Change of Paradigm in Knowledge Management

Framework for the Collaborative Production and Exchange of Knowledge

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- A paradigm shift
- Knowledge warehouses vs knowledge networks
- New World Information and Communication Order - revisited
- Sky-writing, sky-communicating – the role of the media in the communication paradigm
- Collaborative learning
- Who owns knowledge in science?
- The role of libraries in the communication paradigm

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Right to communicate

The right to communicate seems the most obvious thing in the world, in particular in a world where information and communication technologies are the driving force in all domains of modern society.

Right to communicate

The right to communicate seems a basic right, a natural right, so fundamental that the founders of the Universal Declaration of Humans Rights and most other Covenants, Conventions, Charters etc. did not feel compelled to mention it explicitly or to enshrine it in the canon of universal rights and values.

Right to communicate

The right to communicate can even be considered a distinctive characteristic of the human race.

But amazingly enough the right to communicate is one of the most controversial topics of the international debate in the last 50 years.

Objective of traditional knowledge management

The objectives of traditional knowledge management in a nutshell: to know what an organization in principle knows and to make that knowledge available to the right people at the right time.

Knowledge management approaches

Knowledge warehouse approach

Network or communication approach to knowledge management

Telemediatization

"Telemediatization" is a cover term for the potentials of telecommunication (electronic communication via networks), informatics (electronic information processing) and multi-/hypermedia (non-linear multi-modal knowledge representation and usage).

Networks –coordination - management

"Networks allow greater creativity and innovative power because they reduce barriers and constraints inherent to hierarchies.
But networks need coordination.
Coordination is another word for management.

