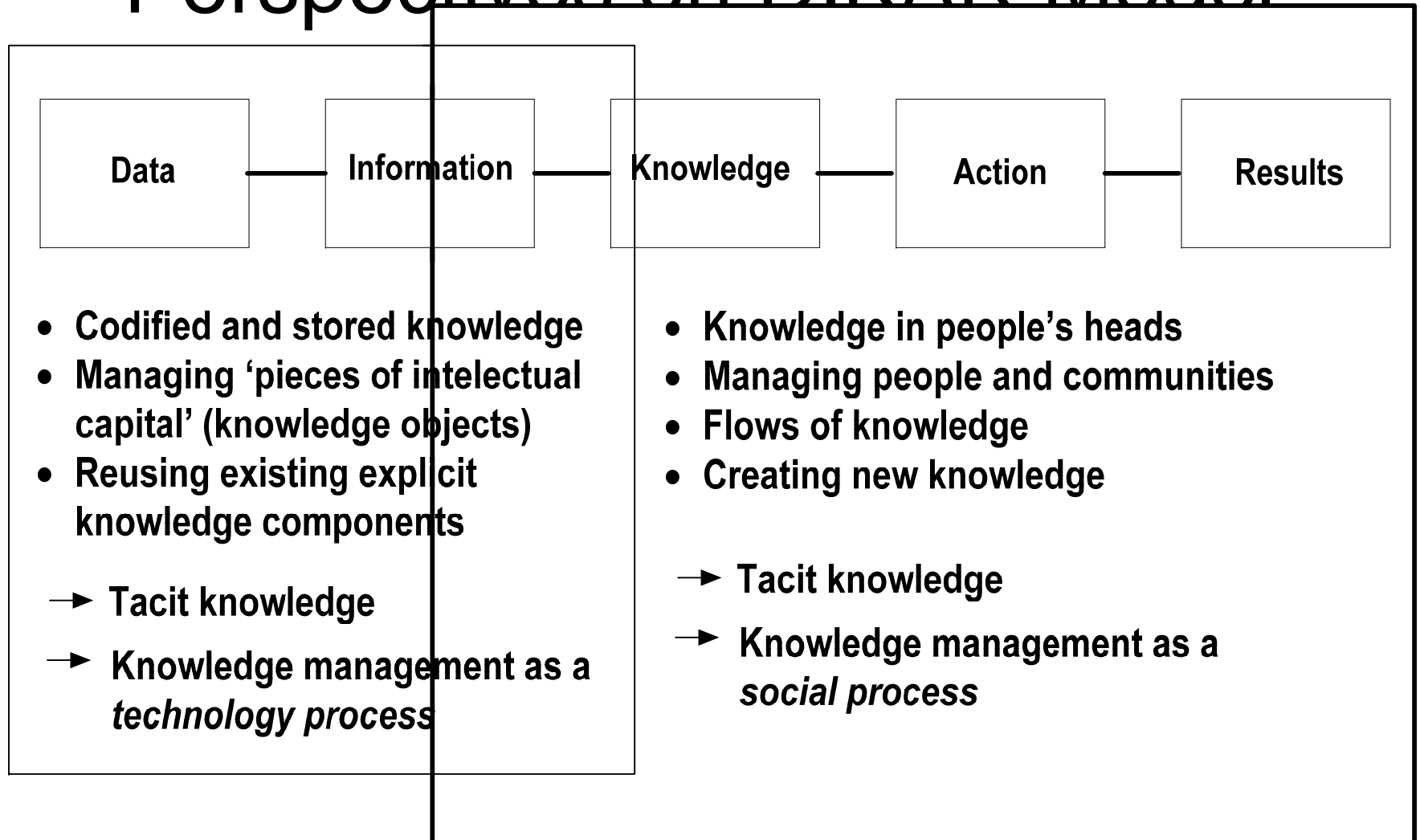
- The DIKAR is a model that helps locate packages knowledge and diffuse knowledge within a business-related context.





