

Knowledge Management

Enablers and barriers to knowledge sharing in organizations

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Christophe Muller – Maxime Chambreuil

The Nature of Work is Changing

“The most important contribution management needs to make in the 21st century is to increase the productivity of knowledge work and knowledge workers. It is on their productivity, above all, that the future prosperity-and indeed the future survival-of the developed economies will increasingly depend.”

- Peter Drucker, *Knowledge Worker Productivity: The Biggest Challenge*, California Management Review, pps. 79-94, V41 N2, Winter 1999.

Introduction

Information

Culture

Technology

Conclusion

Objectives

- Introduce Knowledge Management and its perspectives
- Explore the implementation of a KM system and define:
 - Barriers
 - Enablers
- Learn from an insightful and relevant case study
- Explore Future Recommendations



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KM Definition

- It is the process through which organizations generate value from their intellectual and knowledge-based assets. Most often, generating value from such assets involves sharing them among employees, departments and even with other companies in an effort to devise best practices.
- Aims of Knowledge Management Systems
 - Connect people with other knowledge people
 - Connect people with information
 - Enable the conversion of information to knowledge
 - Encapsulate knowledge, making it easier to transfer
 - Disseminate knowledge around the organization

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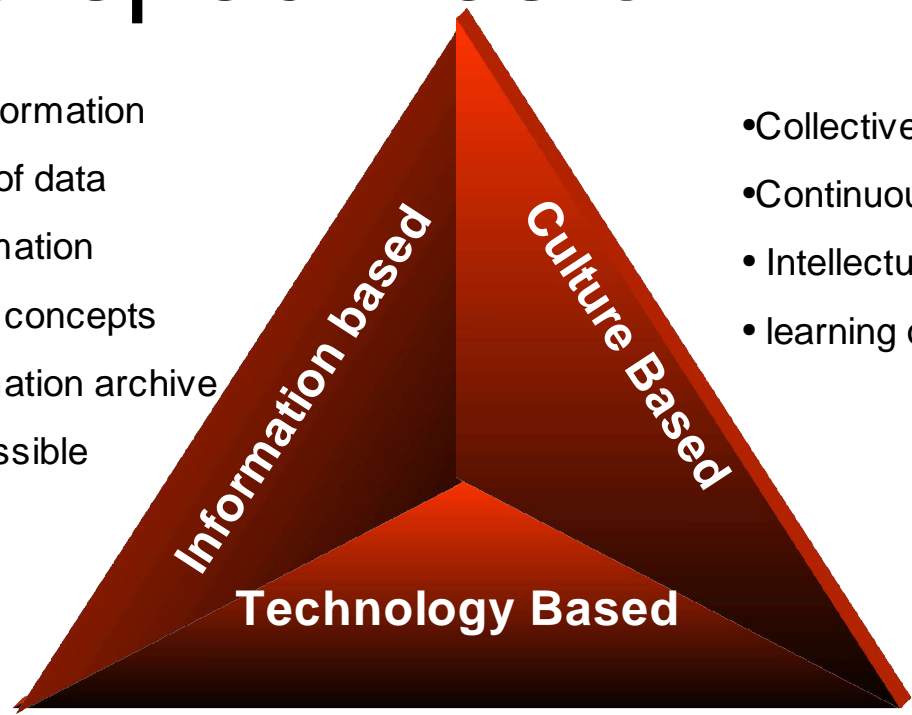
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Perspectives of KM

- Actionable Information
- Categorizing of data
- Filtered Information
- Free text and concepts
- People information archive
- Readily accessible information

- Collective Learning
- Continuous Learning
- Intellectual property cultivation
- learning organization



- Data mining
- Data warehouses
- Executive Information Systems
- Expert Systems
- Intelligent Agents
- Intranet
- Multimedia
- Search Engines

Effort Factor: Culture 70%, Information 20%, Technology 10%

Source: **Knowledge management systems: issues, challenges, and benefits**

Maryam Alayi, Dorothy E. Leidner (Univ. of Maryland at College Park, College Park)

Information Based Perspective

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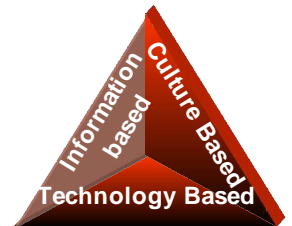
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Knowledge