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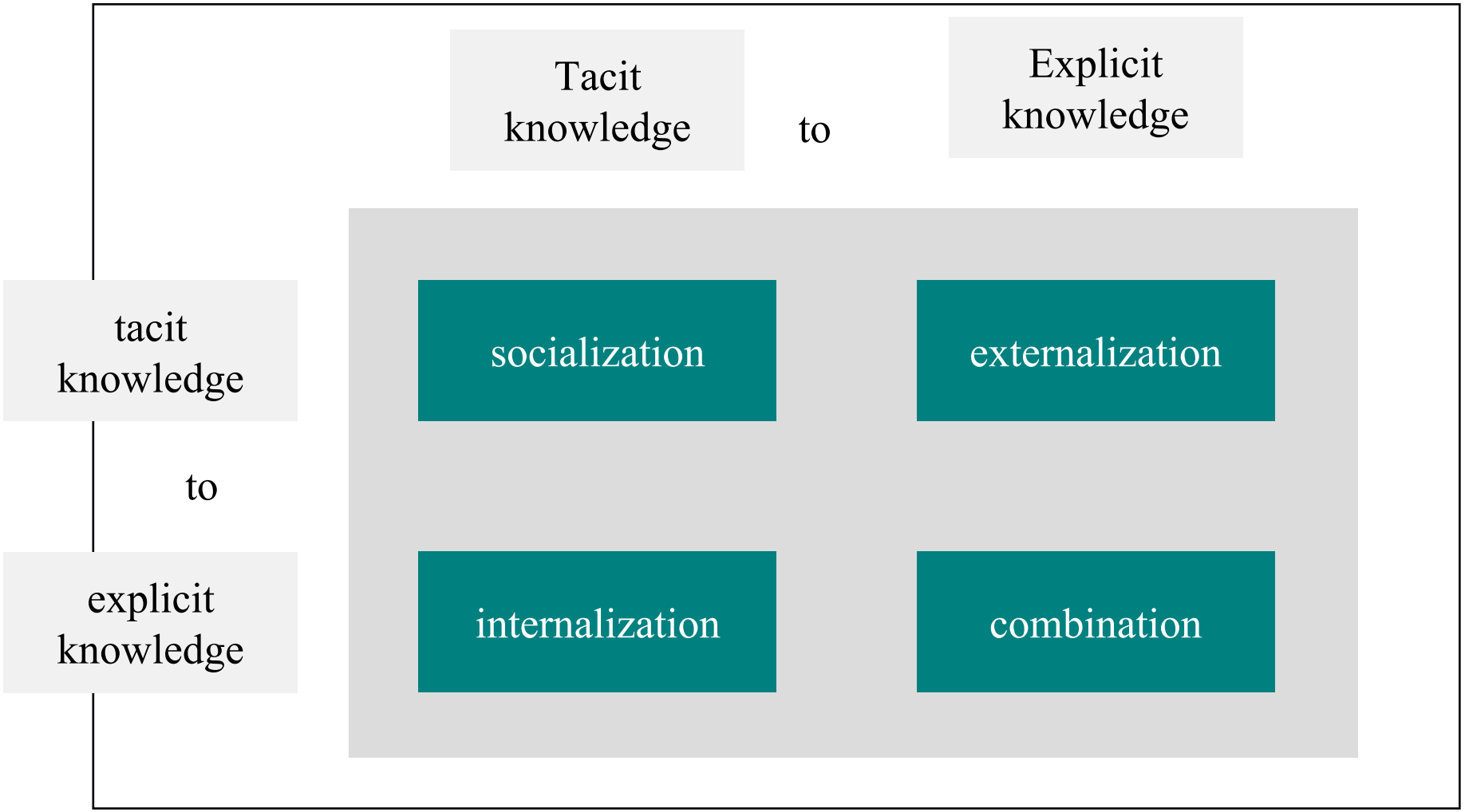
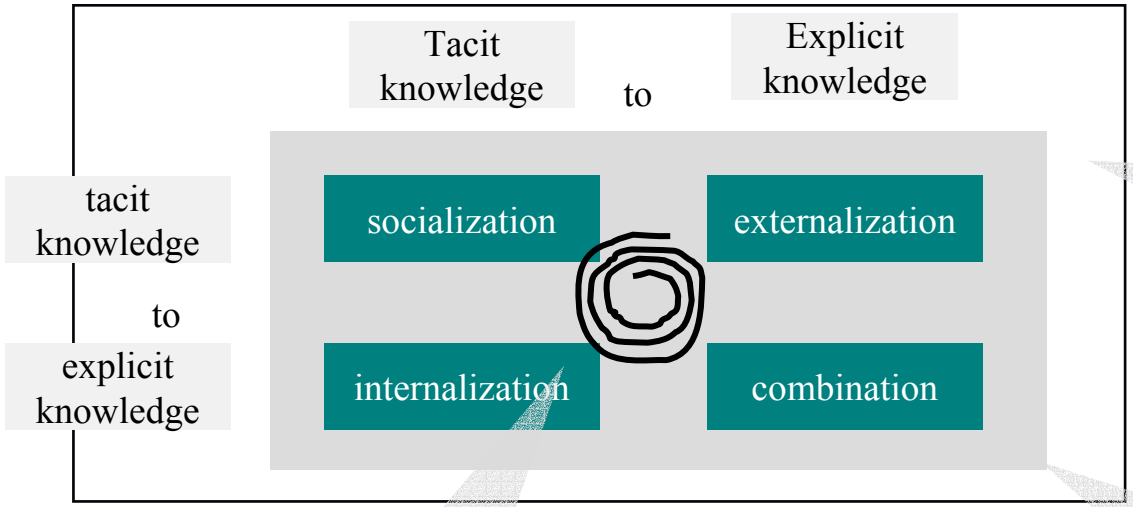
Management of knowledge

Knowledge, an internal cognitive structure of human beings, cannot be managed,
but the processes that support the creation and exchange of knowledge can be the subject of management,
in particular those processes where many knowledge actors are involved.