Mapping Knowledge

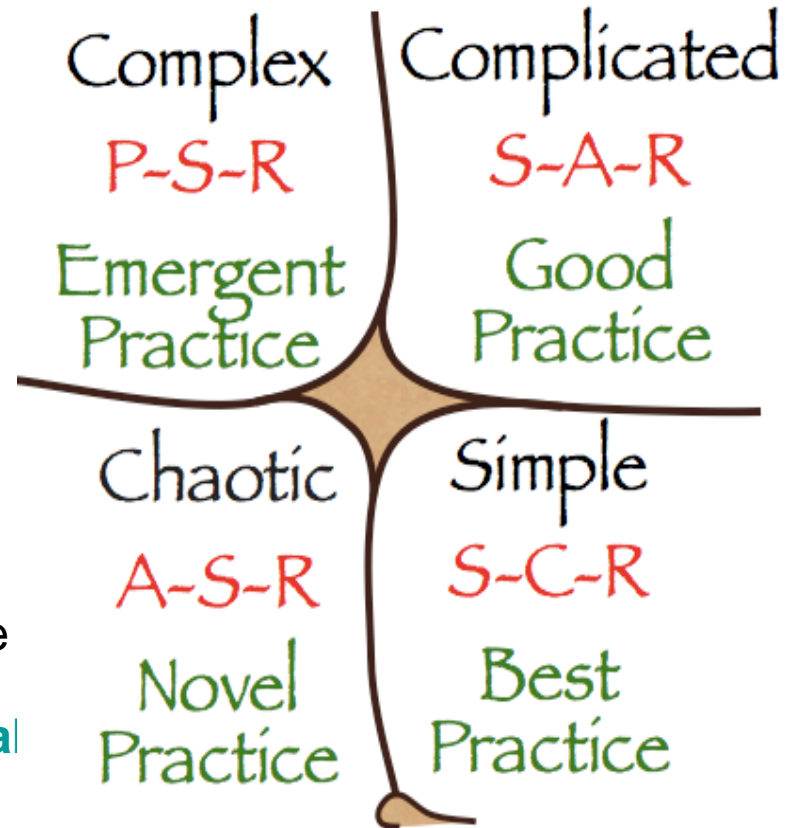
Perspectives on DIKAR Model





Cynefin Model

- differs from Ba -no specific English translation; interpreted as the **relationship that exists between, birth, upbringing, and the environment one was raised in or acclimatized**
- emphasizes that implementing a knowledge system cannot start from ground zero, all layers in that system come with the baggage, positive and negative derived from multiple histories
- the model creates four open spaces or domains of knowledge all of which have validity within different contexts: **informal interdependent, professional logic, uncharted innovative, and bureaucratic structured**





CHSRF

Self Assessment Tool

- **Acquire evidence**
 - Can the organization find the research evidence it needs?
- **Assess evidence**
 - Can the organization assess whether the research is reliable and high-quality, and whether it is relevant and applicable?
- **Adapt its format**
 - Can the organization present the evidence to appropriate decision makers in a useful format, which synthesizes recommendations, conclusions and key issues?
- **Apply it in decisions**
 - Does the organization have the skills, structures, processes and corporate culture to promote and use research evidence in decision-making?