- **Actionable Information:** Accessible for customer, client, competitor and market information
- **Categorizing of Data:** The information stored is an easily understood manner
- **Filtered Information:** reducing the overload of information by “filtering the gems from the rocks”.
- **People Information Archive:** people’s interactions with the System

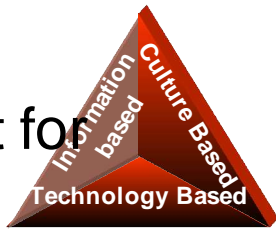




Information Based Factors

- **Budget benchmarks:**
 - Startup: > \$1 million
 - On-going development + maintenance > start-up

(Source: American Productivity & Quality Center (APQC))
- **‘Tailor made’ packages**
 - Ernst & Young’s "PowerPack" document collections
- **KM Is Not Static**
 - As with many physical assets, the value of knowledge can erode over time.
- **Not All Information Is Knowledge**
 - Companies diligently need to be on the lookout for information overload.



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Knowledge

Organizational Culture

Organizational Structure

Traditional: focus on solo vs Permeable culture: free flow of info regardless of employee role, job function, other traditional boundaries

Learning organizations: teams, workgroups

Communities of practice: Informal (issues and challenges)

Eg. World Bank (evolution)

Chief Knowledge Officer

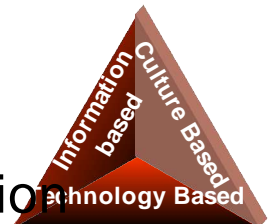
Leadership:

Champion (strong and dedicated: lead by example)

-Clear: vision, mission, objectives, and ethics code established within the organization

Aim: Endorse and sustain knowledge transfer

Also include middle management: day to day interaction



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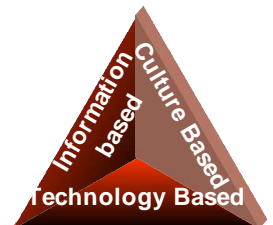


Knowledge

Organizational Culture

Processes

- Integrated factor: people and knowledge
 - types = knowledge generated vs knowledge managed
- Eg. World Bank
(streamlining and consolidating information, enabling info to flow seamlessly cross traditional silos)



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Organizational Culture

- **People: (information hoarding)**

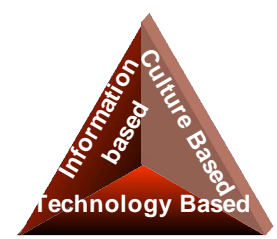
Employee competence, Teamwork, Motivation

- ***Trust***

- Employees needed reassurance that they were still valued after they gave up their knowledge (Williams, 2002; De Long and Fahey, 2000; Martin, 2000; Davenport and De Long, 1998).

Reward Systems

- Traditional financial measures
- 'knowledge is power'
- Intrinsic vs extrinsic rewards balance.
- Incentives must not be perceived as trivial
- Assessed against objectives



Technology Based Perspective

Case-study : INSA de Rouen

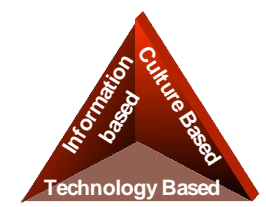
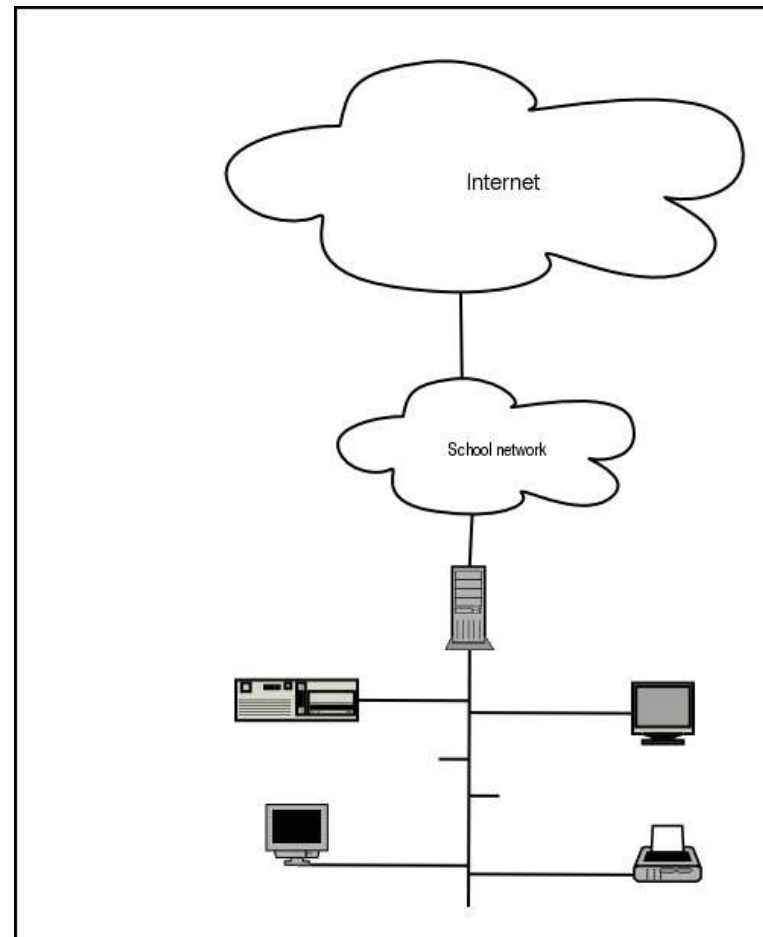
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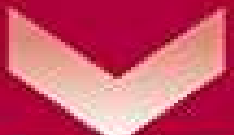
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Case-study : INSA de Rouen