Tacit (implicit) – Explicit knowledge



Tacit (implicit) – formalized (explicit) knowledge



Transformation of tacit knowledge into explicit knowledge, mainly through representation, codification, standardization

Generation of new explicit knowledge through categorization, synthesis, combination, integration into existing knowledge structures

Interpersonal exchange of tacit knowledge through observation, cooperation, common experience

Transformation of explicit knowledge into tacit knowledge, mainly through learning, simulation, reorganization

The Personal knowledge evolution cycle

Knowledge Research Institute, Karl WIIG
http://www.krii.com/downloads/personal_knowl.pdf

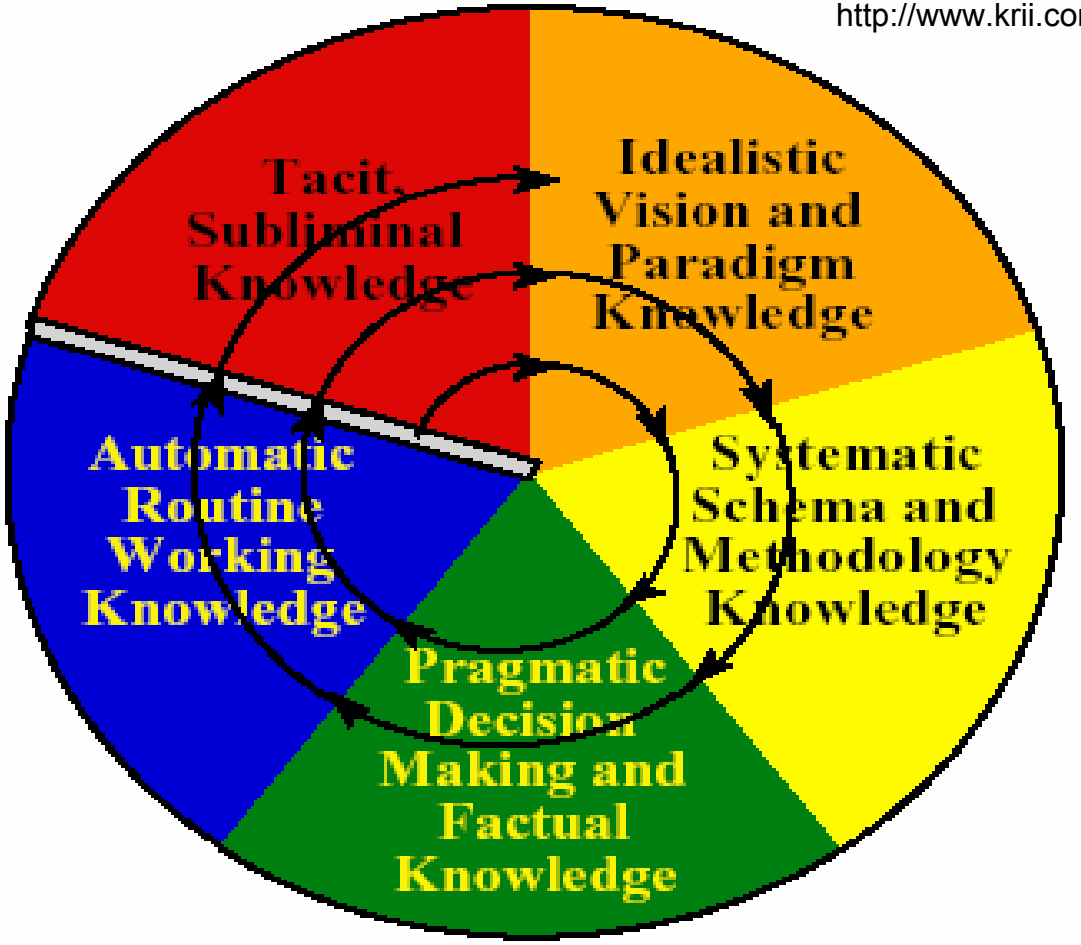
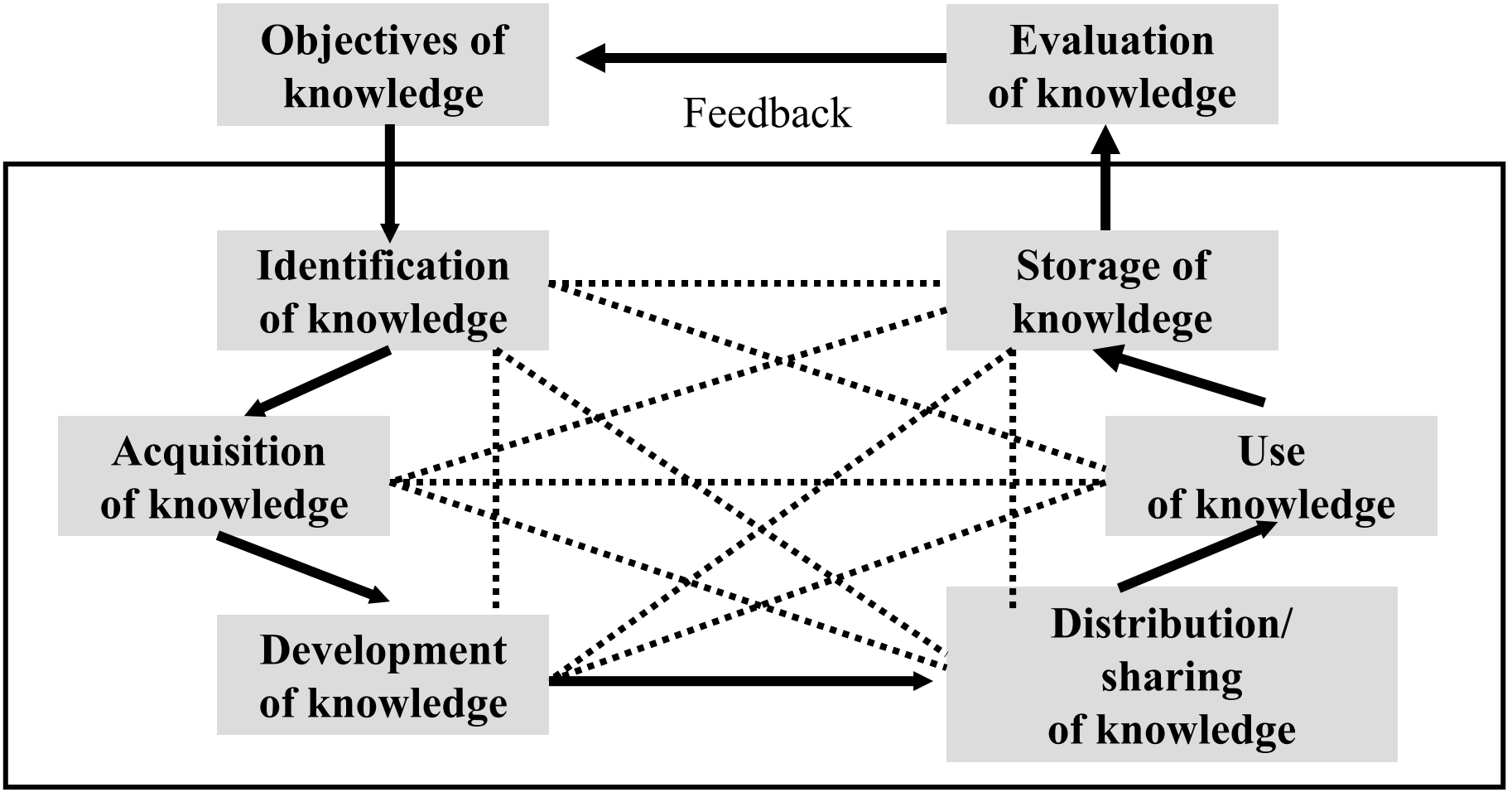