http://www.chsrf.ca/other_documents/working_e.php



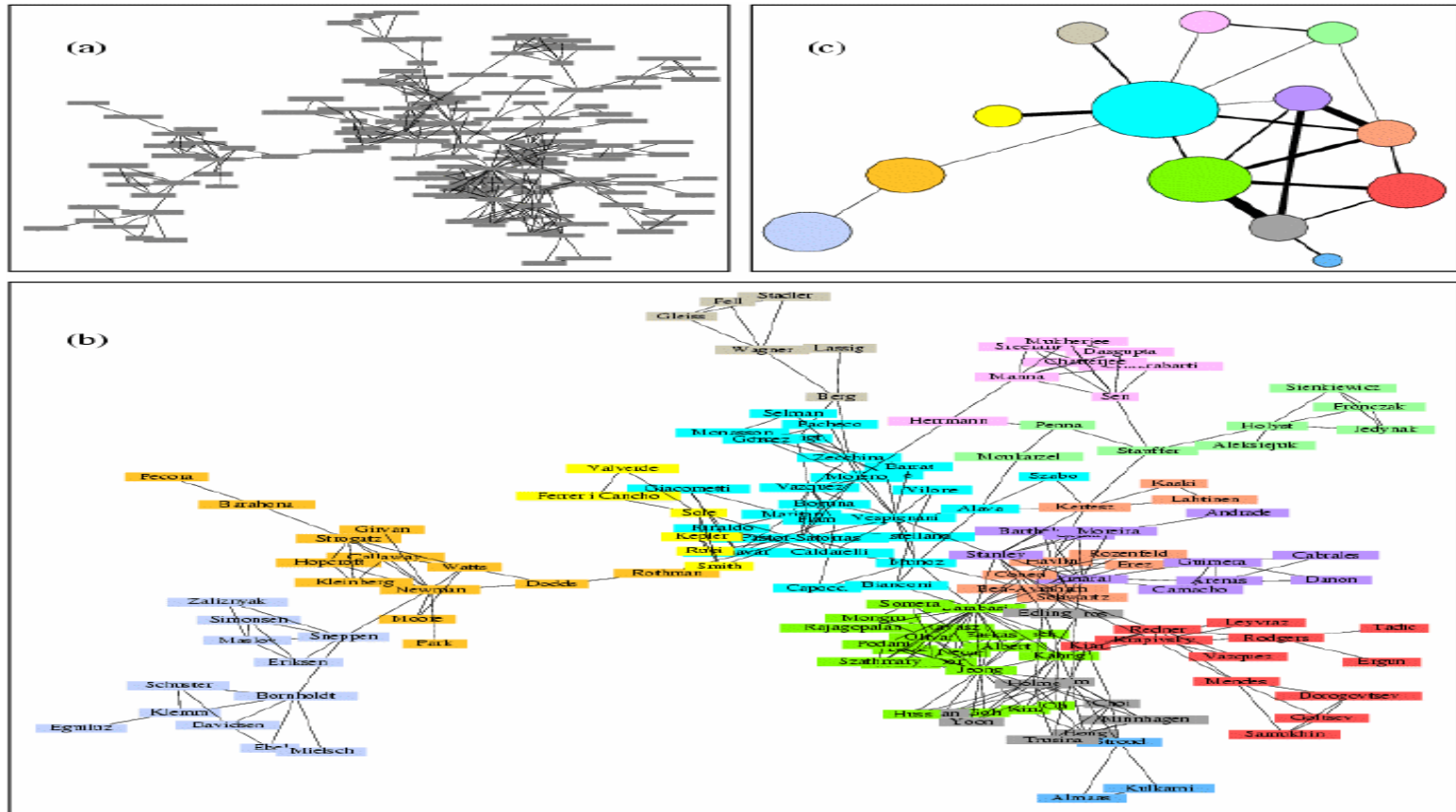
KMb: Basic Methods

- Réjean Landry, of l'Université Laval, has shown that the greatest value from knowledge mobilization happens when we LINK and EXCHANGE. Yet most KmB activities are still based on PUSH and PULL.





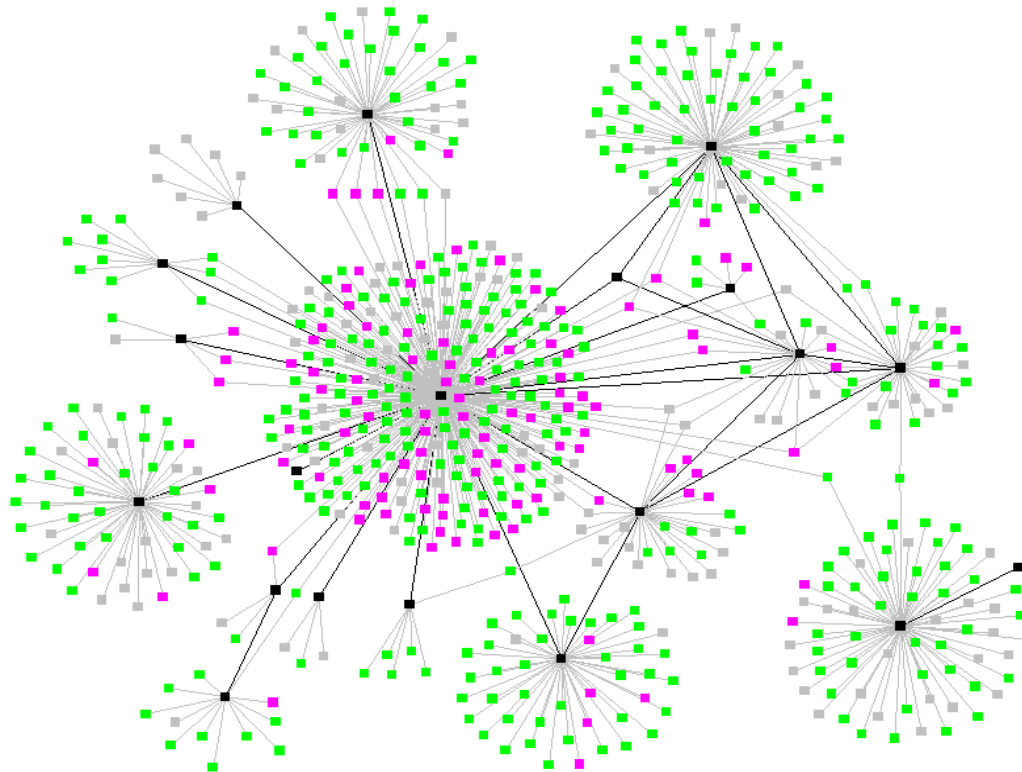
Network Images: Collaboration of Physicists