- My Network Places :
 - Residence private network
 - Sharing documents, printers, etc...
- Webspaces :
 - 1 website for each student
 - Online forums

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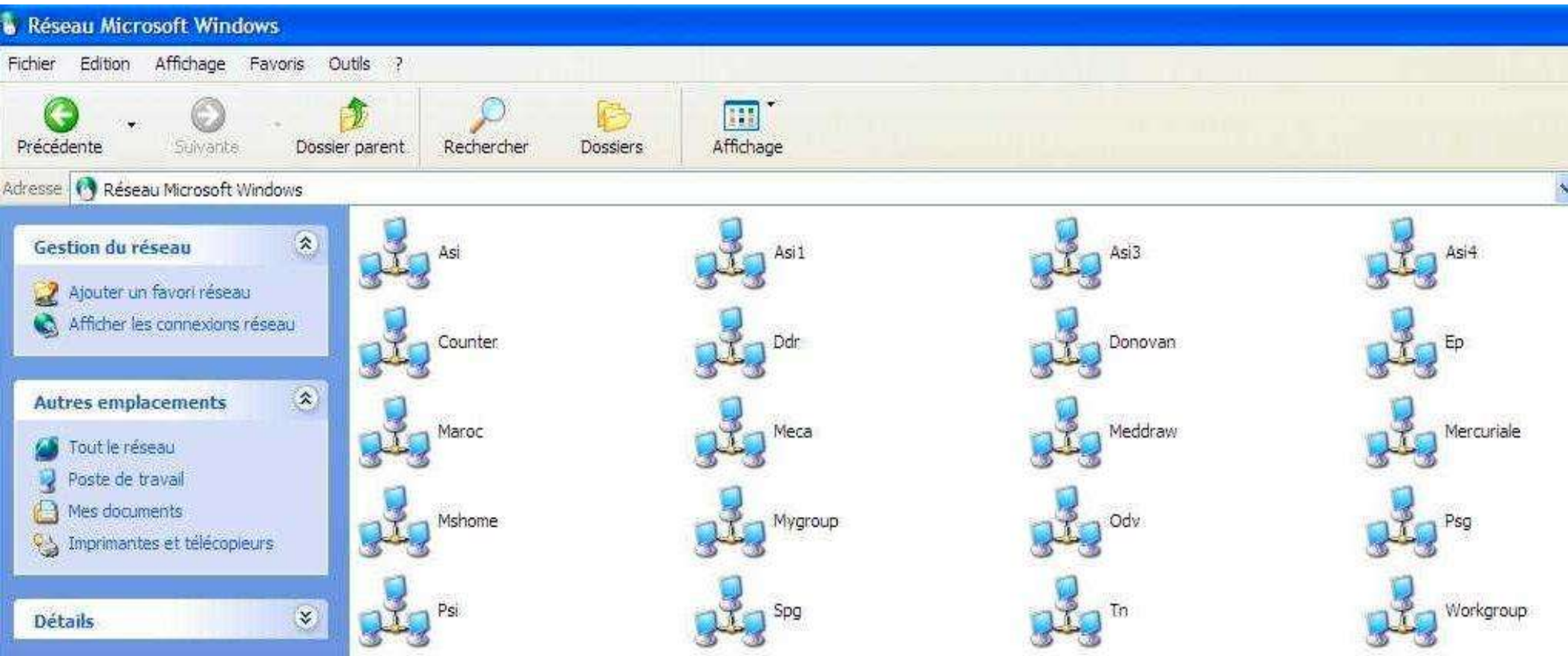