Figure 2. The Personal Knowledge Evolution Cycle.

Elements of knowledge management (Probst et al. 1999



: http://www.cck.uni-kl.de/wmk/papers/public/Bausteine/bausteine.pdf

The Institutional knowledge evolution cycle

Knowledge Research Institute, Karl WIIG
http://www.krii.com/downloads/instit_knowl.pdf

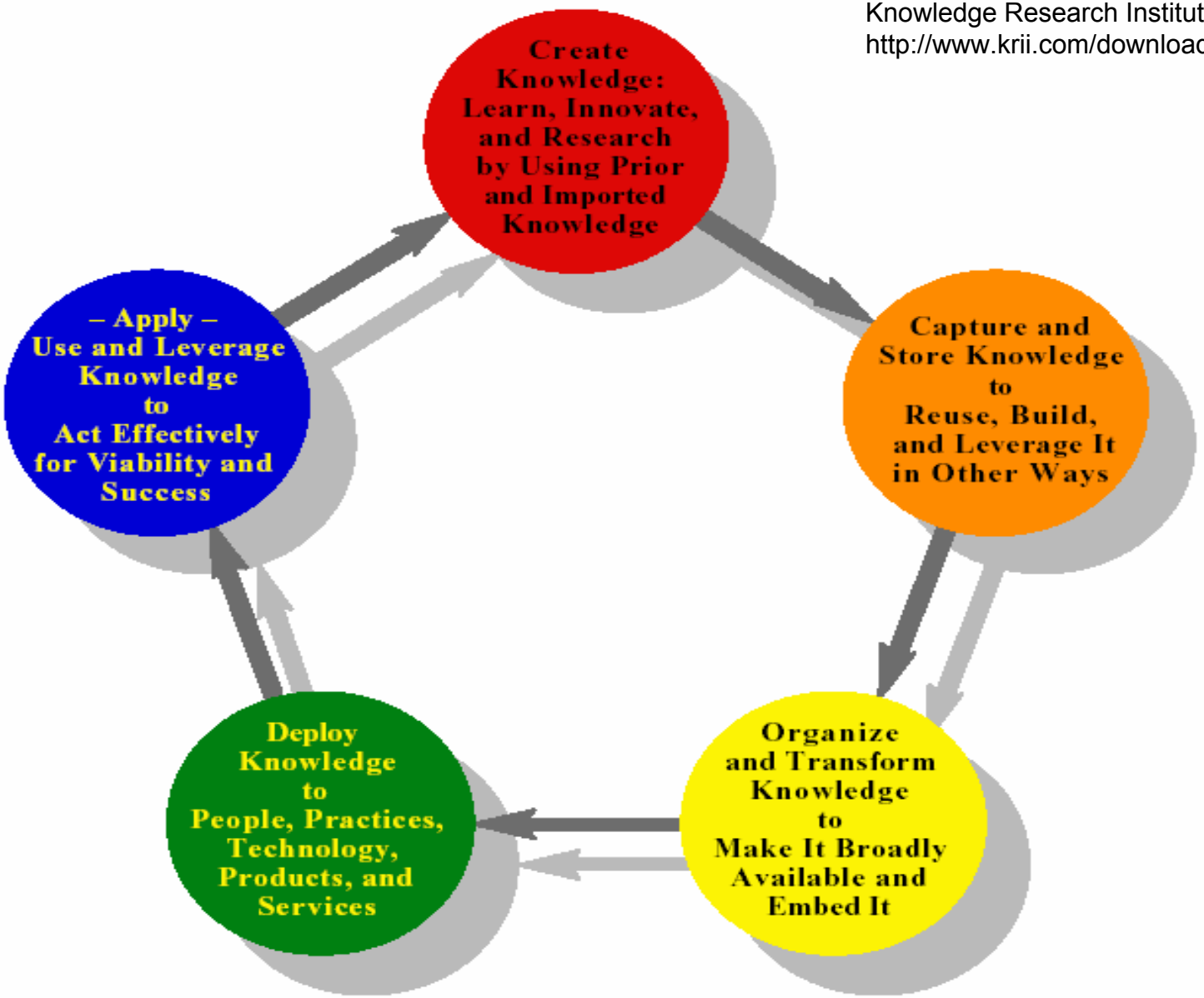


Figure 1. The Institutional Knowledge Evolution Cycle.