<http://www-personal.umich.edu/~mejn/networks/collab.gif>



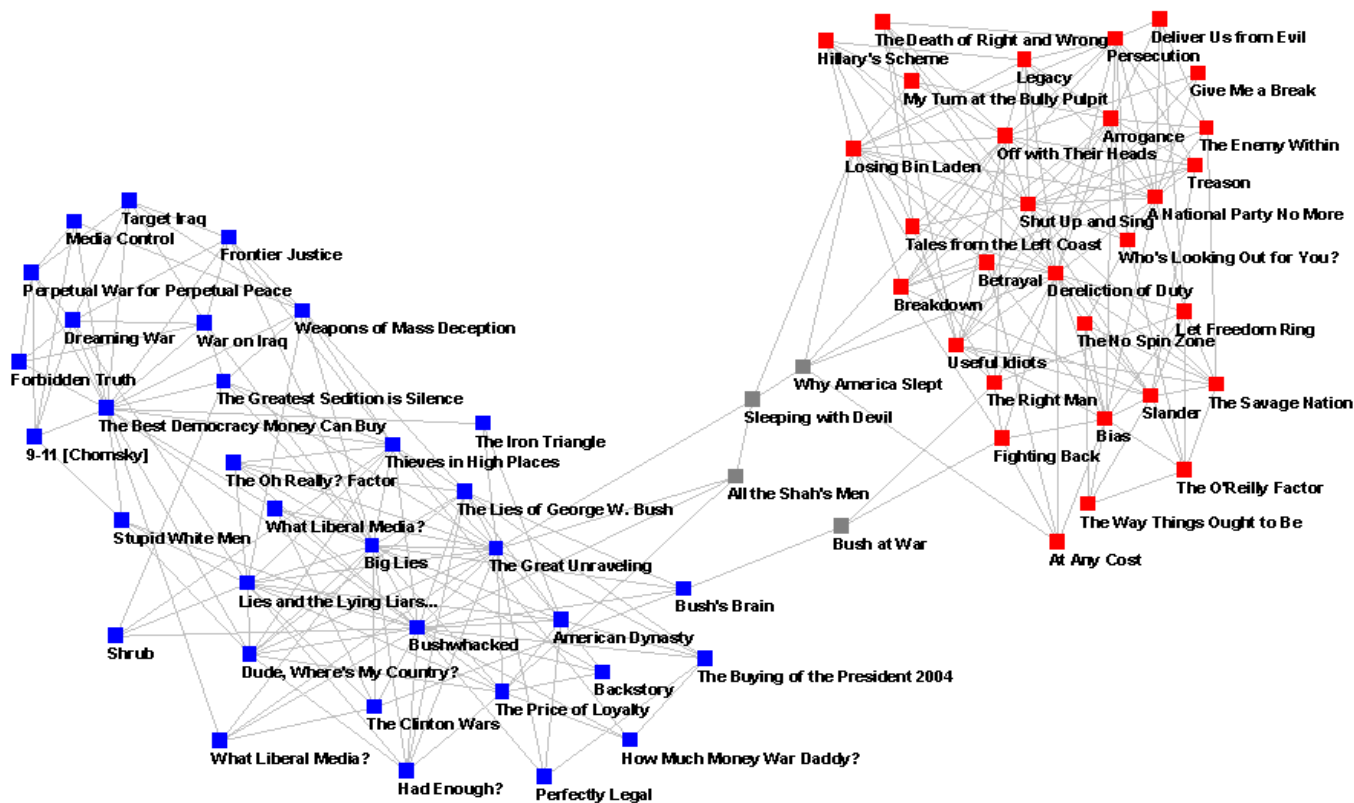
Network Images: Tuberculosis Infection



<http://www-personal.umich.edu/~mejn/networks/contagion.gif>



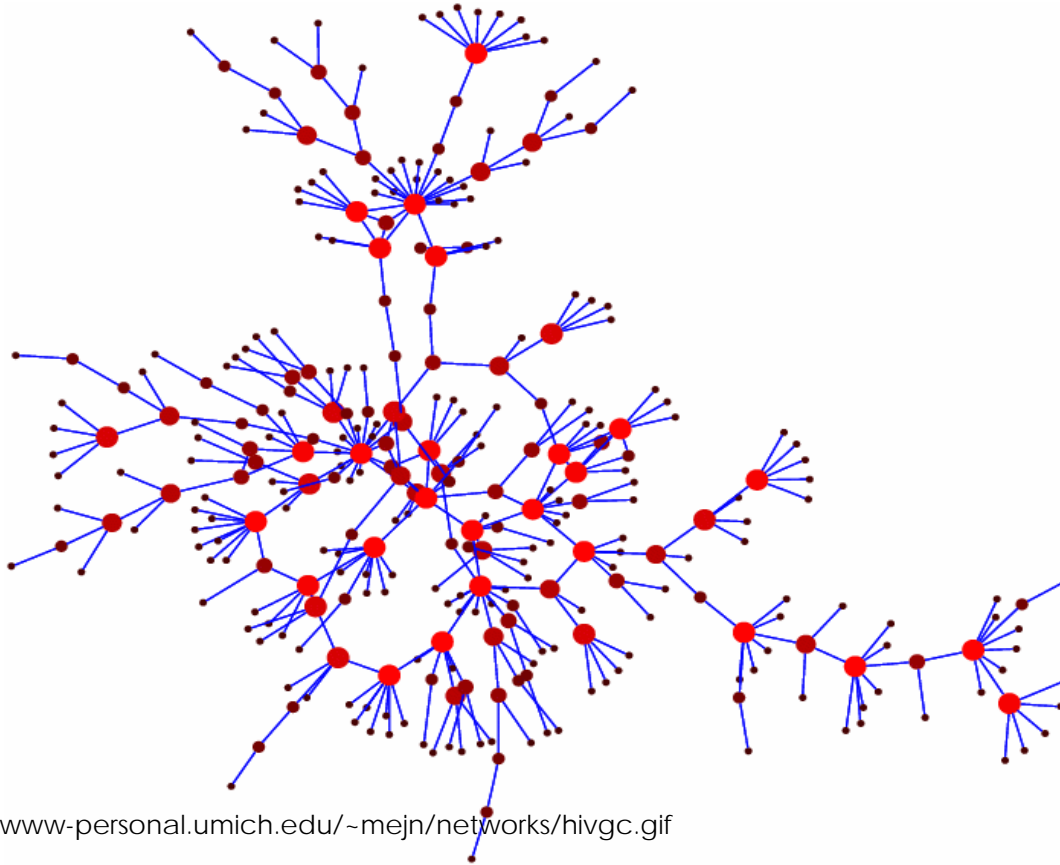
Network Images: USA Election 2004 Books



<http://www-personal.umich.edu/~mejn/networks/divided2004.gif>



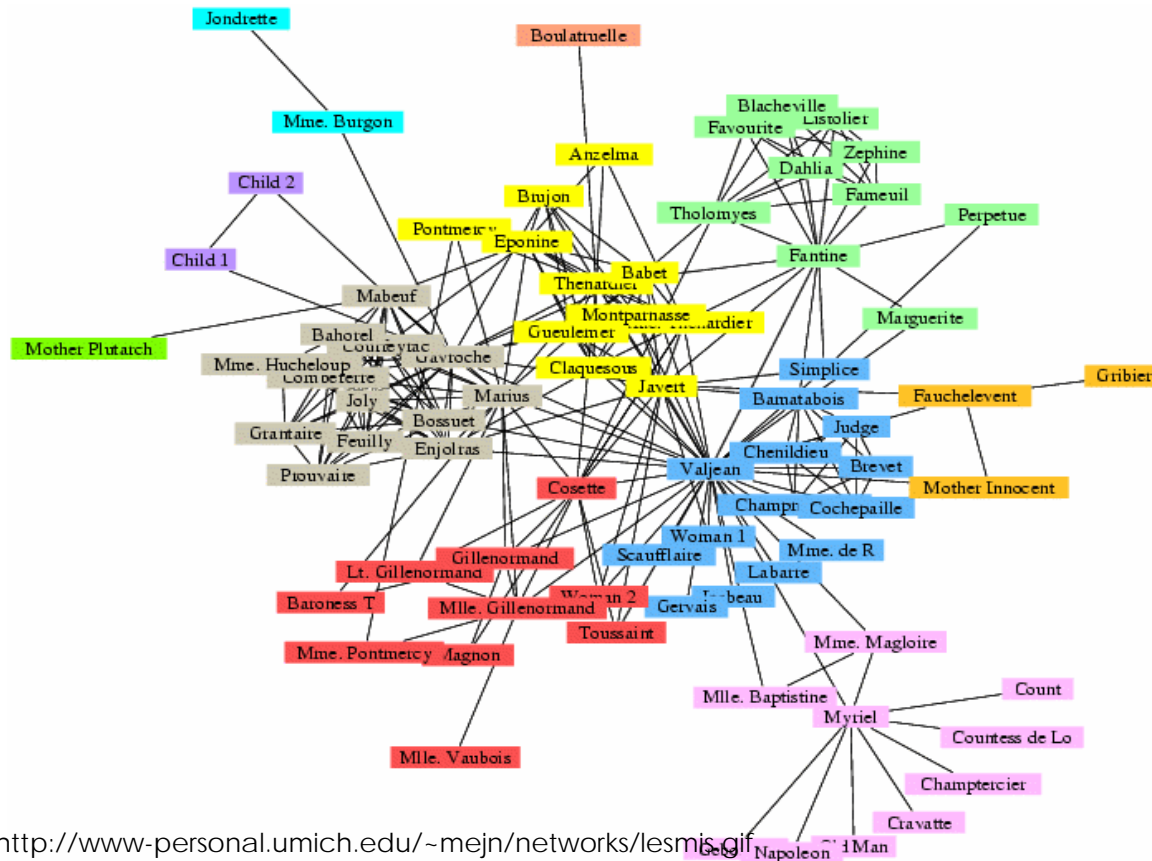
Network Images: HIV Contacts



<http://www-personal.umich.edu/~mejn/networks/hivgc.gif>



Network Images: Les Misérables



<http://www-personal.umich.edu/~mejn/networks/lesmis.gif>



Exchange





Social Networking





5. Grants Success

Top 5 reasons KMb is important for grant success

1. Granting Agencies require it.
2. Changing nature of expertise