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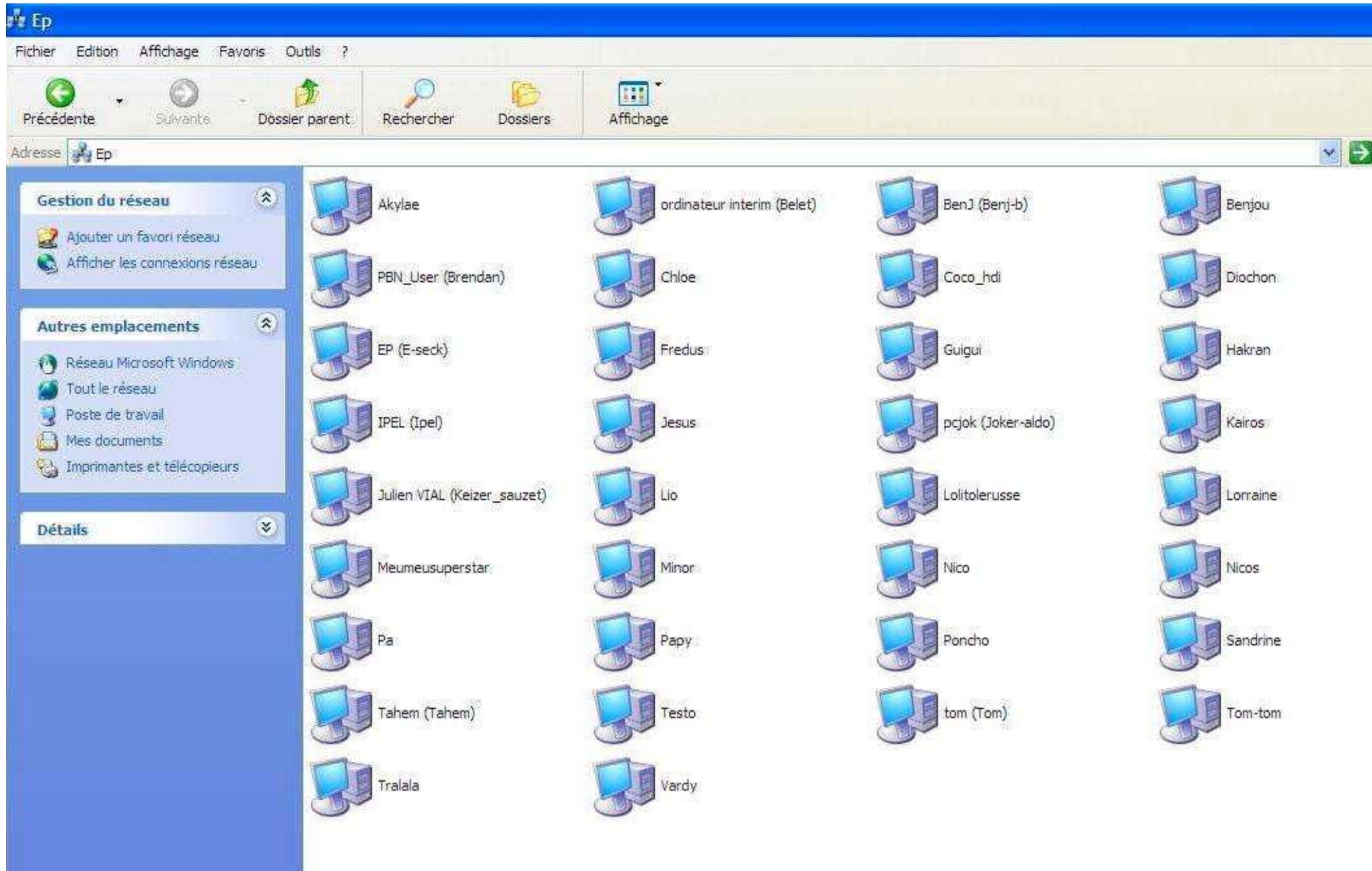
My Network Places