The Institutional knowledge evolution cycle

Knowledge Research Institute, Karl WIIG
http://www.krii.com/downloads/instit_knowl.pdf

Knowledge Development. Knowledge is developed through learning, innovation, creativity, and importation from outside

Knowledge Acquisition. Knowledge is captured and retained for use and further treatment

Knowledge Refinement. Knowledge is organized, transformed, or included in written material, knowledge bases, and so on to make it available and useful

The Institutional knowledge evolution cycle

Knowledge Research Institute, Karl WIIG
http://www.krii.com/downloads/instit_knowl.pdf

Knowledge Distribution and Deployment. Knowledge is distributed to Points-of-Action (PoAs) through education, training programs, automated knowledge-based systems, expert networks

Knowledge Leveraging. Knowledge is applied or otherwise leveraged. By using (applying) knowledge, it becomes the basis for further learning and innovation.

Knowledge warehouses

- collect existing knowledge

- transform tacit knowledge into explicit knowledge by representing and structuring it

- store knowledge in data - or rather knowledge - bases

Knowledge warehouses

- make knowledge available by providing access through traditional retrieval/query languages and through more sophisticated data mining techniques and

- make knowledge user-friendly and adaptable to heterogeneous user profiles by presenting the results in flexible sophisticated forms of visualization.

Computers

- Computers are syntax machines, at an advanced stage they are semantic machines.
- But pragmatics, the ability to identify the validity and the relevance of knowledge (in machine reality data), is still the privilege, the knowledge competence of human being.
- Computers do not have what philosophers call “Urteilskraft” (the power of judgement).

Virtual Communities – Definition - Rheingold

"*Virtual communities* are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace.
(Rheingold: „The Virtual Community„)

Online-Version
http://www.rheingold.com/vc/book/

Virtual Communities – The Well

THE WELL

The WELL is an online gathering place like no other -- remarkably uninhibited, intelligent, and iconoclastic. For more than seventeen years, it's been a literate watering hole for thinkers from all walks of life, be they artists, journalists, programmers, educators or activists. These WELL members return to The WELL, often daily, to engage in discussion, swap information, express their convictions and greet their friends in online forums known as WELL Conferences.

Over the years, WELL members have made fast friends, created enduring traditions, gathered casually face-to-face in cities 'round the world, provided support and mentoring to strangers, developed feuds, gone into business, fallen in and out of love...

http://www.well.com/aboutwell.html

Value-added effects of communication Forums

- Electronic communication forums allow the exchange of information between people who in real life would normally never be in contact with one another.

- Electronic communication forums bring together people with different (personal, professional, intellectual) backgrounds.

Value-added effects of communication Forums

- Electronic communication forums build continuous knowledge bases which are open to all members of the forum. Knowledge bases are normally enriched by links/references to external resources.

- In electronic communication forums only what has been said counts. Reputation is not defined by one´s position in the organizational hierarchy, but is a function of the contributions made by the forum's participants.

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Art 19 Universal Declaration of Human Rights

"Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers."

Underlying interests in the old NWICO debate

- A struggle of developing countries in the South to protect their national cultural identity, which is threatened by the predominance of Western cultural, information and media products?

- A protest against the ongoing process of commercialization of knowledge and information, the protest against the exploitation of indigenous knowledge and culture, which is the heritage of their national public sphere (what we today call the public commons)?

Underlying interests in the old NWICO debate

- A defense – from the Western perspective - of freedom of expression, a concern that the free press is threatened by governments which use their monopoly status in communication technology as a lever for corruption and patronage?

Underlying interests in the old NWICO debate

Or merely a fight for economic dominance in the global markets for information, communication and the media,

which developed in the 70s in the form of online information markets, of globally operating information technology corporations, international telecommunication and commercial media organizations,

all of them dominated by the countries of the West and the North, strongly under the leadership of US-based organizations?