3. Growing demand for collaboration and co-creation
4. New generational norms
5. Inflation of expectation of results



Requirements

- SSHRC: co-creative programs, organizational priority, full strategy as part of operational plan as of March '10
- CIHR: full portfolio of programs, learning modules, publications
- NSERC: long history of research and tech transfer



Expertise

- Experts not only based in universities
 - NGOs, QUANGOs, Business, Government all have people trained in research and analysis
 - Public demand for return on investment
 - Public demand for access
 - Speed of decision making has increased



Collaboration

- Trend internationally towards co-creation in research
- Groups no longer wish to be “subjects” of research and wish a say in development of questions, methods, analysis, and implementation
- Complexity of issues require multiple perspectives



New Norms

- Tapscott: Grown up Digital
 - Net Generation
 - Freedom
 - Customization
 - Scrutiny
 - Integrity
 - Collaboration
 - Entertainment
 - Speed
 - Innovation



Expectations

- Public dollars = public access
- Need it now and in format I can use
 - Decisions will still be made even if I do not have the evidence
- Conversations - networks have transformed the power relationships to knowledge
- Search - if it isn't available online, it doesn't exist



Next Session

- Choosing Appropriate Methods
 - Value Creation
 - Some Examples
 - Tools
 - Events
 - Publications
 - Meta Tools
 - Sustainability
 - KMb and Learners
 - Group Exercise



Q & A

- Questions
- Discussion