- No real availability :
 - Information can be removed or the computer shut down
 - Time-consuming to search on each share
 - Information not accessible for off-campus students
- No reward, process and feedback

My Network Places



My Network Places



Webspaces – 1 website/student

- Availability :
 - Everyone from everywhere at any time
 - Use of search engine
- Incentive : Help next students
- Reward : Result from the [statistic page](#) or search engine
- Feedback : From people visiting the website, by using the statistics
- Still no process

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Webspace - Forums

- Use of YaBB : Yet Another Bulletin Board

INSA de Rouen

- Who : students, teachers, admin staff and anyone from the internet
- What :
 - Post his question or problem in the specific topic
 - Answer a question, help, propose his solution
 - Get other means to solve the same problem
 - Exchange his point of view

= Notion of **Community of Practice**

McGill University – INSY 432 – Winter 2004

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Knowledge

Nothing is perfect

- Data is not uniform, standardized, homogeneous
- Information is not processed
- But knowledge is shared and this system answers the real question of KM : Why ?
 - To use others experience
 - To save time
 - To be more efficient

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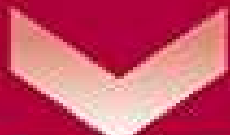
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Why sharing ?

- To use others experience :
 - Amélie studied CVS (Concurrent Versions System)
- To save time :
 - I have never read anything about it
- To be more efficient :
 - I can manage the versioning of a project within 5 min



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Was it a good example ?

- Yes :
 - We now have a good idea of what technology can do to **enable** knowledge sharing and provide tools for **people to share**
- No :
 - Students are studying Information Technology
 - Do other students use this system ???

Chemistry Dept

Models :

Technology-Push / Strategy-Pull

- Try to enhance your current system or information processes
- Find the technology that best fits your needs
- Do not try to fit to a technology
- “Organizational function should drive the choice of organizational form”
- “Ends should drive the choice of means”
- “Do more with less”

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Enabling recommendations

- System quality
 - Use a common network structure, such as the Internet.
 - Add KM skills to the tech support skill set.
 - Use the latest technologies
 - Standardize hardware and software across the organization

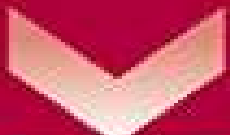
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Enabling recommendations

- Information quality :
 - Allocate maintenance resources for KMS.
 - Train users on use and content of the KMS.
 - Create and Implement a KM Strategy/Process for identifying/maintaining the knowledge base.
 - Automate data capture.
 - Design security into the knowledge base.

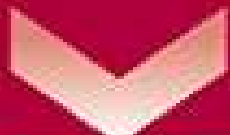
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Enabling recommendations

- Use
 - Incorporate KM into personnel evaluation processes.
 - Implement KMS use/satisfaction metrics.
 - Identify organizational culture concerns that could inhibit KMS usage.

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Challenging factors

- Technological change
 - “*wicked environments*”: characterized by radical and discontinuous change. As business needs and technology architectures change, the business and competitive environment tend to become less and less predictable the KM system becomes obsolete

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Challenging factors

- Usability and costs
 - High real and perceived search costs associated with obtaining knowledge
- Why?
 - Users are not comfortable using an IT interface
 - The system is too complicated

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Challenging factors

- Consequence:
 - Employees generally prefer to use their own social networks to obtain information
- Eventually:
 - If they didn't find information from colleagues through direct or indirect contact, only then they will search in the system

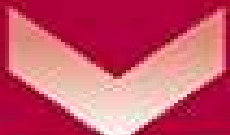
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Recommendations

- The systems must be designed for non IT people so that information can be accessed easily without investing too much in training.
- The system should track the history of questions asked and track the user's progress on the associated task.

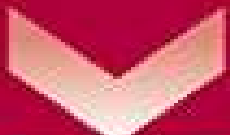
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Recommendations

- Managers must encourage the system's use and educate all employees on the system's benefits.
- Developing an extranet with access to pertinent information
 - suppliers will possibly be able to take part in product development.

How far have we really come?

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- Introduce Knowledge Management
- Identify the current barriers that prevent successful implementation KM systems
- Identify the current enablers that aid successful implementation KM systems
- Provide an insightful and relevant case study



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Thank you for your time.

Any questions ?