Ambivalence or multivalence of communication (McBride)

- "Communication can be an instrument of power, a revolutionary weapon, a commercial product, or a means of education;
- it can serve the ends of either liberation or of oppression, of either the growth of the individual personality or of drilling human beings into uniformity.
- Each society must choose the best way to approach the task facing all of us and to fund the means to overcome the material, social and political constraints that impede progress"

Ambivalence or multivalence of communication (McBride)

- "Communication needs in an democratic society should be met by the extension of specific rights such as the right to be informed, the right to inform, the right to privacy, the right to participate in public communication –
- all elements of a new concept, the right to communicate.
- In developing what might be called a new era of social rights, we suggest all the implications of the right to communicate be further explored"

Rights

- Rights do not fall from heaven and cannot be derived from metaphysics, religion or by reference to nature.
- All of these rights have been developed under specific circumstances and while these circumstances may change, mainly due to technological, media and societal paradigm shifts,
- they need to be constructively interpreted and enforced, taking into account the potentials and opportunities of contemporary information and communication technologies and services today.

Changes

- Knowledge production and exchange is no longer primarily an individual process, but is more and more a participative and collaborative process.

- Knowledge production and exchange is no longer dependent on primarily hierarchically structured and controlled institutions but is open for everyone.

Communication rights

- *Societies with open communication structures for everyone can challenge media concentration and media monopolies*

- *Communication rights can enable access to information by those who often face exclusion from knowledge and information (people in developing countries, disabled people, young people, women)*

Communication rights

- *Communication rights if guaranteed for everyone can contribute to censorship-free societies and are the best means for building democratic and transparent government structures*

- *Communication rights and collaborative knowledge production are the basis for scientific development, new ideas and for economic innovation and growth.*

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Media in the electronic environment

- Is the opinion-building role of the traditional media, one of the major guarantors of democratic societies, still valid in an environment where everyone has the possibility of sky-writing and sky-communicating?

Media in the electronic environment

- Is there still a need for the media in the distribution paradigm when the Internet can be used as a means of making one's own knowledge available to others and of contacting other people to a degree unthinkable in the traditional media communication environment?

Media in the electronic environment

- Do we still acceptthe claim of professional journalists claim to be the knowledge managers of our daily life when we can manage it by ourselves?

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Publishing in science

- Is there still a need for a commercially exploitable right to intellectual property, considered by many, in particular in the information/publishing industry, as the necessary incentive for the production of knowledge?

Publishing in science

- Do we still need the intermediary role of commercial publishers who, in the currently enforced copyright paradigm, are used to being true and real owners of intellectual property rather than the authors themselves?

Publishing in science

- The production and publication of knowledge is part of the contract between scientists/researchers and the public.
- Scientists are of course the authors of their ideas and findings and they must be referenced as authors but their products should not be considered private property-
- They should therefore not give away their work to other people who transform these intellectual products into commercial goods which can be sold and licensed on information markets.

Publishing in science

- It is only due to media restrictions that authors or the institutions in which they work are not able to organize the publication of knowledge and the distribution of knowledge products themselves.
- This will change in the communicative paradigm of knowledge management.

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Infrastructure

- Knowledge management
- Management of information and communication technology
- Multimedia Management
- Communication Management
- Marketing/Rights Management

Infrastructure

- to monitor and coordinate the free flow of information
- to be the moderators in communication forums
- to provide people in forums with additional information from internal and external information resources
- to secure the rights of producers/authors of knowledge pieces
- to bind information together to new knowledge products, classify it and make it available for future knowledge workers
- to organize local and remote networks of scientific virtual communities

Conclusion

If there is a main message in my talk, then this one:

communication, broadly enhanced by modern technology, is the basis for most if not all processes in modern society.

Conclusion

The communciative paradigm shift will change the profile of librarians.

It will longer not mainly provide information but rather be a part of communication processes.

Conclusion

It is the duty of governments to guarantee the right to communicate to everyone.

Information or knowledge socities only deserve these labels when they are in reality inclusive and sustainable communication societies.

Thank you very much for your attention